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DUCHESNE COUNTY GENERAL PLAN & RESOURCE MANAGEMENT PLAN

JULY 2022

Duchesne County General Plan

County Policies, Objectives, Action Steps
& Resource Management Plan

Spring 1997
(Amended Winter 1998, Winter 2005,
June 25, 2007, April 16, 2012, August 19, 2013
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DUCHESNE COUNTY GENERAL PLAN

The 1997 Duchesne County General Plan was a partnership effort among Duchesne County, the Governor's Office of Planning and Budget and the Utah Association of Counties.

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DUCHESNE COUNTY GENERAL PLAN

Introduction

The Duchesne County General Plan is an effort by the County and its citizens to address the present and future needs of Duchesne County. This Plan addresses specific issues identified by County residents as County priorities and outlines a series of strategies designed to accomplish County goals and objectives.

Utah State Statute provides for the development of county-level plans under Title 17-27a-401. Components which are required to be addressed within these plans include: land use, transportation, environmental issues, public services and facilities, rehabilitation and redevelopment, economic concerns, recommendations for plan implementation, and "any other elements that the county considers appropriate".

In 2015, the Utah Legislature amended Title 17-27a-401 to also require that county general plans include a "resource management plan" to provide a basis for communicating and coordinating with the federal government on land and resource management issues. The 2016 Utah Legislature amended the resource management planning requirements and extended the time for the county legislative body to approve the plan until August 1, 2017.

In its general plan, Duchesne County has focused not only on the statutory requirements, but on issues identified by County residents during public work sessions. These issues are addressed in the Plan through County "value/goal" statements. Issues identified as "County priorities" are further developed through "County Policy Statements" and "Action and Implementation Steps".

The purpose of the Duchesne County General Plan is two-fold. First, the County now possesses a single document that establishes the "guidelines" for other planning efforts within the County. It is anticipated that County planning efforts in the future will expand on the "values and objectives" identified in the County's General Plan. With respect to this purpose, County priorities and the issues facing the County will most likely change over time. For the document to function as a valuable decision-making tool, it should be reviewed and amended as necessary to address County issues and interests as they develop.

Second, the original planning process itself was a valuable learning experience for the citizens of Duchesne County. A diverse group of County residents and interests actively participated in all stages of the 1997 plan development including: issue identification, issue prioritization, objective identification and implementation strategy development. Additional citizen participation took place in the 2017 resource management planning process mentioned above. Through this process, County citizens have, as the intro line states, truly "planned for Duchesne County's future" including plans for private lands and public lands. The County's General Plan is the result of their combined expertise and experience. This experience will be invaluable as the County adopts and begins to implement this Plan.

1 **Historical Background**
2

3 In 1860 Brigham Young sent an exploratory party to the Uintah Basin to determine that region's
4 potential for Mormon settlement. Upon their return they reported that the country was "entirely
5 unsuitable for farming purposes...was one vast contiguity of waste, and measurably valueless,
6 except for nomadic purposes . . . hunting ground for Indians, and to hold the rest of the world
7 together." The area that they viewed and reported upon is presently located in Duchesne County.
8 The region is vastly more valuable than this early report led settlers to believe. Today the County
9 is home to approximately 20,000 people and is multi-varied in culture and economics. It boasts
10 five incorporated communities and several unincorporated regions of habitation.
11

12 Duchesne County forms the western portion of the Uintah Basin. This is a unique region with a
13 variety of notable geographic features including the Uinta Mountains that run west to east as
14 opposed to the usual north to south pattern for mountains in the United States. Located in the
15 central part of the Uinta Mountains is Kings Peak, the highest point in the state of Utah (13,528
16 feet).
17

18 Humans have occupied the Uintah Basin for many centuries. The first known and identified
19 group in the region was the Fremont Indians. Rock paintings and archeological evidence of early
20 Native American cultures are common. The rock art in Nine Mile Canyon represents some of the
21 finest in the world. Every year, dozens of scholars and thousands of tourists travel to the area to
22 study, photograph, and marvel.
23

24 The first historical record of the region comes from the Dominguez/Escalante Expedition who
25 traversed the area in 1776. Records indicate that Escalante's party traveled up the Duchesne and
26 Strawberry rivers, camping near the present-day locations of Myton and Duchesne City.
27 Escalante recorded of the land seen that day; "There is good land along these three rivers that we
28 crossed today, and plenty of it for farming with the aid of irrigation -- beautiful popular groves,
29 fine pastures, timber and firewood not too far away, for three good settlements."
30

31 The next recorded entries of the Uintah Basin were from the mountain men and fur traders. As
32 early as 1824, three different trapping expeditions led by William Huddard, Antoine Robidoux,
33 and Etienne Provost, left Santa Fe to trap along the Green River. Another well-known trapper
34 who entered the region at this time was William H. Ashley.
35

36 Although there is some uncertainty, it is most likely the name Duchesne was used by these
37 mountain men to identify the major river of the area. Mother Rose Philippine Duchesne, a
38 Catholic nun, came to St. Louis from France to work with the Indians of that region. Over the
39 years she became highly respected for her work. Well known to several trappers and traders,
40 including William Ashley and Antoine Robidoux, it is supposed that these individuals named the
41 river in her honor. The name Duchesne was later used for Fort Duchesne, the town of Duchesne,
42 and Duchesne County.
43
44

1 The next known fur traders to the region were Kentuckians William Reed, James Reed, and
2 Denis Julien. In 1828, they established the Reed Trading Post on the junction of the Whiterocks
3 and Uinta rivers. The Reed's enterprise was the first year-round non-Native American habitation
4 and business in the Uintah Basin and Utah. Later purchased from the Reeds by Robidoux, the
5 post and business was expanded. Employing an average of twenty trappers for the next twenty-
6 two years, Robidoux dominated the Basin's fur trade from 1832 until 1844 when the fort was
7 attacked and burned.

8
9 Prior to 1847, most of the non-Indians who came to the region did so to trap and trade with the
10 Indians and then traveled on. The region's natives did not realize that what started as a pitiful
11 few Mormon settlers and Colorado miners would eventually result in them being removed from
12 the land they had lived on for generations.

13
14 In 1861 President Abraham Lincoln issued an executive order establishing the Uintah Indian
15 Reservation. This order set aside the drainage of the then-named Uinta River, presently referred
16 to as the Duchesne River, as the Uintah Reservation.

17
18 After a few years, the United States Government determined that a fort was needed to establish a
19 military presence in the region. Fort Duchesne was completed in 1886. A supply route through
20 Nine Mile Canyon to the railroad in Price was built in 1886 by the Buffalo Soldiers of the 9th
21 Cavalry Regiment. This route was so heavily used that for twenty years it was aptly named the
22 "Lifeline of the Uintah Basin." Millions of pounds of freight and thousands of travelers and
23 settlers used the road between 1886 and the early 1900's.

24
25 At the turn of the century, Congress, acting in harmony with the then-popular Indian policy
26 aimed at breaking up Indian reservations to give each individual Indian an allotment of land on
27 which to sustain a livelihood; decided that the Ute reservation would be broken up and surplus
28 lands opened to homesteading. Wanting to avoid the confusion that came with the earlier land-
29 rushes of Oklahoma, a lottery system was adopted for the Uintah Basin's available acres.

30
31 With the opening of the Uintah Basin in 1905 to homesteading, thousands of hopeful settlers
32 looked to former reservation lands for a new start in life. Over the next several years, hundreds
33 of homesteaders claimed and settled on land located mostly in Duchesne County. Soon, several
34 communities were established. In 1915, Duchesne County was formed from the eastern side of
35 Wasatch County. Duchesne City was voted in as the County seat.

36
37 As the initial homesteading era drew to a close, the hard times associated with pioneering did not
38 necessarily end. Close examination of the living conditions of early Duchesne County residents
39 from 1915 to the end of the Depression show little improvement or significant change. In the
40 summer of 1933, several government-based work assistance projects were started in the County.
41 These programs included several CCC (Civilian Conservation Corps), PWA (Public Works
42 Administration), and WPA (Works Projects Administration) projects. The most notable project
43 was the construction of Moon Lake Dam. In general, the post-war era, known nationally as a
44 period of economic growth, saw little improvement for County residents in the 1950's and 60's.

1 Not since the opening of the reservation to homesteading was there such a radical change in
2 Duchesne County demographics as that which was triggered by the 1970's oil boom. Hundreds
3 of workers flocked into a county that was not sufficiently prepared to handle them. Housing,
4 schools, services, law enforcement, and every other entity in the County scrambled to meet the
5 bulging new population. Seemingly overnight, hundreds of rigs were drilling around the clock,
6 each with a several man crew, support crews and services. For the first time in the County's
7 history, jobs were plentiful and wages were good. The number of new family-supporting jobs
8 not only bolstered the local economy, but also enabled area youth to find local employment rather
9 than leaving as they had done in earlier generations. Many people who had grown up in the area
10 also moved back and took jobs. As the boom years evolved from drilling to oil field
11 maintenance and trucking, more and more of these jobs were filled by Basin residents.
12

13 Throughout the West, "boom" cycles in extractive industries are often followed by "busts".
14 Duchesne County's experience was no different. Their period of unprecedented growth and
15 prosperity was followed by a bust in the oil-related job market. In a matter of years, County
16 population fell from a high of 14,000 to under 12,000. Another boom lasted until the national
17 recession of 2008. After that bust, another boom commenced in about 2011 and brought the
18 county population over 20,000. This boom lasted until a dramatic drop in oil prices in early
19 2015. Climbing oil prices in early 2017 offer a glimmer of hope for the future of the energy
20 industry in Duchesne County.
21

22 Today, extractive-use industries: livestock, timber, mining, and oil; remain the backbone of the
23 region's economy. The County continues to encourage and support these industries,
24 acknowledging that industry patterns, fluctuating markets, and changing political winds predict
25 periodic good times followed by lean.
26

27 In an effort to stabilize drastic swings in the economy, the County has explored and promoted
28 economic development and growth strategies that would diversify the County's economic base
29 while maintaining the County's current lifestyle and character.
30

31 At present Duchesne County is growing and, with an eye to the future, trying to meet the
32 challenges of a new century with planning and preparation. Although the County's population is
33 small, it is hoped that residents' voices will be heard on issues such as control of the land and use
34 of the resources within the region that they live. Vital concerns over water, public land and
35 resource use, County/Tribal relations, economic growth and many other issues yet unresolved,
36 will shape the history of the County in the next decades.
37

38 **Scope** 39

40 The area encompassed by this plan is the entire area of Duchesne County, approximately 2.1
41 million acres. Approximately seventy-two percent of this area is public land administered by
42 federal and state agencies or is tribal land. The Bureau of Land Management's Vernal Field
43 Office and the United States Department of Agriculture's Ashley National Forest are located at
44 least partially within Duchesne County. State-owned public lands within the County are

1 managed by the State School and Institutional Trust Lands Administration, the State Office of
2 Sovereign Lands and Forestry, the Utah Division of Wildlife Resources, and the Utah Division of
3 State Parks. Due to the County's dependence on public land and the accompanying resources, it
4 is extremely important that County input be considered by federal and state agencies and
5 reflected in the resource management plans that are developed for these lands and resources. It is
6 the intent of Duchesne County that this Plan clearly and concisely states County policies, issues
7 and objectives and that this document will be used by the County and federal and state public
8 land management agencies during public land planning efforts and decision-making processes.
9

10 **General Plan Purpose and Process**

11
12 The Governor's Office of Planning and Budget and the Utah Association of Counties recognize
13 the need for adequate county-level land use planning. Under Utah state law, a general plan must
14 address certain social, economic, and environmental issues. House Bill 323 passed in the 2015
15 Utah Legislative Session and House Bill 219 (2016 Utah Legislative Session), require that
16 County general plans contain a resource management plan for public lands. The law also
17 requires a minimum level of public participation as plans are prepared and considered for
18 adoption.
19

20 The original Duchesne County General Plan process went beyond the required level of public
21 participation to provide the citizens of the County with the opportunity to participate through a
22 number of public meetings and as members of the citizen Plan Advisory Committee. Bear West,
23 a consulting firm with expertise in county-leveling planning and public land use issues, assisted
24 the County throughout initial plan development in the mid 1990's. As the plan has been
25 amended over the years, public hearings or public meetings have been held by the County
26 Planning Commission, County Public Lands Committee and Board of Commissioners to allow
27 public participation in the process.
28

29 An important aspect of the Duchesne County General Plan has been the involvement of local
30 officials and various state and federal land management agencies. At the beginning of the
31 original planning project, a citizen Plan Advisory Committee was formed. This committee
32 represented a cross-section of Duchesne County interests and included local elected officials and
33 representatives from federal and state land and resource management agencies. This committee's
34 main responsibility was to work with the consultants throughout the plan development process.
35

36 The Duchesne County general plan project formally began in May of 1994 with a public
37 workshop attended by over seventy people. This workshop served as the "scoping" meeting for
38 the project and gave County residents their first opportunity to identify the issues, concerns,
39 values, and opportunities that they felt should be addressed as part of the County's general plan.
40

41 Once the issues were recorded, workshop participants had the opportunity to indicate which
42 issues they felt were County priorities. Priorities identified during the meeting included:
43 maintaining the County's rural character and lifestyle, improving County participation in public
44 land management issues, natural resource development, economic development, private land use

1 issues, human services (particularly education) and improving Tribal relations. A summary of
2 these issues was prepared and reviewed by the Plan Advisory Committee. These topics became
3 the focus of the plan development process.

4
5 During this time, the Ute Tribe General Planning Committee also conducted a survey of Tribal
6 members to determine which issues they felt should be considered as part of Duchesne County's
7 planning efforts.

8
9 Beginning in July 1994, the Plan Advisory Committee and consultants met monthly. During
10 these work sessions, the Committee discussed each County "priority issue" in detail. The
11 Committee worked to articulate County sentiments through "value/goal" statements, to refine
12 County objectives, and to development policy "implementation strategies". Depending on the
13 topic of discussion, members of the Committee or "topic experts" were invited to present
14 background information and to assist the Committee in developing realistic and viable
15 approaches.

16
17 The Plan Advisory Committee's recommendations were formally presented to the citizens of
18 Duchesne County through this Plan. Each "priority issue" is presented in the following fashion:
19 County Policy Statement, County Objectives, and Action/Implementation Strategies. As outlined
20 in Utah State statute, these recommendations are the subject to Planning Commission and County
21 Commission review through an open public hearing and adoption process.

22 23 **Using and Amending the Duchesne County General Plan**

24
25 It is intended that the General Plan will serve as a framework for Duchesne County as it
26 considers future private and public land use decisions. The Plan is also designed to provide a
27 policy foundation for the development of infrastructure and community and human services, as
28 well as the pursuit of economic development opportunities.

29
30 To successfully implement specific portions of the General Plan, Duchesne County will need to
31 take action beyond Plan adoption. Recommended actions are identified in the
32 "Action/Implementation" sections following each County Objective or Policy.

33
34 While this plan, upon adoption, reflected the thoughtful direction of the citizens of Duchesne
35 County in 1995, it is expected that the plan will be updated and revised as circumstances change
36 and new challenges arise. The amendment process for the General Plan is defined by Utah
37 statute, and follows the same requirements as the adoption process: hearings and action by the
38 Planning Commission and County Commission with minimum 14 days notice by each body.
39 Any interested person can propose an amendment at any time by filing an application with the
40 Planning Commission.

41
42 The General Plan has been amended several times since initial adoption; in 1998, 2005, 2007,
43 2012, 2013 and 2017.

1 **Value/Goal Statements: A Framework for Action**

2
3 **Maintaining the County's Rural Lifestyle and Character**

4
5 Duchesne County residents enjoy the rural lifestyle and "small town" qualities of their County.
6 The existing moral climate, low crime rates, community pride, and "neighborly" atmosphere are
7 County characteristics residents desire to maintain and protect. The County will foster
8 community and County pride through county-wide beautification and "take pride" campaigns.
9 Two such programs are the Duchesne County Trailer Removal Program and the Junk Vehicle
10 Contest. These programs, using funds generated by the Wasatch-Duchesne regional landfill,
11 have resulted in the disposal of hundreds of abandoned mobile homes and thousands of junk
12 vehicles since they began in 2005.

13
14 Duchesne County residents enjoy clean air and clean water and support County population
15 growth and resource development as long as a "quality environment" can be maintained. County
16 residents feel future growth and development decisions should consider the following issues:

- 17
18 a. Maintaining the current quantity and quality of public services and facilities through
19 balancing growth and development (commercial, residential, industrial, and recreational)
20 with facility/service capacity, e.g., water, sewer, waste disposal, transportation and roads,
21 law enforcement, emergency services;
22
23 b. Ensuring that development decisions are sensitive to rural/agricultural interests; and
24
25 c. Maintaining zoning ordinances and development regulations consistent with the County's
26 overall development preferences and objectives.

27
28 **Public Lands/Federal and State Agencies**

29
30 Over 44% of the land within Duchesne County is public land managed by the United States
31 Forest Service and the Bureau of Land Management. Additional public lands and resources are
32 managed by other federal agencies and the State of Utah. Decisions made by these agencies
33 directly impact the County and its residents. For this and other reasons noted below, the resource
34 management planning section was added to the general plan.

35
36 Due to Duchesne County's dependence on public lands and the accompanying resources, the
37 County feels that all public land management agencies should actively solicit and adequately
38 consider County input when making and implementing public land and resource management
39 decisions. The County will encourage this interaction by participating in all public land
40 management planning processes relevant to the welfare of the County and/or its residents. The
41 County also anticipates agency participation in County planning efforts and activities.

42
43 The County also feels that public land and resource management decisions should be supported
44 by accurate and adequate data. This data should include impacts to County residents, private

1 property rights, the local economy, the social structure of the County and the environment.

2
3 Specific County policy statements in respect to public land multiple-use, access, recreation and
4 tourism, land classification, resource use and development, and wildlife management can be
5 found in the Resource Management Plan section of this document.

6 7 **Tribal Relations**

8
9 Duchesne County recognizes the Ute Tribe as an important partner in county-wide planning
10 efforts and development decisions. Cooperation between the Tribe and Duchesne County is
11 necessary to adequately and effectively address Uintah Basin concerns and issues.

12
13 Historically, the relationship between the Tribe and Duchesne County has suffered due to issues
14 with law enforcement jurisdiction, road access and other concerns. Mutual interests, such as
15 water, transportation infrastructure, utility infrastructure, law enforcement jurisdiction, energy
16 and mineral development, and wildlife management issues, are not being constructively
17 discussed. Duchesne County wishes to have an open and positive dialogue with the tribe on
18 issues of mutual interest. The County is also interested in forming working partnerships with the
19 Tribe as mutually beneficial projects are identified. For example, coordination between the
20 County and Tribe would be beneficial as the Tribe considers a new water code.

21
22 **Policy:** In an effort to foster better relations, the County will work toward gaining a better
23 understanding of Bureau of Indian Affairs and Tribal policies and procedures.

24 25 **Duchesne County Policy - Human and Community Services**

26
27 Duchesne County recognizes the need to provide adequate services for its elderly, young, and
28 disadvantaged resident populations. Existing programs within the County include a County
29 hospital, food pantry, senior centers, and facilities for hospice care, memory care, rehabilitation
30 and nursing care.

31
32 **Policy:** The County is committed to further addressing human and community service needs
33 through encouraging self-sufficiency, personal responsibility, and family assistance. The County
34 discourages making public assistance a way of life and views government assistance through
35 human service programs as the last alternative.

36
37 **Policy:** The County will continue to support the Uintah Basin Association of Governments
38 (UBAOG) in their efforts to provide adequate human and community services. The County will
39 actively participate in the review of UBAOG's federally mandated "consolidated plan" and
40 support UBAOG sponsored human and community capital facility projects as funding allows.

41
42 **Policy:** Duchesne County will assist the Uintah Basin Association of Governments, special
43 interest groups, and/or private interests to prepare human/community service grant applications
44 and identify possible funding sources.

1 **Guideline:** The County encourages residents to take an active interest in community-service
2 projects and to participate in human and community service volunteer activities.
3

4 **Objective:** Continued County support for County and UBAOG sponsored human and
5 community service programs.
6

7 Duchesne County residents desire to maintain and improve the current quantity and quality of
8 public services and facilities through balancing growth and development with facility/service
9 capacities.
10

11 **Guideline:** The County encourages private sector involvement to provide human and
12 community services where applicable.
13

14 **Emergency Services/Law Enforcement**

15
16 Residents feel that Duchesne County is a safe place to live and raise their families. Considering
17 the County's demographic and economic profiles, citizens feel that their law enforcement, fire
18 protection, emergency response, and search-and-rescue personnel and agencies are well-prepared
19 and trained. As a County, they feel that maintaining this level of preparedness is a necessity.
20

21 **Policy:** The County is dedicated to expanding services, personnel, and capital facilities in support
22 of emergency services and law enforcement, according to County growth and needs.
23

24 **Medical Facilities/Health Care**

25
26 The Uintah Basin Medical Center (UBMC) maintains excellent medical facilities and provides
27 the finest health care in the region. County residents desire to maintain this level of excellence
28 and support expanding services and facilities to maintain and improve the quality of medical care
29 available to County residents.
30

31 **Senior Citizen Services**

32
33 Duchesne County recognizes the need to provide adequate senior citizen care facilities and
34 services, such as those offered at the Uintah Basin Rehabilitation and Senior Villa at UBMC.
35 Expansion of recreational, educational, and medical services targeted for this sector of the
36 population is encouraged by the County as doing so becomes feasible.
37

38 **Education**

39
40 **Findings:** The Economic Development Corporation of Utah has published a 2015 Economic
41 Profile for Duchesne County. In this profile, educational attainment data is presented for
42 Duchesne County residents 25 years old or older. The data shows that 2.4% of the population
43 has a 9th Grade education, 12.8% have an education between the 9th and 12th Grades, 35.1%
44 completed high school, 25.6% completed some college, 7.5% have an Associate's Degree, 10.9%

1 have a Bachelor's Degree and 5.7% have attended Graduate school.

2
3 The Utah System of Higher Education reports that 489 Duchesne County students were enrolled
4 in post high school courses in the Fall of 2015. This was down from 549 enrollees in 2012.

5
6 **Objective:** Promoting quality educational opportunities for all residents is a top County priority.

7
8 **Policies and Guidelines**

9
10 The County supports Duchesne County School District, Utah State University, and the Uintah
11 Basin Applied Technology Center (UBATC) efforts to improve and maintain the quality of
12 education facilities, instruction materials, trained personnel (attracting and retaining
13 quality/qualified teachers), and programs necessary to pursue this agenda.

14
15 Duchesne County recognizes the value and necessity of a solid public education system.
16 Residents currently enjoy quality educational programs and receive additional benefits through
17 Uintah Basin Applied Technology Center (UBATC) and Utah State University Uintah Basin
18 Campus programs.

19
20 According to Utah State Office of Education data and statistics section, the Duchesne County
21 School District had a fall 2015 enrollment of 5,076, which made it the 21st largest of the 42
22 school districts in Utah. Per-pupil expenditures in FY 2015 in the Duchesne County School
23 District were \$7,322, which ranked 22nd in the state and the Class of 2015 graduation rate was
24 84.2% (ranked 27th in the state). Duchesne ranked 16th in the pupil-teacher ratio (21.5 pupils per
25 teacher) and 31.4% of the students qualified for school meal assistance (which was lower than 29
26 other districts).

27
28 The County encourages active public participation in the Duchesne School District's on-going
29 strategic planning process and supports the District's efforts to retain quality teachers, provide on-
30 going teacher training, improve classroom instruction, offer challenging courses, and increase
31 vocational job training opportunities. The County and its taxpayers have recently supported
32 construction of new school buildings in Altamont, Duchesne Roosevelt and Tabiona.

33
34 Duchesne County views the Uintah Basin Applied Technology Center (UBATC) and the Utah
35 State University Uintah Basin Campus as valuable educational resources to the citizens of the
36 Uintah Basin. Through their open access policy, these institutions offer students and the
37 community higher education and vocation opportunities unsurpassed in a "rural" county.

38
39 Through County, School District, and community efforts; the following educational issues and
40 objectives will be pursued.

41
42 **Increasing Community Awareness**

43
44 **Objective:** Assist the Duchesne School District and associated interests to improve the public's

1 understanding of educational issues.

2

3 **Policies and Guidelines**

4

5 The County supports the district's current practice of organizing citizen/teacher/administrator
6 committees to address specific issues and feels that the County can provide valuable expertise
7 and resources to these discussions.

8

9 The County also supports Parent/Teachers Association (PTA) activities and other programs that
10 serve to inform the public on educational matters.

11

12 **Increasing Community Involvement**

13

14 **Objective:** Increase community involvement in public education activities and course
15 development.

16

17 **Policies and Guidelines**

18

19 The County feels that the education of our young people should be a joint school and community
20 effort.

21

22 The County supports the School District and educators in their efforts to increase community and
23 parental involvement in student's lives through activities such as parent/teacher conferences,
24 science fairs, and "back-to-school" nights.

25

26 The County also feels that the community at-large should become more involved in curriculum
27 development.

28

29 The County feels that public school courses should include a balance of views and encourage an
30 objective analysis of current issues facing the nation, the state, and the County. The County also
31 feels that students should learn more about national, state, and local government functions and
32 policies. Duchesne County will provide copies of County plans and ordinances to schools or
33 individual teachers on request.

34

35 **County and School District Partnerships**

36

37 **Objective:** Continue Duchesne County and Duchesne School District partnerships.

38

39 Duchesne County and the Duchesne School District have many mutual interests. The County
40 continues to show its support for educational activities by "partnering" with the School District
41 on several projects.

42

43 **Policy:** The County will broaden this support by "partnering" with the School District to submit
44 grant applications and share in matching funds allocations for mutually beneficial projects.

1 Proposals/projects will be evaluated on a case-by-case basis. The County's and School District's
2 participation and role will be determined at that time.

3
4 **Continued County Support for the Uintah Basin Applied Technology Center and the Utah**
5 **State University Uintah Basin Campus**

6
7 Duchesne County views the Uintah Basin Applied Technology Center (UBATC) and the Utah
8 State University Uintah Basin Campus as valuable assets to the citizens of the County and
9 northeast Utah. Through their open access policy, these institutions of higher learning offer
10 students and the community higher education and vocation opportunities within the unique
11 atmosphere of a "community college."

12
13 **Policy:** The County anticipates UBATC and USU playing major roles in the region's educational
14 and economical future and will work closely with administrators, facility, staff, and alumni to
15 accomplish these objectives.

16
17 **Utah State University - Uintah Basin Campus**

18
19 **Objective:** Continued County support for USU Extension programs.

20
21 The County feels that Utah State University, as a land-grant university, is a great educational and
22 training resource for the area.

23
24 **Policy:** The County will assist, as necessary, to secure mineral lease monies for research and
25 planning projects considered beneficial to the region, the County, and the institution.

26
27 **Uintah Basin Applied Technology College (UBATC)**

28
29 **Objective:** Continued County support of the Uintah Basin Applied Technology College.
30 Currently, the Uintah Basin Applied Technology College is one of the best vocational training
31 centers in the state. UBATC continues to provide a quality education at a cost significantly
32 lower than other institutions of higher learning. As education costs continue to rise, and fewer
33 students pursue a four-year degree, enrollment at UBATC will continue to grow.

34
35 **Policy:** The County encourages the State to allocate higher-education funds on the basis of
36 program demand, cost to student, quality of programs offered, and utilization of facility resources
37 by "non-traditional" students. The County will formally support UBATC's lobbying efforts as
38 needed.

39
40 **Economic Development**

41
42 **Objective:** Diversify the economic base.

43
44 Duchesne County enjoys a strong economic base and employment profile. However, recent

1 reports show that a relatively small number of industries (especially the energy industry) generate
2 the majority of economic returns.

3
4 **Policy:** In an effort to decrease "single industry dependence", the County will continue to
5 support the economic diversification strategies of the Duchesne County Chamber of Commerce.
6 These efforts include, but are not limited to, business retention and expansion, value-added
7 agriculture, tourism and recreation.

8
9 County residents enjoy a quality of life unique in today's society. This lifestyle and rural
10 environment also attracts businesses to the area. Residents and local leaders desire additional
11 economic development, but feel that this growth should complement, rather than detract from the
12 County's character. Residents feel that responsible natural resource use and development should
13 be included as part of this priority.

14
15 **Policy:** The County will continue to work with the Tribe and federal and state agencies to
16 identify mutually beneficial economic objectives. Partnerships with these entities will be formed
17 when applicable and feasible.

18
19 Additional County policy statements in respect to business recruitment, retention, and expansion
20 can be found in the Economic Development Policy, Objective, and Action Step section of this
21 document.

22 23 **Housing**

24
25 **Findings:** The 2010 U.S. Census counted 9,493 housing units in Duchesne County, of which
26 6,003 were occupied and 3,490 were vacant. Of these vacant homes, the majority (2,803) were
27 seasonal or recreational units, which are common in western Duchesne County. Of the vacant
28 units, 107 were available for sale and 141 were available for rent. Of the 6,003 occupied units,
29 4,648 (77.4%) were owner-occupied. The remaining 1,355 units (22.6%) were renter-occupied.
30 According to the Profile of Demographics, Duchesne County, Utah," Headwaters Economics
31 Economic Profile System (EPS), in 2014, the number of housing units increased to 9,634, of
32 which 6,738 were occupied and 2,896 were vacant. Of the vacant units, 2,191 were considered
33 seasonal or recreational units.

34
35 The housing stock is newer than the nationwide average, with 15.1% of the homes in the County
36 having been constructed before 1960 as compared to 29.5% nationwide. The 1970's saw 20.3%
37 of the housing stock constructed and the period between 2000 and 2004 was also busy, with
38 26.5% of the County housing stock constructed. Housing construction in Duchesne County tends
39 to follow the fluctuations in the energy industry.

40
41 Housing costs are lower in Duchesne County when compared to the nation. The median monthly
42 mortgage cost in 2014 was \$1,202 in the County compared to the national median of \$1,522.
43 The median monthly gross rent in 2014 was \$803 in the County compared to the national median
44 of \$920. Lower housing costs in the County resulted in only 25.2% of County owner-occupied

1 households paying more than 30% of their income on mortgage costs, as compared to 34%
2 nationwide. The Fiscal Year 2016 Annual Report from the Utah State Tax Commission indicates
3 that the average residential property tax in Duchesne County was \$1,386, which was ranked 14th
4 out of the 29 Utah counties. This relatively low property tax burden adds to the affordability of
5 housing in Duchesne County.

6
7 For renter-occupied units, 38.3% of County households were paying more than 30% of their
8 income on rent compared to 48.3% nationally.

9
10 In January, 2017, the Utah Department of Workforce Services and the Utah Housing and
11 Community Development Division published the *State of Utah Affordable Housing Assessment*
12 *and Plan, 2016*. This publication shows that housing is very affordable in Duchesne County,
13 compared to other counties in Utah. At that time, there were 1,670 renter households in the
14 county containing 4,460 persons. The median rent of \$803 per month is 25.6% of the median
15 income of \$3,131 per month. When housing costs fall below the 30% threshold, they are
16 considered affordable. Duchesne is one of only four counties in the state (the others being
17 Uintah, San Juan and Emery) where the mean renter hourly wage is more than sufficient to afford
18 a two-bedroom apartment at fair market rent. Specifically, in Duchesne County, the mean renter
19 hourly wage is \$15.47, while a wage of \$14.54 is required to afford the fair market rent
20 apartment (see Figures 4, 5, 13, 14 and 15 of the state study).

21
22 **Objective:** Develop partnerships with cities, towns and the Uintah Basin Association of
23 Governments to address housing issues and implement appropriate strategies.

24
25 **Housing Policies:**

26
27 Duchesne County understands the relationship between sustained economic growth and housing
28 availability and supports community housing plans that provide adequate and affordable housing
29 opportunities and encourage residential development patterns that are compatible with the
30 existing agricultural lifestyle and small-town atmosphere of the County.

31
32 The County supports community and private efforts to construct affordable housing units to the
33 extent that these projects are compatible with existing subdivision development patterns.

34
35 The County supports the various housing assistance programs offered by the Uintah Basin
36 Association of Governments, such as the Self Help Acquisition Rehabilitation Program, the
37 Mutual Self Help Housing construction program, the Rental Assistance Program, the
38 Homelessness Prevention Program, the One Time 50% Match Program and the Temporary
39 Assistance for Needy Families Rapid Re-housing Program.

40
41 The County supports continued use of Community Development Block Grant and USDA Rural
42 Development funds by the Uintah Basin Association of Governments to offer housing
43 rehabilitation assistance to low-moderate income individuals and families in the County.
44

1 The county supports efforts of local utility service providers to extend their facilities to serve
2 housing and other land uses as demand warrants and as economically feasible.

3
4 State Code Section 17-27-307 requires all County General Plans to include a housing element.
5 The County’s housing element was adopted as part of the County’s General Plan by reference via
6 Resolution #00-06 passed by the County Commission on March 27, 2000. This resolution
7 adopted an “affordable housing plan” that included the following:
8

9 **Affordable Housing Policies**

10
11 A. Duchesne County perceives its role in supporting affordable housing as:

- 12
13 1. Enabling the provision of at least enough equitable and affordable housing to
14 accommodate Duchesne County’s indigenous low to moderate income population.
15
16 2. Reviewing existing ordinances, as opportunity or need arises, to eliminate
17 inappropriate or excessive requirements that may post barriers to affordable
18 housing within the county.
19
20 3. Avoiding new regulations or ordinances that inappropriately or excessively
21 burden prospective new home owners or home builders.
22
23 4. Utilizing to the fullest extent possible, available federal and state funded housing
24 rehabilitation and replacement programs including the Community Development
25 Block Grant and HOME programs operated under the Uintah Basin Association of
26 Governments.
27

28 B. The county commission will adopt amendments to its General Plan only after they have
29 been reviewed for any possible barriers to equitable and affordable housing that they may
30 create.
31

32 C. As time and opportunity arise, the Commission will review its General Plan for
33 regulations affecting construction, annexation or subdivision which may give rise to
34 inappropriate barriers to equitable and affordable housing. Appropriate adjustments will
35 be made as necessary but at all times such adjustments in ordinance structure shall;
36

- 37 1. Consider the financial capability of the County.
38
39 2. Consider the infrastructure implications (e.g., capacities, demands, location, costs)
40 of all proposed new construction or reconstruction and, within this context,
41 consider the implications of new construction or reconstruction on utility rates and
42 tax assessment levels of existing residents.
43

44 The 2019 Utah Legislature passed Senate Bill 34 in an attempt to encourage the development of

1 more moderate income housing in the state. The bill, which was codified in Section 17-27a-403
2 of the Utah Code, encourages counties to implement three or more of the following strategies to
3 provide a realistic opportunity for the development of moderate income housing:
4

- 5 (A) Rezone for densities necessary to assure the production of moderate income housing;
- 6 (B) Facilitate the rehabilitation or expansion of infrastructure that will encourage the
7 construction of moderate income housing;
- 8 (C) Facilitate the rehabilitation of existing uninhabitable housing stock into moderate
9 income housing;
- 10 (D) Consider county general fund subsidies or other sources of revenue to waive
11 construction related fees that are otherwise generally imposed by the county;
- 12 (E) Create or allow for, and reduce regulations related to, accessory dwelling units in
13 residential zones;
- 14 (F) Allow for higher density or moderate income residential development in commercial
15 and mixed-use zones, commercial centers, or employment centers;
- 16 (G) Encourage higher density or moderate income residential development near major
17 transit investment corridors;
- 18 (H) Eliminate or reduce parking requirements for residential development where a
19 resident is less likely to rely on the resident's own vehicle, such as residential
20 development near major transit investment corridors or senior living facilities;
- 21 (I) Allow for single room occupancy developments;
- 22 (J) Implement zoning incentives for low to moderate income units in new developments;
- 23 (K) Utilize strategies that preserve subsidized low to moderate income units on a long-
24 term basis;
- 25 (L) Preserve existing moderate income housing;
- 26 (M) Reduce impact fees, as defined in Section 11-36a-102, related to low and moderate
27 income housing;
- 28 (N) Participate in a community land trust program for low or moderate income housing;
- 29 (O) Implement a mortgage assistance program for employees of the county or of an
30 employer that provides contracted services for the county;
- 31 (P) Apply for or partner with an entity that applies for state or federal funds or tax
32 incentives to promote the construction of moderate income housing;
- 33 (Q) Apply for or partner with an entity that applies for programs offered by the Utah
34 Housing Corporation within that agency's funding capacity;
- 35 (R) Apply for or partner with an entity that applies for affordable housing programs
36 administered by the Department of Workforce Services;
- 37 (S) Apply for or partner with an entity that applies for services provided by a public
38 housing authority to preserve and create moderate income housing;
- 39 (T) Apply for or partner with an entity that applies for programs administered by a
40 metropolitan planning organization or other transportation agency that provides technical
41 planning assistance;
- 42 (U) Utilize a moderate income housing set aside from a community reinvestment agency,
43 redevelopment agency, or community development and renewal agency; and
- 44 (V) Consider any other program or strategy implemented by the county to address the

1 housing needs of residents of the county who earn less than 80% of the area median
2 income.

3
4 **Implementation Guidelines**

5
6 Coordinate planning activities with individual communities in an effort to meet the varied
7 housing needs of each area.

8
9 Encourage residential development to occur within the incorporated cities and towns and town
10 sites in order to maintain our agricultural lifestyle.

11
12 Offer and participate in training seminars on planning, zoning, and community development.
13 Residential development within the unincorporated portion of the County must comply with the
14 County Subdivision and Zoning Ordinances.

15
16 **Action Implementation Steps**

17
18 Develop housing strategies and determine criteria for development in the unincorporated areas of
19 the County.

20
21 Encourage growth and design consistent with maintaining an agricultural atmosphere.

22
23 Promote moderate income housing in accordance with Section 17-27a-403 of the Utah Code by
24 continuing to allow accessory dwellings, tiny homes/cabins and manufactured housing in zones
25 that allow dwellings, preserving existing moderate income housing through housing
26 rehabilitation and weatherization programs offered by the Uintah Basin Association of
27 Governments, continuing policies establishing no or limited impact fees and partnering with the
28 Uintah Basin Association of Governments in a variety of programs offered by state and federal
29 agencies to make housing affordable.

30
31 **Transportation**

32
33 Section 17-27a-403 (2) of the Utah Code requires that the County adopt a transportation and
34 traffic circulation element in its general plan. A draft transportation master plan has been
35 prepared for the County by Jones & DeMille Engineering; and was adopted by Resolution #17-
36 14 on September 25, 2017. The Transportation Master Plan is a stand-alone document
37 supplementing this general plan.
38

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12

Duchesne County Resource Management Plan Findings, Objectives, Policies and Guidelines

Section 1. Land Use

Private Lands. The use of private lands is regulated by the Duchesne County zoning ordinance. The zoning map adopted by this ordinance, as amended from time to time constitutes the official land use map for the county. County zoning does not apply to state, federal or tribal lands.

Residential Development Trends. Residential development in the county can be categorized by average residential lot size.

- Urban/Suburban: Average residential lot size < 1.7 acres.
- Exurban: Average residential lot size 1.70–40.0 acres.
- Total Residential: Cumulative acres of land developed at urban/suburban and exurban densities.

The total acreage of private lands by type and percentages of private land developed for residential use in Duchesne County is shown in Table LU1.

Table LU1. Acres of Private Lands by Type and Percentages of Private Land Developed for Residential Use in Duchesne County

Land Type	Duchesne County
Total Private Land (acres)	597,004
Total residential, 2000	21,604
Urban/suburban, 2000	1,641
Exurban, 2000	19,963
Total residential, 2010	49,081
Urban/suburban, 2010	2,228
Exurban, 2010	46,853
Percentage change in total residential	127.2%
Total Private Land Developed for Residential Use (%)	
Total residential, 2000	3.6%
Urban/suburban, 2000	0.3%
Exurban, 2000	3.3%
Total residential, 2010	8.2%
Urban/suburban, 2010	0.4%
Exurban, 2010	7.8%

Source: EPS (2016).

1 **Objective:** Duchesne County feels that residential, commercial, and industrial development on
2 private land should be allowed to continue in a responsible manner and in locations that
3 contribute to the economic and social well-being of County residents.
4

5 **Policy:** The County will continually review and amend its existing ordinances as necessary to
6 accurately and adequately reflect the land-use preferences of Duchesne County residents.
7

8 **Policy:** Under direction of the County Commissioners, the County Planning Commission will
9 address the following issues and propose the appropriate revisions and amendments to the
10 existing County land-use ordinances and regulations:
11

- 12 a. A County/community/Tribal agreement to notify and discuss impacts of Tribal and
13 private land use development decisions,
14
- 15 b. Adequate protection of private property rights during the implementation of the CUP
16 Completion Act,
17
- 18 c. Land use and amendments to the zoning map,
19
- 20 d. Implementing "pay your own way" cost-recovery strategies to help offset County-incurred
21 service provision costs related to new development.
22

23 Duchesne County recognizes that land use decisions made by the County impact county
24 communities and the Tribe. Likewise, the decisions made by these entities impact the County.
25 The County proposes that an agreement be drafted to require notification of planning decisions
26 made by each entity and to provide an opportunity for comments. The intent of this agreement is
27 to coordinate planning efforts in a proactive, cooperative manner. Through a county-wide effort,
28 land-use priorities and decisions of the Tribe, communities, and the County will complement
29 rather than contradict each other.
30

31 **Policy:** Duchesne County supports better cooperation between the County, the Tribe, and
32 communities in land-use and development plans.
33

34 **Policy:** Encourage approval of a County/Tribal agreement requiring notification of each entity of
35 proposed Tribal and private land use development decisions.
36

37 **Objective:** Duchesne County has identified the need to improve communication and
38 coordination among planning entities and service providers. A specific example identified is the
39 lack of coordination between agricultural water users and municipalities in respect to current use
40 and future demand/availability.
41

42 **Policy:** Duchesne County will encourage and maintain improved cooperation and coordination
43 between planning entities and service providers.
44

1 **Policy:** The County encourages developing an open forum wherein municipalities and service
2 providers can discuss ways to address future growth and service availability issues.
3

4 Estimates from the U.S. Census Bureau show that the Duchesne County population grew at a rate
5 of 9.1% from 2010 to 2013 as about 1,700 new residents were added during that time period.
6 The 2016 Economic Report to the Governor found that the Duchesne County population grew at
7 a rate of 1.4% between 2013 and 2014, with the population of the county estimated to be 20,380
8 by July 1, 2014. The U.S. Census Bureau statistics show an estimated county population of
9 20,862 as of July 1, 2015 and a slight drop to 20,337 as of July 1, 2016.
10

11 The County supports orderly and responsible residential, commercial, industrial, and recreational
12 growth and feels that there are areas within the County suited to accommodate these types of
13 development. However, the County is concerned about its ability to provide an adequate level of
14 service as growth in the unincorporated areas of the County continues. Land use changes and
15 development can stress the services and infrastructure provided by county government and local
16 municipalities. It is the County's position that new development should be required to pay its
17 own way.
18

19 **Objective:** The County Planning Commission will identify cost recovery options and
20 recommend revisions to the existing land use ordinances.
21

22 **Policy:** The County will develop, adopt, and implement the cost-recovery strategies necessary to
23 cover the costs of providing services to new development.
24

25 Land use patterns have a considerable influence on the amount of energy needed to move from
26 residences to jobs, services, shopping or recreation.
27

28 **Policy:** Duchesne County, through its zoning ordinance, encourages a mixture of land uses
29 which helps shorten commuter trips, reduces vehicle miles traveled (VMT), encourages walking
30 and biking and reduces energy consumption.
31

32 **Private Property Rights Policies** 33

34 It is the policy of Duchesne County, consistent with Section 63J-8-104 (j) of the Utah Code, that
35 federal land agencies shall manage lands under their jurisdiction so as to not interfere with the
36 property rights of private landowners as follows:
37

- 38 a. Duchesne County recognizes that there are parcels of private fee land located near or
39 surrounded by federal lands.
40
- 41 b. Federal land management policies and standards shall not interfere with the property
42 rights of any private landowner to enjoy and engage in uses and activities on an
43 individual's private property consistent with controlling county zoning and land use laws.
44

- 1 c. A private landowner or a guest or client of a private landowner should not be denied the
2 right of motorized access to the private landowner's property consistent with past uses of
3 the private property.
4

5 **Public Lands**

6
7 **Findings**

8
9 Information in this section is extracted from the Profile of Land Use, found in the Headwaters
10 Economics Economic Profile System (EPS 2016). Headwaters Economics is an independent,
11 nonprofit research group. EPS uses published statistics from federal data sources, including
12 Bureau of Economic Analysis and Bureau of the Census, U.S. Department of Commerce, Bureau
13 of Labor Statistics, and U.S. Department of Labor.
14

15 Land use in Duchesne County generally falls under the jurisdiction of federal, state, tribal, and
16 local government entities. Land use on federal lands (U.S. Forest Service [USFS], Bureau of
17 Land Management [BLM], and National Park Service [NPS]) is guided by federal land
18 management plans. Land use on state lands is determined by the managing state agency. Land use
19 on tribal lands is determined by the tribal government or by the Bureau of Indian Affairs for trust
20 lands. Land use on private lands is determined by the county, or in incorporated municipalities, it
21 is determined by the municipality through land use and zoning ordinances.
22

23 More than half of Duchesne County consists of public lands managed by federal or state agencies
24 (See Table LU2 below and Map #1). These lands and their resources cannot be separated from
25 the culture, quality of life and economic well-being of Duchesne County. The oil and gas,
26 agriculture, and recreation and tourism industries are the lifeblood of Duchesne County and each
27 requires access to public lands.
28

29 A December 2008 report published by Utah State University entitled “Public Lands and Utah
30 Communities: A Statewide Survey of Utah Residents,” found (in Table 33) that 81.7% of
31 residents surveyed in the Daggett-Duchesne-Uintah County region somewhat agree (24.6%) or
32 strongly agree (57.1%) that Utah’s public lands are an important part of the culture and heritage
33 of their communities.
34

35 Utah Department of Workforce Services 2013 data indicated that mining provided 2,269 (24.5%)
36 of the 9,269 nonagricultural jobs in Duchesne County and the leisure and hospitality industry
37 provided 449 jobs. These two industries generated over \$171 million in annual payroll in the
38 county at that time. However, due to a decline in the energy industry, the Utah Department of
39 Workforce Services counted only 7,485 non-farm jobs in the county in February 2017, with the
40 number of mining jobs declining to 1,519 by September 2016. The number of leisure and
41 hospitality industry jobs has dropped slightly to 432 by September 2016.
42

43 The 2012 Census of Agriculture counted 1,058 farms in Duchesne County, with 375 of those
44 providing the sole occupation for the owner. Duchesne County’s acreage of farmland dropped

1 from 1,328,307 acres in 2002 to 1,088,559 acres in 2012. However, the market value of farm
 2 products sold in Duchesne County was over \$57 million according to the 2012 census.

3
 4 Given the economic data above, Duchesne County must exercise its right to participate in the
 5 planning and decision-making processes associated with public lands to the extent allowed by
 6 law. Historically, federal and state land management agencies have made a good effort to invite
 7 the County to participate in projects as a Cooperating Agency.

8
 9 **Table LU2. Acres & Percentages of Land Ownership of Duchesne County**

11	Private lands	597,004	(28.9%)
12	Conservation easement	15,288	(0.7%)
13			
14	Federal lands	926,679	(44.8%)
15	USFS	716,702	(34.6%)
16	BLM	209,977	(10.2%)
17	NPS	0	(0%)
18	Other federal	0	(0%)
19			
20	State lands	148,968	(7.2%)
21	State Trust lands	55,051	(2.7%)
22	Other State	93,917	(4.5%)
23			
24	Tribal lands	395,857	(19.1%)
25			
26	Total Area	2,068,508	

27
 28 In each county, the Headwaters Economics Economic Profile System (EPS) categorizes federal
 29 lands as Type A, B, and C to more easily distinguish lands according to primary or common uses
 30 and/or conservation functions, activities, permitted uses, and whether they have a special
 31 designation (EPS 2016). The three land types are defined as follows:

- 32
- 33 • **Type A:** National Parks and Preserves (NPS), wilderness (NPS, U.S. Fish and Wildlife
 34 Service [USFWS], USFS, BLM), National Conservation Areas (BLM), National
 35 Monuments (NPS, USFS, BLM), National Recreation Areas (NPS, USFS, BLM),
 36 National Wild and Scenic Rivers (NPS, USFS, BLM), Waterfowl Production Areas
 37 (USFWS), Wildlife Management Areas (USFWS), Research Natural Areas (USFS,
 38 BLM), Areas of Critical Environmental Concern (ACECs) (BLM), and National Wildlife
 39 Refuges (USFWS). Type A lands tend to have more managerial and commercial use
 40 restrictions than Type C lands.
 - 41
 - 42 • **Type B:** Wilderness Study Areas (NPS, USFWS, USFS, BLM), Inventoried Roadless
 43 Areas (USFS).
 - 44

- Type C: Public Domain Lands (BLM), O&C Lands (BLM), National Forests and Grasslands (USFS). Type C lands generally have no special designations and may allow a wider range of uses.

Type A, B, and C federal lands in Duchesne County by acres and percentages are presented in Table LU3.

Table LU3. Acres and Percentages of Type A, B, and C Federal Lands in Duchesne County

Land Type	Duchesne County
Type A	328,817 (35.4%)
Type B	361,238 (38.9%)
Type C	237,784 (25.6%)
Total Federal Area	927,839

Source: EPS (2016).

Duchesne County 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 law and regulation. These laws and regulations require public land management agencies to prepare land and resource management plans. These land and resource management plans include land use allocations that specify locations that are available or not 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.

This policy document has been developed to protect the interests of Duchesne County, the State of Utah, and the nation. It is designed to ensure the spirit and intent of the laws, regulations, and policies that govern and manage public lands. This policy document also provides the basis for federal and state consistency analysis.

This policy document and subsequent implementation plans are to be followed unless inconsistent with any statute or duly promulgated regulation. Should any part of this policy document or implementation plan be found inconsistent with such statute or regulation, or found by a court with competent jurisdiction to be void, unenforceable, or invalid, the remaining

1 provision or parts shall nevertheless remain in full force and effect. For the purpose of this
2 policy, all reference to analysis means NEPA analysis, unless otherwise specified.

3
4 Local governments and citizens are often the “closest to the ground” and have the best
5 understanding of how land use practices of federal agencies will affect local communities.
6 The BLM, in mid-December 2016, revised the agency’s planning regulations for developing
7 resource management plans. The revised regulations are referred to by BLM as Planning 2.0.
8 BLM’s Planning 2.0 regulations would negatively affect Duchesne County by encouraging the
9 agency to move away from multiple-use sustained-yield management principles to planning that
10 focuses on ecological metrics and landscapes as opposed to commonly used administrative
11 boundaries. Lawsuits were filed against the Planning 2.0 rule shortly after it was finalized and
12 the rule was repealed by Congress in March 2017.

13
14 Section 102(a) of the Federal Land Policy and Management Act of 1976 (FLPMA) requires that
15 all public lands be retained in federal ownership unless it is determined that disposal of a
16 particular parcel will serve the national interest. Furthermore, Section 203(a) of FLPMA provides
17 for the sale of public lands if one of the following criteria is met: 1) the tract is difficult and
18 uneconomic to manage as part of the public lands and is not suitable for management by another
19 federal agency; 2) such tract was acquired for a specific purpose and the tract is no longer
20 required for that or any other federal purpose; or 3) disposal of such tract will serve important
21 public objectives, including expansion of communities and economic development that cannot be
22 achieved prudently or feasibly on land other than public land.

23
24 The *Bureau of Land Management Vernal Field Office Record of Decision and Approved Resource*
25 *Management Plan* (BLM Vernal ROD/RMP) identifies 33,359 acres of land for potential federal
26 disposal (of which 3,258 acres are in Duchesne County). The BLM has identified 42,550 acres of
27 land for potential federal acquisition (of which 3,729 acres are in Duchesne County). See Map #2 for
28 the location of these lands.

29 30 **Objectives**

31
32 The following objectives will guide the development of implementation measures to be used
33 under this section and are a guide for public land managers during consistency review, planning
34 and management processes. If the provisions of this policy document are germane to a proposal
35 involving public lands planning by a state or federal agency, such agency shall consider the
36 contents of this policy document in the decision-making process along with advice offered by
37 Duchesne County during the process.

38
39 The County’s objectives are:

- 40
41 1. Avoid loss of private lands within the county boundaries as measured by acreage and fair
42 market value.
- 43
44 2. Encourage disposal of federal lands to support community growth and community needs.

- 1 3. Improve communication and coordination among various federal, state, tribal, and local
2 land use authorities.
3
- 4 4. Minimize impacts of development and land use changes on local governments,
5 infrastructure, and community services.
6
- 7 5. Ensure that adjacent land uses and land use restrictions do not deny private property
8 owners the right of fair use, access to, and enjoyment of their property.
9
- 10 6. Discourage or eliminate land use restrictions or special designations that restrict
11 economic growth and activity, especially on federal lands.
12
- 13 7. Promote land uses on federal lands consistent with the principles of multiple use and
14 sustained yield as directed by the FLPMA and the Multiple Use and Sustained Yield Act
15 of 1960 as amended by the Omnibus Parks and Public Lands Management Act of 1996.
16

17 **Policies**

- 18
- 19 1. Federal and state governments currently hold sufficient land to protect the public interest.
20
- 21 2. Federal lands shall be available for disposal when lands are difficult to manage or consist
22 of isolated tracts, when such disposal meets the important public objective of community
23 expansion or economic development, or when the disposal would serve the public
24 interest.
25
- 26 3. The county should be consulted on any federal land acquisition or disposal actions
27 located within the borders of, or in close proximity to, the county.
28
- 29 4. Lands must be made available for disposal under the Recreation and Public Purposes Act
30 of 1954 and in resource management plans and upon request by an appropriate entity in
31 accordance with the act.
32
- 33 5. The county shall encourage and participate in coordination and communication among
34 various federal, state, tribal, and local land management authorities. Where appropriate,
35 the county will enter into a reciprocal agreement to require notification of planning
36 decisions made by each entity and to provide an opportunity for comments.
37
- 38 6. Duchesne County supports the wise use, conservation and protection of public lands and
39 their resources, including well-planned management prescriptions. It is the County's
40 position that public lands be managed for multiple uses, sustained yields, prevention of
41 waste of natural resources, and to protect the health, safety and welfare of the public. It is
42 important to the County economy that public lands be properly managed for fish, wildlife,
43 livestock production, timber harvest, recreation, energy production, mineral extraction
44 and the preservation of natural, scenic, scientific and historical values.

- 1 7. Multiple use and sustained yield management means that state and federal agencies shall
2 develop and implement management plans and make other resource-use decisions which
3 facilitate land and natural resources use allocation which would support the specific
4 plans, programs, processes, and policies of state agencies and local governments. Such
5 management plans shall be designed to produce and provide the watersheds, food, fiber,
6 and minerals necessary to meet future economic growth needs and community expansion.
7 Such plans shall meet the recreational needs of the citizens of Duchesne County and the
8 state without permanent impairment of the productivity of the land.
9
- 10 8. In support of the national interest in energy independence and in consideration of the
11 nation’s dependence on foreign oil, it is important that public lands remain open for oil
12 and gas exploration and production.
13
- 14 9. The County recognizes that federal agencies are mandated to manage public lands
15 according to federal laws, policies, and regulations established within the framework of
16 the U. S. Constitution, including, but not limited to the National Environmental Policy
17 Act (NEPA), the Endangered Species Act (ESA), the Clean Water Act (CWA), the
18 Federal Land Policy and Management Act (FLPMA), the National Forest Management
19 Act (NFMA), the Wilderness Act, the Utah Wilderness Act and the Wild and Scenic
20 Rivers Act.
21
- 22 10. The Secretary of Interior, under FLPMA, is required to ensure that federal land use plans
23 are consistent with state and local plans to the maximum extent possible (provided the
24 Secretary finds such plans to be consistent with federal law and the purposes of the act).
25 Under NEPA, federal agencies are required to integrate environmental impact statements
26 into state or local planning processes. Such statements shall discuss any inconsistency of
27 a proposed action with approved state or local plans or laws (whether or not federally
28 sanctioned). Where an inconsistency exists, the statement should describe the extent to
29 which the federal agency would reconcile its proposed action with the plan or law.
30
- 31 11. Counties have the right to be involved in public lands planning before the general public
32 has the opportunity to be involved and before a preferred alternative is selected. Counties
33 may request that monitoring occur to determine the effects that land and resource
34 management plans have on the local economy. Counties are allowed to define what
35 constitutes “community or economic stability.”
36

37 Sections 63J-8-103 and 63J-8-104 of the Utah Code define state participation in managing public
38 lands and require consistency between federal and state plans as follows:
39

40 Section 63J-8-103: “In view of the requirement in FLPMA, 43 U.S.C. Sec. 1712, that
41 BLM must work through a planning process that is coordinated with other federal, state,
42 and local planning efforts before making decisions about the present and future uses of
43 public lands, the requirement in FLPMA, 43 U.S.C. Sec. 1714 that BLM may not
44 withdraw or otherwise designate BLM lands for specific purposes without congressional

1 approval, and the requirement in the Forest Service Multiple-Use Sustained Yield Act of
2 1960, 16 U.S.C. Sec. 528, that lands within the national forests be managed according to
3 the principles of multiple use, and in view of the right which FLPMA, the National
4 Environmental Policy Act, 42 U.S.C. Sec. 4321 et seq. and the Federal Advisory
5 Committee Act, 5 U.S.C. Appendix 2, give to state and local governments to participate
6 in all BLM and Forest Service efforts to plan for the responsible use of BLM and Forest
7 Service lands and the requirement that BLM and the Forest Service coordinate planning
8 efforts with those of state and local government, the state [and Duchesne County] adopts
9 the following policy for the management of the subject lands:

- 10
11 1. Pursuant to the proper allocation of governmental authority between the several
12 states and the federal government, the implementation of congressional acts
13 concerning the subject lands must recognize the concurrent jurisdiction of the
14 states and accord full recognition to state interpretation of congressional acts, as
15 reflected in state law, plans, programs, and policies, insofar as the interpretation
16 does not violate the Supremacy Clause, U.S. Constitution, Article VI, Clause 2.
17
- 18 2. Differences of opinion between the state's plans and policies on use of the subject
19 lands and any proposed decision concerning the subject lands pursuant to federal
20 planning or other federal decision making processes should be mutually resolved
21 between the authorized federal official, including federal officials from other
22 federal agencies advising the authorized federal official in any capacity, and the
23 governor of Utah.
24
- 25 3. The subject lands managed by the BLM are to be managed to the basic standard of
26 the prevention of undue and unnecessary degradation of the lands, as required by
27 FLPMA. A more restrictive management standard should not apply except
28 through duly adopted statutory or regulatory processes wherein each specific area
29 is evaluated pursuant to the provisions of the BLM's planning process and those of
30 the National Environmental Policy Act.
31
- 32 4. The subject lands should not be segregated into separate geographical areas for
33 management that resembles the management of wilderness, wilderness study
34 areas, wildlands, lands with wilderness characteristics, or the like.
35
- 36 5. The BLM and the Forest Service should make plans for the use of the subject
37 lands and resources subject to their management pursuant to statutorily authorized
38 processes, with due regard for the provisions of the National Environmental
39 Policy Act, by:
 - 40
41 a. Recognizing that the duly adopted Resource Management Plan or Forest
42 Service equivalent is the fundamental planning document, which may be
43 revised or amended from time to time;
44

- b. Avoiding and eliminating any form of guidance or policy that has the effect of prescreening, segregating, or imposing any form of management requirements upon any of the subject lands and resources prior to any of the planning processes subject to Subsection (5)(a); and
- c. Avoiding and eliminating all forms of planning that parallel or duplicate the planning processes subject to Subsection (5)(a).”

Section 63J-8-104: “The BLM and Forest Service land use plans should produce planning documents consistent with state and local land use plans to the maximum extent consistent with federal law and FLPMA's purposes, by incorporating the state's land use planning and management program for the subject lands that preserve traditional multiple use and sustained yield management on the subject lands to:

1. Achieve and maintain in perpetuity a high-level annual or regular periodic output of agricultural, mineral, and various other resources from the subject lands;
2. Support valid existing transportation, mineral, and grazing privileges in the subject lands at the highest reasonably sustainable levels;
3. Produce and maintain the desired vegetation for watersheds, timber, food, fiber, livestock forage, wildlife forage, and minerals that are necessary to meet present needs and future economic growth and community expansion in each county where the subject lands are situated without permanent impairment of the productivity of the land;
4. Meet the recreational needs and the personal and business-related transportation needs of the citizens of each county where the subject lands are situated by providing access throughout each such county;
5. Meet the needs of wildlife, provided that the respective forage needs of wildlife and livestock are balanced according to the provisions of Subsection 63J-4-401(6)(m);
6. Protect against adverse effects to historic properties, as defined by 36 C.F.R. Sec. 800;
7. Meet the needs of community economic growth and development;
8. Provide for the protection of existing water rights and the reasonable development of additional water rights; and
9. Provide for reasonable and responsible development of electrical transmission and energy pipeline infrastructure on the subject lands.”

1 Duchesne County incorporates the above sections of the Utah Code into the county resource
2 management plan and it is County policy that federal land management agencies are to comply
3 with Utah law to the greatest extent possible, as required by FLPMA, as they manage federal land
4 in Utah.

5
6 **Multiple Use and Sustained Yield**

7
8 Multiple Use and Sustained Yield, in terms of the national forests, is defined as follows:
9

10 Section 4 [16 U.S.C. 531] (a) “Multiple use” means: The management of all the various
11 renewable surface resources of the national forests so that they are utilized in the combination
12 that will best meet the needs of the American people; making the most judicious use of the land
13 for some or all of these resources or related services over areas large enough to provide sufficient
14 latitude for periodic adjustments in use to conform to changing needs and conditions; that some
15 land will be used for less than all of the resources; and harmonious and coordinated management
16 of the various resources, each with the other, without impairment of the productivity of the land,
17 with consideration being given to the relative values of the various resources, and not necessarily
18 the combination of uses that will give the greatest dollar return or the greatest unit output.
19

20 Section 4 [16 U.S.C. 531] (b) “Sustained yield of the several products and services” means the
21 achievement and maintenance in perpetuity of a high-level annual or regular periodic output of
22 the various renewable resources of the national forests without impairment of the productivity of
23 the land.
24

25 **Policy:** It is the policy of Duchesne County that:

- 26
- 27 1. The citizens of the County are best served by applying multiple-use and sustained-yield
28 principles in public land use planning and management; and
29
 - 30 2. Multiple-use and sustained-yield management means that federal agencies should develop
31 and implement management plans and make other resource-use decisions that:
32
 - 33 a. Achieve and maintain in perpetuity a high-level annual or regular periodic output
34 of mineral and various renewable resources from public lands;
35
 - 36 b. Support valid existing transportation, mineral, and grazing privileges at the
37 highest reasonably sustainable levels;
38
 - 39 c. Support the specific plans, programs, processes, and policies of state agencies and
40 local governments;
41
 - 42 d. Are designed to produce and provide the desired vegetation for the watersheds,
43 timber, food, fiber, livestock forage, and wildlife forage, and minerals that are
44 necessary to meet present needs and future economic growth and community

- 1 expansion without permanent impairment of the productivity of the land;
- 2
- 3 e. Meet the recreational needs and the personal and business-related transportation
- 4 needs of the citizens of the state by providing access throughout the state;
- 5
- 6 f. Meet the recreational needs of the citizens of the state;
- 7
- 8 g. Meet the needs of wildlife;
- 9
- 10 h. Provide for the preservation of cultural resources, both historical and
- 11 archaeological;
- 12
- 13 i. Meet the needs of economic development;
- 14
- 15 j. Meet the needs of community development; and
- 16
- 17 k. Provide for the protection of water rights and water quality.
- 18
- 19 3. All plans and management decisions must ensure that special designations do not
- 20 influence the use of resources on lands not listed. The County opposes the use of a buffer
- 21 zone management philosophy that dictates land use practices and influences decisions
- 22 beyond the scope and boundaries of the designations. The County also opposes the
- 23 imposition of Areas of Critical Environmental Concern (ACEC), National Conservation
- 24 Areas or Visual Resource Management (VRM) classifications as substitutes for former
- 25 Wilderness Inventory Units or Citizens' Proposed Wilderness Units, or as a means to
- 26 displace valid surface occupying multiple use activities. ACEC and VRM classifications
- 27 are improper management tools unless narrowly drawn and tailored, both geographically
- 28 and programmatically, to effect only those restrictions which are actually necessary to
- 29 prevent irreparable damage to valid and relevant resource values. Imposing VRM
- 30 classifications that result in the prohibition of valid surface occupying or surface
- 31 disturbing activities is an improper use of the VRM tool, which contradicts this County
- 32 policy.
- 33
- 34 4. Restrictions placed on any resource must be based on trend analysis or other analysis
- 35 applicable to the resource and only imposed after a complete analysis.
- 36
- 37 5. Lands designated open for specific uses should be available on a timely basis. If such use
- 38 is not covered in a resource management plan, then it will be analyzed in a separate
- 39 document or by amendment to the RMP. Extended delays or no action will not be used
- 40 as a method to accomplish management goals.
- 41

42 **Policy:** It is the policy of Duchesne County that public land agencies must consult with
43 Duchesne County on certain plans or actions they propose on public lands as required by agency
44 regulations and rules. Public land agencies shall:

- 1 1. Grant the County cooperating agency status on any proposed actions within the NEPA
2 process. The County shall be notified regarding natural resource area management
3 actions and participate accordingly.
4
- 5 2. File a written report detailing how consistency was analyzed with respect to agency
6 actions or plans. The report must identify where inconsistencies exist, why consistency is
7 impossible, and any plausible way to correct the inconsistencies.
8
- 9 3. Provide an opportunity for the County to have meaningful participation in the
10 development, monitoring and analysis of any studies conducted on resources associated
11 with public lands.
12
- 13 4. Notify the County of any proposed action that will affect the County's culture and
14 heritage values.
15
- 16 5. Provide a detailed socio-economic analysis, including cumulative impacts, of proposed
17 agency actions on Duchesne County's tax base, economy, culture and heritage values.
18
- 19 6. Certify that applicable data used to develop agency proposals meet the requirements of
20 the federal Data Quality Act.
21
- 22 7. Consider compensation of any individual or entity physically or financially harmed by
23 federal and state actions, including negative impacts on the County tax base.
24
- 25 8. Analyze the ability of Duchesne County to provide emergency services, law enforcement,
26 water and waste management, search and rescue and other essential services to support a
27 proposed agency action.
28
- 29 9. Analyze the impacts of proposed agency actions on traditional uses such as recreation,
30 grazing, energy development, timber, fish, and wildlife.
31
- 32 10. Make no decisions on agency plans and actions in a piece-meal fashion. The agency must
33 analyze the present and future impact of the proposal, including but not limited to: the
34 need for buffer zones, protection of prey species and protection of viewscapes.
35
- 36 11. Mitigate negative impacts of any agency proposed action.
37
- 38 12. Provide public access and rights-of-way for utilities and/or transportation of products and
39 provide such additional access when future need is demonstrated.
40
- 41 13. Agency actions shall be reasonable and shall not cause excessive cost, time delays, or
42 undue hardship to applicants or the citizens of Duchesne County.
43
- 44 14. Ensure that guidelines, protocols, and other policies used to direct any activity on public

1 lands do not contain restrictions or protections not provided by law or regulation. Any
2 such actions must be developed and implemented with local government and public
3 participation.
4

5 15. Keep the County fully informed of public land management action proposals and allow
6 time for development of the County position should it not be clearly defined in the
7 County general plan or this policy document.
8

9 In the event that an agency seeks consultation with the County, the request shall be in writing that
10 such consultation is formal and will be treated as such.
11

12 **Special Designations in General**

13

14 Administrative designations contained in federal land use plans, such as ACECs, special
15 recreation management areas (SRMAs), or other prescriptive designations, can dictate practices
16 that restrict access or use of the land and negatively impact other resources or their use. Such
17 designations cause resource waste, serious impacts to other important resources and actions, and
18 are inconsistent with the principles of multiple use and sustained yield.
19

20 The Federal Land Policy Management Act (FLPMA) defines an ACEC as “areas within the
21 public lands where special management attention is required (when such areas are developed or
22 used or where no development is required) to protect and prevent irreparable damage to
23 important historic, cultural, or scenic values, fish and wildlife resources or other natural systems
24 or processes, or to protect life and safety from natural hazards.”
25

26 Section 201 [43 U.S.C. 1711] (a) gives the following guidance regarding ACECs: “The
27 Secretary shall prepare and maintain on a continuing basis an inventory of all public lands and
28 their resource and other values (including, but not limited to, outdoor recreation and scenic
29 values), giving priority to areas of critical environmental concern. This inventory shall be kept
30 current so as to reflect changes in conditions and to identify new and emerging resource and
31 other values. The preparation and maintenance of such inventory or the identification of such
32 areas shall not, of itself, change or prevent change of the management or use of public lands.”
33

34 The Bureau of Land Management, in their 2008 Vernal RMP, has established three Areas of
35 Critical Environmental Concern and one SRMA that contain lands in Duchesne County (see Map
36 #3).
37

38	Nine Mile Canyon ACEC	(40,285 acres in Duchesne County – 44,168 acres total)
39	Nine Mile Canyon SRMA	(36,956 acres in Duchesne County – 44,135 acres total)
40	Lear’s Canyon ACEC	(1,375 acres – all in Duchesne County)
41	Pariette Wetlands ACEC	(839 acres in Duchesne County – 10,437 acres total)

42
43
44

1 **General Policies:** It is the policy of Duchesne County that:

- 2
- 3 1. In general, the objectives of special designations can be met by well-planned and
- 4 managed development of natural resources. For this reason, no special designations shall
- 5 be proposed until the need has been determined and substantiated by verifiable scientific
- 6 data available to the public. Furthermore, it must be demonstrated that protection cannot
- 7 be provided by other means and that the area in question is truly unique compared to
- 8 other area lands.
- 9
- 10 2. Special designations can be detrimental to the County’s economy, life style, culture, and
- 11 heritage. Therefore special designations must be made in accordance with the spirit and
- 12 direction of the laws and regulations that created them.
- 13
- 14 3. Special designation areas do not include, and Duchesne County expressly prohibits
- 15 designation or creation of any protective perimeter or buffer zone around any special
- 16 designation area, including wilderness. The fact that activities or uses can be seen or
- 17 heard from within special designation areas shall not preclude such activities or uses up to
- 18 the boundary of the special designation area.
- 19

20 **Grazing Polices in Special Designation Areas**

- 21
- 22 1. Special designation areas shall be actively managed by local, state and federal agencies to
- 23 preserve valid existing rights and all grazing rights. Grazing permit holders and other
- 24 affected parties may employ a full range of management techniques, including, but not
- 25 limited to, mechanical, chemical, agricultural, natural or other methods as deemed
- 26 necessary. Permittees, local, state and federal agencies, as stewards of special designation
- 27 areas, shall fully cooperate and coordinate management efforts to ensure that water, soil,
- 28 vegetation, timber, mineral, recreation, wildlife and other resources are properly managed
- 29 in a cohesive and collaborative multiple use stewardship effort. This authority shall
- 30 include fuel reduction and salvage harvest projects necessary to establish and maintain
- 31 healthy forests.
- 32
- 33 2. The grazing of livestock in special designation areas shall continue to be regulated by the
- 34 terms of the grazing allotment permit, rules, regulations, manuals and handbooks or other
- 35 guidance that might apply to national forest or public domain lands (including the *BLM*
- 36 *Utah Standards for Rangeland Health and Guidelines for Grazing Management* on BLM
- 37 lands. Livestock grazing shall be entitled to continue as a valid existing right and shall be
- 38 entitled to renewal consistent with the following:
- 39
- 40 a. If range conditions warrant, grazing levels and season of use shall remain at the
- 41 same level per permittee when the affected allotment is designated as a special
- 42 designation area. Grazing levels may increase upon monitoring data developed
- 43 for a minimum of five (5) years showing that there is additional forage and the
- 44 increased grazing will not adversely affect vegetation resources.

- 1 b. There shall be no reductions in grazing numbers of both active and suspended
2 AUM's or in the season of use in special designation areas simply because an area
3 is, or has been designated as such, nor should any special designation be used by
4 administrators to slowly phase out grazing. Any changes in grazing use shall only
5 be temporary AUM reductions due to drought or other natural occurrences and
6 shall be based on monitoring data of at least five (5) years duration from studies
7 designed to measure change over time and which document a causal link between
8 livestock grazing and resource deterioration. No permanent grazing reductions
9 shall occur if the data fails to show that livestock grazing is a causal factor and
10 does not distinguish livestock impacts from those of wildlife or natural forces,
11 such as drought, wildfire or flood, or other activities, such as recreation. All
12 monitoring shall be conducted in close cooperation, consultation and coordination
13 with the permittees in any affected allotment.
14
- 15 c. The administration of grazing permits shall include the right to access the
16 allotments and private lands using motorized vehicles, if applicable, and to apply
17 the same full range of active management techniques on all range improvements
18 including roads and trails as in any non-special designation area. The term
19 "administration" is not limited to the grazing season and includes access to check
20 on the status of range projects and range resource conditions, research and
21 monitoring, maintenance, repair, construction, reconstruction, and installation of
22 range improvements, trailing and moving livestock according to existing
23 allotment management plans or established grazing practices. Special designation
24 areas, in no way, limit administration of grazing permits.
25
- 26 d. Grazing permits shall be fully transferrable under the same Acts, rules and
27 policies that apply to transfers of grazing permits located in non-special
28 designation areas.
29
- 30 e. Special designation areas within the National Forest System shall not be managed
31 to give priority or preference to wildlife populations or wildlife habitat over
32 livestock grazing. Livestock grazing permits shall not be reduced, discontinued,
33 or suspended due to big horn sheep populations, existing or re-introduced elk,
34 moose, mule deer, mountain goats, wild horses, buffalo or any other wildlife
35 species in special designation areas.
36
- 37 f. Livestock permits shall be renewed for a term of ten (10) years according to
38 existing terms and permits consistent with the above or incorporation of new
39 regulation changes that lengthen the term of the renewal.
40

41 **Vegetation Management Policies for Special Designation Areas**
42

- 43 1. In special designation areas, permittees, local, state and federal entities shall cooperate,
44 consult and coordinate in order to actively manage vegetation with a full range of

1 management tools and techniques including, but not limited to, mechanical, chemical,
2 agricultural, natural, or other methods as deemed necessary by the permittee or entity.
3 Duchesne County finds the unhealthy state of the forest and timber resources in the
4 County to be unacceptable. Duchesne County supports proper and active management of
5 forest resources, as well as the myriad of resources that will be adversely affected by
6 catastrophic wildfire. Such active management requires logging, motorized access,
7 mechanical and chemical treatments, as well as monitoring, thinning, reclamation and
8 seeding.

- 9
10 2. Vegetation management shall also include methods to control non-native, noxious and
11 invasive plant species.
12

13 **Wildlife Policies in Special Designation Areas**

- 14
15 1. Permittees, local, state and federal entities shall be entitled to engage in a full range of
16 active habitat management practices, including those vegetation treatments discussed
17 above, as well as installation of physical water guzzlers or troughs, gates, fences or other
18 improvements for the purpose of benefitting fish or wildlife habitat.
19
20 2. Motorized vehicle access and the use of mechanical equipment shall be permitted in the
21 establishment of improvements for the purpose of benefitting fish or wildlife habitat.
22
23 3. Habitat improvement and vegetation management shall include reduction in fuel loads,
24 removal or control of invasive or non-native species and removal of decadent or
25 undesirable vegetation to improve habitat or biological diversity.
26
27 4. Wild horses, if any, shall be kept within their Herd Management Area (HMA) and shall
28 be removed from any private, state or federal land outside of the HMA immediately upon
29 notice by any Permittee, local, state or federal entity that wild horses have strayed from
30 their HMA. The parties recognize that responsible management of wild horses is
31 necessary to mitigate negative environmental effects on the range, wildlife habitat,
32 riparian areas and other resources.
33
34 5. Special designation area management will not impair or impede predator control and a
35 full range of methods shall be used to protect and actively manage wildlife and livestock.
36 Areas established in County plans for habitat management, such as for the Greater Sage
37 Grouse, will be counted as conservation areas for special designation mitigation.
38
39 6. Prior to listing any species as threatened or endangered pursuant to the Endangered
40 Species Act, Duchesne County expects listing agencies to exhaust all potential
41 conservation efforts to prevent listing of the species. Conservation efforts may include,
42 but are not limited to, Conservation Plans or Conservation Agreements between federal
43 agencies, the state and private landowners and permittees. All Conservation Plans and
44 Agreements must be granted a minimum term of ten (10) years to show improvements in

1 habitat or population numbers. Demonstrable improvement will automatically extend the
2 agreement for an additional five (5) year period until the species is stable. The MOU
3 with the Animal and Plant Health Inspection Service (APHIS) will be acknowledged and
4 used for predator control. Duchesne County encourages the U.S. Fish and Wildlife
5 Service to acknowledge this authority and accept state management of wildlife under its
6 sovereign rights.

7
8 **Water Rights Policies in Special Designation Areas**
9

- 10 1. No special designation areas shall include any water rights or the presumption of a water
11 right, whether reserved, unreserved, absolute, conditional or otherwise for any purpose
12 relating to said special designations.
13
14 2. Nothing in a special designation decision shall have any impact on the certification,
15 development, use, change, maintenance or expansion of water rights to any existing or
16 future use or permit as allowed by Utah State Code within a special designation area,
17 whether such rights are held by a person or other entity.
18
19 3. No special designation area shall impair or impede construction of facilities to develop,
20 divert, change, store, apply or otherwise use water.
21
22 4. Canals, ditches, springs and all other water structures must be accessible to motorized
23 vehicles and equipment for maintenance and protection purposes. Administrative motor
24 vehicle access shall be established for repair and maintenance of water impoundment
25 facilities in the High Uintas Wilderness.
26
27 5. All canals, ditches and water structures shall be protected by an adequate buffer on either
28 side of the center of the canal, ditch or structure. Management prescriptions associated
29 with special designation areas shall not conflict with such protection areas.
30
31 6. Stock ponds, watering holes, fencing or the placement of troughs on springs shall be
32 considered improvements.
33
34 7. Any in-stream water right created by the designation of Wild and Scenic Rivers is junior
35 to all absolute and conditional water rights existing before the special designation is
36 finalized.
37
38 8. Nothing in the special designation decision shall be construed to take or reduce the State
39 of Utah's sovereign authority over all waters within the State and to make and enforce all
40 laws, rules or regulations or Utah's rights and authority pursuant to the Colorado River
41 Compact of 1922.
42
43
44

1 **Watershed Policies in Special Designation Areas**

- 2
- 3 1. Notwithstanding creation of a special designation area, and in accordance with the
- 4 conservation principles set forth above, a permittee or local, state or federal agency shall
- 5 actively manage and employ a full range of management techniques to protect water
- 6 development, including domestic and agricultural water resources, in a watershed area
- 7 and to promote watershed health. Watershed protection areas shall be counted as a
- 8 conservation use.
- 9
- 10 2. Vegetation management projects in watershed areas shall include restoration and removal
- 11 or timber to limit wildfire impacts, protect riparian areas, ensure appropriate water flows
- 12 and enhance water flows.
- 13
- 14 3. Local, state and federal agencies responding to wildfire shall be allowed to use motorized
- 15 vehicles, mechanical equipment and any other means necessary to protect watersheds.
- 16 Special designation areas shall be a priority for fire suppression and control to protect
- 17 water quality and water quantity.
- 18

19 **Transportation Policies in Special Designation Areas**

- 20
- 21 1. In general, all roads, two-tracks and historic trails in the County, located within,
- 22 bordering or reaching a special designation area will continue to be open and accessible
- 23 by all methods of travel, including motorized vehicles and shall not be closed, obliterated,
- 24 gated or blocked without the prior approval of the Duchesne County Commission. This
- 25 provision is consistent with the active management policies of Duchesne County and is
- 26 necessary to facilitate use of the full range of land management tools.
- 27
- 28 2. Pursuant to the Act of July 26, 1866, Chapter 262, Section 8, Stat. 251, 253 codified at 43
- 29 USC Section 932, all public trails, roads, livestock byways and other rights of way shall
- 30 remain open and accessible to historic uses and shall not be closed, obliterated, gated or
- 31 blocked without the prior approval of the Duchesne County Commission.
- 32
- 33 3. Congress shall recognize all Duchesne County RS 2477 claims on public roads crossing
- 34 federal lands, outside of special designation areas, in the County.
- 35
- 36 4. Congress shall allow for motorized travel in all existing or new wilderness in Duchesne
- 37 County for the purpose of search and rescue in the event of an emergency.
- 38
- 39 5. In the Nine Mile Canyon ACEC, there is a pending Settlement Agreement (Settlement
- 40 Agreement in Southern Utah Wilderness Alliance, et al. v. U.S. Department of the
- 41 Interior, et al., U.S. District Court (D. Utah) Consolidated Case No. 2:12-cv-257 DAK
- 42 U.S. Court of Appeals for the Tenth Circuit Nos. 15-4151, 15-4152, 15-4153, 15-4155,
- 43 15-4158). The court has ordered that a Travel Management Plan will take place in the
- 44 Nine Mile Canyon ACEC. This Settlement Agreement dictates the requirements that will

1 be followed for evaluating all roads, routes, trails, etc. in this area. If Duchesne County
2 (as an intervener) agrees to this settlement, then it will be obligated to abide by conditions
3 spelled out in the Settlement Agreement, and consequently, the general policies above
4 may not apply. Duchesne County will be invited to be a Cooperating Agency for the
5 Travel Management Plan for the Nine Mile Canyon ACEC.
6

7 **Recreation Policies in Special Designation Areas**
8

- 9 1. All existing recreation uses, including hunting, fishing, off-road vehicle travel,
10 snowmobiling and cycling shall continue to the same degree and in the same manner.
11 Such continued right of use shall include the use of motorized vehicles and mechanical
12 equipment along all existing roads and trails.
13
14 2. Dispersed camping shall be allowed within 300 feet of roads to provide an adequate
15 buffer between campsites and roads and ensure a safe and healthy environment for
16 camping and associated recreational activities.
17
18 3. Existing campgrounds shall be preserved and current recreation uses shall be allowed to
19 continue in the same manner and degree.
20

21 **Policies for Areas of Critical Environmental Concern**
22

23 Consistent with Chapter 63J-4-401 of the Utah Code, County support for the designation of an
24 Area of Critical Environmental Concern shall be withheld until:
25

- 26 1. It is clearly demonstrated that the proposed area satisfies all the definitional requirements
27 of the Federal Land Policy and Management Act of 1976, 43 U.S.C. Sec. 1702(a);
28
29 2. It is clearly demonstrated that the area proposed for designation as an ACEC is limited in
30 geographic size and that the proposed management prescriptions are limited in scope to
31 the minimum necessary to specifically protect and prevent irreparable damage to the
32 relevant and important values identified, or limited in geographic size and management
33 prescriptions to the minimum required to specifically protect human life or safety from
34 natural hazards;
35
36 3. It is clearly demonstrated that the proposed area is limited only to areas that are not
37 already developed or used or to areas where no development is required;
38
39 4. It is clearly demonstrated that the proposed area contains historic, cultural or scenic
40 values, fish or wildlife resources, or natural processes, which are unique or substantially
41 significant and that the land area of the proposed designation is limited to the minimum
42 acreage required to protect those resources;
43
44 5. The regional values, resources, processes, or hazards have been analyzed by the federal

1 agency for impacts resulting from potential actions which are consistent with the
2 multiple-use, sustained-yield principles, and that this analysis describes the rationale for
3 any special management attention required to protect, or prevent irreparable damage to
4 the values, resources, processes, or hazards;

- 5
- 6 6. It is clearly demonstrated that the proposed designation is consistent with the plans and
7 policies of the state and of the county where the proposed designation is located as those
8 plans and policies are developed according to Subsection (3) of Chapter 63J-4-401 of the
9 Utah Code;
- 10
- 11 7. It is clearly demonstrated that the proposed ACEC designation will not be applied
12 redundantly over existing protections provided by other state and federal laws for federal
13 lands or resources on federal lands, and that the federal statutory requirement for special
14 management attention for a proposed ACEC will discuss and justify any management
15 requirements needed in addition to those specified by the other state and federal laws;
- 16
- 17 8. The difference between special management attention required for an ACEC and normal
18 multiple-use management has been identified and justified, and that any determination of
19 irreparable damage has been analyzed and justified for short and long-term horizons;
- 20
- 21 9. It is clearly demonstrated that the proposed designation is not a substitute for a wilderness
22 suitability recommendation, is not a substitute for managing areas inventoried for
23 wilderness characteristics after 1993 under the BLM interim management plan for valid
24 wilderness study areas; and it is not an excuse or justification to apply de facto wilderness
25 management standards;
- 26
- 27 10. The conclusions of all studies are submitted to the State of Utah and to Duchesne County,
28 as cooperating agencies, for review and the results, in support of or in opposition to, are
29 included in all planning documents;
- 30
- 31 11. Any impacts on private property rights are evaluated and mitigated.
- 32

33 **Visual Resource Management (VRM)**

34

35 BLM and USFS resource management plans also consider an area's visual values and identify
36 management classes with established objectives for public lands. The BLM's management of
37 visual resources includes identification of visual resource management (VRM) classes, which are
38 categories assigned to public lands based on scenic quality, sensitivity level, and distance zones.
39 There are four classes. Each class has an objective that prescribes the amount of change allowed
40 in the characteristic landscape. USFS classes are similar but are referred to as visual quality
41 objectives and include preservation, retention, partial retention, and modification designations.

- 42 • **VRM Class I objective:** To preserve the existing character of the landscape. The level of change
43 to the characteristic landscape should be very low and must not attract attention.

- 1 • **VRM Class II objective:** To retain the existing character of the landscape. The level of change to
 2 the characteristic landscape should be low.
- 3 • **VRM Class III objective:** To partially retain the existing character of the landscape. The level of
 4 change to the characteristic landscape should be moderate.
- 5 • **VRM Class IV objective:** To provide for management activities which require major
 6 modification of the existing character of the landscape. The level of change to the characteristic
 7 landscape can be high.

8 The 2008 BLM Vernal ROD/RMP (BLM 2008) and 1986 *Land and Resource Management Plan*
 9 *for the Ashley National Forest* (U.S. Department of Agriculture 1986) identify the following
 10 VRM prescriptions for federal lands (Tables LU4 and LU5):

Table LU4. Acres of Visual Resource Management Classes and Objectives for Federal Lands

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

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

Table LU5. Acres of Visual Resource Management Classes and Objectives for Bureau of Land Management Lands in Duchesne County

BLM Class	Duchesne County
VRM Class I	–
VRM Class II	7,943
VRM Class III	67,980
VRM Class IV	131,819

Sources: BLM (2009).

11
 12 Bureau of Land Management visual resource management classes in Duchesne County are shown
 13 on Map #4.

14
 15 **Policy**

16
 17 In accordance with Section 63J-8-104 (m) of the Utah Code, it is the policy of Duchesne County
 18 that a BLM visual resource management class I or II rating is generally not compatible with the

1 county's plan and policy for managing federal lands. Such designations may cause resource
2 waste, serious impacts to other important resources and actions, and are inconsistent with the
3 principles of multiple-use and sustained yield. However; special cases may exist where such a
4 rating is appropriate if jointly considered and created by state, local, and federal authorities as
5 part of an economic development plan for a region of the state, with due regard for valid existing
6 rights, school trust lands and private lands within the area.

7
8 **Land Exchanges, Acquisitions, and Sales**
9

10 Whereas more than fifty-percent of Duchesne County consists of public lands managed by
11 federal or state agencies, further loss of private property will result in a diminution of the
12 economic base and cultural values.

13
14 **Policy:** It is the policy of Duchesne County that:

- 15
16 1. Private property shall be protected from coerced acquisition by federal, state and local
17 governments.
18
19 2. The County shall be compensated for loss of private lands or tax revenues due to land
20 exchanges.
21
22 3. Private lands shall not be converted to state or federal ownership in order to compensate
23 for government activities outside of Duchesne County.
24
25 4. A private property owner has a right to dispose of or exchange property as he/she sees fit
26 within applicable law.
27
28 5. Any conversion from private property to public lands should result in no net loss of
29 private property. No net loss shall be measured both in terms of acreage and fair market
30 value.

31
32 EXCEPTION: Private property may be converted to public ownership only after written
33 approval by motion of the Duchesne County Commissioners on recommendation of the
34 Duchesne County Public Lands Committee (if desired by the Commission). In making
35 exceptions to the "no net loss rule," the following shall be considered:

- 36
37 1. The acreage of the proposed acquisition.
38
39 2. The proximity of the proposed acquisition to existing public lands.
40
41 3. The proximity of the proposed acquisition to conservation areas on private lands.
42
43 4. The property tax revenue received by the county under private ownership
44 compared to estimated payment in lieu of taxation under public ownership.

- 1 5. The private development potential of the subject land, including proximity to
2 public roads and utilities.
- 3
- 4 6. The proposed management scheme for the lands (the extent to which multiple use
5 will be allowed rather than restricted).
- 6
- 7 7. Whether the acquisition is needed to mitigate adverse environment affects
8 associated with public improvements that have occurred or are proposed.
- 9
- 10 8. Whether the agency proposing the acquisition has taken steps to dispose of
11 surplus lands in the County.
- 12

13 **Conservation Easements**

14
15 Chapter 57-18 of the Utah Code is known as the Land Conservation Easement Act.
16 Conservation easements are legal documents reducing certain property rights, in perpetuity,
17 offered voluntarily by private property owners in exchange for compensation or tax breaks, from
18 non-profit or government agencies. Once signed, conservation easements are to be recorded with
19 the County and notice given to the County Assessor. Land values can be greatly reduced as a
20 result of a conservation easement and such reductions have a negative effect on the County tax
21 base.

22
23 **Policy:** Duchesne County encourages property owners to consult legal counsel before
24 considering a conservation easement on their property and carefully consider the impacts of the
25 loss of certain property rights in perpetuity.

26 **Soils**

27
28
29 Soils in Duchesne County vary considerably, as do most of the soils in the Intermountain West.
30 Layers of Mancos shale are prevalent in the region and contain large amounts of salts. Flood
31 irrigating this land raises these salts to the surface, affecting yield and water quality when runoff
32 leaves the land. Deep percolation drives the salts down further into the soil and thus into the
33 water table. This salty water then seeps into the Green River, which is a tributary of the Colorado
34 River where high salinity is a problem.

35
36 To help alleviate this problem, farmers are being encouraged to convert from flood irrigation to
37 sprinklers. These sprinklers are more efficient, giving just enough water to help counter the salt
38 build-up on the surface of the land, as to not further contaminate the Colorado River. The soil in
39 Duchesne County is also very high alkaline.

40
41 Duchesne County is currently one of the few counties in the entire United States that is yet to
42 have its Digitized Soil Survey completed. Therefore, some soil information is not readily
43 available to the general public.

1 Soils used for agriculture production vary across the county, from most of the higher elevation
2 irrigated lands consisting of shallow rocky soils used mostly for grass and pasture production to
3 lower elevation lands used mostly for small grains and hay production.

4
5 **Policy:** It is the policy of Duchesne County that land management agencies shall:

- 6
7 1. Apply scientifically effective practices to maintain and improve the quality and quantity
8 desirable plant cover to protect watersheds, timber, and rangelands from soil erosion.
9
- 10 2. Install structural measures to prevent soil erosion, as needed.
11
- 12 3. Recognize the Natural Resource Conservation Service (NRCS) soil survey as the
13 authority in matters of soil conservation.
14
- 15 4. Encourage that a Digitized Soil Survey be completed for Duchesne County so that soil
16 information is readily available to the public.
17
- 18 5. Base soil conservation activities on all available survey drafts until a final survey is
19 published. Any deviation from this material or soil data developed outside of the survey
20 must be coordinated with the Duchesne County Soil Conservation District and Natural
21 Resource Conservation Service (NRCS).
22
- 23 6. Continue use of the NRCS Soil Climate Analysis Network (SCAN) sites located at Little
24 Red Fox and Mountain Home to monitor soil moisture and assess drought risk.
25

26 **Water Considerations**

27
28 Land use policies can have an effect on water quality and water consumption.

29
30 **Policy:** Duchesne County encourages preservation of water quality for beneficial uses and to
31 encourage conservation of water. Zoning ordinance standards shall encourage xeriscape and
32 drought tolerant landscaping over treatments that require significant watering.
33

34 **Transfer of Public Lands to the State**

35
36 **Findings:** Legislation passed in the State of Utah (HB 148, signed into law in 2012) has
37 demanded that the federal government extinguish title to certain public lands that the federal
38 government currently holds. This legislation was analyzed in a study entitled “*A Legal Overview*
39 *of Utah’s H.B. 148 — The Transfer of Public Lands Act,*” written by Donald J. Kochan. As
40 Kochan writes, “the State of Utah claims that the federal government made promises to it (at
41 statehood when the federal government obtained the lands) that the federal ownership would be
42 of limited duration and that the bulk of those lands would be timely disposed of by the federal
43 government into private ownership or otherwise returned to the State.” Those promises were
44 kept with Hawaii and states east of Colorado; but not with the states in the Intermountain West.

1 This demand does not include National Parks, Wilderness, and several other special-designation
2 federal holdings.

3
4 Kochan concludes his study by noting that “Utah’s Transfer of Public Lands Act presents
5 fascinating issues for the areas of public lands, natural resources, and constitutional law. There
6 are credible legal arguments supporting Utah’s demand that the federal government extinguish
7 certain public lands within the State. At the very least, it seems clear that the law is not “clearly”
8 unconstitutional as some opponents contend.” While Kochan offers the analysis above, others
9 have disagreed and the matter will likely be decided in court.

10
11 A group called the American Lands Council was formed in 2012 to advocate for the transfer of
12 federal lands to the states. A recent American Lands Council news release stated that "the
13 economic, legal, and environmental case for transferring public lands to the states is so strong
14 that hundreds of elected officials have joined our efforts to improve access, health, and
15 productivity on public lands through local control, and nearly every state in the west has
16 introduced transfer of public lands related legislation. Some states have called for the transfer and
17 others are studying it. Even eastern states are coming on board."
18

19 **Policy:** Duchesne County shall continue to support efforts to legally relieve the Federal
20 Government of ownership, control and jurisdiction over public lands in Duchesne County
21 (except for designated wilderness areas).

22 23 **SITLA Lands**

24
25 Approximately 55,051 acres of land in Duchesne County (about 2.7% of the County) is owned
26 and managed by the State School and Institutional Trust Lands Administration (SITLA). SITLA
27 also owns the subsurface mineral estate in many areas of the county.

28
29 SITLA leases land surface in Duchesne County for grazing, mining and for oil and gas
30 development. According to SITLA’s 2015 Annual Report (for the 2014-15 fiscal year), they
31 generated \$109.2 million in revenue from land sales, leases and other activities. After
32 administrative operating costs were deducted, the agency was able to provide \$100.1 million to
33 permanent funds and beneficiaries. Of the total revenue received, \$61.7 million came from the
34 oil and gas industry and \$7.9 million from the mining industry. The largest beneficiary of SITLA
35 revenues is the public K-12 school system, which received \$45.7 million in 2015.

36
37 Many Class B and Class D county roads cross SITLA lands and the county has been able to
38 acquire easements from SITLA to ensure the continued use of those routes by the public.

39
40 **Policy:** It is the policy of Duchesne County to closely coordinate with the State Institutional
41 Trust Lands Administration to help meet the needs of citizens and companies using trust lands
42 and to help continue the economic benefits of multiple use of SITLA lands.
43
44

1 **Duchesne County Public Lands Committee**

2
3 Consistent with its responsibility to participate in the public land management process, the
4 Duchesne County Commission established the Duchesne County Public Lands Committee and
5 charged the committee in 2003 to write and implement a new public lands policy document that
6 shall outline the County's policies as they relate to public land management agencies. Those
7 policies were adopted in 2005 and are being updated in 2017.

8
9 The Public Lands Committee has been assigned the following tasks:

- 10
11 a. Study public land management planning, policies and decision-making processes.
12
13 b. Develop an action-plan to provide a basis for the county's participation in public lands
14 issues.
15
16 c. Monitor the activities of public land management agencies.
17
18 d. Engage the citizenry in dialog relative to public land issues.
19
20 e. Make recommendations to the Duchesne County Commission with regard to public lands
21 issues.
22
23 f. At the direction of the Duchesne County Commission, participate in the public lands
24 management planning and decision-making processes on behalf of the county.
25
26 g. Revise or amend the county public land use policies, as needed.

27
28 In order to accomplish these tasks, the Public Lands Committee shall:

- 29
30 a. Meet once a month or as necessary
31
32 b. Select a chairman who shall:
33
34 1. Assign qualified committee members to attend specific meetings relative to public
35 lands issues.
36
37 2. Assign qualified committee members to review environmental and public land use
38 documents.
39
40 3. Assign qualified committee members to prepare reports for the Duchesne County
41 Commission, which shall document compliance or noncompliance with the
42 county public land use policies.
43
44

- 1 4. Assign qualified committee members to prepare responses from the Duchesne
- 2 County Commission to the public land management agencies.
- 3
- 4 5. Report to the Duchesne County Commission once per month or as necessary.
- 5
- 6 6. Recommend the hiring of consultants with special expertise to review documents,
- 7 perform surveys, write opinions, and perform other tasks as directed by the
- 8 Duchesne County Commission.
- 9

Section 2. Energy, Mining & Mineral Resources

Findings: The energy and mining industries are an important part of the culture, heritage and economy of Duchesne County and will be for a number of years to come. The future looks bright for energy development in Duchesne County, as an “Assessment of Undiscovered Oil and Gas Resources in the Uteland Butte Member of the Eocene Green River Formation, Uinta Basin, Utah,” published by the U.S. Department of the Interior, U.S. Geological Survey, August 2015, found that the Uteland Butte Carbonate Continuous Assessment Unit and the Uteland Butte Conventional Oil and Gas Assessment Unit (portions of which are in Duchesne County) contain estimated mean undiscovered resources of 214 million barrels of oil, 329 billion cubic feet of associated/dissolved natural gas, and 14 million barrels of natural gas liquids.

A December 2008 report published by Utah State University entitled “Public Lands and Utah Communities: A Statewide Survey of Utah Residents,” found (in Table 34) that 79.3% of residents surveyed in the Daggett-Duchesne-Uintah County believe that federal land managers should either maintain (41.0%), moderately increase (27.4%) or substantially increase (10.9%) the extent to which mineral exploration and extraction activities occur on Utah’s public lands. The same study found (in Table 37) that 80.2% of residents surveyed in the Daggett-Duchesne-Uintah County believe that federal land managers should either maintain (32.4%), moderately increase (29.4%) or substantially increase (18.4%) the extent to which oil and gas exploration and development activities occur on Utah’s public lands.

The *Bureau of Land Management Vernal Field Office Record of Decision and Approved Resource Management Plan* (BLM Vernal ROD/RMP) made the following allocations for oil and gas leasing (BLM 2008). Note: The Utah Recreational Land Exchange Act of 2009 resulted in 27,726.13 acres of BLM land being transferred to SITLA; however, none of this acreage was in Duchesne County.

Unavailable: 190,434 acres:

- 53,058 acres of wilderness study areas (WSAs) in the BLM Vernal Field Office plus 2,750 acres of WSA in the BLM Moab Field Office.
- 99,498 acres in 14 areas identified as lands with wilderness characteristics (LWC) (does not include 6,680 acres of LWC in BLM White River Field Office that are no surface occupancy [NSO]).
- 35,128 acres within the Hill Creek Extension.

Open subject to NSO: 86,789 acres:

- 0.25-mile area around greater sage-grouse (*Centrocercus urophasianus*) leks.

- 1 • High-use recreation areas such as Pelican Lake.
- 2
- 3 • White River LWC.
- 4
- 5 • Areas of critical environmental concern (ACECs) including the Nine Mile Canyon ACEC
- 6 (44,168 acres in Duchesne and Carbon Counties), Lear’s Canyon (1,375 acres, all in
- 7 Duchesne County), and the Pariette Wetlands (10,437 acres, the bulk of which are in
- 8 Uintah County).
- 9

10 Open subject to moderate constraints: 890,280 acres

11

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

13

14 Mineral leasing categories on BLM land in Duchesne County are shown on Map #5.

15

16 Section 63J-8-104 of the Utah Code gives the state’s position regarding energy, mining and

17 mineral resources on federal land. Duchesne County supports the state’s position, which requires

18 federal land management agencies to achieve and maintain at the highest reasonably sustainable

19 levels a continuing yield of energy, hard rock, and nuclear resources in those subject lands with

20 economically recoverable amounts of such resources as follows:

21

22 **Policies:** It is the policy of Duchesne County that:

- 23
- 24 1. The development of the solid, fluid, and gaseous mineral resources in portions of the
- 25 subject lands is an important part of the state's economy and the economies of the
- 26 respective counties, and should be recognized that it is technically feasible to access
- 27 mineral and energy resources in portions of the subject lands while preserving or, as
- 28 necessary, restoring non-mineral and non-energy resources;
- 29
- 30 2. All available, recoverable solid, fluid and gaseous mineral resources in the subject lands
- 31 should be seriously considered for contribution or potential contribution to the state's
- 32 economy and the economies of the respective counties;
- 33
- 34 3. Those portions of the subject lands shown to have reasonable mineral and energy
- 35 potential should be open to leasing, drilling, and other access with reasonable stipulations
- 36 and conditions, including mitigation, reclamation, and bonding measures where
- 37 necessary, that will protect the lands against unnecessary and undue damage to other
- 38 significant resource values;
- 39
- 40 4. Federal oil and gas existing lease conditions and restrictions should not be modified,
- 41 waived, or removed unless the lease conditions or restrictions are no longer necessary or
- 42 effective;
- 43
- 44

- 1 5. Any prior existing lease restrictions in the subject lands that are no longer necessary or
2 effective should be modified, waived, or removed;
3
- 4 6. Restrictions against surface occupancy should be eliminated, modified, or waived, where
5 reasonable;
6
- 7 7. In the case of surface occupancy restrictions that cannot be reasonably eliminated,
8 modified, or waived, directional drilling should be considered where the mineral and
9 energy resources beneath the area can be reached employing available directional drilling
10 technology;
11
- 12 8. Applications for permission to drill in the subject lands that meet standard qualifications,
13 including reasonable and effective mitigation and reclamation requirements, should be
14 expeditiously processed and granted; and
15
- 16 9. Any moratorium that may exist against the issuance of qualified mining patents and oil
17 and gas leases in the subject lands, and any barriers that may exist against developing
18 unpatented mining claims and filing for new claims, should be carefully evaluated for
19 removal;
20

21 **Policy:** Consistent with the above state law, Duchesne County’s support for mineral
22 development provisions within federal land management plans will be withheld until the
23 appropriate land management plan environmental impact statement clearly demonstrates:
24

- 25 1. That the authorized planning agency has:
26 a. Considered and evaluated the mineral and energy potential in all areas of the
27 planning area as if the areas were open to mineral development under standard
28 lease agreements; and
29 b. Evaluated any management plan prescription for its impact on the area's baseline
30 mineral and energy potential;
31 b. Evaluated any management plan prescription for its impact on the area's baseline
32 mineral and energy potential;
33
- 34 2. That the development provisions do not unduly restrict access to public lands for energy
35 exploration and development;
36
- 37 3. That the authorized planning agency has supported any closure of additional areas to
38 mineral leasing and development or any increase of acres subject to no surface occupancy
39 restrictions by adhering to:
40 a. The relevant provisions of the Federal Land Policy and Management Act of 1976,
41 43 U.S.C. Sec. 1701 et seq.;;
42 b. Other controlling mineral development laws; and
43 b. Other controlling mineral development laws; and
44

- 1 c. The controlling withdrawal and reporting procedures set forth in the Federal Land
2 Policy and Management Act of 1976, 43 U.S.C. Sec. 1701 et seq.;
- 3
- 4 4. That the authorized planning agency evaluated whether to repeal any moratorium that
5 may exist on the issuance of additional mining patents and oil and gas leases;
- 6
- 7 5. That the authorized planning agency analyzed all proposed mineral lease stipulations and
8 considered adopting the least restrictive necessary to protect against damage to other
9 significant resource values;
- 10
- 11 6. That the authorized planning agency evaluated mineral lease restrictions to determine
12 whether to waive, modify, or make exceptions to the restrictions on the basis that they are
13 no longer necessary or effective;
- 14
- 15 7. That the authorized federal agency analyzed all areas proposed for no surface occupancy
16 restrictions, and that the analysis evaluated:
 - 17
 - 18 a. Whether directional drilling is economically feasible and ecologically necessary
19 for each proposed no surface occupancy area;
 - 20
 - 21 b. Whether the directional drilling feasibility analysis, or analysis of other
22 management prescriptions, demonstrates that the proposed no surface occupancy
23 prescription, in effect, sterilizes the mineral and energy resources beneath the
24 area;
 - 25
 - 26 c. Whether, if the minerals are effectively sterilized, the area must be reported as
27 withdrawn under the provisions of the Federal Land Policy and Management Act;
28 and
 - 29
 - 30 d. That the authorized planning agency has evaluated all directional drilling
31 requirements in no surface occupancy areas to determine whether directional
32 drilling is feasible from an economic, ecological, and engineering standpoint;
 - 33

34 **Energy Resources in General**

35
36 **Findings:** The Utah Code, in Section 40-6-1, declares that it is in the public interest to foster,
37 encourage and promote the development of natural oil and natural gas resources in Utah in such a
38 manner to prevent waste of those resources.

39
40 The oil and gas industry has been a significant economic factor in Duchesne County since the
41 early 1970's. The energy industry provides employment and economic opportunity and accounts
42 for a significant percentage of the County's tax base. However, the energy industry is prone to
43 boom and bust cycles based on fluctuating prices of crude oil and natural gas. The boom and
44 bust cycle is demonstrated by the amount of revenue collected by the Utah State Tax

1 Commission each fiscal year (see Table EM1 below).

Table EM1. Oil and Gas Severance Tax Net Revenue in Utah

Fiscal Year	Oil and Gas Severance Tax Net Revenue Collected
2011	\$ 59,855,286
2012	\$ 65,540,973
2013	\$ 53,164,253
2014	\$ 89,159,562
2015	\$ 69,685,131
2016	\$ 20,759,297
Total	\$358,164,502

Source: Utah State Tax Commission, FY 2011-2016 Annual Reports

2
 3 Severance tax revenue has dropped substantially in the recent “bust” years from a high of over
 4 \$89 million in FY 2014; but remains an important part of local and state budgets. The Utah
 5 Legislature has designated 12% of the first \$3 million collected (\$360,000) to be distributed to
 6 Duchesne County and for the second \$3 million collected, the county receives \$1 million.

7
 8 The State of Utah also collects an Oil and Gas Conservation Fee from the production, sale or
 9 transport of oil and gas resources. Table EM2 shows the impact of this fee on the state budget.
 10 These funds are used for plugging or reclaiming abandoned wells, boring holes, and
 11 mineral/petroleum resources and industry education programs.

Table EM2. Oil and Gas Conservation Fee Net Revenue in Utah

Fiscal Year	Oil and Gas Conservation Fee Net Revenue Collected
2011	\$ 5,784,545
2012	\$ 6,432,953
2013	\$ 5,870,532
2014	\$ 7,821,433
2015	\$ 6,727,949
2016	\$ 3,121,286
Total	\$35,758,698

Source: Utah State Tax Commission, FY 2011-2016 Annual Reports

1 The State of Utah also receives 49% of the mineral lease money collected by the federal
2 government, in the form of royalties, lease bonuses and rentals. Of this 49%, the state sends 25%
3 to the county of origin. Thirty two and one half percent (32.5%) is deposited into the Permanent
4 Community Impact Fund according to Section 59-21-2 of the Utah Code. Forty percent of the
5 mineral lease funds go to the Utah Department of Transportation, which distributes a portion to
6 counties or county special service districts for road projects. Smaller percentages are allocated to
7 the Department of Workforce Services, the State Board of Education, the Utah Geological
8 Survey and the USU Water Research Laboratory.

9
10 Over the 2012-2016 fiscal years, the PCIF reports distributing a total of \$114,075,616 in grant
11 and loan funds for water, street and other infrastructure or public improvement projects in
12 Duchesne County and a total of \$553,815,871 was distributed to projects statewide. Local
13 beneficiaries of these funds during the 2012-2016 fiscal years included the Cedarview-Montwell
14 Special Service District, Duchesne City, the Duchesne County Municipal Building Authority,
15 Duchesne County Special Service District #2, Duchesne County Water Conservancy District,
16 East Duchesne Culinary Water Improvement District, Fruitland Special Service District, Hanna
17 Water and Sewer District, Johnson Water District, Myton City, Neola Water and Sewer District,
18 Pinion Forest Special Service District, Roosevelt City, Tabiona Town, Tabby Valley Parks
19 District and the Upper County Water Improvement District.

20
21 The positive and substantial economic impact of energy and energy-related mining on the state
22 economy is summarized in a May 2015 report prepared by Applied Analysis for the Governor's
23 Office of Energy Development. This report found that oil and gas development produced a total
24 economic output of \$5.2 billion in 2013, including 6,976 direct, indirect and induced jobs and
25 labor income of \$503.9 million associated with these jobs. The income from these oil and gas
26 jobs created approximately \$8.0 million in state income tax revenue in 2013. The above benefits
27 do not count the economic benefits of petroleum refineries in the state, which produced \$7.2
28 billion in economic output in 2013, including 9,522 direct, indirect and induced jobs generating
29 labor income of \$677.4 million (and state income tax revenue of \$3.6 million).

30
31 The Applied Analysis report also found that oil and gas production generated \$9.2 million of
32 sales tax revenue in FY 2013 and \$8.8 million in FY 2014. Oil and gas production on SITLA
33 lands resulted in \$69.1 million in revenue for Utah schools and other SITLA beneficiaries in FY
34 2013.

35
36 The Utah Division of Oil, Gas and Mining has identified several major oil and gas fields in
37 Duchesne County (see Map #6). Oil and Gas production areas (well sites) are also shown on
38 Map #6).

39
40 In 2012, the Duchesne County Conservation District identified Energy as one of the top five
41 natural resource concerns. The District encouraged energy conservation measures, increased use
42 of renewable energy sources, increased use of natural gas and support of the petroleum extraction
43 industry in the County.

1 The District identified the following challenges associated with energy resources:

- 2
- 3 a. Obtaining permits to drill on federal land is becoming more difficult due to increasing
- 4 environmental regulations.
- 5
- 6 b. Distribution of energy commodities to markets is difficult due to the lack of rail service,
- 7 lack of crude oil pipelines, geographic isolation from refineries and markets and
- 8 dangerous conditions on state highways, particularly during the winter.
- 9
- 10 c. Energy companies are becoming more hesitant to invest in Duchesne County due to the
- 11 environmental regulations affecting federal lands that make it more costly to access the
- 12 resource.
- 13
- 14 d. Private land owners do not understand the implications of the Split Estate and feel
- 15 violated or not adequately compensated when wells are drilled on their property.
- 16
- 17 e. Although there is a vast amount of energy in the Uintah Basin within oil shale and tar
- 18 sands, the technology to extract the energy from these resources has not been proven to be
- 19 economically viable.
- 20

21 According to data from the Utah Division of Oil, Gas and Mining, Duchesne County is the top
22 oil producing county in Utah, having produced 19.4 million barrels (of the 40.9 million barrels
23 produced in Utah) in 2014 and 17.1 million barrels (of the 37.1 million barrels produced in Utah)
24 in 2015. Due to low crude prices, the production in Duchesne County has dropped to about 13.9
25 million barrels (of the 30.5 million barrels produced in Utah) in 2016.

26
27 Duchesne County is currently the third highest natural gas producing county in Utah; having
28 produced 49.7 million MCF of gas in 2014 and 41.7 million MCF in 2015 (1 MCF equals 1,000
29 cubic feet of gas). Production of gas dropped to about 35.9 MCF in 2016.

30
31 The most recent oil and gas boom resulted in Duchesne County being the second-fastest growing
32 county in the nation in 2013 (for counties with over 10,000 residents) with a 5.5% growth rate
33 that year. Between 2000 and 2012, the county population grew by 29.48 percent. During boom
34 times, the county unemployment rate has been known to drop into the 2.7% range (December
35 2014). During bust times, such as in early 2016, the unemployment rate increased to over 11%.

36
37 This bust is illustrated by Division of Oil, Gas & Mining data that shows the applications for
38 permits to drill (APDs) in Duchesne County decreasing from 794 in 2013 to 511 in 2014, 77 in
39 2015 and only 48 in 2016. By May 31, 2017, 59 APDs had been issued in the county, reflecting
40 a slow rebound of the energy industry.

41
42 Spudding of new wells in Duchesne County decreased from 441 in 2013 to 433 in 2014 to only
43 37 in 2015. Only 27 new wells were spudded in 2016. As of May 31, 2017, 21 new wells were
44 spudded in the county, showing the potential for a better year than 2015 or 2016.

1 For decades, the wealth created by oil and gas development has provided for the growth of local
2 government services. It has helped build schools, roads, public buildings, utility infrastructure
3 and family fortunes. Historically, much of this activity has taken place on private land. Trends
4 since the late 1980's have emphasized development of oil and gas on public lands; however,
5 recent restrictive federal government policies have caused a shift toward drilling on private and
6 tribal lands. According to the Utah Division of Oil, Gas and Mining, the amount of oil
7 production in Duchesne County from federal leases dropped from 32.7% of total production in
8 2011 to 29.1% of total production in 2013. Access to public lands is critical to the development
9 of energy resources.

10
11 **Additional Findings**

12
13 More upgraded pipeline and crude oil infrastructure is needed to bring crude oil products
14 produced in the Uintah Basin to market.

15
16 The business environment for renewable energy and non-renewable energy is not on a level
17 playing field because renewable energy is heavily subsidized.

18
19 The management of the greater sage-grouse by federal and state entities has implications for the
20 level of mineral development that is allowed in the counties. Voluntary management provisions
21 in the *Conservation Plan for Greater Sage-grouse in Utah* (Utah Division of Wildlife Resources
22 2013) are as follows:

- 23
24 a. Avoid disturbance within a lek if possible. Project proponents must demonstrate why
25 avoidance is not possible.
- 26
27 b. If avoidance is not possible, use minimization as appropriate to the lek.
- 28
29 c. If minimization is not sufficient, mitigation is required. Mitigation should be calculated at
30 a minimum of a 4:1 ratio starting with the first acre disturbed. Mitigation must produce
31 lands capable of supporting greater sage-grouse as habitat before the proposed
32 disturbance occurs, although birds do not need to be using the mitigated area.
- 33
34 d. The proponent of the disturbance must demonstrate that the conditions have been met.
35 Cumulative new permanent disturbance should not exceed 5% of the surface area of other
36 habitat within the sage-grouse management area.

37
38 The BLM Vernal ROD/RMP manages the greater sage-grouse in Utah with some of the
39 following provisions:

- 40
41 a. NSO in a 0.25-mile zone around leks year-round;
- 42
43 b. No permanent facilities or structures allowed within 2 miles of a lek when possible;
- 44

- 1 c. No surface-disturbing activities within 2 miles of active greater sage-grouse leks allowed
- 2 from March 1 to June 15;
- 3
- 4 d. Within 0.5 mile of known active leks, the best available technology used to reduce noise,
- 5 e.g., installation of multi-cylinder pumps, hospital sound-reducing mufflers, and
- 6 placement of exhaust systems.
- 7

8 In September 2015, the BLM and Forest Service signed a Sage Grouse EIS that establishes new
9 guidance for sage grouse habitat management on federal lands in the West. The RMP
10 Amendments for managing Greater Sage-Grouse in Utah can be found at:

11 [https://eplanning.blm.gov/epl-front-](https://eplanning.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage¤tPageId=99423)
12 [office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage¤tPageId=9](https://eplanning.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage¤tPageId=99423)
13 [9423](https://eplanning.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage¤tPageId=99423).

14
15 A fact sheet available at: [https://www.blm.gov/programs/fish-and-wildlife/sagegrouse/state-](https://www.blm.gov/programs/fish-and-wildlife/sagegrouse/state-sagegrouse-efforts/utah)
16 [sagegrouse-efforts/utah](https://www.blm.gov/programs/fish-and-wildlife/sagegrouse/state-sagegrouse-efforts/utah) provides a good summary of BLM and USFS conservation plans in Utah.
17 The fact sheet notes that “the highest levels of protections are applied to Sagebrush
18 Focal Areas (SFA), which are landscapes with high breeding population densities of sage-grouse,
19 high-quality sagebrush habitat and a preponderance of federal ownership or protected areas that
20 serve to anchor the conservation value of the landscape. These areas are prioritized for habitat
21 improvement and vegetation management efforts and proposed for locatable mineral withdrawal.
22 Priority Habitat Management Areas (PHMA), equivalent to Core Areas, are managed to avoid
23 and minimize further disturbance. Surface energy and mineral development is limited in these
24 areas. Development is capped with limits on the amount and density of disturbance allowed.
25 General Habitat Management Areas (GHMA) provide greater flexibility for land use activities.
26 Mitigation and required design features ensure that impacts from development are avoided,
27 minimized and mitigated in GHMA.

28
29 The RMP Amendment document indicates that 1,100 acres of surface estate and 2,700 acres of
30 mineral estate in Duchesne County have been identified as Priority Habitat Management Areas
31 (PHMA) and 28,600 acres of surface estate and 7,200 acres of mineral estate have been identified
32 as General Habitat Management Areas (GHMA). In total, 29,700 acres of surface estate and
33 9,900 acres of mineral estate are within habitat management areas. There are no Sagebrush Focal
34 Areas in Duchesne County. About 95 percent of federal lands with high and medium oil and gas
35 potential in Utah are outside of federally-managed priority conservation areas and valid existing
36 lease rights are recognized. As such, the potential impacts of sage grouse management on energy
37 development on federal lands in Duchesne County are lessened.

38 39 **Oil Shale**

40
41 The U.S. Geological Survey has studied the “In-Place Oil Shale Resources of the Mahogany
42 Zone, Green River Formation, Sorted by Grade, Overburden Thickness, and Stripping Ratio,
43 Piceance Basin, Colorado, and Uinta Basin, Utah” in a February, 2015 report. This study found
44 total oil shale resources in the Eocene Green River Formation of the Piceance and Uinta Basins

1 in Colorado and Utah amount to an estimated 2.845 trillion barrels of oil in-place regardless of
2 grade according to the most recent U.S. Geological Survey (USGS) assessment. This total value
3 does not represent how much of the resource is likely to be recoverable, because much of the oil
4 shale is of insufficient grade (as determined by yield in gallons per ton of oil generated per ton of
5 rock processed) or occurs in intervals too thin to be targeted for development.

6
7 In the Uinta Basin, 29.9 billion barrels of the 214.5 billion barrels of Mahogany zone oil in-place
8 meets the overburden and stripping ratio criteria that make recovery of shale oil the most
9 feasible. Although southeastern Duchesne County contains oil shale, the study shows that the
10 most likely extraction/mining locations, containing the best overburden and gallons per ton
11 conditions, are to the east in Uintah County.

12
13 In 2013, the BLM completed an Oil Shale/Tar Sands EIS. For the Vernal BLM Field Office,
14 360,350 acres of land within the most geologically prospective oil shale area was designated as
15 available for application for leasing for commercial oil shale development in accordance with
16 applicable Federal and State regulations and BLM policies. A very small portion of SE
17 Duchesne County is within that area. All lands within the most geologically prospective oil shale
18 area that are not excluded from commercial leasing by existing laws and regulations, Executive
19 Orders, or administrative land use plan designation, or have not been specifically excluded by the
20 BLM for other reasons, will be available for application for commercial leasing.

21
22 The decision specified that applications for commercial leases using surface mining technologies
23 will only be accepted within an area of 133,194 acres within the most geologically prospective
24 oil shale area where the overburden is 0 to 500 feet thick. Applications for commercial leasing
25 using surface mining technologies will not be accepted in any other areas as 500 feet is assumed
26 to be the maximum amount of overburden where surface mining can occur economically using
27 today's technologies.

28 29 **Tar Sands**

30
31 The 2013 Oil Shale/Tar Sands EIS designated the following amounts of land within Special Tar
32 Sand Areas (STSA) in the Vernal RMP, Vernal Field Office as available for application for
33 leasing for commercial tar sands development in accordance with applicable Federal and State
34 regulations and BLM policies:

- 35
- 36 • Argyle Canyon STSA: 5 acres
 - 37 • Asphalt Ridge STSA: 2,123 acres, which represents the acreage subject to the pending tar
38 sands lease application.
 - 39 • Hill Creek STSA: 45,307 acres
 - 40 • Pariette STSA: 860 acres
 - 41 • P.R. Spring STSA: 43,293 acres
 - 42 • Raven Ridge STSA: 9,134 acres
 - 43 • Sunnyside STSA: 1,982 acres
- 44

1 All lands within the designated STSAs that are not excluded from commercial leasing by existing
2 laws and regulations, Executive Orders, or administrative land use plan designation, or have not
3 been specifically excluded by the BLM for other reasons, will be available for application for
4 commercial leasing. The Argyle Canyon and Pariette STSAs are within, or partially within,
5 Duchesne County.

6 7 **Renewable Energy**

8 9 **Geothermal Resources**

10
11 The Utah Geological Survey published a map of Geothermal Resources in Utah in 2004. While
12 counties such as Juab, Millard, Beaver and Iron were depicted to have potential for geothermal
13 energy development, that map showed very few geothermal resources in Duchesne County and
14 no designated geothermal resource areas. The 2004 map depicted only the Warm Springs on the
15 Duchesne River near Hanna and eight other thermal springs or wells in the central part of the
16 county. This map was updated by the Utah Geological Society in the 3rd edition of “*Utah’s*
17 *Energy Landscape*,” and the 2014 map (see Map #7) shows three thermal wells in northeastern
18 Duchesne County with temperatures over 50° Celsius. The map also shows the location of about
19 48 wells with elevated heat flow and a thermal spring in the Hanna area.

20
21 Many of the oil and gas wells in the southern part of Duchesne County have potential for
22 production of geothermal energy, but the temperatures are low, and the main focus of such wells
23 is the production of crude oil and natural gas. When those wells are no longer productive for oil
24 and natural gas, they could become productive for generation of low-level geothermal energy,
25 according to the Ashley National Forest mineral specialist.

26
27 The BLM has the delegated authority for leasing public lands, including U.S. Forest Service
28 lands, with geothermal potential in 11 Western States and Alaska. The BLM presently manages
29 818 geothermal leases, with 59 geothermal leases in producing status, with a total capacity of
30 1,500 megawatts of geothermal energy on public lands. This amounts to over 40 percent of U.S.
31 geothermal energy capacity and supplies the electrical needs of about 1.5 million homes. The
32 BLM’s geothermal leases provide not only electrical power generation but also alternative heat
33 sources for direct-use commercial endeavors.

34
35 The BLM produced a *Nationwide Geothermal Resources Leasing Programmatic EIS and issued*
36 *a Record of Decision* in December 2008. According to an associated BLM fact sheet, this
37 decision amended 114 BLM resource management plans and allocated about 111 million acres of
38 BLM-managed public lands as open for leasing. An additional 79 million acres of Forest Service
39 lands are also available for leasing. Since the completion of the Programmatic EIS, the BLM has
40 competitively leased over one million acres of Federal lands, generating over \$76 million in
41 bonus bids for geothermal lease parcels. The overall lease sales include 67 parcels in Utah,
42 totaling 241,490 acres; 11 parcels in Oregon, totaling 41,362 acres; 13 parcels in Idaho totaling
43 17,580 acres; 18 parcels in California, totaling 21,835 acres; 1 parcel in Colorado, containing 799
44 acres; and 262 parcels in Nevada, totaling 737,785 acres. None of the geothermal leases are

1 located within Duchesne County.

2
3 **Biomass**

4
5 The National Renewable Energy Laboratory produced a map for the U.S. Department of Energy
6 in 2007 showing Biomass Resource potential for all counties in Utah. Duchesne County, along
7 with 26 of the 29 counties in Utah, has a low potential, with less than 50 thousand tons of
8 biomass available for production of energy per year. Biomass includes agricultural residue,
9 wood residue, municipal discards and dedicated energy crops.

10
11 Table EM3 shows the amount of green tons of biomass made available for bio-energy on the
12 Ashley National Forest during fiscal years 2010-2016.

Table EM3. Green Tons of Biomass for Bio-Energy from the Ashley National Forest

Fiscal Year	Tonnage of Biomass
2010	18,625.2
2011	19,267.7
2012	17,428.2
2013	17,132.6
2014	19,042.8
2015	N/A
2016	N/A
Total	91,496.5

Source: Ashley National Forest (2017)

13
14 **Wind Resources**

15
16 Wind energy has yet to be developed in Duchesne County. A June 2005 study of Bureau of Land
17 Management lands in Utah found all BLM lands in Duchesne County to have low wind resource
18 potential. The Bureau of Land Management then issued a Record of Decision regarding
19 “Implementation of a Wind Energy Development Program and Associated Land Use Plan
20 Amendments,” in December 2005 that found no suitable wind development areas within the
21 Vernal Field Office.

22
23 A wind power classification map for Utah prepared by the National Renewable Energy
24 Laboratory in 2007 showed that most all of Duchesne County has poor or marginal 50m wind
25 resource development potential; with the exception of high elevation ridges and mountain tops in
26 the High Uintas Wilderness area (see Map #8). The Utah Renewable Energy Zones task force
27 collected data from 109 anemometer towers throughout Utah (three are in Duchesne County) and
28 identified 51 wind development zones covering 1,838 square miles of land, with a potential wind

1 generating capacity of 9145 megawatts. These sites, mapped in the 2014 Utah Geologic
2 Service’s 3rd edition of “Utah’s Energy Landscape,” were identified after screening out
3 environmentally sensitive areas, elevations over 9,500 feet, lands too rugged for development
4 and military operating airspace. Two linear wind potential sites are in high elevation areas of
5 southern Duchesne County and are depicted as Wind Energy Zones on Map #8.

6
7 With newer wind generation technologies, including increased hub heights and increased rotor
8 diameters, the Four Corners Wind Resource Center and the Governor’s Office of Energy
9 Development, in 2015, found that some sections of south central and southeast Duchesne County
10 could be suitable for wind energy development. The total potential capacity is in the county is
11 estimated to be 320 megawatts.

12
13 Development of the renewable energy resources in Duchesne County has the potential to be an
14 important contributor to the economy of the county. Wind and solar resource development costs
15 have dropped dramatically in the last several years. In many places, electricity from wind and
16 solar resources is now cost competitive with all other sources of new electricity generation, and
17 many existing sources of generation. Due to advancements in technology, better forecasting, and
18 better controls, wind and solar energy can be economically developed in areas not previously
19 thought possible.

20
21 Wind turbine technologies continue to improve and turbines are now able to generate
22 economically competitive electricity in lower wind speed areas through the use of longer turbine
23 blades, taller hub heights, and advanced controls. Also, improvements in wind resource
24 forecasting, wind plant control technologies, and energy storage now allow wind plants to
25 generate electricity at a smoother, more consistent rate than in the past. These factors enable
26 more accurate predictions of output for management by the electric utilities that generate and/or
27 purchase the power generated by wind projects.

28
29 The cost of solar photovoltaic installations has fallen dramatically in recent years and continues
30 to decline, making solar an increasingly economically attractive source of electricity.

31
32 Utah has an abundance of developable wind and solar resources. In 2015, the National
33 Renewable Energy Laboratory released new wind resource maps showing development potential
34 in Utah at 110 and 140 meter hub heights. Duchesne County has less wind generation capacity
35 compared to Utah’s west desert areas, where the potential seems to be the greatest
36 (http://apps2.eere.energy.gov/wind/windexchange/wind_resource_maps.asp?stateab=ut).

37 38 **Solar Energy**

39
40 As one of the seven sunniest states in the nation, Utah has an incredible solar resource and
41 Duchesne County has the potential to benefit from that resource. In 2007, the U.S. Department
42 of Energy released solar photovoltaic resources maps showing solar potential across the state.
43 (<http://apps1.eere.energy.gov/states/maps.cfm/state=UT>).

1 However, in 2012, the Departments of Energy and Interior conducted a programmatic EIS for
2 solar energy development in Utah and five other southwestern states (found at
3 http://solareis.anl.gov/documents/docs/Solar_PEIS_ROD.pdf). This document identified no
4 acreage within the Vernal Field Office suitable for development as a solar energy zone. An
5 associated map prepared by the Argonne National Laboratory for Utah
6 (http://solareis.anl.gov/documents/fpeis/maps/alternatives/Final_Solar_PEIS_UT_map_poster.pdf) shows
7 all of the BLM land in Duchesne County being proposed for exclusion from solar leasing under
8 the program alternative.

9
10 The Utah Renewable Energy Zones Task Force identified about 6,371 square miles of land
11 suitable for solar power generation at the utility scale. This land could support up to 826 GW of
12 solar generating capacity. The task force screened out environmentally sensitive areas, areas
13 with slopes greater than three percent and lands where the Direct Normal Irradiance fell below
14 the threshold of six kilowatt hours per square meter per day. Much of the lower elevation areas
15 in east-central Duchesne County are included in the suitable area (see Map #9).

16
17 Several factors are contributing to growth in the market for wind and solar energy development
18 across the country and in the West:

- 19
20 a. There is increasing demand nationwide for renewable energy development, due to
21 economic and policy drivers. Duchesne County has some potential to supply this demand
22 with wind or solar projects at the utility scale.
23
24 b. Increasing commitments to renewable energy in states throughout the west will drive
25 demand and create competition for development of renewable resources.
26
27 c. With the expansion of Energy Imbalance Markets in the West, higher levels of renewable
28 energy can be managed by participating utility electrical systems. Thus, geographically
29 dispersed renewable energy development, such as Utah based projects, can more easily
30 contribute to local and regional energy needs and clean energy goals.
31
32 d. Reduced use, partial unit closure, and retirement of fossil electricity generation plants
33 create capacity on existing transmission lines, making it easier for renewable
34 development projects to get energy resources to market.
35

36 **Hydro Power**

37
38 Generating power from flowing water is addressed in the Water Quality and Hydrology section
39 of this plan.
40

41 **Critical Minerals and Rare Earth Elements**

42 **Critical Minerals**

43
44 Products from the mining industry are integral to every Utahns' lifestyle and standard of living

1 and mining supports the foundation of the nation’s economy. From the sand and gravel used to
2 build roads and lay foundations for homes and buildings, to coal and uranium used to generate
3 more than half of the nation’s electricity, to the copper wire that connects billions of computers
4 to a global social and commercial network, this country’s economy and way of life depend on the
5 vital resources provided by mining. Because of its importance to society, mineral resource
6 development in Utah is supported by state policy.

7
8 The Critical Mineral List (List) was first released by the U.S. Geologic Survey (USGS) in May
9 2018 and contained 35 critical minerals and rare earth elements (REEs). The basis for the
10 creation of the List was that, “The United States is heavily reliant on imports of certain mineral
11 commodities that are vital to the Nation’s security and economic prosperity. This dependency of
12 the United States on foreign sources creates a strategic vulnerability for both its economy and
13 military to adverse foreign government action, natural disaster, and other events that can disrupt
14 supply of these key minerals.” Utah had known sources of 28 of the 35 critical minerals and
15 REEs, produced eight critical minerals (helium, lithium, beryllium, magnesium metal, potash,
16 rhenium, platinum, and palladium), and hosted established resources of six more critical minerals
17 (fluorspar, vanadium, uranium, aluminum, and indium).

18
19 On February 24, 2022, the USGS published the 2022 Critical Mineral List which removed
20 helium, uranium, potash, rhenium, and strontium, four of which can be mined in Utah and which
21 contribute significantly to the mining industry and the economics of local communities. Nickel
22 and zinc were added to the 2022 List and Utah has historically been the ninth largest zinc
23 producer domestically.

24
25 The Critical Minerals of Utah report (<https://ugspub.nr.utah.gov/publications/circular/c-129.pdf>)
26 contains a description of each critical mineral produced in Utah as well as known and
27 hypothetical sources. None of these mineral sources are located in Duchesne County.

28
29 **Rare Earth Elements (REE)**

30 Utah’s geology is not conducive to the formation of significant REE deposits, as confirmed by
31 historical exploration. Minor modern exploration has re-evaluated previously deprioritized
32 targets; however, it is unlikely that Utah has the potential to become a primary REE producer.
33 Byproduct REE production from existing mine tailings, such as the beryllium tailings at Spor
34 Mountain in Juab County or coal ash stockpiled at coal-fired power plants, may be possible and
35 is the subject of current research. Duchesne County is not an expected location for rare earth
36 elements.

37
38 **Objectives:**

- 39
40 1. Ensure federal recognition of the Uintah Basin Energy Zone in Uintah and Duchesne
41 Counties.
42
43 2. Maintain federal lands available for oil and gas leasing and development with standard
44 stipulations while considering the impacts to other public land resources and uses.

- 1 3. Avoid unnecessary federal rules associated with fracking and master leasing plans.
- 2
- 3 4. Support infrastructure that conveys energy resources such as pipeline development (e.g.,
- 4 pipeline from the Uintah Basin to existing railroads).
- 5
- 6 5. Encourage technology that would allow for the transport of crude oil.
- 7
- 8 6. Eliminate or reduce the amount of federal agency approval requirements for development
- 9 to simplify and encourage investment in the area.
- 10
- 11 7. Promote renewable energy development.
- 12

13 **Policies:** It is the policy of Duchesne County that:

- 14
- 15 1. Access to public lands for all forms of energy development must be increased in the
- 16 economic interest of the county citizens and government.
- 17
- 18 2. Energy exploration and development are consistent with the multiple use philosophy for
- 19 management of public lands. These activities constitute a temporary use of the land that
- 20 will not impair its use for other purposes in the future. All energy development activities
- 21 shall comply with appropriate laws and regulations.
- 22
- 23 3. Identification of energy potential and location is important for planning future energy
- 24 needs and resource management. Agencies shall plan, fund, and encourage by way of
- 25 policy management decisions relative to energy resources.
- 26
- 27 4. All management plans must address and analyze the possibility for the development of
- 28 energy resources where there is a reasonable expectation of their occurrence within the
- 29 planning area.
- 30
- 31 5. After environmental analysis, and as provided for in the governing resource management
- 32 plan, all tracts will be available and offered for lease or open to be claimed as provided by
- 33 law. Duchesne County recognizes that decisions are made regarding oil and gas leases
- 34 through the land use planning process. Alternatives identify areas where leasing may
- 35 occur with standard lease terms, timing and controlled surface use stipulations or no
- 36 surface occupancy. Additionally, some areas may be considered for no leasing in the
- 37 future.
- 38
- 39 6. Local authorities shall encourage federal and state authorities to decrease regulatory
- 40 burdens and ensure efficient processing of permits to utilize state or federal lands for
- 41 energy resource extraction. All permits and applications must be processed on a timely
- 42 basis, provided that the applicant follows proper procedures and submits all required
- 43 information at the time of application.
- 44

- 1 7. Development of the fluid, and gaseous energy resources of the state should be
2 encouraged. The waste of fluid and gaseous minerals within developed areas should be
3 prohibited. This policy is not intended to prohibit necessary flaring of gas at well
4 locations. Requirements to mitigate or reclaim energy development projects should be
5 based on credible evidence of significant impacts to natural or cultural resources.
6
- 7 8. For private lands within the County, the County supports the provisions of the Surface
8 Owner Protection Act, which was enacted by the 2012 Utah Legislature to establish
9 surface owner rights and responsibilities when working with energy development
10 companies. An Oil & Gas Liaison has been appointed by the County to help improve
11 communication and cooperation between fee owners and energy development companies.
12
- 13 9. The development of geothermal, wind and solar energy at large and small scales, for
14 generating electricity for sale or for use on site, on public and private lands throughout the
15 county shall be supported. The County will establish policies, guidelines, and/or goals to
16 support the development of geothermal, wind and solar energy resources on public and
17 private lands in the county.
18
- 19 10. The development of infrastructure needed to transport energy resources to market, such as
20 railroad lines and pipelines shall be supported.
21
- 22 11. The development of local refineries and crude upgrading facilities shall be supported.
23
- 24 12. The use of alternative fuel vehicles and development of fueling facilities for said vehicles
25 shall be supported.
26
- 27 13. The development of technologies that will further the development of the vast oil shale
28 and tar sands resources in the Uinta Basin shall be supported.
29
- 30 14. Oil and gas production in the Uintah Basin has increased in recent years due to
31 technological advancements such as hydraulic fracturing or “fracking”. Fracking is
32 regulated by the State of Utah and has produced no documented instances of earthquakes
33 or negative impacts to water quality. Duchesne County supports the continued regulation
34 of oil and gas production, including fracking, by the State of Utah and opposes efforts by
35 the federal government, such as federal fracking rules, which add unnecessary layers of
36 bureaucracy and increased costs to producers.
37
- 38 15. The Utah Department of Transportation’s (UDOT’s) 2015–2040 Long-Range
39 Transportation Plan (UDOT 2015) will be supported. Energy development generates the
40 need for sufficient transportation facilities to support the industries. This plan supports
41 the widening of U.S. Highway 40 and the development of passing lanes in Duchesne and
42 Uintah Counties.
43
- 44 16. The decisions of the BLM Vernal ROD/RMP should remain in effect until they are

1 lawfully amended so that energy projects are not held up for an undetermined amount of
2 time while a decision is considered.
3

4 **Uintah Basin Energy Zone**

5
6 There is established, pursuant to Utah Code, the Uintah Basin Energy Zone in Duchesne County
7 for the purpose of maximizing efficient and responsible development of energy and mineral
8 resources. The land area and boundaries of the Uintah Basin Energy Zone in Duchesne County
9 consist of federal lands within the Townships and Ranges described below and as depicted on
10 Map #10.
11

12 Uintah Special Base and Meridian: Township 3N, Range 1W; Township 3N, Range 2W;
13 Township 3N, Range 3W; Township 3N, Range 4W; Township 2N, Range 1W; Township 2N,
14 Range 2W; Township 2N, Range 3W; Township 2N, Range 4W; Township 2N, Range 5W;
15 Township 2N, Range 6W; Township 1N, Range 6W; Township 1N, Range 7W; Township 1N,
16 Range 8W; Township 1N, Range 9W, Township 5S, Range 8W, Township 5S, Range 9W;
17 Township 6S, Range 3W; Township 6S, Range 4W; Township 6S, Range 5W; Township 6S,
18 Range 6W; Township 6S, Range 7W; Township 6S, Range 8W; Township 6S, Range 9W;
19 Township 7S, Range 4W; Township 7S, Range 5W; Township 7S, Range 6W; Township 7S,
20 Range 7W; Township 7S, Range 8W; Township 7S, Range 9W.
21

22 Salt Lake Meridian: Township 8S, Range 15E; Township 8S Range 16E; Township 8S, Range
23 17E; Township 9S, Range 15E; Township 9S, Range 16E; Township 9S, Range 17E; Township
24 10S, Range 14E, Township 10S, Range 15E; Township 10S, Range 16E; Township 10S, Range
25 17E; Township 11S, Range 10E; Township 11S, Range 11E; Township 11S, Range 12E;
26 Township 11S, Range 13E; Township 11S, Range 14E; Township 11S, Range 15E; Township
27 11S, Range 16E; and Township 11S, Range 17E.
28

29 The county finds, based on the 2002 Mineral Potential Report for the BLM Vernal Planning
30 Area, that the lands comprising the Uintah Basin Energy Zone contain abundant, world-class
31 deposits of energy and mineral resources, including oil, natural gas, oil shale, oil sands, gilsonite,
32 coal, phosphate, gold, uranium, copper, sand/gravel, dimension/building stone, as well as areas
33 with high wind and solar energy potential.
34

35 The highest management priority for all lands within the Uintah Basin Energy Zone is
36 responsible management and development of existing energy and mineral resources in order to
37 provide long-term domestic energy and supplies for Utah and the United States.
38

39 **Policies:** Duchesne County supports:

- 40
41 1. Efficient and responsible full development of all existing energy and mineral resources
42 located within the Uintah Basin Energy Zone, including oil, oil shale, natural gas, oil
43 sands, gilsonite, phosphate, gold, uranium, copper, solar, and wind resources; and
44

2. A cooperative management approach among federal agencies, state, and local governments to achieve broadly supported management plans for the full development of all energy and mineral resources within the Uintah Basin Energy Zone.

The county calls upon the federal agencies who administer lands within the Uintah Basin Energy Zone to:

1. Fully cooperate and coordinate with the county to develop, amend, and implement land and resource management plans and to implement management decisions that are consistent with the purposes, goals, and policies described in this section to the maximum extent allowed under federal law;
2. Expedite the processing, granting, and streamlining of mineral and energy leases and applications to drill, extract, and otherwise develop all existing energy and mineral resources located within the Uintah Basin Energy Zone, including oil, natural gas, oil shale, oil sands, gilsonite, phosphate, gold, uranium, copper, solar, and wind resources;
3. Allow continued maintenance and increased development of roads, power lines, pipeline infrastructure, and other utilities necessary to achieve the goals, purposes, and policies described in this section;
4. Refrain from any planning decisions and management actions that will undermine, restrict, or diminish the goals, purposes, and policies for the Uintah Basin Energy Zone as stated in this Resolution; and
5. Refrain from implementing a policy that is contrary to the goals and purposes described within this Resolution.

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

Energy and Water Considerations

Findings: The production of energy resources can have impacts on water quality.

Policy: It is the policy of Duchesne County that the development of energy resources be conducted in a manner that minimizes adverse impacts to water quality in accordance with state and federal standards.

Findings: The production of energy resources can have impacts on water supplies.

1 **Policy:** It is the policy of Duchesne County that the development of energy resources be
2 conducted in a manner that uses water in accordance with terms set forth by the Utah Division of
3 Water Rights and the State Engineer.
4

5 **Other Energy Considerations**
6

7 **Findings:** Data from the federal Office of Natural Resources Revenue (ONRR), compiled in
8 2015, reveals that federal revenues generated from natural resource development in Duchesne
9 County reached \$37.2 million in federal fiscal year 2010, \$36.5 million in federal FY 2011, \$40.2
10 million in FY 2012, \$45.8 million in FY 2013 and \$53.9 million in FY 2014. Much of this
11 revenue came from oil and gas development.
12

13 **Policy:** Maintaining the Duchesne County energy industry and the associated revenue should be
14 a high priority for local, state and federal government agencies.
15

16 **Mining & Mineral Resources in General (other than Energy)**
17

18 **Findings:** Section 40-8-2 of the Utah Code states that a mining industry is essential to the
19 economic and physical well-being of the state.
20

21 The State of Utah collects a severance tax from the mining industry. Table EM4 shows the
22 impact of this fee on the state budget.

Table EM4. Mining Severance Tax Net Revenue in Utah

Fiscal Year	Mining Severance Tax Net Revenue Collected
2011	\$ 27,118,296
2012	\$ 25,401,211
2013	\$ 16,940,927
2014	\$ 15,850,801
2015	\$16,346,625
2016	\$ 6,977,039
Total	\$108,634,899

Source: Utah State Tax Commission, FY 2011-2016 Annual Reports

23
24 Continued access to mineral resources associated with public lands is paramount to the well-
25 being of Duchesne County's and the State of Utah's economy, the national economy, and
26 national security especially because mining is on a different economic cycle than the oil and gas
27 industry.
28

1 It is necessary to alter the earth's surface to extract minerals required by our society, but such
2 mining should be done in a manner that minimizes undesirable effects and provides for
3 reclamation of the surface when mining is completed.
4

5 The Utah Division of Oil, Gas & Mining requires permits for mining operations in the state.
6 According to the DOGM website, there are six active mines, one proposed mine and five retired
7 mines in Duchesne County (see Map #11). The active mine permits are for rock and building
8 stone, rip rap, calcite, silver, copper, uranium and gold.
9

10 According to the USFS mineral specialist, there are two calcite mines located on the Ashley
11 National Forest in the Blind Stream area. The Honeycomb Mine is an intermittently active open
12 pit mine, producing small tonnages of locatable high-value decorative calcite blocks, for use in
13 countertops, light fixtures, and other assorted decorative household fixtures and semi-precious
14 gemstone applications. The Amber Onyx Mine is a proposed and approved open pit mining
15 operation, similar in scale and nature to the Honeycomb Mine. When it begins operating, this
16 mine is expected to produce small tonnages of decorative calcite boulders, similar to those from
17 the Honeycomb Mine.
18

19 The USFS has permitted the Dal Cuinn Exploratory Drilling Project, located in the Dry Ridge
20 area west of Moon Lake. It is a small-scale exploratory drilling program seeking to demonstrate
21 and delineate the occurrence of disseminated copper-silver mineralization. There has been
22 ongoing exploration with no production and no significant un-reclaimed disturbance.
23

24 The Ashley National Forest is also the site of the Iron King Exploratory Drilling Project, in the
25 Pole Mountain / Farm Creek area of northeastern Duchesne County. This project is a small-scale
26 exploratory drilling program, seeking disseminated and fault-bound precious metals in the Farm
27 Creek Area. This project currently includes 1.6 miles of temporary road, and single plugged drill
28 hole. The site is planned for reclamation, but as of August 2016, had not yet been reclaimed,
29 according to the USFS minerals specialist.
30

31 Finally, the USFS service has also permitted the Kenya's Quest Exploratory Drilling Project, in
32 the Rock Creek area. This is a small-scale exploratory drilling program, seeking disseminated
33 precious metals. This project has been approved, but as of August 2016, has not yet begun active
34 drilling operations.
35

36 The retired mine sites shown on Map #11 were for hematite gemstones, sandstone and clay
37 extraction operations. The clay extraction was active during the expansion of the Big Sand Wash
38 Reservoir.
39

40 The *Bureau of Land Management Vernal Field Office Record of Decision and Approved*
41 *Resource Management Plan* (Vernal ROD/RMP; BLM 2008) allocates the following acreages
42 for mineral exploration and development activities on public lands (information about oil and gas
43 leasing can be found in the Energy and Mineral Resources section):
44

- 1 • Unavailable: 190,434 acres
- 2 • Open (subject to major constraints such as no surface occupancy [NSO]): 86,789 acres
- 3 • Open (subject to moderate constraints such as timing limitations/controlled surface use):
- 4 890,280 acres
- 5 • Open (subject to standard terms and conditions): 750,131 acres
- 6 • Total: 1,917,634 acres
- 7

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

- 11 • For leasable minerals:
 - 12
 - 13 ○ 36,846 acres of BLM-administered lands along 172 miles (approximately 11 miles
 - 14 in Duchesne County) of Gilsonite veins will be available for prospecting, leasing,
 - 15 and development (additional veins located through field study or prospecting will
 - 16 also be available if such are within "open" category lands).
 - 17
 - 18 ○ 76,208 acres of BLM-administered lands (none of which are located in Duchesne
 - 19 County) will be open to phosphate prospecting, leasing, and development with
 - 20 standard and special stipulations within the phosphate occurrence areas.
 - 21
 - 22 ○ Other minerals defined in the BLM Vernal ROD/RMP include coal, asphalt,
 - 23 sulfur, potassium, and sodium. However, no designated leaseable acreages are
 - 24 provided for these minerals.
 - 25

26 Mineral allocations and mining information in Duchesne County is shown on Map #12.

- 27 • For locatable minerals:
 - 28 ○ Operations on lands open to mineral entry (as well as on claim locations that pre-
 - 29 date withdrawal) must be conducted in compliance with 43 Code of Federal
 - 30 Regulations (CFR) 3809 and 3715 regulations. The three levels of operation under
 - 31 these regulations are casual use, notice, plan of operation. A plan will have to be
 - 32 filed for operations usually conducted under notice in the following:
 - 33 ▪ Areas in the National Wild and Scenic Rivers System and areas designated
 - 34 for potential addition to the system.
 - 35 ▪ Designated areas of critical environmental concern.
 - 36 ▪ Areas designated as part of the National Wilderness Preservation System
 - 37 and administered by the BLM.
 - 38 ▪ Areas designated as “closed” to off-highway vehicle use as defined in 43
 - 39 CFR 8340-5.

- 1 ▪ Any lands or waters known to contain federally proposed or listed
2 threatened or endangered species or their proposed or designated critical
3 habitat.
- 4 ▪ National Monuments and National Conservation Areas administered by
5 the BLM; see 43 CFR 3809.11(c).
- 6 ▪ A plan must be submitted for any bulk sampling of 1,000 tons or more of
7 presumed ore for testing (see 43 CFR 3809.11(b)).
- 8 • For saleable minerals and mineral materials:
 - 9 ○ All existing mineral material sites will be evaluated to determine continual need
10 and to ensure that they are accommodating user needs.
 - 11 ○ Mineral material common use areas, community pits, free-use permits,
12 competitive and noncompetitive contract sales and testing and sampling of
13 mineral materials may be authorized by the BLM in “open” areas.
 - 14 ○ 390,307 acres of BLM-administered lands (approximately 14,915 acres in Daggett
15 County, 38,612 acres in Duchesne County, and 336,762 acres in Uintah County)
16 will be available for mineral material disposal with standard and special
17 stipulations (BLM 2008).
 - 18 ○ Close non-wilderness study area lands with wilderness characteristics to the
19 disposal of mineral materials (106,178 acres).

21 In accordance with the Federal Land Policy and Management Act of 1976 (FLPMA), the U.S.
22 Forest Service (USFS) must consider that all National Forest system lands are available for
23 mineral exploration and development unless they are withdrawn from mineral entry and leasing.
24 The total area within the boundary of the Ashley National Forest is 1,405,042 acres.

25
26 Approximately 20,910 acres of this area are state and private land. This leaves 1,384,132 acres
27 available subject to the constraints imposed by the following (U.S. Department of Agriculture
28 [USDA] 1986):

- 29 • Outstanding or Reserved National Forest System Lands Mineral Rights: There are 22,356
30 acres of acquired federal lands within the Ashley National Forest where all mineral rights
31 are outstanding or reserved. An additional 5,087 acres have the oil and gas rights only
32 outstanding.
- 33 • Existing National Forest System Lands Withdrawals: In total, 137,729 acres of National
34 Forest System lands in Daggett, Duchesne, and Uintah Counties have been formally
35 withdrawn from all forms of appropriation under the public land laws. This includes
36 33,162.6 acres of withdrawals in Daggett County, 74,188.1 acres of withdrawals in
37 Duchesne County, and 30,379.8 acres of withdrawals in Uintah County.
- 38 • Special Legislation: Approximately 185,645 acres (93,930 acres in Daggett County) of

1 Ashley National Forest were withdrawn under Public Law 90-540 when the Flaming
2 Gorge National Recreation Area was established on October 1, 1968. Approximately
3 276,175 acres were withdrawn with the passage of the Utah Wilderness Act of 1984.

4 ○ Lands with Wilderness Characteristics: Daggett County = 40,660 acres, Duchesne
5 County = 22,670 acres, Uintah County = 209,683 acres

6 ○ Wilderness Study Areas: Daggett County = 7,207 acres, Uintah County = 46,831
7 acres.

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

12 ○ Locatable minerals: 861,355 acres

13 ○ Leasable minerals: 1,083,830 acres

14 ○ Oil and gas: 1,083,830 acres

15
16 The Ashley National Forest applies the following objectives, standards, and guidelines to mineral
17 activities on Forest System lands (USDA 1986):

- 18 ● Objective: Control mineral activities to protect other resources, and restore disturbances
19 resulting from mining or leasing activities.

20 ○ Standards and Guidelines:

21 ■ Accomplish needed reclamation work on abandoned and/or invalid mining
22 claims.

23 ■ Prohibit the depositing of material from drilling, processing, or site
24 preparation in natural drainages or floodplains unless restricted to prevent
25 contamination of overland flow.

26 ■ Surface occupancy will be allowed only where impacts on surface
27 resources will be acceptable.

28 ■ Recommend against leasing and sale of minerals when critical adverse
29 impacts cannot be mitigated.

30 ■ Recommend withdrawal of lands from mineral leasing when there are
31 sensitive, unique surface resources that cannot be adequately protected
32 under current public laws and federal regulations.

33 ■ Specific stipulations will be assigned on a case-by-case basis for all
34 mineral activities and designed to protect other resource values.

35 ■ Prohibit open pit phosphate mining visible from Flaming Gorge Reservoir
36 or Highway 44 from Greendale to Manila.

- 1 ▪ Prohibit surface occupancy of mineral leases within 500 feet of highways
2 and lakes.
- 3 ▪ Retain mineral entry withdrawal for the Sheep Creek Geological Area.
4 Except for existing valid claims, the entire geologic area is withdrawn
5 from all mineral entry.
- 6 ▪ Mineral activities will not be allowed on areas where the erosion hazard
7 rating or geologic hazard rating is high.
- 8 ▪ Require leases, prospectors, and miners to complete reclamation work on
9 all disturbed lands.
- 10 ▪ Disposal of mineral waste material will be allowed only when there is no
11 risk to the public or will not result in adverse environmental impacts.
- 12 • Objective: Inventory, conserve, and determine in-service needs, and establish proper use
13 levels of all common variety minerals.
 - 14 ○ Standards and Guidelines:
 - 15 ▪ Maintain an inventory of both proven and probable mineral material
16 availability.
 - 17 ▪ Estimate in-service demands and allow out-service use only in excess of
18 that need.

19
20 The State of Utah School and Institutional Trust Lands Administration (SITLA) manages 3.4
21 million surface and subsurface acres, and an additional 1.1 million acres of mineral estate, which
22 include land in the Uintah Basin (55,051 acres in Duchesne County). The revenue generated from
23 SITLA lands is transferred into the Permanent School Fund, and Utah’s public schools are the
24 beneficiary of 96% of all SITLA lands.

25
26 Utah Code 53C-2-4 and Utah Administrative Code R850 define SITLA’s responsibilities
27 regarding mineral leases.

28
29 The hard rock mineral, coal, and industrial mineral assets of SITLA are managed by the
30 Administration’s mining group. Revenue is generated primarily through rents and production
31 royalties. Crushed stone aggregate and tar sands are the main (non-oil and gas) mineral assets
32 SITLA manages in the Uintah Basin. Information about oil and gas leasing can be found in the
33 Energy and Mineral Resources section.

34
35 Minerals on Uintah and Ouray Reservation lands are managed by the Ute Tribe and the U.S.
36 Bureau of Indian Affairs.

37
38 **Coal**

39
40 Coal is the remains of plant material preserved in stratified layers in the earth’s crust. Mining of

1 coal beds in Utah is conducted mainly to provide fuel for the electric power generation industry,
2 as well as for some commercial and industrial uses. Minable coal occurs in beds greater than
3 four feet thick and at depths generally less than 3,000 feet deep.

4
5 The Utah Division of Oil, Gas and Mining has identified one coal field in Duchesne County (see
6 Map #13). The coal field is located in the Tabby Mountain area, where much of the surface is
7 owned by the State Institutional Trust Lands Administration and most of the coal has tribal
8 mineral rights. A 1980 study by Margaret A. Adams and James N. Kirr found that the Tabby
9 Mountain coal field contains an estimated 1.8 billion short tons of coal, with about 231 million
10 tons found in coalbeds greater than four feet thick and less than 3,000 feet deep.

11
12 The Mineral Potential Report for the Vernal Planning Area, prepared for the Vernal BLM Field
13 Office in October 2002, verified the occurrence of coal in these areas, but noted that “it is highly
14 unlikely that coal will be developed in the Planning Area in the foreseeable future because of the
15 low-grade quality of the coal in the area and the high-grade abundant coal in nearby Colorado
16 and Wyoming. Coal extraction did occur in the first half of the 20th century at a few mines on
17 private lands. Maximum coal production from the Planning Area (10,000 to 13,000 tons)
18 occurred in 1903. The total historic production from all mines in the Planning Area is estimated
19 at 250,000 tons.”

20
21 Coal is a low-cost, bulk commodity that is sensitive to transportation costs, and therefore
22 development is often constrained by proximity to existing road and railroad transportation
23 infrastructure. There is no railroad service in Duchesne County. There are no active coal mining
24 permits in Duchesne County, according to the Utah Division of Oil, Gas and Mining and
25 Duchesne County contains only 0.1% of the coal resources in Utah.

26 27 **Mining and Mineral Resource Objectives**

28
29 Continue to allow access, and increase access to public lands for mining and mineral resource
30 development in a manner that 1) satisfies local and national needs and provides for economical and
31 environmentally sound exploration, extraction, and reclamation practices; and 2) is consistent with,
32 and complementary to, the County’s lifestyle, character, and economy.

33 34 **Mining and Mineral Resource Policies**

- 35
- 36 1. Mining and mineral resource exploration and development are consistent with the
37 multiple use philosophy for management of public lands. These activities constitute a
38 temporary use of the land that will not impair its use for other purposes in the future. All
39 mineral resource exploration activities shall comply with appropriate laws and
40 regulations.
 - 41
42 2. All available, recoverable solid mineral resources in Duchesne County should be
43 seriously considered for contribution or potential contribution to the state's economy and
44 the economies of the respective counties.

- 1 3. Those portions of Duchesne County shown to have reasonable mineral potential should
2 be open to leasing and other access with reasonable stipulations and conditions, including
3 mitigation, reclamation, and bonding measures where necessary, that will protect the
4 lands against unnecessary and undue damage to other significant resource values.
5
- 6 4. Any prior existing lease restrictions in Duchesne County that are no longer necessary or
7 effective should be modified, waived, or removed.
8
- 9 5. Restrictions against surface occupancy in Duchesne County should be eliminated,
10 modified, or waived, where reasonable.
11
- 12 6. Any moratorium that may exist against the issuance of qualified mining patents in
13 Duchesne County, and any barriers that may exist against developing unpatented mining
14 claims and filing for new claims, should be carefully evaluated for removal.
15
- 16 7. Future withdrawals of land from mineral exploration and development should be avoided.
17
- 18 8. Consistent with Utah Code 63J-8-104, Duchesne County’s support for mineral
19 development provisions within federal land management plans will be withheld until the
20 appropriate land management plan environmental impact statement clearly demonstrates
21 the following:
22
 - 23 a. That the authorized planning agency has considered and evaluated the mineral
24 potential in all areas of the planning area as if the areas were open to mineral
25 development under standard lease agreements and has evaluated any management
26 plan prescription for its impact on the area's baseline mineral potential.
27
 - 28 b. That the development provisions do not unduly restrict access to public lands for
29 mineral exploration and development.
30
 - 31 c. That the authorized planning agency has supported any closure of additional areas
32 to mineral leasing and development or any increase of acres subject to NSO
33 restrictions by adhering to:
 - 34 1. The relevant provisions of FLPMA, 43 United States Code (USC) 1701 et
35 seq.;
 - 36 2. Other controlling mineral development laws;
 - 37 3. The controlling withdrawal and reporting procedures set forth in FLPMA,
38 43 USC 1701 et seq.; and
 - 39 4. The relevant laws and regulations governing land management decisions
40 of the USFS, the U.S. Fish and Wildlife Service, the Bureau of Indian
41 Affairs, and other federal agencies managing land in the Uintah Basin.

- 1 d. That the authorized planning agency evaluated whether to repeal any moratorium
2 that may exist on the issuance of additional mining patents.
- 3 e. That the authorized planning agency analyzed all proposed mineral lease
4 stipulations and considered adopting the least restrictive necessary to protect
5 against damage to other significant resource values.
- 6 f. That the authorized planning agency evaluated mineral lease restrictions to
7 determine whether to waive, modify, or make exceptions to the restrictions on the
8 basis that they are no longer necessary or effective.
- 9 g. That the authorized federal agency analyzed all areas proposed for NSO
10 restrictions, and that the analysis evaluated:
 - 11 1. Whether analysis of management prescriptions demonstrates that the
12 proposed NSO prescription, in effect, sterilizes the mineral resources
13 beneath the area; and
 - 14 2. Whether, if the minerals are effectively sterilized, the area must be
15 reported as withdrawn under the provisions of FLPMA.
- 16
17 9. Identification of mineral potential and location is important for planning future energy
18 needs and resource management. All management plans must address and analyze the
19 possibility for the development of mineral resources where there is a reasonable
20 expectation of their occurrence within the planning area.
- 21
22 10. All mining permits and applications should be processed on a timely basis, provided that
23 the applicant follows proper procedures and submits all required information at the time
24 of application. The regulations implementing the National Environmental Policy Act
25 provide guidance on reducing delay (40 CFR 1500.5). The Utah Administrative Code
26 R645 and R647 include the timelines and requirements for mining permit applications.
- 27
28 11. Development of mineral resources of Duchesne County should be encouraged. The
29 bypassing of valuable mineral resources within developed areas should be avoided. The
30 requirements to mitigate or reclaim mineral resource development projects should be
31 based on credible evidence of significant impacts to natural or cultural resources.
- 32
33 12. Mining operations that serve the energy industry should be supported, provided that such
34 operations comply with the requirements of county zoning ordinances that attempt to
35 mitigate nuisance impacts on surrounding property owners. In split-estate situations, the
36 subsurface owners shall work cooperatively with surface owners to resolve any nuisance
37 issues.
- 38
39 13. The development of mining and mineral resources should be conducted in a manner that
40 minimizes adverse impacts to water quality in accordance with local, state, and federal
41 standards.

- 1 14. The development of mining and mineral resources should be conducted in a manner that
2 uses water in accordance with terms set forth by the Utah Division of Water Rights and
3 the State Engineer, county zoning ordinances, and is in compliance with other applicable
4 laws and regulations, such as Utah Administrative Code R317-1-3.3, which requires that
5 discharges having reasonable potential to discharge phosphorus implement new water
6 quality monitoring requirements and the dischargers must meet specified effluent limits
7 by January 1, 2020.
8
- 9 15. Provide, as appropriate, incentives to encourage economic development and stimulate
10 natural resource-based business recruitment, retention, and expansion activities.
11
- 12 16. An environment that is conducive to owner-operator natural resource-based businesses
13 should be encouraged, created, and maintained.
14
- 15 17. A broad spectrum of educational and vocational programs relating to natural resource use
16 and development should be encouraged and supported.
17
- 18 18. County land use plans and regulations that complement Duchesne County's natural
19 resource exploration and development interests and objectives should be maintained and
20 should accommodate resource planning efforts.
21
- 22 19. Additional transportation options (including air, rail, pipeline, and interstate roadway
23 system, corridors) to expand natural resource development opportunities and markets
24 should be explored.
25

26 **Energy Considerations**

27
28 **Findings:** The energy industry in Duchesne County relies on a supply of rock and gravel to
29 construct roads and well pads needed to produce energy resources.
30

31 **Policy:** It is the policy of Duchesne County to support mining operations that serve the energy
32 industry, provided that such operations comply with the requirements of the County zoning
33 ordinance that attempt to mitigate nuisance impacts on surrounding property owners.
34

35 **Water Considerations**

36
37 **Findings:** The production of mining and mineral resources can have impacts on water quality.
38

39 **Policy:** It is the policy of Duchesne County that the development of mining and mineral
40 resources be conducted in a manner that minimizes adverse impacts to water quality in
41 accordance with state and federal standards.
42

43 **Findings:** The production of mining and mineral resources can have impacts on water supplies.
44

- 1 **Policy:** It is the policy of Duchesne County that the development of mining and mineral
- 2 resources be conducted in a manner that uses water in accordance with terms set forth by the
- 3 Utah Division of Water Rights and the State Engineer.

Section 3. Agriculture

Agriculture in General

Findings: Duchesne County contains substantial farm lands which produce a variety of high quality agricultural products. The 2012 Census of Agriculture revealed that there are 1,058 farms in Duchesne County. This is an increase from 932 farms counted in 2002 and 879 farms counted in 2007. Of the 1,058 farms, 410 (38.8%) produce beef cattle, but only 10 dairy farms remain. The land area in farms in the County in 2012 was 1,088,559 acres, which is 52% of the total county land area. This acreage includes public lands rangeland allotments. Pasture and rangeland covered 954,517 acres, or 87.7% of all farm land. The remaining percentage is in Cropland (7.2%), Woodland (2.7%) and Farmsteads (2.5%). The total acreage in farms has decreased from 1,304,716 acres counted in the 2002 Census of Agriculture. Thus, although the total number of farms has increased from 2002 to 2012, the total acreage in farms has decreased, showing a trend toward smaller farms. The average size of farms in Duchesne County decreased from 1,400 acres in 2002 to 1,029 acres in 2012.

The estimated market value of land and buildings on farms in Duchesne County has steadily increased from an average of \$535,609 in 2002 to \$809,965 in 2007 to \$856,720 in 2012. Likewise, the estimated market value of machinery on farms in Duchesne County has steadily increased from \$65,921 in 2002 to \$78,236 in 2007 to \$98,000 in 2012.

The amount of irrigated farm land has increased slightly from 94,723 acres in 2002 to 100,909 acres in 2012. The County has seen a decrease in flood irrigation as federal programs have provided resources to install irrigation systems that decrease the amount of salinity deposited into waterways.

Policy: It is the policy of Duchesne County to support efforts to provide more efficient irrigation systems that decrease salinity impacts in the Colorado River Drainage basin.

Findings: The market value of agricultural products sold by farms in Duchesne County increased from \$46,047,000 in 2002 to \$57,123,000 in 2012. Of the 2012 value of sales, 66.8% came from livestock and 33.2% from crops. Although the amount of acreage in farms has decreased, that decrease has not prevented the value of products sold from increasing.

The number of farms receiving government payments decreased from 201 in 2002 (receiving \$1,643,000 in support) to 89 in 2012 (receiving \$455,000 in support).

The number of farms with an operator whose primary occupation is farming decreased from 472 of the 932 farms (50.6%) in 2002 to 375 of the 1,058 farms (35.4%) in 2012. The data show that more farmers are making their living from other occupations than in the past. According to the *Profile of Agriculture*, found in the Headwaters Economics Economic Profile System (EPS), Duchesne County had 1,037 persons employed on farms in 2014, which is 7.4% of the total employment in the County. This compares to only 1.4% of jobs in farming nationwide. Farm

1 labor earnings in Duchesne County were only 4.4% of total labor earnings in the county. From
2 1970 to 2014, net farm business income in Duchesne County increased from \$8.9 million to
3 \$29.8 million. However, there have been several years recently when farm business net income
4 was “in the red” (2007, 2009, 2010) only to rebound strongly in 2012-2014.

5
6 **Objective:** The County will continue to support "value-added" agricultural programs.
7 In 1995, Duchesne was one of three counties selected by the State to participate in a "value-
8 added agriculture" feasibility study. This opportunity explored "adventure tourism and ranching"
9 opportunities in the area.

10
11 **Policy:** The County will continue to pursue "value added agriculture" options with the assistance
12 of local Utah State University extension agents and offices.

13
14 Other resources available to agricultural interests within the County include the Uintah Basin
15 Applied Technology Center, the Natural Resources Conservation Service, Dinosaurland
16 Resource Conservation and Development, and the United States Forest Service. These
17 institutions and agencies are actively involved in providing expertise and funding for agriculture-
18 related projects.

19
20 One such funding source is the federal Grassland Reserve Program. According to the USDA
21 Natural Resource Conservation Service, the Grassland Reserve Program (GRP) is a voluntary
22 program that helps landowners and operators protect eligible grazing lands, including rangeland,
23 pastureland, shrubland and certain other lands using rental contracts or conservation easements.
24 The program emphasizes support for working grazing operations, enhancement of plant and
25 animal biodiversity, and protection of grasslands under threat of conversion to cropping, urban
26 development and other activities. Eligible land includes privately owned grasslands; land that
27 contains forbs (including improved rangeland and pastureland or shrubland) for which grazing is
28 the predominant use; or land that is located in an area that historically has been dominated by
29 grassland, forbs, or shrubland that has the potential to serve as wildlife habitat of significant
30 ecological value. In 2011, the Grassland Reserve Program was used to fund \$18.2 million worth
31 of sage grouse habitat conservation work in Idaho, Utah and Wyoming. Utah received \$2.3
32 million of this funding, which was used in seven projects in Box Elder, Rich and San Juan
33 counties.

34
35 **Policy:** The County will facilitate on-going interaction between information and training
36 resources and County agricultural interests to ensure that residents are fully aware of available
37 technological advances and funding sources.

38 39 **Energy and Agriculture**

40
41 Energy resources in Duchesne County have been developed on federal, state, tribal and private
42 lands. Due to restrictive policies of the federal government, the percentage of energy production
43 on federal lands has been decreasing. Energy companies have increasingly moved onto private
44 lands to develop energy resources, which can result in conflicts between the agricultural surface

1 owners and the subsurface mineral owners. Duchesne County has appointed an Oil & Gas
2 Liaison to help resolve such conflicts. Other issues, such as continued greenbelt taxation of oil
3 and gas well lease sites, remain under discussion.

4
5 **Policy:** It is the policy of Duchesne County that surface disturbance associated with energy
6 development, including loss or damage to agricultural lands, irrigation systems, crops or surface
7 improvements due to energy development (such as well pads, roads and pipelines) shall be
8 limited to that which is reasonably necessary and practical to extract the resource.

9
10 **Agricultural Water Use**

11
12 Agriculture operations require water for irrigation of crops and pastures. Since much of
13 Duchesne County receives around ten inches of precipitation on an average year, farmers rely on
14 supplemental irrigation water, much of which comes from streams and reservoirs on the south
15 slope of the Uinta Mountains. See Section 11 of this plan for more detailed considerations and
16 County policies associated with Irrigation.

17
18 **Agricultural Pests**

19
20 Grasshoppers and Mormon Crickets do a lot of damage to agricultural crops on private and
21 public lands in Duchesne County. The Utah Department of Agriculture and Food, in cooperation
22 with local county extension services, surveys and monitors the population of such pests. This
23 data is used to target the spraying of pesticides to reduce the impacts of such infestations.

24
25 In its 2015 Utah Mormon Cricket and Grasshopper Report, the department provides data
26 showing the trends in cricket and grasshopper infestation since 2000. In Duchesne County, the
27 worst year for grasshopper infestation was 2004; in which 230,190 acres were affected. The next
28 highest years during this period were 2009 and 2001; in which 85,391 and 82,400 acres were
29 infested respectively. No infestations of grasshoppers were found in 2005. In the past five years,
30 an average of slightly less than 19,000 acres of land has been infested. In 2015, Duchesne
31 County saw 22,817 acres infested, with 17,502 of those acres being privately owned. This was
32 the third highest acreage infested of the 29 counties in the state.

33
34 Mormon crickets have been less of a problem recently in Duchesne County. There was a large
35 infestation of crickets in 2001 (83,900 acres) and a smaller infestation of 7,000 acres in 2002; but
36 no infestations since that time.

37
38 The Utah Department of Agriculture and Food published a 2012 report on its accomplishments in
39 controlling insect pests, which included the following Summary of Invasive and Native Pests
40 Risk:

- 41
42 • Africanized Honey Bee: Potential to disrupt Utah's \$1.5 million honey industry, health
43 risks to humans and livestock. As of the 2012 report, this species had not been found in
44 Duchesne County; but has been found in four southern Utah counties.

- 1 • Orchard Pests such as Apple Maggot, Brown Marmorated Stink Bug, Chinese Long Horn
2 Beetle, Plum Curculio, Spotted Wing Drosophila and Cherry Fruit Fly: Potential to
3 devastate Utah’s \$17 million fruit industry.
4
- 5 • Cereal Leaf Beetle: Potential to reduce Utah’s \$715 million small grain and field crop
6 industry.
7
- 8 • Emerald Ash Borer: Threat to kill all ornamental and native ash trees in Utah.
9
- 10 • European Corn Borer: Potential to devastate Utah’s \$69 million corn harvest.
11
- 12 • Gypsy Moth: Potential to destroy Utah’s watersheds, coniferous forests, and residential
13 landscapes.
14
- 15 • Japanese Beetle: Potential to damage Utah’s \$128 million nursery and floriculture
16 industry, and \$17 million fruit industry.
17
- 18 • Mormon Cricket and Grasshopper: Potential to significantly reduce Utah’s \$715 million
19 small grain and field crop industry.
20
- 21 • Red Imported Fire Ant: Economic damage caused in the US exceeds \$5 billion, public
22 health risk.
23

24 **Policy:** It is the policy of Duchesne County to support efforts to control agricultural pests that do
25 or could in the future affect county agriculture through the use of surveys and targeted pesticide
26 applications. The County encourages state and federal agencies and the Ute Tribe to support
27 similar pest control efforts on lands under their management within the county.
28

29 **Agricultural Sustainability**

30
31 As agriculture in Utah continues to face increased pressure from urban development, changing
32 demographics, economic pressures, and a myriad of other issues, it is becoming increasingly
33 important that policy makers and citizens understand the critical role that agriculture plays in
34 promoting Utah’s security, economy, society, culture, and well-being.
35

36 To better understand and address these concerns, former Lieutenant Governor Greg Bell and
37 former Commissioner of Agriculture Leonard Blackham convened the Utah Agriculture
38 Sustainability Task Force in 2011. The Task Force was comprised of state legislators, local
39 government officials, conservation districts, agricultural producers, and other interested parties.
40 They came together to gather and analyze data and information, and to make recommendations to
41 promote the sustainability of all types of agriculture in Utah. During the discussion of key
42 agricultural sectors, eight major issues emerged:
43

1 **Food Security** - Local farming gives us the ability to feed people in their communities
2 independent of outside influences and keeps dollars spent on agricultural products in the local
3 economy. Once prime or important agricultural lands are converted to urban development, the
4 ability to produce food is lost and our ability to be self-sufficient is decreased.

5
6 **Invasive Species** - More effective coordination is needed to inventory and control weeds on
7 public and private lands. Increased public awareness is critical to minimize the spread of invasive
8 species.

9
10 **Grazing Management** - Livestock grazing is the dominant sector in Utah agriculture. While the
11 number of permitted livestock on public lands has been decreasing, rangeland can support
12 additional livestock grazing that is beneficial to wildlife, healthy lands, and quality recreational
13 opportunities, if it is properly managed. Landscape-scale grazing management can be a tool to
14 effectively manage natural resources for wildlife and livestock.

15
16 **Immigration** - Utah farms and ranches require an ample, sustainable, and legal workforce.

17
18 **Urban Agriculture** - Urban agriculture is a growing segment in which —every acre counts. Creating
19 agriculture-friendly zoning ordinances will help expand food-producing opportunities
20 throughout our cities and counties.

21
22 **Agriculture Promotion and Profitability** - To be sustainable, agriculture must be *profitable*.
23 This will require increased local marketing opportunities, processing capacity, and distribution
24 networks.

25
26 **Next Generation Farms** - As the average age of farm operators in Utah continues to increase, it
27 will be important to provide Utah farmers and ranchers with reasonable options for generational
28 farm transfer.

29
30 **Irrigation Infrastructure** - The availability of water is critical to agriculture. Improving water
31 distribution systems to deliver water to farm lands in a cost-effective manner will be important
32 for both sustainable agriculture and projected population growth.

33
34 In order to address these issues, the Task Force developed a list of proposed actions that state,
35 local and federal governments and the private sector can implement. All proposed action items
36 were unanimously supported by all members of the task force, with the exception of conservation
37 easements. A few members of the task force had concerns with the structure and appropriateness
38 of conservation easements. Duchesne County supports the findings and recommendations of the
39 Task Force below.

40
41 **Agriculture Sustainability Task Force Proposals:**

42
43 **Policy:** Prime, important and unique agricultural lands and soils are vital to sustain human life.
44 The protection of prime agricultural lands should be given the same consideration as other lands

1 by federal agencies, the State of Utah, and its political subdivisions. It is important these lands be
2 conserved for our food security needs.

3
4 **Proposed Actions:**

5
6 **State**

- 7
- 8 • Develop legislative policy that provides protection for important agricultural lands and
9 soils equal to wetlands in order to sustain food security.
 - 10 • Fund conservation easement legislation that gives priority to important productive
11 agricultural lands with prime soils or important farmlands. Dedicate greenbelt rollback
12 monies to conservation easements or other productive agricultural uses within the
13 counties where rollback funds are generated. Enable local conservation districts to make
14 recommendations to county commissions related to the use of annual rollback funds.
 - 15 • Provide new monies to the LeRay McAllister Fund to match funds for conservation
16 easements on productive agricultural lands with prime state or locally-important soils.
 - 17 • Create a separate greenbelt designation for smaller-acreage productive operations.
 - 18 • Amend Utah law to fund mitigation of agriculture lands lost to eminent domain.
 - 19 • Amend Utah law to encourage energy producers to use directional drilling and other
20 techniques to minimize the surface impacts on agricultural lands caused by energy
21 development.
 - 22 • Provide a \$1,000,000 increase in money from the State of Utah General Fund for invasive
23 species mitigation, especially weed control.
 - 24 • Consider other sources of funding for weed control tied to the spread of weed seeds
25 including: funds earned from unclaimed property, trailer licenses, noxious weed impact
26 fees from recreational ATVs, gravel pit fee assessments, a portion of the sportsmen fees
27 gathered by the Utah Department of Natural Resources, and other appropriate sources.
 - 28 • Provide \$1,000,000 of on-going state funding to increase landscape-scale coordinated
29 resource management planning. Where feasible, this money will facilitate the
30 development of grazing management plans, watering facilities, fencing improvements,
31 weed control, and other grazing improvement projects.
 - 32 • Augment existing funding or develop alternative funding sources to improve and update
33 irrigation system technologies.
 - 34 • Enhance the Utah Division of Wildlife Resources Big Game Depredation program to
35 mitigate crop and other damages caused by big game to farm and ranch land.
- 36
37
38
39

1 **Utah Department of Agriculture and Food**

- 2 • Increase the capacity of the Utah Department of Agriculture and Food to directly
3 participate in the planning of state and local infrastructure needs when agricultural lands
4 are an issue.
- 5 • Work with the Governor’s Office of Economic Development to improve local processing
6 capacity.
- 7 • Develop incubator kitchens in each county to provide small agricultural companies
8 places to test new products.
- 9

10 **Local**

- 11
- 12 • Encourage local governments to recognize the importance of agricultural land uses in
13 their general plans, policies and ordinances.
- 14 • Encourage local governments to develop specialized local food security plans that work
15 toward these goals.
- 16 • Partner with USU Extension, conservation districts, county and city officials, and other
17 interested parties to provide technical assistance for conservation.

18 **Federal**

- 19
- 20 • Encourage the federal government to eliminate subsidies for agriculture-related products
21 diverted from the food supply for energy production.
- 22 • Urge the federal government to allow greater state agricultural environmental stewardship
23 oversight using the traditional educational and voluntary programs of the USDA,
24 conservation districts, and the Utah Department of Agriculture and Food as models.
- 25 • Create federal block grants to fight invasive species on federal and state lands.
- 26 • Pass a resolution calling on Congress to create a new national agriculture guest worker
27 program.
- 28 • Support federal legislation to provide funding for improved agriculture irrigation
29 infrastructure.

30 **Call to Action:** Under the leadership of UDAF, engage partners, educational institutions,
31 support groups, and others to:

32

- 33 • Update the inventory of invasive species in Utah, more clearly define the role of county
34 weed boards in statute, and identify and prioritize weed control measures.
- 35
- 36 • Establish outreach and education campaigns to inform the public about how to minimize
37 the spread of invasive species.
- 38
- 39

- 1 • Improve agricultural product distribution capacity by supporting the existing *Utah's Own*
2 program to provide:
 - 3 ○ Incentives and/or legislation to encourage local stores, restaurants, school lunch
4 programs, state agencies, and other public sector services to buy Utah products
5 first, (when available)
 - 6 ○ A fund to facilitate central distribution points for the purchase of local Utah
7 agricultural products
 - 8 ○ Promotion of innovative agricultural practices and products in our partnerships
9 with food buying groups, restaurant groups and emerging businesses
- 10 • Increase the funding and effectiveness of predator control, and allot reasonable and
11 sufficient compensation to agricultural producers for wildlife impacts that may disrupt
12 agricultural production.
- 13 • Support Utah House Bill 116: an ample, sustainable and legal workforce is critical for our
14 farms and ranches.
- 15 • Oppose using E-verification to verify worker status until federal guest worker laws are in
16 place.
- 17 • Work with Utah State University and support groups to develop and implement planning
18 and farm transfer programs that will complement retirement and insurance programs for
19 farmers and ranchers. Support efforts to match farmers without identified successors,
20 with young farmers seeking opportunities to purchase or lease farms or ranches.
21 Encourage the financial community to finance farm ownership transfer.
- 22 • Work with conservation districts in a statewide effort to map Utah irrigation systems, and
23 educate the general public about the irrigation needs of agriculture and the benefits of
24 well-maintained irrigation delivery systems.

25 **Policy**

26
27 Duchesne County concurs with the findings of the 2011 Utah Agriculture Sustainability Task
28 Force as published in their report dated January, 2012 and supports efforts at the local level to
29 protect agricultural land and sustain the agricultural industry in the County.
30
31

Section 4. Livestock & Grazing

Livestock & Grazing in General

Findings: Agricultural production in Duchesne County is based mainly on the rearing of livestock and crops to support the livestock industry. As part of the livestock industry, the use of pastures and rangelands are an important tool used in the area. Pasture and rangeland health are key to long-term watershed health and profitability. Often, livestock using permitted allotments are under-managed by ranchers who are unable to make dramatic changes in grazing plans due to regulatory, financial, legal, and technical complications. Proper nutrient management is key to water quality concerns for animal feeding operations that combine the use of pastures/rangelands and corals for confined feeding of animals.

Today's rangeland in Duchesne County provides feed for domestic livestock, forage and habitat for wildlife, and outdoor recreation. The various demands on this resource make grazing on public lands a delicate balance. Most of the grazing occurs in the summers in the forests, with some winter grazing occurring in the lowlands. Federal and state rangelands have been an important source of livestock grazing, while private lands provide feed for use in winter.

Rangelands are an integral part of the economy and the landscape of Duchesne County. A comprehensive range management program cannot be overemphasized. The majority of the livestock operators in the county are dependent upon rangelands for their forage base, and large portions of livestock are grazed on public lands. Numerous wildlife species also use these same public and private lands. Pasture and rangeland health are key to long-term watershed health and profitability. Drought years limit available water for irrigation and stock. Inadequate water developments create management challenges that limit livestock distribution. Being located in a salinity control area, funding for improved irrigation systems and pipelines has become available and yields and management have increased.

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

The cultural heritage of Duchesne County is based on agriculture and livestock. These industries formed the historic basis of the local economy from the beginning days of settlement until the development of significant oil and gas resources in the early 1970s. Livestock grazing influenced lifestyles, left its imprints on the landscapes, and is one of the oldest enduring and economically important cultural heritage resources in the west. The following data from the U.S. Census of Agriculture illustrate the trends taking place in Duchesne County livestock and grazing.

Duchesne County has traditionally contained more livestock than people. The 2002 Census of Agriculture counted 63,395 head of cattle and calves in Duchesne County. By the 2007 Census, that count had dropped to 45,222 head. By 2012, the number rebounded upward to 46,907 head.

1 The number of beef cows in Duchesne County dropped from 30,651 in 2002 to 24,823 in 2007
 2 then rebounded to 28,082 in 2012. This ranked Duchesne County third in the State of Utah for
 3 the number of beef cows. The number of farms raising beef cows increased from 458 in 2002 to
 4 558 in 2012.

5
 6 The number of milk cows in the County has also decreased over the past three census periods,
 7 from 3,050 in 2002 to 2,249 in 2007, with an increase to 2,608 in 2012. The number of farms
 8 raising milk cows decreased from 30 in 2002 to 20 in 2012.

9
 10 The Census of Agriculture also counts “other cattle” which include heifers that had not calved,
 11 steers, calves and bulls. The number of other cattle in Duchesne County has decreased from
 12 29,694 head in 2002 to 18,150 in 2007 to 16,127 in 2012.

13
 14 The population of sheep and lambs in Duchesne County has decreased substantially over the past
 15 three census periods, from 7,525 head in 2002 to 2,072 in 2007 and 1,514 in 2012. Summertime
 16 allotments on the south slope of the Uinta Mountains are used by Wyoming sheep ranchers. The
 17 U.S. Forest Service is looking at the impacts of domestic versus bighorn sheep in the Uinta
 18 Mountains. At the request of a permittee, the USFS recently converted an allotment in the
 19 Strawberry Peak area from sheep to cattle, which will reduce conflicts with bighorn sheep.

20
 21 The number of farms raising hogs and pigs has increased from 22 (with 166 head) in 2002 to 32
 22 (with 793 head) in 2007. By 2012, the same number of farms had only 216 head of hogs/pigs.

23
 24 Between 2007 and 2012, Duchesne County had a 20% increase in the number of farms and 66%
 25 increase in the market value of products (USDA 2007, 2012). Duchesne County government
 26 payments and average per farm receiving payments has decreased slightly, -3% and -2%, respectively
 27 (see Table LG1 for more information).

Table LG1. Number of Farms, Market Value, Government Payments and Average Per Farm Receiving Payments for Duchesne County, Years 2007 and 2012

Duchesne County	2007	2012	Percentage Change
Number of farms	879	1,058	+20
Market value of products sold	\$34,427,000	\$57,123,000	+66
Crop sales = 33%, livestock sales = 67%			
Government payments	\$469,000	\$455,000	-3
Average per farm receiving payments	\$5,209	\$5,116	-2

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

1 Although farms and ranches in the County were established on a private land base, during parts
2 of the year, livestock is pastured on public rangeland. The combination of public rangeland and
3 private farmland constitutes the economic base for many of the County’s livestock operations. If
4 either the grazing permit on public lands or the private grazing land is lost or diminished, the
5 economic viability of those operations can be jeopardized.

6
7 A 2013 study by Utah State University, for the Utah Department of Agriculture and Food,
8 contained an “economic analysis of potential changes in grazing access” to public lands in
9 several counties in Utah, including Duchesne. This study found that the production of cattle
10 contributes 1.6% of the Duchesne County economy. By 2016, with the decline in the energy
11 industry, that percentage has likely risen. The USU researchers found that there are about
12 930,000 acres of federal lands supporting the cattle industry, with just under 32,000 AUMs
13 available.

14
15 Given production practices in Duchesne County, these federal lands support cow herds of 9,125
16 head and contribute to 48% of the value of cattle production. In Duchesne County, the continued
17 availability of federal lands for grazing produces direct, indirect and multiplier effect labor
18 income of \$3.9 million and total value added to the county economy of \$6.2 million per year.
19 The study looked at the economic effects of three scenarios; the status quo, the elimination of
20 grazing on federal lands and the transfer of federal grazing lands to the state.

21
22 The USU study found that if federal grazing lands were lost, the profitability of grazing in
23 Duchesne County would suffer, but not as much as in other Utah counties (many of which have
24 less than the 28% private land base that Duchesne County enjoys). While many grazers keep
25 their animals on private lands (grazing for about seven months and feeding grass and hay for
26 about five months) the Duchesne County grazers that do use federal lands generally do so for
27 about 4.5 months, use private lands for about 4 months and feed hay and grass for 3.5 months
28 during the winter. The loss of federal lands would result in added expense of purchasing
29 livestock feed, which would reduce the profit from about \$270 per cow down to about \$118 per
30 cow. Under this scenario, the labor income would drop 34% to \$2.555 million and the total
31 value added to the county economy would decrease by 31% to \$4.25 million.

32
33 The final scenario looked at the impacts of transferring federal grazing lands to the State of Utah.
34 The study found that state management could increase the grazing season on these lands by up to
35 one month. This would add to the profitability of raising cattle provided that grazing fees
36 charged by the state do not become excessive (a state grazing fee of \$4.22 per AUM would result
37 in 7.5% increase in value added and a 13.5% increase in labor income. However, a state grazing
38 fee of \$7.34 per AUM would largely negate those benefits).

39
40 Map #14 shows the location and types of grazing lands available on public lands in Duchesne
41 County.

42
43 Federal grazing permits issued under the Taylor Grazing Act (BLM) or the Granger-Thye Act
44 (USFS) allow permittees the privilege to use publicly owned forage.

1 Data gathered by the Utah Department of Agriculture and Food shows that the amount of
2 federally permitted AUMs in Utah declined four fold between 1940 and 2005. On BLM land,
3 2,749,000 AUMs were available in 1940 but were reduced to less than 675,000 AUMs in 2009.
4 On Forest Service land, the AUMs available decreased from 2.7 million in 1940 to 614,000 in
5 2008.

6
7 According to a report, circa 2008, entitled “Status of Utah Rangelands, Livestock Grazing in
8 Utah,” by Roger E. Banner, livestock grazing use on BLM-administered land has declined from
9 2,749,000 AUMs in 1940 to less than 1,000,000 AUMs currently, a decline of 63 percent. Much
10 of that decrease came as licensed use decreased in the 1940s, 1950s, and 1960s, with permit
11 reductions associated with adjudication programs to bring livestock stocking rates in line with
12 carrying capacity of allotments.

13
14 Grazing permits on BLM-administered rangeland were reduced rather dramatically over several
15 decades after the Taylor Grazing Act of 1934 was passed. Permit reductions in Utah began to
16 level out in the 1960s and 1970s at about 1,250,000 AUMs, which included a substantial amount
17 of grazing preference (AUMs) held in suspended use and unavailable for licensing. This was in
18 response to excessive grazing use of the public domain prior to and immediately after passage of
19 the Taylor Grazing Act and establishment of the Grazing Service, predecessor to the BLM.
20 Suspended use represents a formal reduction in permit (AUMs) that remains with the permit
21 under the assumption that when and if forage production increases, some or all of the suspended
22 AUMs could be reinstated to active preference. Licensed use and suspended use, when summed,
23 may equal active preference. However, they often do not if drought or other conditions do not
24 support full use of active preference. For example, licensed use was curtailed on BLM-
25 administered land in Utah during the drought years of 2003 to 2005.

26
27 Grazing permit reductions continue on BLM land. Active preference has decreased by about 6
28 percent over the past 12 years. This has occurred for a variety of reasons, including interpretation
29 of BLM policy guidelines; closing of allotments or portions of allotments for wildlife benefit,
30 recreation conflict, watershed health, erosive soils, riparian enhancement, cultural resource
31 conflict; and special area designations, such as Areas of Critical Environmental Concern, specific
32 recreation areas, and area restrictions associated with population goals for some wildlife.

33
34 During the 2006 Utah legislative session, in response to these declines, the Rangeland
35 Improvement Act was passed (House Bill 145). The bill provided for the establishment of a
36 State Grazing Advisory Board and six Regional Grazing Advisory Boards (including one with
37 representatives from Daggett, Duchesne and Uintah Counties) to improve the grassroots voice of
38 both private and public grazing land managers. The goals of the act are to strengthen Utah's
39 livestock industry, improve rural economies, and enhance the environment.

40
41 A new division was then established within the Utah Department of Agriculture and Food;
42 known as the Utah Grazing Improvement Program (UGIP). The UGIP's mission is “to improve
43 the productivity, health and sustainability of our rangelands and watersheds.” The UGIP operates
44 under the basic beliefs that “well planned and managed livestock grazing is the most important

1 landscape scale tool for maintaining healthy rangelands, watersheds, and wildlife habitats” and
2 that "healthy rangelands contribute to a healthy livestock industry and productive rural
3 economies." The program has four major components:

- 4
5 1. With input from grazing boards, USU extension and the UDAF, recommend positions on
6 grazing issues for federal and state agencies.
7
- 8 2. Implement projects that rehabilitate our natural resources, increase productivity and
9 protect the landscape.
10
- 11 3. Work with state and federal agencies to make land management decisions that are "open"
12 and are more reasonable, affordable and effective in addressing grazing management and
13 productive capacity of rangeland and watersheds.
14
- 15 4. Partnering with others to improve resource health and preserve livestock grazing on
16 public lands.
17

18 The UGIP has set forth the following goals:

19
20 **Strengthen Utah’s Livestock Industry**

- 21 • Improve the sustainability of livestock grazing through science-based management
22 principles.
23
- 24 • Work cooperatively with federal agencies and partners to promote efficient multiple-use
25 management of public lands.
26
- 27 • Work with federal agencies and Congress to implement policies and procedures that
28 allow maximum flexibility when addressing grazing and environmental issues.
29
- 30 • Curtail the decline of public lands grazing opportunity by using sustainable management
31 practices.
32

33
34 **Improve Rural Economies**

- 35 • Maintain viable ranches as a critical contributor to the economy, customs and culture of
36 rural Utah.
37

38
39 **Enhance the Environment**

- 40 • Demonstrate the power of managed livestock grazing as an important tool for
41 improving/maintaining rangeland resource health.
42
- 43 • Plan and implement rangeland improvement projects that improve grazing management.
44

- 1 • Provide technical expertise and educational opportunity for working ranches and the next
2 generation of ranchers.

3
4 The UGIP has implemented hundreds of projects since 2006. The UGIP website
5 (<http://ag.utah.gov/conservation-environmental/grazing-improvement-program.html>) contains
6 many examples of how grazing improvement projects have benefitted the range environment.
7 These include reseeding of lands damaged by fire with vegetation that benefits wildlife and
8 livestock, watering facilities that help reduce impacts along riparian areas and removal of juniper
9 trees and rabbit brush infestations to allow grasses and forbs to thrive to the benefit of grazing
10 and wildlife.

11
12 Measuring the success of the UGIP is best achieved in three main ways:

- 13
14 • Monitoring on the ground results of projects and land management changes. This is done
15 using both on-the-ground and remote sensing techniques.
- 16
17 • Tracking the economic viability of the livestock industry and rural economies related to
18 ranching in Utah. This includes tracking federal, state and private forage allocation over
19 time.
- 20
21 • Partnering with others to improve resource health and preserve livestock grazing on
22 public lands.

23
24 In 2007, the Governor's Office of Planning and Budget presented data to the Governor's Task
25 Force on Sustainable Agriculture showing that the average age of the principal operator of Utah's
26 farms and ranches has increased from 47 years of age in 1940 to 57.4 years of age. The UGIP
27 includes a program focused on assisting the next generation of ranchers. Through a USDA grant,
28 and in cooperation with Utah State University Extension, the UGIP has provided several multi-
29 day rangeland management workshops over the last two years. Pre and post event surveys
30 demonstrate the effectiveness of helping young ranchers learn from each other as well as from
31 those who have managed successful ranches for decades.

32
33 In addition to the Grazing Improvement Program, the Utah Legislature has taken action to
34 address the issue of wildlife eating the forage grown by ranchers to support their livestock. The
35 legislature created the Cooperative Wildlife Management Unit (CWMU) program to provide
36 incentives for large private land owners to manage for wildlife values. The program has resulted
37 in vastly increased hunting opportunities and has mostly resolved wildlife/rancher conflicts on
38 large private land holdings. However, restitution of damages to crop land is still inadequate. The
39 program, guided by DWR, puts management in the hands of those most capable to achieve
40 results and allows these large landowners to recover the cost of production for wildlife. Finding
41 similar programs to provide solutions for smaller operations has been elusive.

42
43 In 2012, the Duchesne County Conservation District identified Pasture and Rangeland to be one
44 of the top five resource conservation priorities. The District identified several challenges

1 associated with pasture and rangeland management:
2

- 3 a. Most land used for pasture consists of soils that are not suitable for other crops. These
4 include those areas that are too wet, dry, rocky or shallow.
5
- 6 b. Due to lack of grazing management, or inability to utilize grazing management, some
7 pastures are not very productive and are over-used.
8
- 9 c. Most pastures consist of native grasses or those grass species that can withstand livestock
10 use.
11
- 12 d. Understanding of grazing management including irrigation, fertilizer, rotation and
13 noxious weed control (including the Russian Olive).
14
- 15 e. Improvements to inefficient irrigation systems.
16
- 17 f. Invasive and Noxious weeds continue to be a concern for rangeland and watershed health.
18
- 19 g. Pressures from the endangered species act and the potential for listing of the Greater Sage
20 Grouse.
21
- 22 h. Increasing costs of energy that impact production and transportation costs.
23
- 24 i. Challenges from interest groups to public lands grazing.
25
- 26 j. Energy production impacts on desert range lands.
27
- 28 k. Insect infestations, such as grasshoppers and crickets.
29

30 Section 63J-8-104 of the Utah Code states that federal land management agencies shall achieve
31 and maintain livestock grazing on federal lands at the highest reasonably sustainable levels by
32 adhering to the policies, goals, and management practices set forth in Subsection 63J-4-
33 401(6)(m) of the Utah Code.
34

35 A December 2008 report published by Utah State University entitled “Public Lands and Utah
36 Communities: A Statewide Survey of Utah Residents,” found (in Table 42) that only 9.1% of the
37 survey respondents in the Daggett-Duchesne-Uintah County area believed that public land
38 managers should moderately (6.3%) or substantially (2.8%) reduce the extent to which livestock
39 grazing occurs on Utah’s public lands.
40
41
42
43
44

1 **Objectives:**

- 2
- 3 1. Maintain cattle and sheep grazing on BLM and U.S. Forest Service lands at the highest
- 4 reasonably sustainable levels.
- 5
- 6 2. Maintain cattle and sheep grazing on BLM and U.S. Forest Service lands during seasons of
- 7 use that benefit livestock producers but maintain healthy range conditions.
- 8
- 9 3. Avoid the reduction of grazing to support wildlife, especially non-native species.
- 10
- 11 4. Cooperate with U.S. Forest Service to address the transmission of disease from domestic
- 12 sheep to wild sheep.
- 13

14 **Policies:** Consistent with the state laws associated with grazing on federal lands, it is the

15 position of Duchesne County that:

16

- 17 1. Well managed livestock grazing, though poorly understood by the average citizen, is the
- 18 most effective way to manage vegetation on a large scale to benefit watershed health and
- 19 preserve wildlife habitat.
- 20
- 21 2. Improving grazing management on Duchesne County's private and public lands should
- 22 be viewed as a long term priority.
- 23
- 24 3. Public lands shall be managed to maintain or increase forage allocation for livestock
- 25 grazing. Annual monitoring should be done to verify whether desired conditions are being
- 26 maintained.
- 27
- 28 4. Good monitoring and allotment management plans shall be supported. The County
- 29 encourages frequent data collection to inform allotment management plans. The Utah
- 30 Department of Agriculture and Food should be involved in areas of dispute regarding
- 31 range conditions.
- 32
- 33 5. Public land agencies shall maintain livestock grazing permits and grazing allocations at
- 34 present levels unless a study of rangeland conditions justifies increased or decreased
- 35 grazing. The county recognizes that drought, wildfire and other factors may affect the
- 36 terms of grazing permits.
- 37
- 38 6. The County opposes the reduction, relinquishment or retirement of grazing animal unit
- 39 months in favor of conservation, wildlife, and other uses. Any decreases should be
- 40 temporary in nature due to ever-changing range conditions. The county expects the Utah
- 41 Division of Wildlife Resources to coordinate with land management agencies as they
- 42 manage forage and grazing allotments for the benefit of livestock and wildlife
- 43 populations.
- 44

- 1 7. Land management plans, programs, and initiatives should provide that the amount of
2 domestic livestock forage, expressed in animal unit months, for permitted, active use as
3 well as the wildlife forage included in that amount, be no less than the maximum number
4 of animal unit months sustainable by range conditions in grazing allotments and districts,
5 based on an on-the-ground and scientific analysis.
6
- 7 8. The County favors the best management practices that are jointly sponsored by
8 cattlemen's, sportsmen's and wildlife management groups such as chaining, logging,
9 seeding, burning, and other direct soil and vegetation prescriptions that are demonstrated
10 to restore forest and rangeland health, increase forage, and improve watersheds in grazing
11 districts and allotments for the mutual benefit of domestic livestock and wildlife. When
12 the practices described above increase a grazing allotment's forage beyond the total
13 permitted forage use that was allocated to that allotment in the last federal land use plan
14 or allotment management plan still in existence as of January 1, 2005, a reasonable and
15 fair portion of the increase in forage beyond the previously allocated total permitted use
16 should be allocated to wildlife as recommended by a joint, evenly balanced committee of
17 livestock and wildlife representatives that is appointed and constituted by the governor
18 for that purpose. The County favors quickly and effectively adjusting wildlife population
19 goals and population census numbers in response to variations in the amount of available
20 forage caused by drought or other climatic adjustments, and state agencies responsible for
21 managing wildlife population goals and population census numbers will give due regard
22 to both the needs of the livestock industry and the need to prevent the decline of species
23 to a point where listing under the terms of the Endangered Species Act when making such
24 adjustments.
25
- 26 9. The County recognizes grazing permits on public lands as an asset, which may be
27 transferred by the permit owner. Such transactions must be processed by the land
28 management agency within a reasonable time frame after proper notification. Any
29 reduction in the size of the permit or forage allocation as a result of the transaction shall
30 not be made without a specific scientific justification.
31
- 32 10. When grazing permits are withdrawn from a livestock operator due to grazing violations,
33 the permit shall not be reallocated to other uses and shall be made available for continued
34 livestock use as soon as possible.
35
- 36 11. Access to public rangeland is a valid existing right that is vital to the permit-holders and
37 the land management agency for planning, management, and development. Access shall
38 be maintained open and shall be improved as management needs require.
39
- 40 12. The permit-holder shall be compensated for the remaining value of improvements made
41 by the permittee on reduced allotments, unless the permit was canceled for non-
42 compliance with grazing regulations. Said compensation will be provided for in
43 accordance with Section 402 of the Federal Land Policy and Management Act of 1976,
44 which provides a reasonable compensation for the adjusted value, to be determined by the

1 Secretary concerned, of his interest in authorized permanent improvements placed or
2 constructed by the permittee or lessee on lands covered by such permit or lease, but not to
3 exceed the fair market value of the terminated portion of the permittee's or lessee's
4 interest therein.

5
6 13. The County opposes the transfer of grazing animal unit months to wildlife for reasons of
7 rangeland health. Livestock allocations shall not be converted to wildlife allocations as
8 long as the land supports the grazing Animal Unit Months (AUM's) assigned to the
9 allotment. See Chapter 5 (Wildlife).

10
11 14. Reductions in domestic livestock animal unit months must be temporary and
12 scientifically based upon rangeland conditions. Reductions in AUMs should be allocated
13 on a species basis [wildlife, wild horse, wild burros & livestock] with a percentage
14 allocated to each species type. The only justification for decreasing domestic livestock
15 grazing AUM's is for there to be a valid and documented scientific finding that the range
16 district will no longer support the AUM's in question. The BLM and Forest Service are
17 expected to comply with and honor the domestic grazing preference on grazing districts.
18 Likewise, the permittee is also expected to abide by the terms and conditions identified in
19 the grazing permit.

20
21 15. Federal policies, plans, programs, initiatives, resource management plans, and forest
22 plans may not allow the placement of grazing animal unit months in a suspended use
23 category unless there is a rational and scientific determination that the condition of the
24 rangeland allotment or district in question will not sustain the animal unit months sought
25 to be placed in suspended use. Any grazing animal unit months that are placed in a
26 suspended use category should be returned to active use when range conditions improve.

27
28 16. Federal policies, plans, programs, and initiatives related to vegetation management should
29 recognize and uphold the preference for domestic grazing over alternate forage uses in
30 established grazing districts while upholding management practices that optimize and
31 expand forage for grazing and wildlife in conjunction with state wildlife management
32 plans and programs in order to provide maximum available forage for all uses. In
33 established grazing districts, animal unit months that have been reduced due to rangeland
34 health concerns should be restored to livestock when rangeland conditions improve, and
35 should not be converted to wildlife use.

36
37 17. Duchesne County recognizes that 43 CFR part 4110.3 provides for changes in permitted
38 use. Conversion of allocated forage from one grazing animal to another would require a
39 NEPA process that conforms to land use plans.

40
41 18. Management decisions shall be based on the individual range allotment condition and not
42 on the overall condition of surrounding lands. Increases in available forage resulting
43 from the conservation practices of livestock permit-holders shall not be allocated or
44 credited to other uses.

- 1 19. Forage allocation reductions resulting from forage studies, drought, or natural disasters
2 shall be implemented on an allotment basis. Reductions shall be applied proportionately
3 to all allocations unless it can be proven that a specific type of grazing animal is causing
4 the land health degradation. Duchesne County recognizes that, in the event of fire,
5 drought or natural disaster, a variety of emergency or interim actions may be necessary to
6 minimize land health degradation, such as temporary reduced forage allocation for
7 livestock and wildlife. Forage allocation reductions shall be temporary. Grazing
8 allocations shall be restored when forage production is restored.
9
- 10 20. Weed control efforts that affect forage allocations shall be discussed by the land
11 management agency with livestock representatives, neighboring landowners, and the
12 County weed specialist. After the discussion, a weed control plan shall be developed and
13 implemented.
14
- 15 21. Public land management agencies shall endeavor to inspect riparian and sensitive areas
16 with livestock permittees approximately one week before livestock are admitted to the
17 grazing allotment. If riparian areas are damaged or degraded before the livestock enter
18 the grazing allotment, the management agency and representatives shall make a record of
19 the condition and appropriate mitigation shall be acceptable to all parties. A copy of the
20 signed report shall be filed with the agency and provided to the permit-holder.
21
- 22 22. Increases in available forage resulting from practices or improvements implemented by
23 managing agency will be allocated proportionately to all forage allocations, unless the
24 funding source specifies the benefactor.
25
- 26 23. Changes in season of use or forage allocation must not be made without full and
27 meaningful consultation with permittee. The permittee must be the first point of contact.
28
- 29 24. The continued viability of livestock operations and the livestock industry shall be
30 supported on federal and state lands within Duchesne County by management of the lands
31 and forage resources and the optimization of animal unit months for livestock in
32 accordance with the multiple-use provisions of the Federal Land Policy and Management
33 Act of 1976, 43 U.S.C. 1701 et seq., the provisions of the Taylor Grazing Act of 1934, 43
34 U.S.C. 315 et seq., and the provisions of the Public Rangelands Improvement Act of
35 1978, 43 U.S.C. 1901 et seq.
36
- 37 25. Duchesne County encourages responsible and innovative grazing management, increased
38 grazing education opportunities, rangeland restoration projects as identified by the Utah
39 Department of Agriculture's Grazing Improvement Program, improved rangeland
40 monitoring, noxious and invasive weed control, brush management, wildlife
41 management, irrigation improvements, nutrient management and soils testing to improve
42 pasture and rangeland conditions.
43
44

1 26. Duchesne County supports the Cooperative Wildlife Management Unit (CWMU)
2 program and advocates its continuation and expansion to provide compensation to large
3 and small ranching operations to offset the damage to forage crops by wildlife.
4

5 **Energy Considerations**
6

7 **Findings:** Energy development can have impacts on livestock and grazing. Energy development
8 within grazing allotments on federal land or on grazed private lands will disturb the surface and
9 reduce the amount of forage available for livestock. Care must be taken during the planning of
10 energy development projects to recognize the needs of the livestock industry.
11

12 **Policy:** It is the policy of Duchesne County that the adverse impacts of energy development on
13 the livestock industry shall be mitigated or compensated for.
14

15 **Water Considerations**
16

17 **Findings:** Livestock grazing, if not managed properly, can have negative impacts on water
18 quality.
19

20 **Policy:** It is the policy of Duchesne County that livestock grazing be managed on public and
21 private lands in a manner that keeps water resources from being degraded below state or federal
22 standards.
23
24

Section 5. Wildlife

Findings: Wildlife has always been an important part of America’s cultural lifestyle and is an important part of Duchesne County’s tourism and recreation economy. Duchesne County and its partners recognize the need for improved management of wildlife and habitat to minimize negative impacts and maximize positive impacts to both private and public lands. Collaboration of private, federal, state, local, and other groups is needed in order to maintain healthy wildlife populations as well as to protect the local agriculture economy and watershed health.

Because Duchesne County is predominately public lands, wildlife management becomes a critical issue to watershed health, recreation, and agriculture sustainability. Invasive species, threatened and endangered species and big game encroachment are important issues. Located on the south side of the Uinta Mountains, the area is a key part of the habitat for many big game species and grazing lands for livestock.

In Utah, “wildlife” includes brine shrimp and crayfish; mollusks; and vertebrate animals (fish, amphibians, reptiles, birds, and mammals) living in nature, except for feral animals. Wildlife is protected, except for: coyotes, field mice, gophers, ground squirrels, jack rabbits, muskrats, and raccoons. Rare species and those subject to federal listing under the Endangered Species Act are referenced more fully in the chapter of this plan entitled “Threatened, Endangered, and Sensitive Species.” Although fish are legally considered “wildlife,” fisheries and angling-related benefits for local economies are addressed in the “Fisheries” chapter of this plan. Limited amounts of Geographic Information System (GIS) data on a number of common vertebrate wildlife species in Utah can be accessed online at the DWR’s Index of Available GIS Data (DWR 2016a). The most current GIS data is available for some species at:

<http://dwrcdc.nr.utah.gov/ucdc/downloadgis/disclaim.htm>. GIS shape files for Bird Habitat Conservation Areas are available at:

https://iwjv.org/sites/default/files/ut_bhca_map_w_own.pdf.

The Utah Division of Wildlife Resources (DWR) Utah Wildlife Action Plan (Utah Wildlife Action Plan Joint Team 2015) presents strategies for managing native wildlife species and their habitat to help prevent listings under the Endangered Species Act.

Objectives

1. Encourage the Watershed Restoration Initiative (WRI) to focus on projects that include private landowner involvement by having county representatives attend meetings of the WRI regional teams, express their views, advise the WRI to involve private land owners, and advocate for the kinds of watershed restoration efforts they feel are most important.
2. Maintain healthy populations of mule deer while minimizing negative impacts from winter migration, including vehicle collisions and residential and commercial vegetation damage.

- 1 3. Avoid damage caused by wild horses by preventing the introduction of wild horse
2 populations.
- 3
- 4 4. Support bighorn sheep populations for hunting, viewing, and ecosystem support.
- 5
- 6 5. Support energy development while minimizing loss or fragmentation of habitats and
7 disturbance during sensitive periods.
- 8
- 9 6. Meet municipal and industrial water needs while preserving traditional agricultural uses
10 and ensuring aquatic habitat to support wildlife.
- 11

12 **Balancing Interests**

13
14 Wildlife and their habitat contribute to a productive natural environment. They improve our
15 quality of life, and provide a rich source of aesthetic enjoyment, inspiration, and outdoor
16 recreation for many people.

17
18 At the same time, we all need to recognize that wildlife can have an impact on the economic
19 activities of mankind, influencing how people experience the benefits of their private property.
20 Wildlife can affect local economies in both positive and negative ways (see Section 4, Livestock
21 & Grazing).

22
23 Most people support efforts to find a balance between the habitat requirements of wildlife
24 populations and the economic activities of man. Wildlife is capable of yielding important social
25 and economic values including: hunting, photography, and wildlife observation.

26
27 The process for determining the balance among competing uses and establishing the best wildlife
28 management policies is described in state law. This process is founded on an open, public
29 dialogue concerning wildlife issues. Five regional advisory councils (RACs) are active across
30 the state, each consisting of a dozen or more individuals nominated by various interest groups
31 and selected by the leadership of the Department of Natural Resources. Council members can
32 include citizens, local elected officials, sportsmen, agriculturists, federal land managers, and
33 members of the public at large. The duty of each RAC is to hear input and recommendations, to
34 gather data and evaluate expert testimony, and then to make informed policy recommendations to
35 the Wildlife Board. To fulfill this duty, the RACs hold monthly meetings.

36 **The Wildlife Board**

37
38
39 The Wildlife Board is composed of individuals nominated by a committee selected by the
40 governor. The board contains members from diverse groups including non-consumptive wildlife
41 interests, the agriculture industry, sportsmen groups, federal land management agencies, the Utah
42 Association of Counties, and range management specialists. From this list of nominees the
43 governor then appoints seven Wildlife Board members with the consent of the Utah Senate.
44

1 The Wildlife Board is responsible for considering RAC input and recommendations, to the extent
2 that the Board must provide a written explanation if they reject recommendations or positions
3 submitted by a RAC. The Wildlife Board uses public input, the recommendations of the RACs,
4 and the assembled facts to make determinations and establish policies best designed to
5 accomplish the purposes and fulfill the intent of the wildlife laws. The Wildlife Board generates
6 wildlife management policy, and exercises its powers by promulgating administrative rules and
7 issuing proclamations and orders under Utah Code.

8 9 **Agricultural impacts**

10
11 Thriving populations of big game animals will, at times, cause some level of damage to farming
12 and ranching operations, by competing with domestic livestock for available forage, or by
13 damaging crops, fences, or irrigation equipment. A number of methods can be applied to
14 mitigate the damage, including various forms of wildlife harvest and removal, issuance of
15 landowner permits, development of a conservation lease which involves remuneration or other
16 forms of compensation for depredation, and, finally, direct monetary compensation for
17 agricultural damages. Although depredation mitigation review and appeal procedures apply, and
18 are used as needed, the total amount of compensation that can be provided to landowners to
19 prevent or compensate for damages may not exceed the funding amounts appropriated by the
20 legislature for fencing material and compensation for damaged crops, fences, and irrigation
21 equipment.

22
23 The Utah Grazing Improvement Program (UGIP) is a program under the Utah Department of
24 Agriculture and Food designed to improve the productivity, health, and sustainability of
25 rangelands and watersheds throughout the state. UGIP devotes considerable time and resources
26 to improve rangelands, which results in a better environment, a healthier livestock industry, and
27 more abundant wildlife. The program has established a State Grazing Advisory Board and six
28 Regional Grazing Advisory Boards to improve the grassroots voice of both private and public
29 grazing land managers.

30 31 **WRI Habitat Restoration**

32
33 Utah's Watershed Restoration Initiative (WRI) provides a balancing influence that promotes
34 wildlife values and supports agricultural needs. WRI is a diverse partnership of state and federal
35 agencies working together with private organizations, industry, local elected officials and
36 stakeholders, coordinated by the Utah Department of Natural Resources.

37
38 Significant investments have been made through WRI to improve rangeland health and
39 watershed conditions. In fiscal year 2014, the Utah Legislature contributed \$3.95 million to
40 WRI. Ninety-one participating partners completed restoration of 112,987 acres of uplands and
41 55 miles of stream and riparian areas, leveraging the legislative funds by a factor of 7-to-1.
42 Sportsman-generated funding plays an important role in the WRI.

1 Duchesne County appreciates the benefits which are enabled through WRI habitat restoration
2 projects. The long-term results of the WRI will be measured in reduced wildfire acreage and
3 suppression costs, reduced soil loss from erosion, reduced sedimentation and storage loss in
4 reservoirs, improved water quality and yield, improved wildlife populations, reduced risk of
5 additional federal listing of species under the Endangered Species Act, improved agricultural
6 production, and resistance to invasive plant species.

7
8 Map #26 and the WRI website (<https://wri.utah.gov/wri/project/search.html>) shows the location
9 of Watershed Restoration Initiative Projects and their status (draft, proposed, current, pending
10 completion or completed).

11
12 **Objective:** To participate effectively, counties need representatives to attend meetings of the
13 WRI regional teams, expressing their views and advocating for the kinds of watershed restoration
14 efforts they feel are most important.

15 16 **Compensation for damage**

17
18 Although predator management is dealt with under a separate chapter of this plan entitled
19 “Predator Management,” the Wildlife Damage Compensation Act (see Utah Code 23-24-1)
20 should be mentioned because it provides a mechanism by which livestock owners may obtain
21 compensation if livestock are damaged by a bear, mountain lion, wolf, or eagle. In this case,
22 “livestock” means cattle, sheep, goats, and turkeys.

23 24 **Species management plans**

25
26 Management plans provide guidance and direction for a number of species in Utah. These plans
27 are taken through a public process to gather input from interested constituents and then presented
28 to the Wildlife Board for approval. Species covered by statewide plans include wild turkey,
29 chukar, greater sage-grouse, mule deer, elk, moose, pronghorn, mountain goat, bighorn sheep,
30 Utah prairie dog, beaver, northern river otter, black bear, cougar, bobcat, and wolf.

31
32 With regard to wolves, Senate Bill 36 (Wolf Management Act) from the 2010 General Session
33 directed the Division of Wildlife Resources to prevent any wolf packs from establishing in the
34 portion of the state where wolves are removed from the protection of the Endangered Species
35 Act. The law also directs the Division of Wildlife Resources to request that the U.S. Fish and
36 Wildlife Service immediately remove any wolves discovered in areas of Utah where they are still
37 protected under the Endangered Species Act (including Duchesne County). This law suspends
38 the portion of the *Utah Wolf Management Plan* that allows two packs to become established in
39 Utah, although the remaining strategies of the plan are still in effect. If wolves are delisted
40 across all of Utah, the management plan then will be fully implemented.

41 42 **Greater Sage Grouse**

43
44 The *Conservation Plan for Greater Sage-grouse in Utah* (February 2013) was developed to help

1 eliminate threats facing the greater sage-grouse while balancing the economic and social needs of
 2 Utahans through a coordinated program which provides for:

- 3
- 4 a. Voluntary programs for private, local government, and School and Institutional Trust
 5 Lands Administration (“SITLA”) lands; and
- 6
- 7 b. Cooperative regulatory programs on other state and federally managed lands.
- 8

9 These voluntary and cooperative regulatory programs include WRI, Utah Partners for Conservation
 10 and Development, National Resources Conservation Service’s Sage-grouse Initiative, and UGIP.

11
 12 Mapped within each county are winter, brooding, and occupied greater sage-grouse habitat (see
 13 Tables WLF1 and WLF2 and Map #15).

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

Habitat	Duchesne County
Winter	258,289
Brooding	442,932
Occupied	476,227

Source: DWR (2015a).

Note: Acres by county cannot be totaled because these areas overlap.

**Table WLF2. Acres of State Greater Sage-Grouse Management Areas in
 Duchesne County**

Habitat	Duchesne County
Nesting and brood-rearing non-winter habitat	277
Nesting and brood-rearing winter habitat	14,568
Winter habitat	48,630
Non-winter habitat	16,912
Non-winter other	7,607
Non-winter opportunity	23,534

Source: DWR (2016b).

15 As stated earlier, in September 2015, the BLM and Forest Service signed a Sage Grouse EIS that
 16 establishes new guidance for sage grouse habitat management on federal lands in the West. The
 17 RMP Amendments for managing Greater Sage-Grouse in Utah can be found at:

1 [https://eplanning.blm.gov/epl-front-](https://eplanning.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage¤tPageId=99423)
2 [office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage¤tPageId=9](https://eplanning/blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage¤tPageId=99423)
3 [9423.](https://eplanning/blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage¤tPageId=99423)
4

5 A more complete discussion of Greater Sage Grouse in Duchesne County is found in Section 22
6 of this plan (Threatened and Endangered Species).
7

8 **Big Game**

9

10 In 2014, the Utah Division of Wildlife Resources published the Utah Big Game Annual Report.
11 This report is a summary of big game harvest information and monitoring efforts for eight
12 species (mule deer, Rocky Mountain elk, pronghorn, Shiras moose, American bison, desert
13 bighorn sheep, Rocky Mountain bighorn sheep, and mountain goat) in the state of Utah. Those
14 species are managed based on species management plans that have been developed through a
15 public review process and approved by Utah's Wildlife Board. Big game management units do
16 not follow county boundaries, so it is not possible to determine how a particular big game species
17 is faring in a particular county. However, this annual report does provide data showing how
18 many of the various big game species have been harvested over the years and how the desired
19 populations compare to the estimated populations. Statewide, the mule deer population in 2014
20 was the highest it has been since 1992. The wintertime elk population in Utah has increased by
21 about 20,000 head between 1995 and 2014. Pronghorn antelope numbers are down by over
22 1,000 head statewide between 1999 and 2014. Moose numbers have been decreasing since a
23 high point in 2005 (moose habitat is depicted on Map #16). Wild Bison and desert bighorn
24 sheep are not found in Duchesne County. There is a transplanted population of Rocky Mountain
25 bighorn sheep in the Avintaquin area, which appears to be doing well; however there are recent
26 reports from the Utah Division of Wildlife Resources that disease is becoming a problem.
27 Mountain goats appear to be doing well in the High Uintas Wilderness (mountain goat habitat is
28 depicted on Map #17).
29

30 **Deer and Elk**

31

32 In the case of mule deer (*Odocoileus hemionus*) and elk (*Cervus canadensis nelsoni*), in addition
33 to the statewide plans required by state law, herd unit plans also have been developed for each
34 mule deer and elk herd unit across the state. Each of these unit plans have been reviewed and
35 approved by the Wildlife Board. In many cases, herd unit plans have been revised multiple times
36 since their initial development in the mid-1990s. The plans establish target herd-size objectives
37 for each herd unit, which the Division of Wildlife Resources and the Wildlife Board then strive
38 to meet through harvest adjustment and other mechanisms. Habitat needs and other local
39 management considerations are also addressed in these unit plans.
40

41 During the past fifty years there have been wide swings in deer and elk populations. In the
42 1950's deer populations were extremely high, while no elk were present in the County.
43 Following the 1950's, elk were re-introduced to the area and have increased to the present high
44 levels. Following a mild winter of 2014-15, deer populations were at high levels according to the

1 Utah Division of Wildlife Resources.
 2
 3 Portions of northern Duchesne County are within the South Slope Deer Herd Unit #9
 4 Management Plan (which also includes lands in Daggett, Summit, Uintah and Wasatch counties).
 5 The target winter herd size is 26,000. The majority of the Summer Range for deer (85%) is
 6 located on Forest Service and BLM lands. Winter range is more evenly distributed, with 31% on
 7 BLM land, 28% on tribal land and 24% on private lands. Factors that drive deer population
 8 include forage conditions, predation (especially by coyotes) highway collisions, disease,
 9 poaching and the severity of winters. Mule deer habitat is described in Table WLF3 and
 10 consolidated as habitat in Map #18.

Table WLF3. Acres of Mule Deer Habitat in Duchesne County

Habitat Type	Duchesne County
Spring/fall, crucial	3,064
Summer, crucial	758,251
Summer, substantial	–
Winter, crucial	597,509
Winter, substantial	212,063
Year-long, crucial	140,951
Year-long, substantial	201,269
Total	1,913,107

Source: DWR (2015b).

11
 12 The Utah Division of Wildlife Resources has a management plan for Deer Herd Unit #11 in
 13 southern Duchesne County and portions of Carbon, Emery and Uintah counties. The target
 14 winter herd size is 8,500 deer. The majority of the summer range (51%) is located on private
 15 land, with 31% on BLM land. The majority of the winter range (57%) is on BLM land, with only
 16 14% on private land. Winter range conditions in the northern parts of the unit, around Nine Mile
 17 Canyon and Anthro Mountain, were classified as excellent in 2010, while areas to the south, in
 18 Carbon County were deemed fair to good.

19
 20 Portions of western Duchesne County are within the Wasatch Mountains Deer Herd Unit #17
 21 management plan (which also includes areas of Carbon, Salt Lake, Summit, Utah and Wasatch
 22 counties). In this area, 62% of the deer summer range is on Forest Service land and 26.8% on
 23 private land. Winter range is 50% on private land. The target winter herd size is 40,800 deer.
 24 The winter range in the Currant Creek and Avintaquin subunits (which include lands in
 25 Duchesne County) has trended from fair-good condition to good condition between 1995 and
 26 2010. Many (14) habitat improvement projects occurred in this area between 2006 and 2014,
 27 that enhanced 8,064 acres of deer habitat in the unit. Annual and seasonal precipitation patterns

1 remain critical to the growth of vegetation needed to support the desired deer populations.
 2
 3 Portions of western Duchesne County are within the Wasatch Mountain Elk Herd Unit #17
 4 Management Plan (which also includes lands within Carbon, Salt Lake, Summit, Wasatch and
 5 Utah counties. The target winter herd size for this unit is 5,400. A majority of the lands used by
 6 elk in the Spring, Summer and Fall are on Forest Service lands (77% for spring/fall and 83% for
 7 summer); however, the largest group of lands used by the elk in the winter is private lands (46%).
 8 Elk habitat is described in Table WLF4 and consolidated as habitat in Map #19.

Table WLF4. Acres of Elk Habitat in Duchesne County

Habitat Type	Duchesne County
Elk, spring/fall, crucial	11,525
Elk, summer, crucial	679,677
Elk, summer, substantial	–
Elk, winter, crucial	702,539
Elk, winter, substantial	104,525
Elk, year-long, crucial	95,836
Elk, year-long, substantial	143,992
Total	1,738,093

Source: DWR (2015b).

9
 10 On a seasonal basis, big game animals migrate among public, private and tribal lands. These
 11 movements create game management issues as a result of damage to private property and
 12 consumption of livestock feed by wildlife. To address these issues, the UDWR plan seeks to
 13 enhance forage production through prescribed fire, pinion-juniper chaining, conifer thinning and
 14 protect habitat using tools such as conservation easements, conservation agreements and
 15 cooperative wildlife management units. Utah Code 23-21-2.5 (2) states that “When changing
 16 any existing right to use the land, the division shall seek to make uses of division-owned land
 17 compatible with local government general plans and zoning and land use ordinances.”

18
 19 The Western Association of Fish and Wildlife Agencies (WAFWA) Mule Deer Working Group
 20 produced an informative Fact Sheet “Understanding Mule Deer Migration” (WAFWA 2015a).
 21 This fact sheet was developed after wildlife researchers tracked deer migration using global
 22 positioning system technology. Several potential risks to migrating deer and their corridors were
 23 mentioned; including energy development, vehicle collisions, fences and increasing residential
 24 and urban development. The fact sheet presents the following conclusions regarding the
 25 preservation of deer migration corridors:
 26
 27

1 “Efforts to conserve migration corridors are an important component of overall
2 conservation of mule deer in the West because the largest and most productive mule deer
3 herds are migratory. As awareness of the importance of migration corridors grows,
4 conservation efforts to maintain these corridors and incorporate them into land-use
5 planning processes are imperative. Similar to critical winter ranges, migration corridors
6 need to be considered in local, state, and federal land-use planning in order to sustain
7 current mule deer populations. Common sources of risk to migrating mule deer and their
8 corridors include fences, road crossings, energy development, and residential
9 development. With specific maps of migration routes now available, we can identify and
10 prioritize where conservation efforts should be focused to reduce risks to migrating mule
11 deer and migration corridors. Effective conservation measures may include road crossing
12 structures, fence alterations or removal, modifications to proposed industrial
13 developments, conservation easements, leasing stipulations, and state, provincial, or
14 federal protections available through land-use planning. Mule deer migration corridors
15 are essential to the long-term conservation of this iconic species. Many corridors are more
16 than 100 miles in length and cross through many different land ownerships and agency
17 jurisdictions. This situation complicates conservation efforts and requires people work
18 together to develop site-specific measures to ensure migrations continue into the future”
19 (WAFWA 2015a).

20
21 Another WAFWA fact sheet entitled “*Understanding Mule Deer and Winter Feeding*,” deals
22 with the issue of winter feeding of mule deer (WAFWA 2015b). After looking at the biological,
23 behavioral, disease, predation, competition and sociological issues associated with winter
24 feeding, WAFWA reached the conclusion that:

25
26 “At best, feeding has a limited nutritional benefit, often negated by undesirable, even
27 catastrophic, behavioral and biological effects. Of course, we all have the best interest of
28 wildlife in mind. However, we must ensure we understand the biology of the animals
29 we’re concerned about so our actions are truly beneficial. This is often the point of debate
30 as society considers winter feeding mule deer. Our conventional wisdom, experience, and
31 professional consensus is clear - feeding mule deer violates the most basic principle of
32 population regulation within natural systems. At best, winter feeding for mule deer is only
33 successful in making people who are compassionate about wildlife feel better and seldom
34 are any benefits of winter feeding realized” (WAFWA 2015b).

35
36 Wildlife management agencies generally agree that although winter mule deer feeding is based
37 on good intentions, it can result in a variety of issues ranging from disease, malnutrition,
38 predation, behavior changes, and rangeland damage. For these reasons and others, it is
39 discouraged. Information about winter feeding is available from DWR and the Mule Deer
40 Working Group (2015b)

41
42 As the Duchesne County population grows in the future, the likelihood of conflicts between mule
43 deer and rural or urban fringe homeowners will increase. WAFWA has published a fact sheet to
44 address that issue, entitled “*Urban Mule Deer Issues*” (WAFWA 2015c). Mule deer population

1 can increase rapidly in rural residential or urban fringe areas as deer take advantage of the
2 abundant forage and water sources provided by humans as well as protection from hunting and
3 other types of predation. Mule deer are browsers; preferring leaves, stems, and buds of woody
4 plants, as well as forbs (weeds). Like many other wildlife species, mule deer are opportunistic
5 and in some cases will eat and damage ornamental plants, hedges, vegetables, flowers, and
6 lawns. Bucks can damage shrubs and saplings by rubbing the bark with their antlers. This
7 damage to personal and commercially-grown vegetation is not well-tolerated and can make
8 people view mule deer as a nuisance. WAFWA recommends several strategies to deal with these
9 conflicts, including prohibiting supplemental feeding of deer, chemical repellents and scare
10 devices, construction of fencing, using deer resistant plantings, regulated hunting and relocation
11 of deer to more remote areas.

12 13 **Conservation Hunting Permits**

14
15 Conservation permits are hunting permits auctioned annually at banquets, fundraisers and other
16 events sponsored by various conservation groups. Since the program began in 1981, these
17 permits have raised more than \$35 million. The majority of that revenue—more than 90
18 percent—has gone toward projects that directly benefit the species for which the permit was
19 issued. These projects include: habitat enhancement and restoration, species transplants, radio
20 telemetry studies and research projects, aerial surveys and education efforts.

21 22 **Duchesne County Wildlife Policies**

23
24 It is the policy of Duchesne County that:

- 25
26 1. Wildlife management agencies, public land management agencies and the County shall
27 work together to manage big game populations, identify their migration corridors and
28 seek to remove barriers along those corridors.
29
- 30 2. Wildlife agencies shall find effective ways to mitigate and compensate landowners for
31 damage caused by big game animals on private property. Duchesne County recognizes
32 that the Utah Division of Wildlife Resources is mandated by Utah Code to mitigate
33 damage to agricultural crops, equipment and improvements and that a process to do so is
34 in place.
35
- 36 3. Wildlife populations shall not be increased nor shall new species be introduced until
37 forage allocations have been provided and an impact analysis that includes participation
38 and concurrence by the county, wildlife management agencies, public land management
39 agencies, and private landowners is completed for the effects on other wildlife species
40 and livestock.
41
- 42 4. Reduction in forage allocation resulting from forage studies, drought, or other natural
43 disasters will be shared proportionately by wildlife, livestock and other uses.
44

- 1 5. Increases in forage allocation resulting from improved range conditions shall be shared
2 proportionally by wildlife, livestock and other uses.
3
- 4 6. Wildlife target levels and/or populations must not exceed the forage assigned in the RMP
5 forage allocations.
6
- 7 7. Predator and wildlife numbers must be controlled to protect livestock and other private
8 property and to prevent population decline in other wildlife species.
9
- 10 8. Resource-use and management decisions by federal land management and regulatory
11 agencies should support state-sponsored initiatives or programs designed to stabilize
12 wildlife populations that may be experiencing a scientifically proven decline in numbers.
13
- 14 9. The Conservation Hunting Permit program should be continued to help generate needed
15 funding for wildlife conservation projects.
16

17 **Feral or Wild Horses**

18

19 At present there are no Wild Horse Herd Management Areas in Duchesne County. However, the
20 Ashley National Forest reports a problem with feral horses trespassing from tribal lands in the
21 Dry Gulch Allotment area in the Yellowstone region of the forest. At last report, about 100 feral
22 horses are using the allotment area. Free-roaming horses on public lands adversely impact soil,
23 water, wildlife, and vegetative resources and increase the possibility of equine disease among
24 domestic horses. Wild and free-roaming horses rapidly increase in population, cause overgrazing,
25 negatively impact wildlife and livestock, and burden the land managing agency with unnecessary
26 costs. The introduction of wild horses would adversely affect the county's environment and
27 economy.
28

29 **Policy:** It is the policy of Duchesne County that:

- 30
- 31 1. No forage allocations or permits shall be provided for feral or wild horses on public lands
32 in Duchesne County.
33
- 34 2. All feral or wild horses found roaming on public lands in Duchesne County are
35 trespassing and shall be removed.
36

37 **Pronghorn Antelope**

38

39 The Utah Division of Wildlife Resources (UDWR) administers a Pronghorn Herd Management
40 Plan for non-tribal lands in the area generally bounded by Nine Mile Canyon on the south,
41 Highway 191 on the west, Highway 40 on the north and the Green River to the east. It is the
42 purpose of this plan to:

- 43
- 44 a. Manage for a population of healthy animals capable of providing a broad range of

1 recreational opportunities, to include hunting and viewing.

2
 3 b. Balance the pronghorn population with human needs, such as authorized livestock
 4 grazing rights, private land development rights, and local economies.

5
 6 c. Maintain the population at a level that is within the long term habitat capability.”

7
 8 UDWR has a goal of maintaining a population of 1,125 pronghorn in this area, with a buck to
 9 doe ratio of 25:100. Counts in 2008 estimated a population of about 340, with a buck to doe
 10 ratio of 41:100. UDWR plans to transplant about 50 pronghorn in the herd management area per
 11 year until the population reaches the goal. Table WLF5 describes the type of pronghorn antelope
 12 habitat present within Duchesne County, which is consolidated into general habitat in Map #20.

Table WLF5. Acres of Pronghorn Antelope Habitat in Duchesne County

Habitat Type	Duchesne County
Summer, crucial	–
Summer, substantial	–
Year-long, crucial	131,511
Year-long, substantial	48,612
Total	180,123

Source: DWR (2014b).

13
 14 **Policy:** It is the policy of Duchesne County to support the efforts of the UDWR to maintain a
 15 healthy population of pronghorn in the area described above, provided that the rights of farmers,
 16 ranchers and mineral owners are protected.

17
 18 **Bison**

19
 20 There are six bison management areas in Uintah County, one of which extends into Duchesne
 21 County. There are no known populations of wild bison in Duchesne County. A bison herd does
 22 exist on tribal lands east of the Green River in Uintah County. The UDWR has considered
 23 reintroduction of bison in the Book Cliffs area of Uintah and Grand Counties. Table WLF6
 24 describes the type of bison habitat present within Duchesne County, which is defined as winter,
 25 substantial habitat (see Map #21).

Table WLF6. Acres of Bison Habitat in Duchesne County

Habitat Type	Duchesne County
Winter, crucial	–
Winter, potential	–
Winter, substantial	4,983
Year-long, crucial	–
Year-long, potential	–
Year-long, substantial	–
Total	4,983

Source: DWR (2014c).

1
 2 **Policy:** It is the policy of Duchesne County to oppose any proposals to introduce bison into the
 3 County, due to the impacts such action would have on available forage for livestock and wildlife.
 4

5 **Bighorn sheep**

6
 7 The Utah Division of Wildlife Resources (through its Utah Wildlife Board) adopted a *Utah*
 8 *Bighorn Sheep Statewide Management Plan* on June 4, 2013 (DWR 2013b). This plan is
 9 effective for five years. The plan notes that Bighorn sheep are one of the most sought-after and
 10 highly prized big game animals in North America. Demand for hunting opportunities far exceeds
 11 the supply of hunting permits. There is also great demand for bighorn sheep viewing
 12 opportunities. Bighorn sheep are an important part of fragile ecosystems in Duchesne County.
 13

14 Rocky Mountain Bighorn sheep habitat exists in Duchesne County in the High Uintas Wilderness
 15 and in the southwestern areas of the county around Timber, Avintaquin, Indian and Lake
 16 Canyons (known as the Avintaquin Management Unit). In 2009, 30 Bighorn sheep were
 17 transplanted from Montana into the Lake Canyon area and an additional 30 were transplanted
 18 into the Indian Canyon area. The state management plan calls for augmentation of existing
 19 populations to meet management objectives in the Avintaquin Management Unit (DWR 2013b).
 20 A summary of bighorn sheep habitat is provided in Table WLF7 and Map #22.
 21
 22
 23

Table WLF7. Acres of Bighorn Sheep Habitat in Duchesne County

Habitat Type	Duchesne County
Spring/fall, crucial	–
Year-long, crucial	429,791
Year-long, substantial	50,630
Total	480,420

Source: DWR (2006).

1
 2 One of the key management issues associated with Bighorn sheep is the prevention of disease
 3 that can result from contact with domestic sheep and goats. There is also the potential for
 4 bighorn sheep to compete with domestic sheep for limited forage resources.

5
 6 BLM Manual #1730 (*Management of Domestic Sheep and Goats to Sustain Wild Sheep*) issued
 7 in March 2016, provides guidance for the coordination and management of domestic sheep and
 8 goats to sustain wild sheep on the BLM managed lands. The manual notes that respiratory
 9 disease is one of the most crucial factors influencing bighorn sheep populations. Domestic sheep
 10 and goats are carriers of bacteria that may cause substantial wild sheep mortality as a result of
 11 respiratory disease. These carriers are generally not fatal to adult domestic sheep. Currently,
 12 physical separation of domestic sheep or goats from wild sheep is the only effective means to
 13 reduce the potential for pneumonia-type disease transmission.

14
 15 To help prevent such disease transmission, the BLM policies are to:

- 16
 17 1. Achieve effective separation of BLM authorized domestic sheep or goats from wild sheep
 18 on BLM lands, and
 19
 20 2. To minimize the risk of contact between the species. Effective separation is defined as the
 21 spatial or temporal separation between wild sheep and domestic sheep or goats, resulting
 22 in minimal risk of contact and subsequent transmission of respiratory disease between
 23 animal groups.

24
 25 The BLM Management Practices associated with domestic sheep/goats (to minimize the risk of
 26 contact with wild sheep include the consideration of:

- 27
 28 a. Habitat distribution;
 29
 30 b. Habitat connectivity;
 31
 32 c. Wild sheep occurrence;

- 1 d. Wild sheep population numbers;
- 2
- 3 e. Proximity of wild sheep populations to areas authorized for domestic sheep and
- 4 goat grazing or trailing;
- 5
- 6 f. Risk of inter-species contact;
- 7
- 8 g. Domestic sheep and goat allotment boundaries and season of use;
- 9
- 10 h. Domestic livestock operational needs; and
- 11
- 12 i. Other pertinent parameters affecting the BLM's ability to provide for effective
- 13 separation when authorizing domestic sheep and goat uses on BLM lands.
- 14

15 **Policy:** It is the policy of Duchesne County to support efforts by the Utah Division of Wildlife
16 Resources and federal land management agencies to manage Bighorn sheep populations for
17 recreational purposes such as hunting and viewing and to ensure their contribution to ecosystems,
18 provided that such management can be accomplished in coordination with the domestic sheep
19 industry in a manner that does not force domestic sheep operators from their ranges or force them
20 out of business. The County supports efforts to manage and augment the bighorn sheep
21 population as long as there is not competition or interference with domestic animals.

22 **Bear**

23
24
25 The Utah Division of Wildlife Resources publishes a *Utah Black Bear Annual Report*. The
26 report gives detailed information on how many bears were harvested in various wildlife
27 management units across the state, but provides no county-specific data and no statewide black
28 bear population data.

29 **Raptors**

30
31
32 Many types of raptors, such as Golden Eagles, Red-tailed hawk and Ferruginous hawks utilize
33 habitat in Duchesne County. The impact of oil and gas development on the population of raptors
34 has been a concern of land management agencies.

35
36 A 2010 study was prepared for the U.S. Department of Interior by Mark R. Fuller of the U.S.
37 Geological Survey, entitled "*Raptor Nesting Near Oil and Gas Development: An Overview of*
38 *Key Findings and Implications for Management Based on Four Reports by Hawk Watch*
39 *International.*" This study was an overview of key findings about the effectiveness of
40 stipulations used to manage the potential effects of disturbance to raptor nesting in areas where
41 oil and gas are being extracted from BLM lands in Utah, Wyoming, and Colorado.

42
43 Historically, BLM raptor management has included stipulations that restricted human activity
44 near raptor nests during the raptor nesting season. The Hawk Watch International (HWI) study

1 was undertaken to seek information that would contribute to enhancing oil and gas extraction
2 operations while providing environmental protection, including raptor conservation.
3

4 Some of the findings were that the development of new well sites temporarily deterred some
5 Golden Eagles from nesting, and some Golden Eagles habituated to established wells and
6 associated well maintenance. Golden Eagles responded differently to various types of
7 development, and when alternative nest sites existed, the birds were able to choose a site where
8 they felt less disturbed.
9

10 The Hawk Watch International study noted that, since 1987, the BLM has erected artificial
11 nesting structures (ANS) to discourage Ferruginous Hawks from nesting on oil and gas
12 infrastructure. Nests on structures such as condensation tanks commonly failed, so the BLM
13 staff installed 105 artificial nest structures in the Rawlins, Wyoming field office area from 1987
14 to 2004 to provide the hawks with alternative nest substrates. All ANSs were inaccessible from
15 the ground and likely provided nesting birds with a sense of security in the face of development
16 activities. Inaccessible nests were nearly always successful, and nearly all such nests were at
17 least minimally productive.” The study found that ANSs may be an effective mitigation tool
18 where Ferruginous Hawks are nesting on inappropriate man-made structures; however, a long-
19 term commitment to the maintenance of the structures needed to be made.
20

21 Further, the HWI study found that it was important to consider factors associated with other
22 human influences, vegetation, climate, etc., when evaluating the potential effects of oil and gas
23 activities near raptor nests. The data gathered by the study was insufficient to determine if the
24 apparent negative effects of energy development were associated with raptor population
25 characteristics such as fledging young from the nest or a trend in numbers of nesting raptors.
26 HWI suggested that existing nesting-season protection buffers of 0.8-km radius should not be
27 reduced, because the focal raptor species exhibited negative relationships with energy
28 development that occurred within 0.8 km of nest clusters.
29

30 It could not be determined by HWI if there has been a change in the populations of raptors in
31 conjunction with oil and gas development. Nonetheless, it was concluded that applying spatial
32 and temporal buffers around nests is a useful management practice to continue as part of a raptor
33 conservation strategy.
34

35 HWI recommended that the BLM use the study findings to further develop management
36 strategies to conserve raptor nesting habitat near oil and gas activities by:
37

- 38 • Developing survey designs with thorough, consistent methods for monitoring raptor
39 nesting, and for monitoring factors that likely affect raptor nesting;
40
- 41 • Conducting surveys to document raptor nesting and associated environmental factors in
42 areas unaffected by energy development, especially areas where energy development
43 might occur;
44

- 1 • Implementing survey and monitoring of select factors (species, vegetation,
2 anthropogenic) at oil and gas activity sites and at control sites;
3
- 4 • Gathering raptor food habits data, and prey – vegetation association data and use results
5 to manage habitat for prey;
6
- 7 • Conducting management to conserve and enhance existing vegetation that is presumed to
8 be beneficial based on these HWI study results;
9
- 10 • Comparing Ferruginous Hawk use of ANSs and associated survival and reproduction
11 among ANSs in oil and gas areas and non-oil and gas areas;
12
- 13 • Providing ANSs for other species and evaluate their use and effectiveness as a mitigation
14 method;
15
- 16 • Refining time and space stipulations by experimentally manipulating when and where OG
17 activities occur relative to raptor nesting.
18

19 Hawk Watch International published another study in 2010 that addressed the need for improved
20 methods for raptor nest monitoring. HWI found that various federal office personnel in Utah and
21 Wyoming did not use standardized terminology for what constitutes a used, active, occupied or
22 successful nest. Nest naming conventions also varied which made it difficult to track nest
23 records on the landscape. Even with new GPS technology, inconsistent use of mapping datums
24 resulted in inaccuracies. Failure to survey all nests in a nest cluster each year resulted in
25 incomplete data. The lack of maps and data associated with oil and gas spudding and completion
26 dates, road locations, vegetation and the weather made it difficult to model the influences of
27 habitat conditions and oil and gas development levels on nesting activity.
28

29 HWI made several recommendations to improve raptor nest monitoring, including establishment
30 of a pre-development monitoring period of at least 3 to 5 years and monitoring a spatial domain
31 of 5 to 10 km outside of the proposed development area for adequate identification of nest
32 clusters. Very specific recommendations were also given for data gathering, including a
33 comprehensive nest inventory, gathering annual monitoring data for all known and newly
34 discovered nests for all species, gathering annual representative prey monitoring data, gathering
35 annual representative climatic and gathering landscape condition data and other desired GIS data
36 layers describing the study area landscape. Ground-based survey methods were recommended to
37 obtain the most accurate monitoring data as was comprehensive annual nest monitoring or annual
38 monitoring of a representative sample of nests.
39

40 **Policy:** It is the policy of Duchesne County to support research efforts to seek information that
41 would contribute to enhancing oil and gas extraction operations while providing protection of
42 raptor populations.
43
44

1 The Ashley National Forest has provided data that shows their efforts to restore and enhance
 2 terrestrial habitat, which benefits wildlife in the county (see Table WLF8).

Table WLF8. Ashley National Forest Terrestrial Habitat Restoration/Enhancement (2010 – 2016)

Fiscal Year	Acres of Habitat Restored or Enhanced
2010	3,305.0
2011	5,404.0
2012	7,550.0
2013	2,485.0
2014	6,379.0
2015	12,146.74
2016	9,144.0
Total	46,413.74

Source: Ashley National Forest (2017).

3
 4 **Energy Considerations**
 5

6 Energy development provides an important economic stimulus in Duchesne County and for the
 7 State of Utah. However, energy development and transmission also may cause impacts to valued
 8 wildlife species. Typical impacts may include loss or fragmentation of habitats, and increased
 9 disturbance during sensitive periods such as when the young are born or during winter while
 10 harsh climatic conditions may already be causing stress to animals. Development-related
 11 impacts need to be mitigated to promote a balance among competing uses of natural resources
 12 occurring within the County.

13
 14 Measures taken to reduce habitat fragmentation, create buffers around breeding or nesting sites or
 15 establish seasons of the year when human activity is not allowed in a wildlife habitat area, can
 16 make production of energy resources more costly or unfeasible.

17
 18 **Policy**
 19

20 Duchesne County’s policy is that all federal or state wildlife management agencies shall
 21 coordinate with the County prior to establishing regulatory measures associated with wildlife that
 22 could impact energy development.
 23
 24
 25

1 **Water Considerations**

2
3 Water is vital for all living organisms, including wildlife. Most terrestrial wildlife species must
4 drink water on a daily basis, although many supplement their intake by absorbing water from
5 foods. Some desert species get by solely on the moisture they derive from their diet. Fish, many
6 mollusks, crustaceans, amphibians, aquatic mammals (e.g., beavers, otters, muskrats) and water
7 birds (e.g., waterfowl, shorebirds, dippers, ospreys) depend more directly on aquatic systems.

8
9 Wetlands and riparian habitats provide critical needs for a number of wildlife species,
10 particularly birds. Water supply, water quality (e.g., temperature, sediment load, nutrient
11 content) and the flow regimes of streams and spring-fed systems greatly influence aquatic habitat
12 for wildlife.

13
14 Water use and the resulting alteration of aquatic habitats cause substantial stress for aquatic
15 wildlife. Water management needs to be carefully considered, so that we can meet municipal
16 and industrial needs, while preserving traditional agricultural uses, and ensuring aquatic habitat
17 to support wildlife.

18
19 Wildlife, if not managed properly, can have negative impacts on water quality.

20
21 **Policy:** It is the policy of Duchesne County that wildlife shall be managed on public and private
22 lands in a manner that keeps water resources from being degraded below state or federal
23 standards.

24

Section 6. Forest Management

Findings: Forest lands make up 29% of the Utah landscape and provide scenic, recreation, wildlife, and other forest values underscoring the importance of forest health (Utah Division of Forestry, Fire and State Lands [FFSL] and U.S. Forest Service [USFS] 2014). In Utah, approximately 15 million acres of forest are administered by federal, state, and local agencies with another 2.8 million acres held privately (FFSL and USFS 2014).

Forested lands are an important natural resource in Duchesne County and contribute to the quality of life by providing employment, forest products, open space, wildlife habitat, forage for livestock, recreation, and numerous other social and economic benefits.

From an elevational gradient, the lowest species of forested land consists mainly of pinyon pine and juniper. This type of forest encompasses a majority of the landscape. Recently, there have been attacks on pinyon pine from the pinyon engraver beetle. With recent above normal precipitation, the pinyon pine forests are recovering from past drought and should be able to more effectively fight the attack of the beetle.

Moving higher in elevation, the Douglas-fir is another dominant species found on the landscape. Over the past several years, the Douglas-fir beetle has taken a devastating toll on the forests, creating very high mortality rates. Field observations are showing a decrease in beetle populations and attack. This could be attributed to the increased precipitation amounts the area has received over the past few years.

Other species which can be found at mid-elevations (8,000 to 9,500 feet) are White fir, Ponderosa pine, Limber pine, and Lodgepole pine. These species are not as common, but they still serve as important habitat for wildlife and provide a diversity of tree species within the area.

The highest elevation species found in the area are Englemann spruce and Subalpine fir. Currently, the spruce beetle is moving further north, and some areas of spruce are experiencing high mortality rates.

Quaking aspen can be found from low elevations to high elevations. The health of aspen depends on stand age, disease, and recruitment of aspen and aspen suckers in the understory. Much of the aspen in the western United States is being overrun by the encroachment of an understory conifer. The decrease of aspen is associated with the lack of natural disturbances, like wildfire.

Blue spruce is another species which can be found mainly in riparian areas or areas with moist rich soil types.

Management practices (silviculture) can be a significant source of phosphorus and sediments in water bodies. Major wildfires and beetle infestation can lead to increased erosion in the watershed, due to land disturbance and increased lack of ground cover. Forest management practices should include re-vegetating disturbed areas, erosion prevention by timber harvesting

1 activities, stream channel protection, and riparian area designation. Forest health is an important
 2 key to overall watershed health and plays an essential role in the lifestyle and economics of
 3 residents and those that visit Duchesne County for recreational purposes.

4
 5 National Land Cover Database (NLCD) geospatial data use a 16-class land cover classification
 6 scheme at a spatial resolution of 30 meters (Homer et al. 2015). Acres of forested NLCD land
 7 cover types predicted to occur in Duchesne County are listed in Table FM1 and shown on Map
 8 #23.
 9

Table FM1. Acres of Forested National Land Cover Database Land Cover Types in Duchesne County

Forest Cover Type	Duchesne County
Deciduous Forest	77,635
Evergreen Forest	764,079
Mixed Forest	13,230
Shrub/Scrub	826,194
Woody Wetlands	14,803
Total	1,695,940

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

10
 11 Table FM2, taken from the USFS-published report *Forest Resource Statistics for Northern Utah, 1993*
 12 (Brown and O’Brien 1993) illustrates acres of timberland by county. *Timberland* is defined as
 13 forested areas “capable of producing commercial wood products” (Brown and O’Brien 1993) and
 14 differs from other estimates of forest (vegetation community) or USFS-managed forest lands.

Table FM2. Acres of Timberland in Duchesne County

Land Management	Duchesne County
National Forest	243,921
Other public	19,752
Non-industrial private	92,352
Total	356,025

Source: Brown and O’Brien (1993).

15
 16 Employment in the timber industry has dwindled over the years to almost nothing. According to
 17 the Profile of Timber and Wood Products found in the Headwaters Economics Economic Profile
 18 System (EPS), Duchesne County has only 18 jobs in the timber and wood products industry,
 19 which is only .25% of the total private employment in the county. Many of the mills have closed

1 in the county and in the region due to the lack of timber harvesting on private and public lands.
2
3 Table FM3 lists the amount of timber harvest on the Ashley National Forest during fiscal years
4 2010-2016.

Table FM3. CCF (Hundred Cubic Feet) of Timber Volume Sold on the Ashley National Forest

Fiscal Year	Hundred Cubic Feet of Timber Volume Sold
2010	13,158.2
2011	13,176.7
2012	11,045.9
2013	7,392.8
2014	13,448.0
2015	12,035.0
2016	6,803.0
Total	77,059.6

Source: Ashley National Forest (2017)

5
6 Of the 21 Utah sawmills listed by the Utah State University Forestry Extension Program, three
7 are in Duchesne County: Defa Sawmill, Hanna, Utah; John Larson Sawmill, Neola, Utah; and
8 Knotty Wood Products, Duchesne, Utah.

9
10 A 1998 Government Accounting Office report titled *Forest Service Barriers to Generating*
11 *Revenue or Reducing Costs* portrays the importance of 'economic sustainability' on USFS lands
12 and demonstrates the critical importance of multiple uses for the lands (Government Accounting
13 Office 1998). The report provides good examples for a more 'capitalistic' approach to public land
14 management based on private land models.

15
16 Significant issues impacting the timber resource in Duchesne County include declining forest
17 health, productive capacity of forest ecosystems, fragmentation, and socio-economic concerns.
18 Due to a lack of active vegetation management, forests in Duchesne County have become more
19 susceptible to intense wildfire, insects, and diseases. Sustaining a full range of services and
20 benefits that people desire from forests will require a diverse mosaic of forest conditions and a
21 full suite of active management strategies across the landscape.

22
23 In many cases, statutory, administrative, and physical constraints limit the ability to implement
24 restoration treatments within the context of historical functions and conditions. Existing legal

1 authorities, however, do provide justification for these types of activities. Legal mechanisms
2 include the National Forest Management Act, the Multiple Use Sustained Yield Act, the Federal
3 Land Policy and Management Act, the National Fire Plan, the Healthy Forests Restoration Act,
4 the Organic Administration Act and the Clean Water Act.

5
6 Achieving measurable progress toward a desired future condition is important and will serve as a
7 benchmark for future management direction. To do so, it is also important that timber resources
8 be characterized within the landscape setting. Sustainable forest systems begin with the
9 development of assessments that describe the biological, social and economic environment in
10 which the landscape resides.

11
12 Invariably, the concept of forest sustainability tends to integrate society's essential values of
13 environmental, social and economic considerations. Thus, it is equally important to talk about
14 sustaining forest dependent communities in our discussions of sustaining forests. The following
15 questions deserve further discussion: What is the existing infrastructure and capacity related to
16 forest products manufacturing and forest dependent communities? How much area is available
17 for timber production and the level of growing stock (merchantable vs. non-merchantable)
18 available for timber harvesting? What is the direct and indirect employment in the forestry
19 sector? What is the ability and willingness of the forestry sector to adapt to changing economic
20 conditions and technologies?

21
22 By its nature, managing forest resources encompasses a high degree of conflict. What's
23 important is to reach a "balanced" and agreeable approach through mechanisms that support the
24 conservation and sustainable management of forests. The National Forest Management Act
25 requires that the Forest Service coordinate their land management planning with the related
26 planning efforts of state, local and tribal governments. The USFS publication "*Understanding
27 Your Opportunities for Participating in the Forest Service Planning Process*" details how
28 coordination helps ensure that landscape management has consistency across ecosystems and
29 political boundaries so that mutual goals can be achieved where possible. The 2012 Forest
30 Planning Rule requires that the Forest Service review and consider state, local and tribal land use
31 plans and policies during the forest plan process and assess the interrelated impacts of these local
32 plans when developing forest plans. While the Forest Service is not required to comply with
33 state, local and tribal plans, it must consider and review such plans during the planning process.

34
35 Successful coordination will depend on each party taking the time to understand each other's
36 management objectives and working to find and include mutually beneficial and coordinated
37 direction in final plans. For upcoming or ongoing planning efforts, state, local, and tribal
38 governments should be sure to inform the Forest Service and seek mutual dialogue and
39 engagement early in the process. Where state, local, or tribal governments have already adopted
40 relevant land use plans or planning processes and polices (such as this County Resource
41 Management Plan) active engagement with the Forest Service can ensure that such plans and
42 policies are known, understood, and effectively considered during the Forest Service planning
43 process. In both cases, early and active engagement to share information and objectives is
44 necessary for success. While state, local, and tribal governments lack jurisdiction over Federal

1 lands within their areas, these lands are often included in broad local concepts of socioeconomic
2 well-being, safety, and culture.
3

4 The viewpoints of state and local residents have been surveyed and provide insight into how they
5 would like to see the national forests managed. A December 2008 report published by Utah State
6 University entitled “Public Lands and Utah Communities: A Statewide Survey of Utah
7 Residents,” found (in Table 18) that 80% of residents surveyed in the Daggett-Duchesne-Uintah
8 County region believe that having forested areas that provide timber used by logging operations
9 and lumber mills is moderately important (37.4%) or very important (42.6%) to the quality of life
10 of their communities. In that same study, (Table 35) 76.1% of residents surveyed in the Daggett-
11 Duchesne-Uintah County region believe that public land managers should maintain (43.6%),
12 moderately increase (20.5%) or substantially increase (12.0%) the extent to which timber harvest
13 activities occur on Utah’s public lands. Of these survey respondents, according to Table 54 of
14 the report, only 18.2% had a moderate (12.7%) or strong (5.5%) disagreement with Forest
15 Service lands being managed to provide for economic uses like grazing or mining to help
16 encourage local economic development. As set forth in Table 55 of the report, only 13.6% had
17 moderate (9.8%) or strong (3.8%) opposition to Forest Service lands being managed for
18 economic uses like recreation and tourism to help encourage local economic development. Only
19 10.2% of these survey respondents (see Table 40 of the report) believed that public land
20 managers should moderately (5.2%) or substantially (5.0%) reduce the extent to which controlled
21 burns are used to improve ecological conditions on Utah’s public lands. Finally, only 7.1% of
22 these survey respondents believed that public land managers should moderately (4.7%) or
23 substantially (2.4%) reduce the extent to which forested areas are thinned to reduce fire risk on
24 Utah’s public lands (see Table 41 of the report).
25

26 The legal framework of forest management includes periodic planning, assessment and policy
27 review that recognize the range of forest values. This includes opportunities for public
28 participation, decision-making and coordination with affected sectors. The economic and
29 institutional framework of forest management includes education and awareness, planning and
30 coordination, establishment of important infrastructures to support implementation of forest
31 management. Another important consideration is continued research and understanding of the
32 dynamic nature of forest ecosystems and their functions.
33

34 The timber resources and woodlands of Duchesne County are considerable and mostly located on
35 public lands. In recent years, timber harvesting has decreased on the Ashley National Forest. The
36 risk of timber loss from wildfire, insects, and disease and from reduced water yields from
37 watersheds is increased as a result of these management policies. Economic opportunities are
38 also lost. Tables FM4 – FM8 illustrate a variety of forest management actions on the Ashley
39 National Forest from 2010 to 2016. Not all of these actions occurred in Duchesne County.
40

Table FM4. Ashley National Forest Management Actions (FY 2010-2016) - Acres of Forestland Vegetation Established

Fiscal Year	Acres of Forestland Vegetation Established
2010	1,370.0
2011	1,075.2
2012	1,189.0
2013	1,009.0
2014	1,016.0
2015	1,002.0
2016	658.0
Total	5,949.2

Source: Ashley National Forest (2017)

1

Table FM5. Ashley National Forest Management Actions (FY 2010-2016) - Acres of Forestland Vegetation Improved

Fiscal Year	Acres of Forestland Vegetation Improved
2010	522.0
2011	716.0
2012	836.0
2013	668.1
2014	697.1
2015	N/A
2016	N/A
Total	3,439.2

Source: Ashley National Forest (2017)

2

Table FM6. Ashley National Forest Management Actions (FY 2010-2016) Acres of Fuels Treated in the Wildland Urban Interface

Fiscal Year	Acres of Fuels Treated in the WUI
2010	2,843.0
2011	2,971.0
2012	66.0
2013	1,855.0
2014	-
2015	1,179.0
2016	2,438.0
Total	11,352.0

Source: Ashley National Forest (2017)

1

Table FM7. Ashley National Forest Management Actions (FY 2010-2016) Acres of non-Wildland Urban Interface Fuels Treated

Fiscal Year	Non-WUI Fuels Treated
2010	5,571.7
2011	5,283.0
2012	4,744.3
2013	3,707.1
2014	4,602.0
2015	2,513.0
2016	3,549.0
Total	29,970.1

Source: Ashley National Forest (2017)

2
 3
 4
 5
 6

Table FM8. Ashley National Forest Management Actions (FY 2010-2016) Acres Treated to Reduce Risk of Catastrophic Wildfire

Fiscal Year	Catastrophic Fire Fuels Reduced
2010	8,414.7
2011	8,254.0
2012	4,810.3
2013	5,562.1
2014	7,642.0
2015	-
2016	-
Total	34,683.1

Source: Ashley National Forest (2017)

1
 2 Accumulation of large amounts of woody debris and increased fuel loads coupled with mortality-
 3 causing disturbance regimes (e.g. fire, insect and pathogens) exacerbates the potential for
 4 catastrophic wildfire. Research shows these conditions are often inconsistent with historical
 5 patterns of forest development. Some far-reaching impacts include changes in hydrologic
 6 function, nutrient cycling, and introduction of noxious and invasive species.

7
 8 While county-specific forest health statistics are lacking, the 2016 Utah Forest Health Highlights
 9 publication gives an indication of what is happening to our forests state-wide (Forestry Fire and
 10 State Lands 2016). Figures 2 and 3 of that study shows that, between 2002 and 2011, only two
 11 species groups (Ponderosa & Jeffrey pines and Cottonwood & Aspen) showed a positive growth.
 12 However, a decline in aspen (*Populus tremuloides*) has been mapped since 2003 and is caused
 13 largely by drought, canker diseases, and insect borers (FFSL and USFS 2014).

14
 15 Conversely, Lodgepole pine, Douglas fir, True firs, Engelmann and other spruce, other western
 16 hardwoods and other western softwoods all showed more mortality than growth. Average net
 17 annual growth of trees in Utah is -4,556 thousand cubic feet per year indicating more mortality
 18 than growth (FFSL and USFS 2014). The study found that insect and disease-caused tree
 19 mortality generally increased from 2013 to 2014. For example, Douglas fir beetle induced
 20 mortality increased by 73%, while spruce beetle kill increased 35% (from 412,662 killed in 2013
 21 to 555,435 killed in 2014). Fir engraver induced mortality increased from 761 trees killed in
 22 2013 to 34,303 in 2014. Subalpine fir mortality increased by 300% during that time period.

23
 24 Western Bark Beetle Strategy activities in Utah, including Duchesne County, center on three
 25 objectives: 1) increasing safety to ensure that people and community infrastructure are protected

1 from the hazards of falling bark beetle–killed trees and elevated wildfire potential, 2) facilitating
2 recovery to re-establish forests damaged by bark beetles, and 3) cultivating resiliency to prevent or
3 mitigate future bark beetle impacts (U.S. Department of Agriculture 2016). Between 2004 and 2016,
4 there were 14,930 acres treated. The locations of Western Bark Beetle Strategy activities, timber
5 harvest, and brush disposal activities are described on Map #24.

6
7 **Objective:** Reverse the negative fire trends in forest health by actively managing the forest.

8
9 A study released by the U.S. Forest Service Pacific Southwest Research Station on November 25,
10 2013 (summarized at <https://www.treesearch.fs.fed.us/pubs/45108>) found that lowering stand
11 density reduces mortality of ponderosa pine stands. As trees grow larger in even-aged stands,
12 competition develops among them. Competition weakens trees as they contend for soil moisture,
13 nutrients, and sunlight. Competition also increases trees’ risk to bark beetles and diseases, and
14 subsequently leads to a buildup of dead fuels. Duchesne County suspects that these principles
15 apply not only to ponderosa pine forests in California, but generally to pine forests across the
16 West, including in the Ashley National Forest in Duchesne County.

17
18 The study, led by Dr. Jianwei Zhang (<https://www.fs.fed.us/psw/programs/efh/staff/jzhang/>)
19 considered if the onset of this risk could be determined. The study also considered if the
20 relationship between density and mortality varies with site quality as ponderosa pine stands
21 developed. Based on the analysis of 109 long-term research plots established on even-aged
22 natural stands and plantations from 1944 to 1988, and 59 additional ponderosa pine plots
23 measured by the Forest Service’s Forest Inventory and Analysis group, these researchers found
24 that site quality affected the relationship between density and mortality.

25
26 “Any silvicultural treatments that enhances growth will reduce mortality rate for a given stand
27 density.” Dr. Zhang said. “By establishing the self-thinning boundary lines from the size-density
28 trajectories, the onset of mortality risk can be determined for ponderosa pine stands.”

29
30 As stated in “*Lowering stand density reduces mortality of ponderosa pine stands*,” USDA Forest
31 Service, Pacific Southwest Research Station, Science Findings
32 (http://www.fs.fed.us/psw/news/2013/20131125_PonderosaPineStands.shtml) the research also
33 confirmed the added value of such long-term study sites which allow new questions to be
34 addressed that were not included in the original studies. Other recently published research from
35 this group of scientists demonstrated thinning forest stands to a lower density reduces fuel
36 buildup significantly, and enhances its economic value by increasing growth of residual trees.
37 Specifically, stand basal area, which is the cross sectional area of all trees in a stand measured at
38 breast height, is not affected by thinning ponderosa pine stands to half the normal basal area of a
39 specific site quality. If the stand has experienced high mortality caused by bark beetles, it can be
40 thinned more heavily without sacrificing timber, biomass, or volume increment and plant
41 diversity.

42
43 In addition, results from these long-term studies show that early shrub removal and tree density
44 control are the most effective and efficient ways to reduce fuel buildup. Under Mediterranean

1 climatic conditions, shrubs reduce over-story tree growth and keep tree crowns in contact with
2 the shrub canopy. In turn, this growing fuel ladder can carry a ground fire into the crowns of the
3 over-story trees. Although carbon stocks may be the same with or without understory vegetation,
4 by controlling competing vegetation, carbon is reallocated into the trees instead of shrubs; and
5 carbon loss to wildfire is reduced.

6
7 While the latest science is showing that reducing tree stand density is beneficial for forest health,
8 the funding for such projects is lacking. A study of ponderosa pine (*Pinus ponderosa*) forests by
9 Arizona State University, with funding from The Nature Conservancy (“*Modeling the Economic*
10 *Viability of Restorative Thinning, Initial Assessment Report*” The Nature Conservancy and the
11 Walton Sustainability Solutions Initiatives, Arizona State University, December 2013), indicates
12 that harvesting small diameter wood (8 to 12 inches) is critical to restoring the structure, pattern,
13 and composition of fire-adapted ecosystems, and also provides for fuels reduction, forest health,
14 and wildlife and plant diversity. Costs typically born by state and federal agencies can be reduced
15 through development of a wood products supply chain, which includes lumber, pellets, and chips
16 (Arizona State University 2013). The study methodology, which should be repeated on the
17 Ashley National Forest, consisted of four parts:

- 18
19 1. Technology Inventory. Understand current and emerging enabling technologies for wood
20 processing, including emerging technologies (for instance, biomass-to-energy).
- 21
22 2. Business Inventory. Develop an inventory of possible large, medium, and small business
23 possibilities that could utilize SDW.
- 24
25 3. Industry Viability Assessment. Conduct an initial industry viability assessment, based on
26 analyzing a variety of business combination and configuration scenarios.
- 27
28 4. Initial Assessment Report & Presentation. Provide an initial assessment report and
29 presentation.

30
31 **Objectives:** Reducing fire hazards and improving forest health across landscapes with the
32 additional benefit of providing raw material to forest industries. Prescribed fire can reduce fuel
33 loads and potential for catastrophic wildfire, application of appropriate silvicultural prescriptions
34 can be used to promote regeneration while providing a sustainable flow of forest products.

35 36 **2016 Utah Forest Action Plan**

37
38 A portion of the forests in Utah and in Duchesne County are on state and private lands. The Utah
39 Division of Forestry, Fire and State Lands collaborated with numerous partner agencies and
40 organizations, including the USDA Forest Service, Bureau of Land Management, Division of
41 Wildlife Resources, the Utah Partners for Conservation and Development and numerous
42 stakeholders to develop the 2016 Utah Forest Action Plan. Quoting from the Executive Summary
43 (see “*Utah Forest Action Plan 2016*,” Utah Division of Forestry, Fire and State Lands,
44 (<http://www.ffsl.utah.gov/images/forestry/stateassessment/UtahFAP-2016-LowRes.pdf>), this

1 plan provides a comprehensive analysis of the forest-related conditions, trends, threats and
2 opportunities within Utah and will be used to guide the Division’s planning efforts and project
3 work.

4
5 The Forestry Title of the 2008 Farm Bill required all states to produce a Forest Action Plan in
6 order to more effectively focus management priorities and funding opportunities. The Utah
7 Forest Action Plan will drive future grant requests from USDA Forest Service, State and Private
8 Forestry and other funding sources. The purpose of the Plan is to ensure resources are being
9 focused on important landscape areas with the greatest opportunity to address shared
10 management priorities and achieve meaningful outcomes.

11
12 The Utah Forest Action Plan concentrated on eight key themes for the geospatial analysis portion
13 of the Plan. These eight themes are Fire Risk, Forests, Wildlife Action Plan, Water Quality,
14 Riparian Areas, Forest Health, Distance to Managed Lands and Urban and Community Forestry.
15 These eight themes utilized 17 data layers to conduct the analysis and identify those areas of
16 important forest resources for project work.

17
18 The analysis resulted in the development of five priority areas across the state. These priority
19 areas are named for their geographic location. They are, from north to south, Wasatch, Uinta,
20 Sevier-Skyline, La Sal and Cedar.

21
22 Each chapter of the Plan details the current condition, program overview, objectives and
23 strategies for the themes used in the model. Additional chapters address the Forest Legacy
24 Program, Climate Change and a Dynamic Modeling proposal. The Plan is intended to be a living
25 document that the Division can refer to for reference and guidance. The Dynamic Model allows
26 the Division to be adaptable, responsive and proactive. This adaptability and responsiveness is
27 critical to keeping the Division ahead of changes in ecosystems, data and funding sources.

28
29 The Utah Forest Action Plan (2016) establishes the following objectives and strategies in several
30 key areas of forest management:

31
32 **Wildland Fire Fuel Management**

33
34 Fuel Management refers to the act or practice of controlling flammability and reducing resistance
35 to control of wildland fuels through mechanical, chemical, biological, or manual means, or by
36 fire in support of land management objectives. The Division area WUI and fuels specialists that
37 assisted communities with the development of CWPP’s will continue to aid with implementing
38 mitigation strategies. Hazard fuel mitigation grant funds can be requested through several
39 sources. Thousands of acres of defensible space and fuel breaks have been created through this
40 program making communities and firefighters safer.

41
42 In 2013, the State of Utah developed the Catastrophic Wildfire Reduction Strategy (Catfire) in
43 response to the severe 2012 fire season. Reducing the catastrophic wildfire requires attention to
44 three interdependent goals identified in the National Cohesive Wildfire Management Strategy –

1 Restore and Maintain Landscapes, Fire Adapted Communities, and Wildfire Response. These
2 goals have been embraced throughout the development of the state’s Catfire strategy.

3
4 Mitigation of hazardous fuels can change fire behavior making it easier to suppress. The effects
5 of the mitigation, however, are not limited to life and property safety but will also affect forest
6 health, water quality, vegetative species abundance, etc. As we continue to implement projects
7 across the landscapes in Utah, the only way to truly be successful is to integrate existing
8 programs, utilize local and federal partners and continue to educate the general public to create
9 the desired shift towards more resilient communities and ecosystems.

10
11 Objectives and Strategies

12
13 a. *Reassess the existing education program to meet current and future needs.*

- 14
15 1. Make sure literature is updated as necessary to incorporate current research
16 information.
17
18 2. Identify gaps in research and pursue funding to address research needs.
19
20 3. Distribute materials to community members, individual landowners, public
21 officials, interagency partners and media for further dissemination and outreach.
22
23 4. Maintain collaborative efforts with interagency partners to deliver and update
24 information.
25
26 5. Increase participation in state and national programs including Utah Living with
27 Fire; Ready, Set, Go!; Firewise USA and Fire-Adaptive Communities.
28

29 Resources required: State and Area WUI Coordinators, Catfire Prevention & Education
30 Coordinator.

31
32 b. *Expand planning opportunities*

- 33
34 1. Utilize existing tools to effectively and efficiently expand planning opportunities
35 to the 625 identified Communities at Risk within the State of Utah.
36
37 2. Train urban and volunteer fire departments to deliver the National Cohesive
38 Strategy objectives and strategies to more efficiently reach those in the Wildland
39 Urban Interface.
40
41 3. Update and modify as needed the planning documents to meet the needs of the
42 State of Utah and intent of the Healthy Forest Restoration Act.
43
44

1 Resources required: State and Area WUI coordinators, Catfire Program Coordinator
2 Catfire Fire Risk Assessment.

3
4 *c. Organizational development*

- 5
6 1. Provide technical and financial assistance to the 501c3, Utah Living with Fire.
7
8 2. Standardize program delivery to improve consistency across the state.
9
10 3. Provide cross discipline training to meet needs of individuals and other programs.
11
12 4. Expand cross ownership contract sharing to reduce mitigation costs.

13
14 Resources required: Catfire Program Coordinator and Regional planning process.

15
16 *d. Wildland Fire legislation*

- 17
18 1. Update statues and codes to align more closely with current suppression
19 management decision tools.
20
21 2. Establish a reward system through tax relief for preparing for wildland fire.
22
23 3. Provide increased funding to help communities prepare for wildfire.
24
25 4. Create a funding mechanism which allows the participation for all interested
26 entities for wildland fire suppression.

27
28 Resources required: Salt Lake City staff and Area office fire staff.

29
30 *e. Program integration*

- 31
32 1. Increase communication and cooperation among programs within the Department
33 of Natural Resources and other State and Federal agencies.
34
35 2. Utilize when appropriate other programs to meet the intent of the National
36 Cohesive Strategy.
37
38 3. Help to identify areas of potential integration through the Landscape Scale
39 Restoration process.

40
41 Resources required: Catfire Program Coordinator and Catfire Fire Risk Assessment.
42
43
44

1 f. *Project identification and implementation*

- 2
- 3 1. Identify both federal and non-federal mitigation projects identified in the priority
- 4 areas of the Forest Action Plan, through the Interagency Fuels Committees and/or
- 5 through the Catastrophic Wildfire Reduction strategy process.
- 6 2. Plan and complete projects that meet the needs of entire communities; focusing on
- 7 resilient landscapes and fire adaptive communities.
- 8
- 9 3. Incorporate a maintenance schedule for communities that are achievable and
- 10 effective.
- 11

12 Resources required: Catfire Program Coordinator, Catfire Fire Risk Assessment, Catfire

13 funding, and State and Area WUI Coordinators.

14

15 **Forest Stewardship**

16

17 The Utah Forest Action Plan (2016) notes that, across Utah’s landscape, approximately 2.7

18 million acres or 19% of Utah’s forests are held in private ownership. Many of these private

19 forests were originally acquired for cattle grazing, agriculture or mining development and are

20 typically located near larger tracts of public forest where critical watershed areas exist. Although

21 relatively small in acreage, these private forestlands overlay many of the state’s most valuable

22 watershed, wildlife and recreation areas and form critical fringe and connectivity zones

23 throughout larger tracts of public forests (Utah Forest Legacy Program, Assessment of Need).

24 Because of their location, these lands are capable of providing benefits as well as posing risks for

25 nearby communities if not properly managed.

26

27 Utah’s private forest landowners are a diverse group, consisting of corporate owners and private

28 individuals, owners of large and small acreages, multi-generation owners and those who have

29 only recently acquired forestland. Utah’s non-industrial private forest (NIPF) landowners are

30 distributed throughout all twenty-nine counties and own land for a variety of reasons.

31

32 An estimated 3,500 landowners control the management and land use activities on private

33 forestlands greater than 10 acres in size. A recent national survey suggests there are about 11,000

34 forest landowners in Utah who own parcels smaller than 10 acres. Surveys conducted by the

35 Division and Utah State University identified wood products, livestock and recreation as the

36 three primary reasons for forestland ownership in Utah. Utah owners of commercial high

37 elevation forestlands own an average of 6,300 acres.

38

39 The average forest landowner holds 600 acres of forestland, ranging anywhere between 40 to

40 15,000 acres. Utah has over 13,000 farms and ranches spread throughout the state. Rural forest

41 landowners, ranchers and farmers can, through use of conservation plantings and other

42 management practices, improve forest health and productivity, reduce soil erosion, improve

43 riparian areas, improve crop and livestock productivity and improve wildlife habitat.

44

1 Utah has seen slow, yet steady progress towards increasing interest in forest management. This is
2 shown by the increased level of involvement of program delivery staff promoting forest
3 stewardship and landowner education efforts.

4
5 Objectives and Strategies

6
7 *a. Develop management direction for non-federal land use activities, utilizing standards*
8 *for stewardship and ecosystem management.*

- 9
10 1. Identify and target private forest landowners located in important forest resource
11 areas for assistance with stewardship or other planning purposes.
12
13 2. Develop forest stewardship management plans concurrent with Division standards
14 for private forest landowners who demonstrate their commitment to proactive
15 management.
16
17 3. Include non-federal landowners in landscape-level, ecosystem-based planning
18 where appropriate and acceptable to the landowner.
19
20 4. Encourage and promote the use of cooperative activities by other land
21 management agencies (i.e., state, private and federal) employing ecosystem
22 management, forest health and stewardship principles.
23
24 5. Where appropriate, encourage commodity production from private lands within
25 the context of multiple-use and sustained yield.

26
27 Resources required: Forest Stewardship Coordinator

28
29 *b. Plan, develop and implement new information and education programs to inform Utah*
30 *citizens of the importance of balanced conservation.*

- 31
32 1. Develop and present workshops for private forest landowners.
33
34 2. Participate in local community and agency planning processes.
35
36 3. Demonstrate the concepts of ecosystem, stewardship, recycling and urban tree
37 care through public presentations and interpretive sites.
38

39 Resources required: Forestry Program Administrator, Forest Stewardship Coordinator,
40 and Area Foresters

41
42 *c. Maintain or expand existing information and education programs.*

- 43
44 1. Participate in youth-oriented education programs and activities (i.e. Natural

1 Resource days)

2
3 2. Cooperate and participate in ecosystem field days and career days.

4
5 3. Have timely input into work planning of USU's Landowner Education.

6
7 Resources required: Forestry Program Administrator, Forest Stewardship Coordinator,
8 and Area Foresters

9
10 *d. Develop partnerships and cooperative relationships with organizations and*
11 *individuals who share our goals.*

12
13 1. Formalize current and future relationships with agreements that specify desired
14 results.

15
16 Resources required: Forestry Program Administrator

17
18 *e. Use all available management tools, including forest industry, to restore and maintain*
19 *healthy ecosystems.*

20
21 1. Design and implement demonstration areas.

22
23 2. Whenever possible, utilize local mills and forest industry professionals to
24 implement forest stewardship projects.

25
26 Resources required: Forestry Program Administrator, Forest Stewardship Coordinator and
27 Area Foresters

28
29 *f. Develop and maintain appropriate natural resource databases.*

30
31 1. Inventory and catalog existing data on natural resources.

32
33 2. Adopt training, facilities, hardware and staff for using GIS.

34
35 3. Develop a process for acquiring and managing necessary resource data.

36
37 4. Utilize current and emerging technologies to analyze natural resource data in
38 support of the Division's annual plan of work.

39
40 Resources required: Forestry Program Administrator, Forest Stewardship Coordinator,
41 Area Foresters,

42
43 *g. Promote the professional development of Division employees.*
44

1. Promote job-related training and education opportunities.

Resources required: Forestry Program Administrator, Forest Stewardship Coordinator, Area Foresters, and Salt Lake GIS Staff

Wildlife

Objectives and Strategies

As stated in the Utah Forest Action Plan (2016), the Division of Forestry, Fire and State Lands intends to support the Division of Wildlife Resources in the Wildlife Action Plan (WAP) strategies. Coordination between the two agencies is especially important for species of conservation concern, such as the greater sage grouse, where forest management and wildland fire control are critical to maintain habitat for the bird.

Broadly stated, the goal of Utah’s Wildlife Action Plan is to maintain or restore healthy populations of native wildlife, thereby preventing the need for federal Endangered Species Act protection. It cannot be disputed that achieving this goal will deliver better outcomes for the people of Utah and for the wildlife held in perpetual trust for them. The strategy being employed to achieve this goal is to: clarify and communicate WAP implementation goals, objectives and priorities in order to align capacity with needs in order to maximize efficiency, in a coordinated, voluntary fashion.

Resources required: Salt Lake GIS Staff, DWR Wildlife Action Plan Program Manager.

Water Quality and Riparian Areas

The Utah Forest Action Plan identified five priority areas throughout the state, including the Uinta Mountains area, partially within Duchesne County. The Division of Forestry, Fire and State Lands can achieve positive changes in water quality and quantity in these areas through:

1. Continued education of loggers and landowners with regards to Best Management Practices (BMP’s);
2. Providing leadership and implementing strategies that will reduce invasive species in riparian corridors; and
3. Assisting communities with urban tree projects adjacent to rivers and streams.

Objectives and Strategies

The water quality strategies presented below will be implemented in all five priority areas throughout the state.

1 a. *Develop management direction for non-federal land use activities, utilizing standards*
2 *for stewardship and ecosystem management.*

- 3
- 4 1. Continue the development of educational publications for landowners regarding
5 silvicultural practices, Forest Water Quality Guidelines and forest health issues.
6
 - 7 2. Pursue opportunities for application and adoption of Forest Water Quality
8 Guidelines (FWQG) and encourage landowners and industry to include FWQG in
9 all silvicultural activities.
10
 - 11 3. Continue to implement monitoring programs to determine effectiveness of the
12 Forest Practices Act, FWQG and Forest Stewardship Management Plans.
13
 - 14 4. Pursue opportunities to develop watershed assistance programs for Utah’s non-
15 federal forested lands through available funding sources.
16
 - 17 5. Utilize grants to support native tree planting efforts along riparian areas within
18 municipalities.
19
 - 20 6. Provide technical assistance to developers and city planners to help reduce
21 impervious surfaces and utilize trees and other plant materials for water filtration
22 and to slow run off rates.
23

24 Resources required: Forestry Program Administrator, Forest Stewardship Coordinator,
25 Urban and Community Forestry Coordinator.
26

27 **Forest Health**

28

29 The 2016 Utah Forest Action Plan states that the purpose of the Forest Health Program is to
30 provide the necessary technical and financial assistance for the detection and evaluation of forest
31 insect or disease problems and to assist Division service foresters, community foresters and other
32 partners by providing information, education, technical assistance and appropriate management
33 strategies to achieve healthy forest conditions and to prevent, manage or control significant insect
34 or disease outbreaks on non-federal lands.
35

36 State priority areas and forest health issues are congruent with each other. Nearly all forests in
37 Utah have health issues. Spatially, priority areas for forest health fit within State priority areas.
38

39 Insects and disease are oblivious to landownership boundaries and therefore, need to be evaluated
40 on a landscape scale. A coalition between all landownership must be made before effective,
41 comprehensive plans to improve forest health can be made. During outbreak conditions, forest
42 health treatments made on some lands at risk and not others often are ineffective.
43
44

1 Insect suppression strategies are often specific to insect and tree species whether forest insects or
2 urban. However, these strategies should be included in stewardship plans and urban planning
3 efforts. Forest health is an important and integral component of the Forest Stewardship program
4 which maintains the long-term goal of placing non-industrial private forest lands under active
5 management through a proactive approach involving information, education, technical assistance
6 and partnerships. Forest health issues must be taken into account as forest health assessments and
7 stewardship plans are developed for forest landowners. Forest health assessments attempt to
8 characterize potential forest stressors and their capacity to affect the condition of forest stands.
9 As activities prescribed in management plans are implemented, forest health must be monitored
10 on a continuous basis.

11
12 In agro-forestry and urban forestry, as with forest land applications, forest health must consider
13 the function of the planting, not just the survival of the individuals in the stand. A windbreak
14 planting composed of trees that are alive, but with poor form or density, defeats the purpose of
15 the planting.

16
17 Stand structure and composition often determine whether an insect population will reach
18 epidemic levels. Specific attributes of inventory data collected may be used to rate stands
19 according to bark beetle hazard potential. Hazard ratings help identify stands where substantial
20 losses can be expected if an outbreak occurs.

21
22 USDA Forest Service regional and national program data will be used as is appropriate for
23 planning purposes. Coordination and cooperation with federal, state and local municipalities will
24 remain key to project planning and implementation.

25 26 Objectives and Strategies

27
28 *a. Utah's forested resources are used to meet public needs while being appropriately*
29 *managed to provide sustainability for future generations.*

- 30
31 1. Provide sufficient technical assistance, training, information, databases and
32 publications to allow land managers and/or private landowners to effectively deal
33 with insect and disease issues using integrated pest management techniques.

34
35 Resources required: Forest Health Coordinator, Area Foresters.

36
37 *b. Information for all forested lands in Utah is available to the State Forester, State and*
38 *Federal Legislators, other decision makers and land managers; allowing appropriate*
39 *actions in high-priority areas to enhance the health of Utah natural resources.*

- 40
41 1. Coordinate detection efforts with cooperators for significant forest insects and
42 disease and monitor trends in forest health conditions on non-industrial private
43 and state forest lands.

2. Collaborate with partners to participate in the national Forest Health Monitoring Program (FHM).
3. Provide input in the development of the national Forest Inventory and Analysis Core Field Guide.

Resources required: Forest Health Coordinator.

c. Utah natural resources are minimally affected by introduced, exotic species due to aggressive interagency cooperation to prevent introduction and quick action to reduce populations if introduced.

1. Collaborate with partners to minimize the impacts of introduced pests.

Resources required: Forest Health Coordinator, Forest Stewardship Coordinator, and Area Foresters.

Proximity to Lands Managed by other Agencies

Much of the project work and planning efforts undertaken by the Division of Forestry, Fire and State Lands may see increased benefits in relation to their proximity to other managed lands. It is less likely that these managed lands will lose their conservation values to development which in turn makes adjacent WUI work, conservation easements, planning efforts, etc. more valuable.

Also, the collaboration between Federal, State and Tribal agencies enables the efficient, strategic and focused use of limited program resources as well as producing the most benefit in terms of critical resource values and public benefits.

The Division of Forestry, Fire and State Lands has worked with landowners to provide Forest Stewardship Plans on more than 295,000 acres of the 2.8 million acres of private forest land in the state. The Division also holds conservation easements on more than 67,000 acres of private forest land. It is also important to consider these managed lands when considering project work and planning efforts.

Objectives and Strategies

a. Increase project benefits through proximity to managed lands.

1. Coordinate with other State, Federal, Tribal and private entities to identify project work in proximity to existing management plans and/or conserved lands.
2. Give priority to projects and planning efforts adjacent to or in close proximity to existing Federal and Tribal lands and to private lands with existing Forest Stewardship Plans and/or conservation easements.

3. Maintain and update existing Division Forest Stewardship Plan and conservation easement databases yearly to ensure current information is being utilized.

Resources required: Forestry Program Administrator, Area Managers, and Salt Lake City GIS Staff

Forest Legacy Program

Utah's Forest Legacy Program, described in the 2016 Utah Forest Action Plan, is designed to facilitate state, local and private open space and resource conservation initiatives by assisting with the purchase of conservation easements or fee title on nonindustrial private forest lands and by aiding private forest landowners with the development of long-term Forest Stewardship Plans. The Forest Legacy Program fulfills both of these directives by providing the vital educational, technical and financial tools needed by private landowners and local governments to accomplish their goals with regard to conservation and sustainable forestry.

Because the Forest Legacy Program was created through a 1990 amendment of the Cooperative Forestry Assistance Act of 1978, many aspects of Utah's program follow national requirements and criteria. The remaining elements specifically reflect the state's unique resource needs, political climate and public attitudes. Valuable input from private landowners, public citizens and several resource management agencies played a primary role in the development of these components. The following explains Utah's Forest Legacy Program functions and provides detail on the national program, the eligibility criteria for lands to be included in the program, the selection of Utah's Forest Legacy Areas and the process through which willing forest landowners can benefit from the program's many opportunities. The Forest Action Plan is not intended to replace Utah's Forest Legacy Assessment of Need. For more detailed information about the Forest Legacy Program refer to the Utah's Forest Legacy Assessment of Need.

The United States Congress created the national Forest Legacy Program (FLP) recognizing that the majority of the nation's productive forest lands are in private ownership and that private landowners are facing growing pressures to convert their lands to non-forest uses, namely residential subdivisions and commercial development. Greater population density and user needs are increasing this pressure by demanding that private lands not only compensate for the current timber shortfalls on federal lands but that they also provide a wider variety of products and services, from fish and wildlife habitat to aesthetic and recreational opportunities. The FLP mitigates the negative effects of these pressures and facilitates long-term resource management partnerships between local, state and federal governments. Authorization for the FLP was granted through Section 1217 of Title XII of the Food, Agriculture, Conservation and Trade Act of 1990, also referred to as the 1990 Farm Bill. This law amended the Cooperative Forestry Assistance Act (CFAA) of 1978 in order to allow the Secretary of Agriculture to establish the FLP for the protection of environmentally important forest areas that are threatened by conversion to non-forest uses. This authority continues indefinitely. Currently, the USDA Forest Service serves as the lead federal agency for the FLP. The Forest Service implements the Program through close cooperation with a lead state agency as designated by the Governor. In

1 1996, Utah's then Governor, Michael Leavitt, designated the Division of Forestry, Fire and State
2 Lands as the state's lead agency.

3
4 The establishment of a state FLP includes several steps that are specified by the Forest Legacy
5 Program Implementation Guidelines. The first step in these guidelines is the completion of a
6 state-wide Assessment of Need (AON) which documents the demand for a FLP in the state;
7 identifies and delineates the boundaries of eligible forest areas; and recommends to the Forest
8 Service areas which should be included in the FLP. At a minimum, the AON must address the
9 following as they relate to the purpose of the FLP:

- 10
11 1. Forested areas threatened by conversion to non-forest uses;
- 12
13 2. Forest resources including:
 - 14
15 a. Aesthetic and scenic values,
 - 16
17 b. Fish and wildlife habitat, including threatened and endangered species,
 - 18
19 c. Mineral resource potential,
 - 20
21 d. Public recreation opportunities,
 - 22
23 e. Soil productivity,
 - 24
25 f. Timber management opportunities and
 - 26
27 g. Watershed values;
- 28
29 3. Historic uses of forest areas and trends and projected future uses of forest resources;
- 30
31 4. Current ownership patterns and size of tracts, and trends and projected future ownership
32 patterns;
- 33
34 5. Cultural resources on forested lands;
- 35
36 6. Outstanding geological features;
- 37
38 7. Demographic trends as they relate to conversion of forest areas; and
- 39
40 8. Other ecological values.

41
42 Based on the AON, the state lead agency identifies specific geographic Forest Legacy Areas
43 (FLA) that meet both national and state eligibility requirements. It then recommends these areas
44 to the Forest Service for inclusion in a state FLP. Once designated, FLAs and resulting maps of

1 FLAs may be modified and amended upon recommendation by the state lead agency if future
2 conditions make changes necessary. Following completion, the AON and identification of
3 proposed FLAs must be submitted by the state to the Forest Service for review. The Secretary of
4 Agriculture provides final approval for establishing the state's FLP.

5
6 Forest Legacy Area boundaries must encompass forest lands with significant environmental and
7 other resource-based values. These areas may also include non-forested areas such as farms and
8 villages if they are an integral part of the landscape and are within the logical boundaries. In
9 order to ensure that all lands nominated for FLA designation meet the minimum goals and intent
10 of the program, the Implementation Guidelines specify the following eligibility criteria:

- 11
12 1. Proposed Forest Legacy Areas must represent an important forest area that is threatened
13 by conversion to non-forest uses.
- 14
15 2. Proposed Forest Legacy Areas must contain one or more of the following important
16 public values: scenic resources; public recreation opportunities; riparian areas; fish and
17 wildlife habitat; known threatened and endangered species; known cultural resources;
18 and/or other ecological values.
- 19
20 3. Proposed Forest Legacy Areas should provide opportunities for the continuation of
21 traditional forest uses, such as timber harvesting, forest management and outdoor
22 recreation.

23
24 The delineation of boundaries for Utah's FLAs stemmed from a multi-level review involving
25 public attitudes and input from local, state and federal resource managers. The Division of
26 Forestry, Fire and State Lands began this review by generating a map of the state's public and
27 private forest lands using information contained on Geographic Information Systems (GIS) data
28 layers. For the purposes of analysis, these forested areas were then divided according to critical
29 hydrologic basins as established by the Utah Division of Water Resources. The use of these
30 regional boundaries reflects the Division's concern for landscape level management of forest
31 resources and its commitment to working with local and regional entities in facilitating their
32 existing plans for land conservation. Due to the limited private forest ownership on tribal lands
33 within the state, tribal lands were not considered as part of the Assessment of Need process.

34
35 The Division's second phase of review entailed soliciting input from various resource managers
36 and considering a wide array of printed and computerized data regarding Utah's forest resources.
37 This data included information on water quality and quantity, critical wildlife habitat, high
38 density recreation areas, demographic and economic factors affecting forest conversion, regional
39 activity of private land trusts, opportunities for the continuation or development of wood
40 products industries, existing open space plans and public attitudes regarding land conservation. A
41 report regarding this information was presented to Utah's Forest Stewardship Coordinating
42 Committee which subsequently established the following resource priorities for the selection of
43 Utah's Forest Legacy Areas:

- 1 1. Protection and enhancement of water quality;
- 2
- 3 2. Protection of wildlife/fish habitat and maintenance of habitat connectivity;
- 4
- 5 3. Protection of riparian areas and restoration of natural ecosystem functions;
- 6
- 7 4. Maintenance of traditional forest uses; and
- 8
- 9 5. Contribution to rural economies.

10
11 After comparing all these factors to the national eligibility criteria, the Division designated nine
12 FLAs with boundaries corresponding to established state hydrologic basins. Two of the state’s
13 eleven basins were not designated as FLAs at this time because of limited forest resources or
14 Legacy-related opportunities in those areas. The widespread nature of these Areas reflects the
15 dispersed distribution of Utah’s forest resources and the close proximity of nearly all significant
16 forest stands to rapidly developing urban locations.

17
18 All owners of private forest land within a designated FLA are eligible to apply for enrollment of
19 interests in their lands in the state’s FLP. It is important to note, however, that participation of
20 any landowner in Utah’s Forest Legacy Program is entirely voluntary. Under no circumstances
21 will the right of eminent domain be used for the unwilling “taking” of any private property rights.

22
23 Participation also requires preparation of a Forest Stewardship Plan for the forest resources
24 located on a proposed parcel. Eligible landowners who want to participate in the Program may
25 submit a letter of interest to the Division of Forestry, Fire and State Lands at any time. After
26 receiving this letter, the Division will provide the landowner with an application form which
27 requests information regarding the parcel’s environmental values and the landowner’s
28 conservation and management objectives. A subcommittee of the Forest Stewardship
29 Coordination Committee reviews and prioritizes the applications for acquisition each year based
30 on the program goals. The top three applications are submitted to the National Review Panel for
31 review and prioritization.

32
33 The goals of the Forest Legacy Program are to:

- 34
- 35 • Prevent future conversions of forest land and forest resources;
- 36
- 37 • Protect and enhance water quality and water supplies;
- 38
- 39 • Protect wildlife habitat and maintain habitat connectivity and related values
40 needed to ensure biodiversity;
- 41
- 42 • Protect riparian areas;
- 43
- 44 • Maintain and restore natural ecosystem functions; and

- Maintain forest sustainability and the cultural and economic vitality of rural communities.

Objectives and Strategies

a. *In order to protect and enhance water quality and water supplies, priority will be given to:*

1. Parcels on which land management directly affects streams and other waterways that support domestic and agricultural water supplies.
2. Parcels owned by landowners who will identify and seek to minimize past and potential sources of non-point source pollution, including erosion potential and sedimentation resulting from road construction.

Resources required: Forest Legacy Program Coordinator.

b. *In order to prevent future conversion of forest land and forest resources, priority will be given:*

1. Parcels in danger of conversion to non-forest uses within five years.
2. Parcels for which there is a cost share match available.
3. Parcels in danger of being over-harvested or degraded through surface mineral development.
4. Parcels containing 100 or more available acres.
5. Parcels held by owners who will preclude parcel divisions and non-forest development projects on parcels included in the Program. Appropriate exemptions may be negotiated for maintaining compatible development.

Resources required: Forest Legacy Program Coordinator.

c. *In order to protect wildlife habitat and maintain habitat connectivity and related values needed to ensure biodiversity, priority will be given to:*

1. Parcels located adjacent to public lands managed for wildlife habitat.
2. Parcels which currently exhibit connective habitats, migratory corridors, habitat linkages and areas that reduce biological isolation or could be managed to do so.
3. Parcels held by owners who will identify and protect areas with species or communities of concern and seek to manage for key habitats.

- 1 4. Parcels held by landowners who will maintain and/or restore forest cover and
2 structure to provide habitat connectivity for the range of wildlife species which
3 would normally populate the area.

4
5 Resources required: Forest Legacy Program Coordinator.

6
7 *d. In order to protect riparian areas, priority will be given to:*

- 8
9 1. Parcels owned by landowners who will encourage regeneration of healthy stands
10 of native species in riparian areas where they are/were naturally occurring.
11
12 2. Parcels owned by landowners who will identify and protect sensitive riparian
13 habitats, including stream banks.
14
15 3. Parcels including over 300 feet of river or wetland shoreline.
16
17 4. Parcels including a minimum 80 foot strip of native trees and shrubs as a natural
18 buffer and sediment filter.

19
20 Resources required: Forest Legacy Program Coordinator.

21
22 *e. In order to maintain and restore natural ecosystem functions, priority will be given to:*

- 23
24 1. Parcels which include healthy forests, including a natural species mix and a
25 genetically sound mix of trees within the species represented on the parcel.
26
27 2. Parcels owned by landowners who will manage the parcel or key portions of it to
28 restore a natural mix of forest species, structure and stages across the landscape.
29
30 3. Parcels owned by landowners who will utilize prescribed fire or other practices to
31 restore more naturally functioning landscapes.

32
33 Resources required: Forest Legacy Program Coordinator.

34
35 *f. In order to maintain forest sustainability and the cultural and economic vitality of rural*
36 *communities, priority will be given to:*

- 37
38 1. Parcels which could contribute to the development or sustainability of local and
39 regional wood products industries.
40
41 2. Parcels owned by landowners who will work cooperatively to develop a long-term
42 forest stewardship plan for their property.
43
44 3. Parcels which could contribute to the continuance of wildlife production and

1 livestock grazing on forested lands.

2
3 Resources required: Forest Legacy Program Coordinator.

4
5 **Climate Change and Forest Management**

6
7 The Utah Forest Action Plan (2016) notes that the Division of Forestry, Fire and State Lands is
8 working cooperatively with several agencies and organizations to develop policies and strategies
9 for addressing climate change. These include the Western Forestry Leadership Coalition, the
10 Council of Western State Foresters and the Western Governors’ Association Forest Health
11 Advisory Committee (Climate Change Subcommittee). All recommendations, guidance and
12 policy resolutions from these groups focus on ensuring that the role of forests are recognized in
13 the development of national climate policy.

14
15 Forests are critical to state, regional, national and international efforts to reduce atmospheric
16 carbon. Healthy, growing forests are essential for removing and storing carbon from the
17 atmosphere (“carbon sinks”), but this carbon storage is vulnerable to the risks of climate change
18 through large-scale disturbances such as epidemic bark beetle outbreaks and increased severity
19 and extent of wildfire. These disturbances can release very large amounts of stored carbon during
20 short periods of time (“carbon sources”).

21
22 Successful climate change policies must address both mitigation and adaptation. Effects of
23 climate change can be mitigated through:

- 24
25 • Reductions in forestland conversion to other uses;
26
27 • Increased carbon sequestration and storage in forests and wood products;
28
29 • Substituting wood products for non-renewable building materials;
30
31 • Substituting woody biomass for fossil fuels.

32
33 Our forests can best adapt to climate change when they are actively managed to increase
34 resistance to catastrophic disturbances (wildfire, insects) and by ensuring forest species
35 biodiversity. Maintaining diverse forest stands will ensure that with climate change (either
36 warmer or colder) there will be some species that can remain and thrive in the new conditions,
37 while allowing other species to move either geographically or to other elevations over time.

38
39 Climate change was identified as a threat during Utah’s initial Forest Action Plan stakeholder
40 meeting, but stakeholders subsequently ranked it relatively low (19 out of 22 issues). However,
41 despite climate change not being directly carried forward as a theme (input) in the Utah Forest
42 Action Plan, it is indirectly incorporated into other themes such as forest health and wildfire
43 where it may act as a contributing factor. The Nature Conservancy and others have recently
44 initiated a state-wide vulnerability assessment which, after completion, will be reviewed for

1 possible inclusion into Forest Action Plan updates.

2
3 Climate Change Objectives and Strategies

4
5 While most of the nation’s forests are in private ownership, Utah’s forests are mostly managed
6 by federal agencies. This limits how much direct impact state agencies can have on managing
7 forests for climate change. However, broader efforts can include:

- 8
9 • Conduct education & outreach on the importance of healthy forests in mitigating climate
10 change.
11
12 • Develop projects and policies that promote healthy forests and reduce catastrophic
13 wildfire, thereby maintaining forests as a carbon sinks and not carbon sources.
14
15 • Promote the increased use of woody biomass as a renewable and carbon neutral energy
16 source.
17
18 • Develop a funding mechanism to achieve these goals, including a Wood Utilization
19 Coordinator position within the Division of Forestry, Fire & State Lands.
20

21 **Grazing and Forest Management**

22
23 The Utah State University Cooperative Extension Service published a *Utah Forest Facts* fact
24 sheet in May 2012, entitled: *Forest Grazing; Managing Your Land for Trees, Forage and*
25 *Livestock*. This publication contains good advice for private and public land managers as they
26 seek to manage for suitable interactions between trees, forage and livestock.
27

28 This publication recognizes that grazing on forests is common in Utah and encourages the use of
29 deferred, rotational or intensive grazing management systems. Aggressive fire suppression (and
30 environmental) policies have left many forests so dense that forage plants cannot receive the
31 light, nutrients and moisture that they need to grow. Thinning to no more than fifty percent
32 canopy cover is generally recommended to support forage production. Seeding with a mixture of
33 native or introduced species is recommended to prolong the growing season and better protect
34 the soil. Livestock do need to be excluded from riparian areas and seeded areas until the plants
35 have developed an adequate root system.
36

37 Incorporating grazing in forest management improves conditions for wildlife, reduces density of
38 hazardous fuels and can help in exposing the bare mineral soil that is necessary for the
39 regeneration of some tree species.
40

41 The Ashley National Forest reports that, between FY 2010 and FY 2014, an average of 947,580.6
42 acres of land on the forest was sustainably managed for all rangeland products. The forest also
43 reports that FY 2015 saw 1,909 acres of rangeland vegetation improvements and that increased to
44 8,276 acres in FY 2016.

1 **Forest Management Objectives**

- 2
- 3 1. Use active and adaptive forest management to improve forest health and support multiple
- 4 use and sustained yield with emphasis on employment, forest product production, open
- 5 space, wildlife habitat, forage, recreation, and other social and economic benefits.
- 6
- 7 2. Manage forest resources to reduce the risk of catastrophic fires, which cause unacceptable
- 8 harm to resources and assets valued by society, including ecosystem and community
- 9 health and resilience. In most cases, fires reach catastrophic levels largely as the result of
- 10 human intervention, or lack thereof, on the land. Catastrophic wildfires are more intense
- 11 than natural fires and kill practically all vegetation within the fire perimeter. They can
- 12 also sterilize soils, resulting in difficult regeneration and depositions of ash and sediments
- 13 in waterways. Catastrophic wildfires also have a higher probability of threatening private
- 14 property and public infrastructure, and they can adversely affect public health and safety.
- 15
- 16 3. Encourage and support the expansion of the local forest product market at sustainable
- 17 harvest levels.
- 18
- 19 4. Develop new markets for timber and forestry products that are available for harvest (e.g.,
- 20 use timber products for bracing in nearby coal mines or biofuels industry).
- 21
- 22 5. When sustainable and based on scientific knowledge and local data, increase grazing to
- 23 historic levels (allotments, AUMs, or seasonal use) to reduce fuel loads, support local
- 24 economies, and support rural lifestyles for county residents.
- 25
- 26 6. Manage forest watersheds for optimal yield without compromising other resources.
- 27
- 28 7. Seek opportunities to use and harvest forest products that have been affected by wildfire
- 29 or pests (e.g., beetle).
- 30
- 31 8. Reduce time required for National Environmental Policy Act processes associated with
- 32 timber harvests so that economic benefits can be maximized.
- 33

34 **Forest Management Policies:**

- 35
- 36 1. Timber resources shall be managed to achieve multiple benefits.
- 37
- 38 2. All forestlands shall be managed for multiple use and sustained yield.
- 39
- 40 3. Grazing access on national forest land should be tied to historic levels and healthy forest
- 41 conditions. Public forest land management should be consistent to the greatest degree
- 42 possible with the private forest land recommendations of the Utah State University
- 43 Cooperative Extension Service.
- 44

- 1 4. Tree species selection, stocking levels, age class distribution, integrated pest management
2 and fuel loading shall be addressed at some level within the forest planning process.
3
- 4 5. Forest risk assessments, monitoring and prevention tasks shall be completed. Areas of
5 forest affected by processes or agents beyond the range of historic variation shall be
6 identified.
7
- 8 6. Forest management plans shall be written and effective management techniques adopted
9 to promote a stable forest economy and enhanced forest health, in accordance with the
10 National Healthy Forest Initiative.
11
- 12 7. Opportunities for harvesting forest products shall be promoted, including the harvest of
13 small diameter wood and biomass that can be used for energy, lumber, pellets, chips and
14 other products. A study of the economic viability of forest restorative thinning projects
15 on the Ashley National Forest should be launched.
16
- 17 8. Timber and non-timber products and habitats shall be identified for the forest. Long and
18 short-term productive capacities and targets shall be established. Removal of forest
19 products shall be viewed as achievable and sustainable provided that appropriate science
20 and technology are used.
21
- 22 9. Management strategies shall protect timber resources from fire (in accordance with the
23 National Fire Plan), insects, and disease. Such management strategies shall provide for
24 proper vegetation management practices so that excessive fuel loading and high intensity
25 fires do not damage soil productivity.
26
- 27 10. Harvesting techniques shall be employed that will prevent waste of forest products.
28
- 29 11. Sound fuel load management techniques shall be used to minimize fire potential at the
30 urban interface and prevent catastrophic events.
31
- 32 12. Forest management techniques shall be implemented that will increase watershed health
33 and long-term water quantity yield and quality.
34
- 35 13. Management programs must provide opportunities for citizens to harvest forest products
36 for personal needs, economic value and forest health. Sound economic approaches,
37 considering both long and short-term goals shall be used when considering the harvesting
38 of both wood and non-wood products and appropriate social values shall be considered.
39
- 40 14. The County shall be given an opportunity to participate as a Cooperating Agency in forest
41 planning processes and assist in identifying areas where restoration treatments are needed
42 on federal land.
43
- 44 15. The objectives and strategies identified in the 2016 Utah Forest Action Plan shall be

1 supported.

2
3 16. Participate as a Cooperating Agency in the planning for and revision of USFS forest
4 management plans and Bureau of Land Management resource management plans
5 affecting forest management.

6
7 17. Encourage USFS to open appropriate areas for commercial timber harvest.

8
9 18. Encourage USFS to find commercial uses for timber and forest products affected by
10 wildfire or pests.

11
12 19. When revising or updating a forest plan, USFS should engage with the county in
13 developing alternative management strategies and management policies.

14
15 20. Collect and provide data to USFS regarding appropriate forest management
16 methodologies. Data may include published scientific literature, local case studies,
17 inventories, or other pertinent information.

18
19 21. USFS forest plans should address commercial tree species selection, stocking levels, age
20 class distribution, integrated pest management, and fuel loading. Additionally, areas for
21 timber and non-timber product harvest and wildlife habitats shall be identified for the
22 forest. Long- and short-term productive capacities and targets shall be established.

23 24 **Energy Considerations in Forest Management**

25
26 **Findings:** The South Unit of the Ashley National Forest contains substantial oil and gas
27 resources. This section of the forest should be made available for oil and gas leasing and
28 production of these valuable resources.

29
30 **Policy:** It is the policy of Duchesne County that special designations, such as roadless areas and
31 wilderness should not be established in areas of the South Unit containing energy resources.

32 33 **Water Considerations in Forest Management**

34
35 **Findings:** Healthy forests result in healthy watersheds. Healthy watersheds provide optimum
36 water quality and optimum water yields to support a wide variety of water uses important to the
37 citizens of the County. Watershed management can affect water resources in several ways. The
38 quantity, quality, and timing of runoff from watersheds are influenced by the condition of the
39 watershed. Good vegetative cover holds back the runoff, controlling flooding and erosion and
40 allows for deep percolation of the water. This percolation can improve the timing of the runoff
41 making it available later as base flow in the stream. Residential and commercial development,
42 agricultural practices, resource and vegetative management may affect the quality and timing of
43 runoff. Other factors such as dams and flow control structures can affect streamflow.

44 At the heart of conflicts in local watersheds is land use and ownership. There are many possible

1 uses of land within a watershed ranging from untouched habitat to agriculture to mining to urban
2 and industrial. Much public input is needed when attempting to balance these needs. Other
3 conflicts arise over the use of water, water quantity and quality, and development versus
4 environmental and social issues.

5
6 Increases in population in Duchesne County will require additional water for municipal and
7 industrial (M&I) uses. Water conservation can be used to reduce those additional demands, but
8 will not completely eliminate the need for additional water. It is anticipated that as agricultural
9 lands are developed for housing a portion of the agricultural water will be converted to municipal
10 and industrial uses. The effects of these changes and other changes in watershed function need to
11 be considered.

12
13 Forest managers know that thinning forests to a more natural state is a good way to reduce the
14 severity of wildfires. Now scientists suggest that it also could offer help in saving water in times
15 of drought. Researchers at the Sierra Nevada Research Institute at UC Merced found in 2015
16 that thinning overgrown forests throughout the Sierra in California could result in as much as a
17 million acre feet of extra water supply each year for the state. However, years of fire suppression
18 have left much of the Sierra overgrown with small trees that consume a lot of water.

19
20 A local study published in 2008 looked at the prospects for increased water yields from the
21 Ashley National Forest. This study, authored by Mark Muir, is entitled "*Review of Vegetation*
22 *Management and Water Yield with Local Application to the Ashley National Forest.*" This
23 document considers precipitation to be the primary parameter affecting water yield. Therefore,
24 maximizing or appreciably changing the amount and timing of water is unrealistic. However,
25 optimizing water yield can result in maintenance of healthy vegetation in aquatic ecosystems,
26 which in turn supplies clean water for both consumptive and non-consumptive uses (Muir 2008).

27
28 The summary of this study set forth the following findings:

- 29
- 30 • Local observations on the Ashley N.F. demonstrate that a long term program of managing
31 for increased water yield is currently not feasible or compatible with desired conditions.
32
 - 33 • Forest Plan Standards and Guidelines related to other resources and values preclude the
34 level of harvest necessary to create measurable increases in water yield (20% of the
35 forested area in a watershed at a given time).
36
 - 37 • In addition to resource constraints, the combined fuels and timber vegetation treatments
38 on the Ashley N.F. (~5,000 acres per year) are currently not of sufficient scale to create
39 and maintain the disturbed area sufficient for measurable water yield increases in the
40 major watersheds that drain to downstream communities.
41
 - 42 • Vegetation management for a variety of purposes (fuels treatments, timber harvest,
43 habitat improvement, aspen regeneration etc.) could temporarily increase water yields on
44 a small scale, but the changes would be difficult or impossible to detect at the watershed

1 scale. The best opportunities to enhance water yield, if any exist, are in places where
 2 aspen or meadow communities have been replaced by conifer species.

- 3
 4 • Local observations on the Ashley N.F., water yield research, and regional policy all
 5 demonstrate the numerous constraints and limitations of augmenting water yields. The
 6 Ashley N.F will continue to focus on healthy watersheds and optimal flow, instead of
 7 maximum flow. Optimal flow implies healthy vegetative and aquatic ecosystems, which
 8 supply clean water for all beneficial uses of that water, both consumptive and non-
 9 consumptive.

10
 11 The Ashley National Forest contributes the following percentages of flow to the following
 12 surface waters according to the USFS national forest contributions to streamflow project
 13 (Table FM9; USFS 2016), and these percentages reflect current water yields.
 14

Table FM9. Percentages of Streamflow Contributions from the Ashley National Forest

Location	Percentage
Green River at the confluence with the Colorado River	13%
Green River at the confluence with the Yampa River	4%
Green River at the confluence with the Duchesne River	4%
Ashley Creek at the confluence with the Green River	91%
Green River at the confluence with the Price River	14%
Strawberry River at the confluence with the Duchesne River	24%
Duchesne River at the confluence with the Green River	67%

Source: USFS (2016).

15
 16 **Policy:** Based on this science, it is the policy of Duchesne County to encourage thinning of the
 17 forest to allow more water to flow into drainage basins and be put to a variety of beneficial uses,
 18 provided that such vegetation management does not compromise watershed health.

19
 20 See Section 9 of this plan for more detailed analysis of the water considerations associated with
 21 water that originates on the south slope of the Ashley National Forest.
 22

Section 7. Noxious Weeds

Findings: The Utah Department of Agriculture and Food defines a noxious weed as “any plant the Commissioner [of Agriculture] determines to be especially injurious to public health, crops, livestock, land, or other property.”

Most noxious weeds are non-native plants that have been intentionally or accidentally introduced into the county. Some of the main problems caused by noxious weeds are reducing crop yields, reducing livestock forage, limiting recreational opportunities, reducing wildlife habitat, displacing native vegetation, increasing soil erosion, and altering soil and water quality.

Once treated, the most effective way to keep the weeds from returning is planting desirable plants and managing to promote beneficial plants.

Invasive noxious weeds have been described as a raging biological wildfire – out of control, spreading rapidly, and causing enormous economic losses. Weeds often reduce crop yields and can damage watersheds, increase soil erosion, negatively impact plant and animal communities, and adversely affect outdoor recreation.

Utah Administrative Rule R68-9, sets forth that the following weeds are officially designated and published as noxious for the State of Utah, as per the authority vested in the Commissioner of Agriculture and Food under Section 4-17-3 of the Utah Code.

Class 1A: Early Detection Rapid Response (EDRR) Watch List: Declared noxious and invasive weeds not native to the State of Utah that are not known to exist in the State and that pose a serious threat to the state and should be considered as a very high priority.

Common crupina	Crupina vulgaris
African rue	Peganum harmala
Small bugloss	Anchusa arvensis
Mediterranean sage	Salvia aethiopsis
Spring millet	Milium vernale
Syrian beancaper	Zygophyllum fabago
Ventenata (North Africa grass)	Ventenata dubia
Plumeless thistle	Carduus acanthoides
Malta star thistle	Centaurea melitensis

Class 1B: Early Detection Rapid Response (EDRR): Declared noxious and invasive weeds not native to the State of Utah that are known to exist in the state in very limited populations and pose a serious threat to the state and should be considered as a very high priority.

Camelthorn	Alhagi maurorum
Garlic mustard	Alliaria petiolata
Purple star thistle	Centaurea calcitrapa

1	Goatsrue	<i>Galega officinalis</i>
2	African mustard	<i>Brassica tournefortii</i>
3	Giant reed	<i>Arundo donax</i>
4	Japanese knotweed	<i>Polygonum cuspidatum</i>
5	Blueweed (Vipers bugloss)	<i>Echium vulgare</i>
6	Elongated mustard	<i>Brassica elongata</i>
7	Common St. Johns wort	<i>Hypericum perforatum</i>
8	Oxeye daisy	<i>Leucanthemum vulgare</i>
9	Cutleaf vipergrass	<i>Scorzonera laciniata</i>

10
11 Class 2: Control. Declared noxious and invasive weeds not native to the State of Utah, that pose
12 a threat to the state and should be considered a high priority for control. Weeds listed in the
13 control list are known to exist in varying populations throughout the state. The concentration of
14 these weeds is at a level where control or eradication may be possible.

15		
16	Leafy spurge	<i>Euphorbia esula</i>
17	Medusahead	<i>Taeniatherum caput-medusae</i>
18	Rush skeletonweed	<i>Chondrilla juncea</i>
19	Spotted knapweed	<i>Centaurea stoebe</i>
20	Purple loosestrife	<i>Lythrum salicaria</i>
21	Squarrose knapweed	<i>Centaurea virgata</i>
22	Dyers woad	<i>Isatis tinctoria</i>
23	Yellow star thistle	<i>Centaurea solstitialis</i>
24	Yellow toadflax	<i>Linaria vulgaris</i>
25	Diffuse knapweed	<i>Centaurea diffusa</i>
26	Black henbane	<i>Hyoscyamus niger</i>
27	Dalmation toadflax	<i>Linaria dalmatica</i>

28
29 Class 3: Containment. Declared noxious and invasive weeds, not native to the State of Utah, that
30 are widely spread. Weeds listed in the containment noxious weeds list are known to exist in
31 various populations throughout the state. Weed control efforts may be directed at reducing or
32 eliminating new or expanding weed populations. Known and established weed populations, as
33 determined by the weed control authority, may be managed by any approved weed control
34 methodology, as determined by the weed control authority. These weeds pose a threat to the
35 agricultural industry and agricultural products.

36		
37	Russian knapweed	<i>Acroptilon repens</i>
38	Houndstounge	<i>Cynoglossum officianale</i>
39	Perennial pepperweed (Tall whitetop)	<i>Lepidium latifolium</i>
40	Phragmites (Common reed)	<i>Phragmites australis</i> ssp.
41	Tamarisk (Salt cedar)	<i>Tamarix ramosissima</i>
42	Hoary cress	<i>Cardaria</i> spp.
43	Canada thistle	<i>Cirsium arvense</i>
44	Poison hemlock	<i>Conium maculatum</i>

1	Musk thistle	<i>Carduus nutans</i>
2	Quack grass	<i>Elymus repens</i>
3	Jointed goat grass	<i>Aegilops cylindrica</i>
4	Bermuda grass	<i>Cynodon dactylon</i>
5	Perennial Sorghum spp.	<i>Sorghum halepense</i> and <i>Sorghum almum</i>
6	including but not limited to	
7	Johnson grass	
8	Scotch thistle (Cotton thistle)	<i>Onopordum acanthium</i>
9	Field bindweed (Wild Morning-glory)	<i>Convolvulus</i> spp.
10	Puncture vine (Goat head)	<i>Tribulus terrestris</i>

11
12 Class 4: Prohibited. Declared noxious and invasive weeds, not native to the State of Utah, that
13 pose a threat to the state through the retail sale or propagation in the nursery and greenhouse
14 industry. Prohibited noxious weeds are annual, biennial, or perennial plants that the
15 commissioner designates as having the potential or are known to be detrimental to human or
16 animal health, the environment, public roads, crops, or other property.

17		
18	Cogon grass (Japanese blood grass)	<i>Imperata cylindrica</i>
19	Myrtle spurge	<i>Euphorbia myrsinites</i>
20	Dames Rocket	<i>Hesperis matronalis</i>
21	Scotch broom	<i>Cytisus scoparius</i>
22	Russian olive	<i>Elaeagnus angustifolia</i>

23
24 The administrative rule states that each county in Utah may have different priorities regarding
25 specific State designated Noxious Weeds and is therefore able to reprioritize these weeds for
26 their own needs.

27
28 Noxious weeds are a significant problem in Duchesne County and have been the focus of a
29 considerable effort for many years (see Map #25). The County maintains a Weed Board
30 consisting of five individuals representing the Neola-Roosevelt, Myton-Arcadia, Upper Country,
31 Pleasant Valley and Tabiona-Fruitland areas. Members of the board are appointed by the County
32 Commissioners to four-year terms. One County Commissioner, the County Weed Department
33 Supervisor and the local USU Extension Agent provide support and technical assistance.

34
35 In recognition of the ecological and economic impacts of weeds, the Utah Noxious Weed Act
36 requires landowners to control state-listed noxious weed species on their lands. The act stipulates
37 that each county and municipality in Utah must adopt a noxious weed management plan for its
38 jurisdiction and identify the plant species in its area that it considers noxious weeds. In addition,
39 if landowners and managers fail to control weeds on their property, the county or municipality
40 may legally enter the property, control weeds, and charge the landowner for the cost of control
41 work.

42
43 Utah Administrative Rule R68-9-5 requires reports from counties on their efforts to control
44 weeds. The Board of County Commissioners of each county, with the aid of their county Weed

1 Board and their County Weed Supervisor, must submit an "Annual Progress Report of County
2 Noxious Weed Control Program" to the Commissioner of Agriculture and Food by January 15 of
3 each year, covering the activities of the previous calendar year.

4
5 The Duchesne County Code recognizes the weeds listed in Utah Administrative Rule R68-9 and
6 emphasizes the following for treatment in the county:

- 7
8 A. Bermuda grass;
9 B. Field bindweed (morning glory);
10 C. Perennial pepper weed (tall white top);
11 D. Hoary cress (short white top);
12 E. Canada thistle;
13 F. Dyer's woad;
14 G. Johnson grass;
15 H. Leafy spurge;
16 I. Musk thistle;
17 J. Scotch thistle;
18 K. Yellow star thistle;
19 L. Quack grass;
20 M. Russian knapweed;
21 N. Squarrose knapweed;
22 O. Diffuse knapweed;
23 P. Spotted knapweed;
24 Q. Medusa head;
25 R. Purple loosestrife;
26 S. Russian olive;
27 T. Western Water hemlock;
28 U. Poison hemlock;
29 V. Tamarisk (salt cedar);
30 W. Yellow toadflax;
31 X. Dalmatian toadflax.

32
33 **Cooperative Weed Management Areas**

34
35 Cooperative weed management areas (CWMAs) can be an effective resource in the prevention,
36 detection, and suppression of noxious and invasive weeds. Coordinated mechanical, chemical,
37 and biological control over large areas by multiple landowners has proven successful for a variety
38 of weed species. These areas replace jurisdictional boundaries in favor of natural boundaries that
39 facilitate cooperation, coordination, and implementation of effective integrated weed
40 management programs for listed noxious weeds. In 2003, the Duchesne County Weed
41 Management Area was formed to facilitate the management of weeds on lands under various
42 jurisdictions and to combine resources for education opportunities and weed control activities.
43 Other local CWMAs include the Uintah Basin CWMA and the North Ute Indian Tribe CWMA
44 in Uintah County, and the West Basin CWMA in Duchesne County (U.S. Forest Service, 2016).

1 In 2012, the Duchesne County Conservation District, in their Duchesne County Resource
2 Assessment, identified noxious weed control to be one of the top five natural resource issues in
3 the County. The District identified these challenges associated with noxious weeds facing the
4 County:

- 5
- 6 a. Russian Olive invasion into pasture and range lands.
- 7
- 8 b. Neighboring lands can harbor weed stock, making prevention difficult in adjacent fields.
- 9
- 10 c. A mix of land ownership, including federal, state, tribal and private makes weed control
11 efforts hard to coordinate.
- 12
- 13 d. Lack of effort put into controlling weeds while the problem is small leads to great effort
14 and expense being required to control an exponentially larger weed infestation.
- 15
- 16 e. Limited resources available to control weeds.
- 17
- 18 f. Increased mobility of weed seeds due to human activity.
- 19

20 The State of Utah has a strategic plan for managing noxious and invasive weeds (*The Utah*
21 *Strategic Plan for Managing Noxious and Invasive Weeds*).

22

23 The plan identified the following priorities in addressing noxious and invasive weeds, drawing a
24 comparison between fighting weed infestations and fighting wildfire:

25

26 **Prevention**

- 27
- 28 a. Early Detection and Rapid Response
- 29
- 30 b. Management of Establish Populations
- 31
 - 32 1. Identify the perimeter
 - 33
 - 34 2. Eradicate satellite populations
 - 35
 - 36 3. Contain and suppress main population
 - 37
- 38 c. Revegetation and Restoration
- 39
- 40 d. Protect Defensible Spaces
- 41

42 Dr. Whitesides used the strategies above and recommended the following ways to manage weeds
43 in Utah:

44

- 1 a. Education and Research
- 2
- 3 b. Mapping and Monitoring
- 4
- 5 c. Prevention, Early Detection and Rapid Response
- 6
- 7 d. Control – Integrated Weed Management
- 8
- 9 e. Restoration
- 10
- 11 f. Regulation and Enforcement
- 12
- 13 g. Funding
- 14

15 **NRCS Guidance**

16
17 The Natural Resources Conservation Service (NRCS) publishes an Herbaceous Weed Control
18 guide as part of its Conservation Practice Standards, Code 315. The document includes several
19 purposes for such guidance, enabling land managers to:

- 20
- 21 • Enhance accessibility, quantity, and quality of forage and/or browse.
- 22
- 23 • Restore or release native or create desired plant communities and wildlife habitats
- 24 consistent with the ecological site.
- 25
- 26 • Protect soils and control erosion.
- 27
- 28 • Reduce fine-fuels fire hazard and improve air quality.
- 29

30 This NRCS Guidance gives land managers tips for meeting the purposes listed above and
31 encourages them to take the following under consideration as they develop their weed control
32 plans:

- 33
- 34 • Consider using Integrated Pest Management in support of herbaceous weed control.
- 35
- 36 • Consider soil erosion potential and difficulty of vegetation establishment when choosing
- 37 a method of control that causes soil disturbance.
- 38
- 39 • Consider the appropriate time period for treatment. Some herbaceous weed control
- 40 activities can be effective when applied within a single year; others may require multiple
- 41 years of treatment(s) to achieve desired objectives.
- 42
- 43 • Consider impacts to wildlife food supplies, space, and cover availability when planning
- 44 the method and amount of herbaceous weed control.

- 1 • State issued licenses may be required when using chemical pesticide treatments.
- 2
- 3 • For air quality purposes, consider using chemical methods of herbaceous weed control
- 4 that minimize chemical drift and excessive chemical usage and consider mechanical
- 5 methods of herbaceous weed control that minimize the entrainment of particulate matter.
- 6
- 7 • Adjacent land uses must be considered before chemicals are used.
- 8

9 **Integrated Weed Management**

10
11 An important component of adaptive management is an integrated weed management plan that
12 uses multiple weed management techniques. Integrated weed management is a process that
13 combines biological, chemical, mechanical, and cultural management techniques to
14 synergistically control target weed species with minimal adverse impacts to non-target organisms
15 (Colorado Natural Areas Program et al. 2000). Most traditional weed management concentrates
16 only on suppression, typically by using herbicides; however, this approach does not address the
17 ultimate causes of weed invasion. Integrated weed management uses ecological principles of
18 plant community establishment and persistence and integrates strategies that are practical,
19 economical, and protective of public and environmental health (Colorado Natural Areas Program
20 et al. 2000). By implementing multiple weed control methods, the likelihood that one of the
21 methods will control or eliminate the target weed species is increased. Objectives of an adaptive
22 weed management process that uses the principles of integrated weed management are as
23 follows:

- 24 • Work to establish and maintain functioning native plant communities. Disturbance—both
25 anthropogenic and natural—is the primary factor in the degradation of native plant
26 communities and spread of noxious weeds.
- 27 • Implement appropriate prevention methods. Preventing weeds from invading a site in the
28 first place is the most effective and least costly method for controlling weeds.
- 29 • Choose appropriate control actions. Control strategies are a function of the biology and
30 ecology of the target species. The appropriate strategy should also be
 - 31 ○ Applied at the most effective time,
 - 32 ○ The least damaging to non-target organisms,
 - 33 ○ The least hazardous to human health,
 - 34 ○ The least damaging to the general environment,
 - 35 ○ The most likely to reduce the need for weed control over the long term,
 - 36 ○ The most easily implemented, and
 - 37 ○ The most cost effective in the short term and long term.
 - 38

1 **Noxious Weeds and Sage Grouse**

2
3 In 2013, the U.S. Fish and Wildlife Service (USFWS) Conservation Objectives Team identified
4 wildfire and the associated conversion of low- to mid-elevation sagebrush habitats to invasive
5 annual grass-dominated vegetation communities as the two primary threats to the sustainability
6 of Greater sage-grouse (GRSG) in the western portion of the species range. To facilitate the
7 examination and evaluation of the role fire and invasive plants play in the conservation of GRSG,
8 the USFWS solicited the assistance of the Western Association of Fish and Wildlife Agencies
9 (WAFWA) to conduct a collaborative assessment of the conservation challenges associated with
10 the fire and invasive threat.

11
12 In 2015, WAFWA published a report entitled “Invasive Plant Management and Greater Sage
13 Grouse Conservation.” The report finds that much public and scientific attention has been paid
14 to wildfire and its effects on public safety, property and GRSG habitat and populations.

15
16 However, the story of the effects of fire on GRSG conservation cannot be effectively told without
17 recognizing and evaluating the critical role invasive annual grasses and invasive perennial forbs
18 play, both in the wildfire cycle and the direct effect they have on the quality of GRSG habitat.
19 Wildfire, while having a direct effect on GRSG habitat, has been shown to have a significant
20 association with invasive non-native annual grasses such as cheatgrass and medusahead. Many
21 invasive plant species (both annual grasses and perennial forbs) have degraded GRSG habitat by
22 outcompeting native species and by directly affecting the frequency and intensity of wildfires.
23 Invasive annual grasses in particular fuel the wildfire threat and cause degradation of sagebrush
24 communities, resulting in habitat loss and negative effects on GRSG. Deep-rooted, creeping
25 invasive perennials such as Russian knapweed, Squarrose knapweed, Dalmatian toadflax and
26 Canada thistle is often some of the hardest invasive plants to manage, can dominate large areas,
27 and are becoming increasingly important in terms of their effect on sagebrush habitat.

28
29 The report finds that the spread of invasive plants is exceeding treatment rates conducted by most
30 weed management programs. Invasive plant management activities conducted on federally
31 administered lands in the West are often coordinated with state and local governments and may
32 be largely performed by contractors (including county weed programs) under assistance
33 agreements. Federal funding for these activities, however, is severely lacking throughout the 11-
34 state GRSG range, and has resulted in the curtailment of many federal research and management
35 programs or a significant reduction in their scope and scale. The lack of adequate federal
36 infrastructure, funding, and management capacity severely hampers the ability to effectively deal
37 with landscape-scale invasive species threats, including — and perhaps especially — infestations
38 of invasive plants that degrade or eliminate native sagebrush ecosystems across the western U.S.
39 Improving organizational capacity and regulatory mechanisms may lead to more effective
40 invasive plant management and increase the ability of land managers to address the problems
41 associated with the spread of invasive plants (particularly invasive annual grasses). A
42 corresponding emphasis on advancing scientific research in invasive plant prevention and control
43 techniques and development of new approaches for effective restoration of sagebrush ecosystems
44 should also occur.

1 WAFWA identified several key challenges and barriers that will significantly affect the ability to
2 effectively manage non-native plant invasions and conserve native sagebrush ecosystems and the
3 wildlife that depend on those native plant communities for survival. These challenges and
4 barriers fall into four major categories:

5
6 **Information Management and Science Challenges**

- 7 • Lack of emphasis on surveys, inventories, and monitoring activities
- 8 • Lack of scientific information to successfully re-establish desired perennial vegetation
- 9 • Inadequate collection, retrieval, and sharing of invasive plant data
- 10 • Lack of certainty for actions under a changing climate

11
12 **Leadership, Coordination, and Communication Challenges**

- 13 • Governmental Coordination and Emphasis for Invasive Species Management is
14 Insufficient at Nearly All Levels (local, state, federal)
- 15 • Very limited coordination and collaboration with non-traditional stakeholders
- 16 • Lack of effective communication and engagement with the public.
- 17 • Low level of public awareness and support for invasive species management

18
19 **Policy and Regulatory Challenges**

- 20 • Lack of effective legal and regulatory framework for invasive species management
- 21 • Insufficient evaluation, compliance monitoring, and enforcement

22
23 **Operational Capacity and Program Management Challenges**

- 24 • Highly variable management prioritization of high risk invasive plants; Programs do not
25 emphasize sagebrush conservation when targeting invasive plants across the range of the
26 GRSG
- 27 • Lack of internal structure and capacity for weed management programs at all levels
- 28 • Lack of federal funding at the field level, which transfers risk to state and local
29 governments
- 30 • Inconsistent and fragmented prevention operations
- 31 • Lack of an effective early detection and rapid response (EDRR) system across the
32 landscape
- 33 • Inadequate restoration strategies, implementation, and approaches

34
35 After identifying the challenges and barriers listed above, WAFWA made several
36 recommendations in the report to address the invasive species – noxious weed problem across the
37 western landscape. These recommendations include:

- 38
39 1. The Invasive Species Advisory Committee should establish a standing committee
40 dedicated to promoting research and adaptive management to determine how we can a)
41 prevent spread of existing weed infestations, and b) consistently re-establish desired
42 perennial plants in invaded sites. This effort should be paired with a corollary initiative to
43 develop scientific standards, protocols and methods for invasive species assessment and

1 monitoring to be used for a) determining the most critical locations for prevention
2 emphasis, and b) accurately tracking spatial dynamics of weed populations over time as
3 well as the impact of weed treatments on those dynamics. These efforts need to be
4 supported through a directive of the National Invasive Species Council departments and
5 agencies, supported at the state level, and initially focused on invasive annual grass
6 species.

- 7
- 8 2. Convene a summit of federal departments and agencies, state government agencies,
9 tribes, and key non-government organizations to review existing invasive species
10 mandates (e.g., 1999 Presidential Executive Order 13112), overarching policies, and
11 invasive species program budgets. The goal of the summit would be to develop a plan for
12 consistent and appropriate implementation of the existing mandates, fill gaps in law and
13 policy, and develop recommendations for securing adequate and consistent program
14 funding at local, state and federal levels. In particular, develop federal departmental
15 orders, and other direction for accelerating invasive plant management activities to meet
16 the needs of GRSG conservation across the western U.S.
- 17
- 18 3. Re-engage the National Invasive Species Council at the Department level to establish a
19 high-level multi-federal agency working group and charge them with drafting a National
20 Invasive Species Strategy in the U.S. Develop a template for the establishment of regional
21 invasive plant management strategies that consist of assigned responsibilities, funding,
22 invasive plant assessments and action plans. Link regional strategies to GRSG (and other
23 imperiled wildlife) conservation priorities.
- 24
- 25 4. Establish a subcommittee within the Invasive Species Advisory Committee to review the
26 current legislative and regulatory framework (federal and state) on invasive species,
27 including coordination with the Association of Fish and Wildlife Agencies and
28 recommendations for NEPA categorical exclusion authority for rapid response against
29 invasive plant infestations in priority areas. From this review, the subcommittee should
30 provide a status report with recommendations for consolidation, elimination, and/or
31 establishment of new laws, policies, and regulations that would facilitate and improve the
32 assessment, control and management of invasive species.
- 33
- 34 5. Establish a working group to review federal, state, and provincial rules, procedure's,
35 work contract and permit clauses, and Best Management Practices (BMPs) designed to
36 prevent the spread of invasive plants. The work group should make recommendations to
37 establish a set of consistent, ubiquitous standards across the North America to better
38 manage and prevent the spread of invasive plants across the range of the GRSG and other
39 regions. If plausible, the approach developed could be similar in design and function as
40 the interagency/ intergovernmental fire model, but for invasive species, with standard
41 procedures and reporting of actions and effectiveness.
- 42
- 43 6. Conduct a comprehensive evaluation, including potential restructuring, of the funding and
44 personnel model for invasive species management programs at all levels across federal,

1 state, and county agencies and governments. Programs should consider instituting a
2 holistic, site-based management approach to protect and restore critical areas from
3 invasive plant invasions, and restore native plant communities in those areas to
4 accomplish GRSG conservation goals. Rather than limiting activities to only a few,
5 targeted high-risk invasive plants, design programs to build stronger capacity to address
6 all invasive plant threats in priority areas to achieve long-term restoration success within
7 GRSG habitats. Emphasis on the risk and threat to economies, human health, and the
8 environment should be incorporated within program justifications for increasing
9 operational capacity. Examine opportunities and examples within other invasive species
10 management arenas for site-based approaches to help accelerate and emphasize invasive
11 plant management capacity at local, regional, state, and national levels. Lead National
12 Invasive Species Council departments should consider assigning this task to the Invasive
13 Species Advisory Committee for developing a first-cut draft, thereby leveraging the
14 technical expertise provided by the Invasive Species Advisory Committee membership.
15

- 16 7. Develop funding mechanisms at state and federal levels to significantly increase program
17 capacity to accelerate invasive plant prevention and control activities at all levels, with
18 the goal of achieving a measurable net reduction of priority invasive plant populations
19 each year and curtailing the exponential rate of spread of those priority populations,
20 across the range of the GRSG. Financial support for pre-and post-treatment ecosystem
21 restoration activities, including but not limited to native plant restoration should be
22 included in the design of the program funding mechanisms.
23
- 24 8. A new approach needs to be developed and funded to provide for early detection, rapid
25 management response (EDRR) and restoration of areas to prevent invasive plant species
26 from becoming established or spreading. A national system for invasive species EDRR
27 should include consistent funding and a formal incident command structure (ICS) that can
28 address invasive species threats at all levels and across all landownerships, particularly
29 within the range of GRSG, in a timely and efficient manner. Again, this approach could
30 mirror the relevant aspects of the national interagency/intergovernmental fire model,
31 particularly with infrastructure and capacity to respond rapidly and share resources.
32
- 33 9. Develop a nationally consistent public awareness and education program for the
34 prevention and management of invasive species, similar to the successful national fire
35 prevention program campaign, coordinated across public and private sectors. Such a
36 program will require professional marketing and education expertise to design and imple-
37 ment an effective campaign to reach target audiences in a productive manner, with a goal
38 of changing public behavior and elevating the priority of invasive species issues
39 nationwide.
40
- 41 10. Coordination between the public and private landowners to manage invasive plants across
42 landscapes is essential and is occurring through the creation of Cooperative Weed
43 Management Areas. Thus, the support and implementation of these CWMA's needs to be
44 implemented across the range of GRSG. An assessment of the status and functional

1 effectiveness of each CWMA should be conducted across the range of the GRSG. Using
2 the assessment information, expand mechanisms to increase capacity building and
3 support for CWMA operations to address GRSG conservation needs.
4

- 5 11. Wherever feasible, maximize niche occupation with desired native species. Aggressive,
6 fire-resistant, non-native perennial species, such as crested wheatgrass, may be necessary
7 to stabilize and prevent further invasion of cheatgrass and medusahead. However, these
8 species should be only used with the intent to stabilize the plant community and allow for
9 long-term recovery of sagebrush and other native species.
10

11 As stated earlier, in September 2015, the BLM and Forest Service signed a Sage Grouse EIS that
12 establishes new guidance for sage grouse habitat management on federal lands in the West. The
13 RMP Amendments for managing Greater Sage-Grouse in Utah can be found at:
14 [https://eplanning.blm.gov/epl-front-](https://eplanning.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage¤tPageId=99423)
15 [office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage¤tPageId=9](https://eplanning/blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage¤tPageId=99423)
16 [9423](https://eplanning/blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage¤tPageId=99423).
17

18 **Noxious Weeds in the National Forest**

19
20 According to the Land and Resource Management Plan for the Ashley National Forest (U.S.
21 Department of Agriculture 1986):
22

- 23 a. The Ashley National Forest has been actively involved in the control of noxious farm
24 weeds on U.S. Forest Service–administered lands in cooperation with state and local
25 weed control organizations.
26
27 b. Noxious farm weeds are defined as “Those pernicious plant species occurring unnaturally
28 on National Forest System lands that have the greatest potential of contributing to an
29 unfavorable economic impact on crop or pasture land downstream” (U.S. Department of
30 Agriculture 1986).
31

32 In addition to the weeds listed above, the Ashley National Forest reports that Whitetop (*Cardaria*
33 *draba*) and Musk Mustard (*Chorispora tenella*) are problem weeds on forest lands in the county.
34

35 The Ashley National Forest reports that 2,422.9 acres of land were treated for noxious weeds or
36 invasive plants in FY 2015 and that such treatments decreased slightly to 2,396.9 acres in FY
37 2016.
38

39 **Noxious Weeds on BLM Land**

40
41 According to the BLM Vernal ROD/RMP (BLM 2008), management for noxious weed and
42 invasive species will continue to implement control actions as per national guidance and local
43 weed management plans in cooperation with state and federal agencies, affected counties,
44 adjoining private landowners, and other partners or interests directly affected. The BLM will use

1 principles of integrated pest management for control and management of noxious weeds and
2 invasive species. This includes prevention methods as well as control through mechanical,
3 cultural, biological, and chemical methods.

4
5 **County Objectives**

- 6
7 1. Reduce or eliminate noxious weed infestations and minimize the establishment of new weed
8 species across jurisdictional boundaries using adaptive management and integrated weed
9 management approaches.
10
11 2. Accomplish weed control without adverse human, grazing, and environmental effects.
12
13 3. In areas where weeds have been treated, revegetate and restore with desirable native plant
14 species.
15
16 4. Manage noxious weeds to enhance wildlife habitat and farmland.
17

18 **Policies:** It is the policy of Duchesne County that:

- 19
20 1. Farmers, ranchers, land management agencies and governments work together in a
21 coordinated effort to control noxious weeds in Duchesne County. These interests shall
22 develop common management goals, utilize guidance from the Natural Resource
23 Conservation Service, establish funding to facilitate effective treatment, and coordinate
24 efforts along logical geographic boundaries.
25
26 2. Early detection and rapid response measures to control noxious weeds shall be supported.
27
28 3. Land managers and property owners shall comply with state, county, and federal rules,
29 regulations, ordinances, and directives pertaining to noxious weeds and the application of
30 herbicides to manage noxious weeds.
31
32 4. Efforts to implement weed monitoring and weed mapping programs shall be supported.
33
34 5. An integrated weed management plan shall be implemented for preventing, containing, or
35 controlling undesirable plant species or groups of species using all available strategies
36 and techniques prescribed by the State Noxious Weed Act, including prevention,
37 biological controls, chemical controls and mechanical controls. Such plan should include
38 mapping of weed infestations. Such a plan shall be developed to allow the County to
39 obtain funding for weed control efforts.
40
41 6. Preserving and protecting lands not presently infested is the first line of defense against
42 aggressive noxious weeds. Prevention requires awareness and action by land managers,
43 as well as the general public, to recognize, report and control new weed infestations
44 before they have a chance to establish, expand and spread.

- 1 7. A quick response team of volunteers should be established to combat new areas of
2 noxious weed invasion regardless of the status of land ownership.
3
- 4 8. Continuing efforts should be made to inform and educate the public, land managers and
5 property owners regarding the economic and environmental impacts of noxious weeds.
6
- 7 9. Once a noxious weed is controlled in an area, the area should be seeded with beneficial
8 plant species to help prevent another type of noxious weed establishing in the area.
9
- 10 10. Land management agencies should follow the recommendations of the WAFWA report
11 on invasive plant management to help protect and restore native sagebrush ecosystems
12 and the wildlife that depend on those systems for survival.
13
- 14 11. Land management agencies should follow the recommendations of the Colorado Natural
15 Areas Program to establish integrated weed management plans that use multiple weed
16 management techniques to control target weed species with minimal adverse impacts to
17 non-target species.
18

19 **Energy Considerations**

20
21 **Findings:** Energy development can create surface disturbance that can lead to the spread of
22 noxious weeds on public and private lands in the County.
23

24 **Policy:** The County supports weed control and reclamation requirements associated with energy
25 development. County policy requires energy development companies to work with the Duchesne
26 County Weed Department to help prevent the spread of species listed on the county's list of
27 noxious weeds.
28

29 **Water Considerations**

30
31 **Findings:** Duchesne County finds that there are water considerations associated with noxious
32 weed management. First, herbicide applicators must comply with state and federal standards
33 associated with the application of chemicals near regulated surface water. Second, uncontrolled
34 noxious or invasive weed growth can use large amounts of water that would otherwise be
35 available for more beneficial uses. According to the USGS Scientific Investigations Report
36 #2009-5247 (*Salt cedar and Russian Olive Control Demonstration Act Science Assessment*), Salt
37 cedar (known locally as Tamarisk) and Russian olive communities will consume just as much
38 water as native cottonwood and willow communities. The report notes that most wildlife,
39 including many birds, prefer native cottonwood or willow habitat to habitat dominated by
40 Tamarisk or Russian olive. Other negative impacts of dense Tamarisk and Salt cedar include
41 impeded access to waterways and recreational areas, increased fire hazard and clogging of
42 irrigation ditches.
43
44

1 **Policy:** Noxious weeds and invasive plant species shall be controlled in Duchesne County to
2 reduce their negative impacts on water yields and water supply for beneficial uses.

3

4

Section 8. Predator Control

Findings: The Utah Division of Wildlife Resources (DWR) recognizes predator management as an important tool available to DWR staff and U.S. Department of Agriculture-Wildlife Services personnel, when needed. Although predator management can be controversial, it is important under certain circumstances for the effective management of predator and prey populations.

If predator populations are limiting DWR’s ability to reach other wildlife management objectives, wildlife officials may choose to implement predator management plans. DWR recently updated its approach to predator management, placing increased emphasis on the protection of mule deer.

DWR is managing predators in specific units, for the following species and situations:

- Ravens, coyotes, red foxes, and badgers that prey on sage-grouse/eggs
- Raccoons and red foxes that prey on waterfowl/eggs (foxes take nesting hens and eggs)
- Cougars that prey on adult mule deer or bighorn sheep
- Coyotes that prey on mule deer fawns or pronghorn fawns

Of these programs, the one that targets coyotes is the largest and most costly for DWR.

Appropriately targeting and timing predator removal efforts are essential for reducing the impact that coyotes have on fawn survival. In Utah, targeted contracts allow removal of coyotes from fawning grounds from March through August, and the coyote bounty program is most effective during the coyote breeding season (January–March).

Coyote Bounty Program

Utah’s Mule Deer Protection Act went into effect in July of 2012. The primary goal of the program was to remove coyotes from areas where they may prey on deer fawns. The Utah Legislature set aside \$500,000 from the General Fund to pay individuals to kill coyotes in Utah. Coyotes are not considered protected wildlife and there is a bounty program to encourage coyote control. To process the payments and track harvest and participation, DWR created the General Predator Control Program. This took the place of previous coyote bounty programs administered by participating counties.

DWR established locations throughout the state where people can check-in coyotes for a \$50 payment. Each participant is required to submit the scalp of the animal (with both ears attached), the lower jaw, and a data sheet reporting where the coyote was killed. The coyote program does not have mandatory reporting requirements, meaning that it is legal to harvest coyotes and store them for indeterminate periods. One result of that choice is that coyotes harvested in one fiscal

1 year may be submitted for payment in a different fiscal year. With that qualification, based on
2 reported harvest, just over 7,000 coyotes were taken under the bounty program each year for the
3 first two years of the program. In 2015, nearly 8,200 coyotes were submitted for bounty
4 payments.

5
6 Coyote removal success varied across the state. Six mule deer management units (Box Elder,
7 West Desert, SW Desert, Fillmore, Beaver, and Pine Valley) accounted for approximately 50%
8 of all coyotes removed. However, significant numbers were harvested from the Nine Mile and
9 Book Cliffs areas near Duchesne County (Coyote harvest data is gathered on a hunt unit basis
10 rather than by county). The bounty program increased the number of coyotes killed in Utah and
11 provided government-supplied economic rewards to individuals and businesses throughout the
12 state. It may take several years of program implementation before improvements in fawn-doe
13 ratios are observed. Both location and timing are essential in reducing the impact of coyote
14 predation on mule deer fawn survival.

15
16 The updated approach directs additional financial resources (\$600,000 annually) to the U.S.
17 Department of Agriculture-Wildlife Services for coyote control. The most recent data from the
18 Utah Division of Wildlife Resources found a total estimated harvest of coyotes in FY 2015 of
19 8,192 from the General Predator Control Program, 305 from the Targeted Control Program,
20 2,903 from additional general fur harvest not redeemed through the Predator Control Program,
21 and 3,099 by the Wildlife Services program for a total of 14,499 coyotes.

22
23 DWR also is working to limit the impact of cougars on Utah's deer herds, while maintaining a
24 healthy cougar population statewide. Cougar harvest has been liberalized where mule deer or
25 bighorn sheep populations fall below the population management objective, and where adult deer
26 or bighorn sheep survival is lower than normal. More detail can be found in the Utah Cougar
27 Management Plan at: wildlife.utah.gov/pdf/cmgtplan.pdf.

28
29 Two additional wildlife species can at times exhibit predatory behavior in Utah: black bears and
30 wolves. Both of these species are managed under specific plans (Utah Black Bear Management
31 Plan and Utah Wolf Management Plan), although wolves do not present predator-management
32 challenges to Utah wildlife managers at this time.

33 34 **Bears**

35
36 Black bears occur in stable, healthy populations across certain parts of Utah. Normally, they
37 don't occur in the mountain ranges of the western deserts. Geographic Information System (GIS)
38 data showing black bear distribution and hunt boundaries can be downloaded at
39 <http://dwrcdc.nr.utah.gov/ucdc/DownloadGIS/disclaim.htm>. Bears are more of an omnivore, and
40 the vast majority of their diet is composed of plant material and, at certain times of year, insects
41 or insect larvae. Often when bears do eat meat, they are relying on carrion which they have
42 happened upon, not fresh prey. Black bears have under certain conditions been known to take a
43 significant number of newborn deer fawns, bovine calves, sheep and lambs.

1 **Wolves**

2
3 Wolves exhibit behavior patterns, such as cooperative hunting in packs, which clearly separate
4 them from bears and other predators. By any measure, wolves are highly effective and efficient
5 predators. Currently, there are not any established breeding populations of wolves in Utah;
6 however, there are occasional transients and migrants.

7
8 Senate Bill 36 (Utah Wolf Management Act) ([http://le.utah.gov/xcode/Title23/Chapter29/23-
9 29.html?v=C23-29_1800010118000101](http://le.utah.gov/xcode/Title23/Chapter29/23-29.html?v=C23-29_1800010118000101)) from the 2010 General Session directed the Division of
10 Wildlife Resources to prevent any wolf packs from establishing in the portion of the state where
11 wolves are removed from the protection of the Endangered Species Act. That area includes only
12 the portion of Utah located north of I-80 and east of I-84. DWR has given authority to the U.S.
13 Department of Agriculture-Wildlife Services to act on our behalf to resolve livestock depredation
14 incidents which involve wolves in this area.

15
16 For the remainder of the state, wolves are classified as a federally endangered species, and
17 management authority lies with the U.S. Fish and Wildlife Service (FWS). The state law
18 referenced above also directs the Division of Wildlife Resources to request that the FWS
19 immediately remove any wolves discovered in areas of Utah where they are still protected under
20 the Endangered Species Act. The Utah Wolf Management Act suspends the portion of the Utah
21 Wolf Management Plan that would allow two packs to become established in Utah, although the
22 remaining strategies of the plan are still in effect. If wolves are delisted across all of Utah, the
23 management plan then would be fully implemented.

24
25 **Cougar and Bear Livestock Depredation**

26
27 Black bears can cause site-specific depredation problems among livestock, especially domestic
28 sheep bedded down for the night during the summer months. Although cougars prey primarily
29 on adult deer, they are opportunistic predators, and can also cause site-specific livestock
30 depredation problems. Livestock depredation incidents are immediately referred to Wildlife
31 Services staff specializing in removal of specific predators associated with depredation incidents.
32 DWR provides compensation to ranchers with documented livestock losses attributed to cougar
33 or bear. DWR also issues increased cougar and bear permits in areas with chronic livestock
34 losses caused by predation from these species.

35
36 **Duchesne County Predator Control Policies**

37
38 Duchesne County maintains an annual contract with the Administrative Services Division of the
39 Utah Department of Agriculture to assist in the funding of predator control services to support
40 the livestock industry in the County. In the last Census of Agriculture (2012) there were 46,907
41 cattle and calves and 1,514 sheep and lambs counted in Duchesne County. Many of these are
42 subject to predation while on private or public rangelands.

1 **Policy:** Predator control is a necessary service to protect the investment that ranchers make in
2 their livestock.

3
4 Predator control is also important when it comes to threatened and endangered species, such as
5 the Greater Sage Grouse. Experience in this region shows that (in addition to anthropogenic
6 activity, conifer encroachment and over-grazing) wildfire, invasive plant species and predation
7 are major contributors to sage grouse mortality.

8
9 **Policy:** Duchesne County encourages the Utah Division of Wildlife Resources to make and
10 implement plans to reduce predation affecting threatened and endangered species. For the
11 Greater Sage Grouse, Duchesne County encourages the Utah Division of Wildlife Resources to
12 consider offering a bounty on common predators such as raccoon and skunk to protect sage
13 grouse nests.

14
15 In 2005, the Utah Wildlife Board approved a wolf management plan for the state. The plan
16 envisions the delisting of the wolf in the entire state. With delisting, wolves would be managed
17 by the state, rather than by the U.S. Fish & Wildlife Service. Unmanaged wolf populations are a
18 threat to Utah’s wildlife and livestock. Sightings of wolves in Duchesne County are rare.

19
20 **Policy:** It is the policy of Duchesne County that Rocky Mountain gray wolves should be delisted
21 statewide and that the Utah Division of Wildlife Resources is better equipped to manage wolf
22 populations in a way that protects wildlife and livestock. It is the position of Duchesne County
23 that no species of wolves be introduced into the County.

24
25

Section 9. Water Quality and Hydrology

Water Quality and Hydrology in General

Findings: Clean water is essential to the health of county residents.

The infrastructure and communities of Duchesne County are primarily located on 583,334 acres of privately owned land. The utility of these lands is dependent on water that flows to them from watersheds located on public lands. The rivers and streams flowing from these watersheds supply water for municipal, industrial, livestock, irrigation, and recreation use. As set forth in Utah Code 63-38d-401 (5) (c), “The waters of the state are the property of the citizens of the state, subject to appropriation for beneficial use, and are essential to the future prosperity of the state and the quality of life within the state.”

Section 63J-8-104 of the Utah Code states that federal land management agencies shall manage the watershed on federal lands to achieve and maintain water resources at the highest reasonably sustainable levels as follows:

- a. Adhere to the policies, goals, and management practices set forth in Subsection 63J-4-401(6)(m) of the Utah Code;
- b. Deter unauthorized cross-country OHV use in the subject lands by establishing a reasonable system of roads and trails in the subject lands for the use of an OHV, as closing the subject lands to all OHV use will only spur increased and unauthorized use; and
- c. Keep open any road or trail in the subject lands that historically has been open to OHV use, as identified on respective county road maps;

Watersheds

Watersheds in the Uinta Mountains provide a major source of water used in Duchesne County. Consumptive and non-consumptive uses of surface water generally occur downstream of the Ashley National Forest. As depicted earlier in Table FM9, the U.S. Forest Service estimates that the Ashley National Forest contributes the following percentages of stream flow in regional streams (U.S. Forest Service 2016):

- 13% of the flow at the Green River at the confluence with the Colorado River
- 4% of the flow at the Green River at the confluence with the Yampa River
- 4% of the flow at the Green River at the confluence with the Duchesne River
- 91% of the flow at the Ashley Creek at the confluence with the Green River
- 24% of the flow at the Strawberry River at the confluence with the Duchesne River
- 67% of the flow at the Duchesne River at the confluence with the Green River

1 The management of the watersheds should allow for continued multiple use. It should preserve
2 the quality and quantity of water as well as environmental values and allow the watershed to
3 support existing as well as future uses. Healthy watersheds are important because they provide:

- 4
- 5 • Plenty of clean drinking water
- 6 • Irrigation for farms and ranches
- 7 • Clear streams and reservoirs for fishing
- 8 • Healthier rangeland that supports both livestock and wildlife
- 9 • Reduced risk of Endangered Species Act listings
- 10 • More hiring of local contractors, which helps rural economies
- 11 • Improved air quality
- 12 • Decreased fire frequency, intensity and suppression costs
- 13

14 The Utah Division of Wildlife Resources manages a program called the Watershed Restoration
15 Initiative (WRI). The Watershed Restoration Initiative is a partnership based program to
16 improve high priority watersheds throughout the state. WRI is sponsored by the Utah Partners
17 for Conservation and Development and is in its 11th year. The Watershed Program focuses on
18 three ecosystem values: 1) wildlife and biological diversity, 2) water quality and yield, and 3)
19 opportunities for sustainable uses of natural resources. WRI is a bottom-up initiative where
20 project planning, review, and ranking occur at a local level. Five regional teams elect their own
21 leaders, establish focus areas, review, score and rank project proposals using a comprehensive
22 project prioritization score sheet, and assist their members in implementing projects. Duchesne
23 County is located within the Northeastern Region.

24

25 In State Fiscal Year 2015, 122 agencies, organizations and individuals participated in projects in
26 the WRI database through funding, project management, technical assistance or in-kind services.
27 WRI, through its partners, provides a number of project services including: funding, assistance
28 with project planning and implementation, contracting and accounting, seed purchasing, storage,
29 mixing and delivery, free use of restoration equipment, project monitoring and reporting, project
30 management, and an on-line project database. The locally-led teams provide a means to work on
31 a landscape scale across ownership boundaries.

32

33 From 2006-2015, WRI projects have exceeded 1.2 million acres treated in Utah. Projects can
34 generally be categorized into two types, restoration projects to improve the health of watersheds
35 and rehabilitation projects following wild fire to re-establish the structure and function of
36 watersheds. As of 2016, 333 projects are in various stages of completion that would treat an
37 additional 342,714 acres. Proposed projects at this time would treat 35,441 acres in 42 different
38 project areas. The WRI website shows 86 projects in Duchesne County that have either been
39 completed or are currently underway (see Map #26).

40

41 WRI projects receive funding from a number of sources but the core funding comes from an
42 appropriation by the Utah Legislature to the Department of Natural Resources (DNR). These
43 funds are matched many times over by contributions from partners. Contributors of funding to
44 WRI vary annually but other consistent funding for projects comes from federal agencies (e.g.

1 Bureau of Land Management, Natural Resources Conservation Service, U.S. Forest Service, U.S.
2 Fish and Wildlife Service), state agencies (e.g. Division of Wildlife Resources, Division of
3 Forestry, Fire, and State Lands, Department of Agriculture and Food, State Institutional Trust
4 Lands Administration, Governor’s Public Lands Policy Coordination Office, Department of
5 Environment Quality) and non-governmental organizations such as, but not limited to, the Mule
6 Deer Foundation, Sportsmen for Fish and Wildlife, Rocky Mountain Elk Foundation, Foundation
7 for North American Wild Sheep, Safari Club International, National Wild Turkey Federation and
8 Utah Bowman for Habitat). Many private landowners provide funding to complete projects on
9 their own land or grazing allotments).

10
11 **Watershed Restoration Plans**
12

13 The EPA requires that watershed plans contain the following nine elements in order for projects
14 to be eligible for funding under Section 319 of the Clean Water Act:
15

- 16 1. Identification of causes of impairment and pollutant sources or groups of similar sources
17 that need to be controlled to achieve needed load reductions, and any other goals
18 identified in the watershed plan. Sources that need to be controlled should be identified at
19 the significant subcategory level along with estimates of the extent to which they are
20 present in the watershed (e.g., X number of dairy cattle feedlots needing upgrading,
21 including a rough estimate of the number of cattle per facility; Y acres of row crops
22 needing improved nutrient management or sediment control; or Z linear miles of eroded
23 streambank needing remediation).
- 24 2. An estimate of the load reductions expected from management measures.
- 25 3. A description of the nonpoint source management measures that will need to be
26 implemented to achieve load reductions and a description of the critical areas in which
27 those measures will be needed to implement the plan.
- 28 4. Estimate of the amounts of technical and financial assistance needed, associated costs,
29 and/or the sources and authorities that will be relied upon to implement the plan.
30
- 31 5. An information and education component used to enhance public understanding of the
32 project and encourage their early and continued participation in selecting, designing, and
33 implementing the nonpoint source management measures that will be implemented.
- 34 6. Schedule for implementing the nonpoint source management measures identified in the
35 plan that is reasonably expeditious.
- 36 7. A description of interim measurable milestones for determining whether nonpoint source
37 management measures or other control actions are being implemented.
38
39
40
41
42
43
44

- 1 8. A set of criteria that can be used to determine whether loading reductions are being
2 achieved over time and substantial progress is being made toward attaining water quality
3 standards.
- 4
- 5 9. A monitoring component to evaluate the effectiveness of the implementation efforts over
6 time, measured against the criteria established under item h immediately above.
- 7

8 A Watershed Restoration Plan for the Duchesne River watershed was prepared by the Uinta
9 Basin Watershed Council in 2012. The goals of this plan are to:

- 10
- 11 • Provide a cohesive strategy for implementing needed water quality improvements for the
12 watershed such that state water quality standards are restored and maintained in the
13 Duchesne River and tributaries.
- 14
- 15 • Improve water quality in the watershed by decreasing the TDS and Sediment load.
- 16
- 17 • Improve wildlife habitat.
- 18
- 19 • Educate the public about water quality issues in the watershed as well as BMP's to
20 protect and improve the water quality.
- 21

22 The Duchesne River Watershed Restoration Plan found that the main sources of TDS loading in
23 the watershed include “areas of surface disturbance, irrigation activities, natural sources
24 (geology), streambank erosion/destabilization, grazing, roadways, and energy development.”
25 The plan also found that “if the load reductions identified in the Duchesne River TMDL are
26 attained from recent or future salinity control projects and water quality standards are still
27 violated, the TMDL will be reviewed or site-specific water quality standards will be developed
28 based on additional data collected. Regardless of the short-term effect on instream flows and
29 concentrations, the available and recommended control efforts should improve irrigation
30 efficiencies and water quality will ultimately benefit.”

31

32 Tables in the Duchesne River Watershed Restoration Plan contain recommended best
33 management practices for all of the sub-watersheds that were analyzed, current implementation
34 projects, funding needs, technical assistance needs, an implementation schedule, an education
35 effort and a monitoring program. About \$2,417,781.00 of funding is needed to fully implement
36 the plan.

37

38 **Future Water Demand**

39

40 The current and future water demand for surface waters within Daggett, Duchesne, and Uintah
41 Counties is illustrated in Table WAT1 and is excerpted from *Conceptual Analysis of Uinta and*
42 *Green River Water Development Projects* (Franson Civil Engineers & CH2M Hill 2007).

Table WAT1. Summary of Overall Existing and Future Demands (acre-feet per year)

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

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

- 1
- 2 The Franson Civil Engineers & CH2M Hill study contained a summary of the water development
- 3 scenarios for the Uintah Basin as defined by the DWRe (see Table WAT2). Some of the listed
- 4 projects are not in Duchesne County.

Table WAT2. Water Development Scenario Summary

Project Features	1	2	3	4	5	6	7	8	9	10
Stabilize High Uinta High Mountain lakes (Transfer storage to downstream storage)		x	x	x	x	x	x			
Upper Uinta Reservoir (28,000 acre-feet storage)		x	x			x	x			
Brown’s Draw Enlargement (adds 1,900 acre-feet storage)				x	x	x	x			
Montes Creek Enlargement (950 acre-feet storage increase)				x	x	x	x			
Bennett Reservoir (5,000 acre-feet storage)				x	x	x	x			
Neola Reservoir (5,000 acre-feet storage)				x	x	x	x			
East Cottonwood Reservoir (5,200 acre-feet storage)				x	x	x	x			
Renn Smith Reservoir		x	x	x	x	x	x	x	x	x
Cliffs and Whiterocks High Mountain Lakes transfer to M & I demand		x								
Fill Cottonwood Reservoir with Exchange								x	x	x
Yellowstone Feeder Canal Extension to Area 16 (capacity = 19 cubic feet per second)				x	x	x	x			
Pump from Green River to Pelican Lake		x		x		x		x	x	x
Pump from Green River to Ouray Park, Cottonwood Area		x		x		x		x		
Pump from Pelican Lake to Cottonwood Area (3,500 acres in Cottonwood Service Area)										x

Source: Franson Civil Engineers & CH2M Hill (2007)

1 The Utah DWRe further describes these scenarios below and in Table WAT3. Combinations of
 2 computer models were used to estimate the water yield for each scenario. A cost estimate was
 3 developed for each project and for each scenario. Ranking criteria were then developed that,
 4 “assumed an alternative must be complete, effective, efficient and acceptable in order to be viable.”
 5 Each scenario was then ranked and assigned a score. Finally, in September 2007 a public meeting
 6 was held with all of the stakeholders participating. The outcome was a decision that scenarios two,
 7 four, six, eight and 10 would remain as viable ones to consider. In addition to being the ones most
 8 favored, these also had either the highest ranking score or lowest total cost. Figure 3 shows the
 9 preferred scenarios along with the water developed, total capital cost, cost per acre-foot and score.
 10 (DWRe 2015)

Table WAT3. Water Development Viable Scenario Summary

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

Source: Utah DWRe (2015).

11
 12 The U.S. Geological Survey publishes a National Water Information System that provides data
 13 on water usage by county. This database provides the following data for Duchesne County as of
 14 December 2014. Of the 18,607 residents of Duchesne County (based on the 2010 U.S. Census),
 15 16,570 were served by public water systems. These water consumers used an average of 282
 16 gallons of water per day, per person. Of that usage, 177 gallons per day were for domestic use.
 17 The remaining 2,037 residents were found to be using water from non-public sources, such as
 18 private wells. These consumers used less water (167 gallons per person per day).

19
 20 The National Water Information System also gives us data on the acreage of lands irrigated in the
 21 County. The database indicates that, in 2010, 70,160 acres of land in the county were irrigated
 22 with some type of sprinkler system and 53,760 acres were surface irrigated. These numbers were
 23 an increase in irrigated acreage from 2005, when 55,780 acres received sprinkler irrigation and
 24 42,770 acres were surface irrigated.

25
 26 The greatest increase in Utah’s and Duchesne County’s future water demands will be for
 27 municipal & industrial water as a result of population growth. In some areas, new and
 28 substantial water demands could come from industrial development. The growth of these
 29 municipal and industrial water demands will drive many future water decisions. Conservation, in
 30 order to reduce per capita demands, is an essential first step in meeting future demands. While

1 the conversion of agricultural water supplies to municipal and industrial uses will occur as
2 farmland is urbanized, these conversions will not always be sufficient to satisfy future demands.
3 Therefore, other means of securing adequate water supplies are necessary.
4

5 In order to meet all demands on water resources, a cooperative effort is needed to better use
6 existing water supplies. The county and state must promote water conservation measures and
7 innovative water management technologies. New water developments will also be needed. The
8 timing and scope of these developments will depend on the ability to reduce water demand
9 through water conservation, agricultural water conversions and other water management
10 strategies.
11

12 Water is considered the "lifeblood" of the Uintah Basin. Additional residential, industrial,
13 recreational, and agricultural development will be determined by water quality and availability.
14 There is overwhelming public support for water development projects on public lands (which
15 occurs predominately on the Ashley National Forest). A December 2008 report published by
16 Utah State University entitled "Public Lands and Utah Communities: A Statewide Survey of
17 Utah Residents," found (in Table 44) that only 3.1% of the survey respondents in the Daggett-
18 Duchesne-Uintah County area believed that public land managers should moderately (0.0%) or
19 substantially (3.1%) reduce the extent to which development of water storage and delivery
20 systems to meet the needs of communities occurs on Utah's public lands.
21

22 **Objective:** Duchesne County desires to protect the quality of its water resources.
23

24 **Policy:** The County supports responsible use and development of this resource and feels that all
25 users should meet appropriate water quality testing standards.
26

27 **Policy:** Duchesne County will protect this limited resource by promoting the efficient use and
28 management of its water resources. Relative to this agenda, the County will take an active role in
29 all relevant state, regional, and local water-resource management plans and decision-making
30 processes.
31

32 **Findings:** Competition for available water supplies is great. While agriculture has been and will
33 continue to be the largest consumer of water in the state and in Duchesne County, municipal and
34 industrial uses are growing rapidly. The growing population will seek water-based recreation
35 and will become more vocal for their interests. Similarly as we have become established and
36 moved beyond meeting basic survival needs, there are more people calling for preservation of the
37 environment.
38

39 Proposed federal land management policies, such as ACEC's, Wild & Scenic Rivers, and
40 Wilderness, also may limit further development of some water supplies. Federal reserved water
41 rights which will be set aside for the various federal parks, Indian tribes, etc. located in the state,
42 including within Duchesne County, must also be considered in future water resource decisions.
43 Future water needs can be satisfied in many different ways, including water conservation,
44 agricultural water conversions, water transfers, new water development, conjunctive use of

1 surface and ground water, aquifer storage and recovery, secondary irrigation systems, cooperative
2 agreements (arrangements with other water suppliers to share/lease their excess supplies) and
3 water reuse (recycling wastewater effluent). Reuse of wastewater in the energy industry is a big
4 issue in Duchesne County. Companies such as Newfield have constructed water processing
5 plants that have significantly reduced water use and the amount of water dumped into
6 evaporation ponds.

7
8 **Policy:** It is the policy of Duchesne County to encourage energy companies to construct modern
9 water reclamation facilities to allow for the reuse of water and help the county meet future needs.

10
11 Ideally, every community should have a plan in place to ensure the water needs are met for at
12 least two decades into the future. These plans would outline water conservation goals and how
13 they will be met as well as a balanced combination of other means that will allow future needs to
14 be satisfied. Water supplies needed to meet future demands should be identified and should
15 include sufficient excess above projected demand to be reliable in times of drought or
16 emergency. In Duchesne County, the Culinary Water Master Plan prepared for the Duchesne
17 County Water Conservancy District in 2006 looks at water needs to the year 2050. In 2017, the
18 district started the process of updating this plan.

19
20 While one method may be sufficient to meet future needs over the next 5 to 10 years, a balanced
21 combination of several methods will likely be required to meet needs over the next 20, 50 or
22 even 100 years.

23
24 Most residents of the County, if not receiving water from a municipality, receive water from one
25 of the special service districts or via a private well. Local water service entities need to project
26 future water needs and determine the corresponding amounts of conservation and agricultural
27 conversion that will be available for future needs. The difference between these future needs and
28 supplies is the amount of water that needs to be developed. Water service entities then need to
29 factor future development plans into the local watershed plans, balancing that against other uses
30 including agricultural, environmental and recreational. Local water service entities and land
31 managers should also consider the effects of vegetation management on the water yield and
32 quality.

33
34 **Policies:** It is the policy of Duchesne County to encourage communities and special service
35 districts to:

- 36
37 1. Collect sufficient revenue to keep their systems in good and proper operating condition.
38
39 2. Set aside revenue to pay for at least part of costly future improvements and new water
40 developments.
41
42 3. Prepare or participate in long-term water plans that address how to meet future water
43 needs.
44

- 1 4. Prepare water conservation plans to reduce their future water resource demands.
- 2
- 3 5. Acquire water historically used for agriculture as lands are developed.
- 4
- 5 6. Meter all water connections and keep track of water use to determine whether
- 6 conservation goals are being met.
- 7

8 Duchesne County benefits from the vast water knowledge and expertise of its residents. Many
9 are directly involved in water management, allocation, and use within the Uintah Basin. The
10 County encourages increased cooperation among irrigation companies, special service districts,
11 municipalities, the Ute Tribe and water user associations as these entities address water
12 management issues and make decisions that impact county citizens.

13
14 In 2012, the Duchesne County Conservation District found Water Quality and Quantity to be one
15 of the top five areas of resource conservation concern. Some of the challenges found by the
16 District were:

- 17
- 18 a. Increased government regulations and the high cost of planning and constructing water
- 19 storage and delivery systems makes it difficult to construct and maintain additional
- 20 facilities.
- 21
- 22 b. Irrigation companies and water organizations oversee the use and delivery of water within
- 23 the County. With all of these entities, it becomes more complex to coordinate water
- 24 storage and delivery in the county.
- 25
- 26 c. Salt entering the Colorado River drainage basin from poor irrigation methods and the lack
- 27 of understanding by the area producers.
- 28
- 29 d. Threats to Uintah Basin water rights.
- 30

31 **Water Quality**

32

33 As required by the Clean Water Act, the Utah Division of Water Quality (UDWQ) is charged
34 with establishing and maintaining water quality standards designed to protect, restore, and
35 preserve water quality in Utah. The UDWQ regularly conducts monitoring of surface waters to
36 assess water quality. An integrated report, which can be found at
37 <http://www.waterquality.utah.gov/documents/pdf>, is provided to the EPA and to the public to
38 report assessments results and account for the states progress in addressing TMDL requirements.
39 Total maximum daily load (TMDL) studies are one tool used to manage water quality.

40
41 Watersheds are the primary means of organizing surface waters for management, and if a specific
42 lake, river, or stream within that watershed is considered impaired (i.e., on the 303(d) list), a
43 TMDL study is typically required.

44

1 Monitoring sites at which water quality data are gathered and assessment units inform this
2 process and are illustrated in Map #27. Watershed condition information and boundaries are
3 illustrated in Map #28.

4 **Total Maximum Daily Load (TMDL) Studies**

6
7 Section 303(d) of the federal Clean Water Act requires states to develop Total Maximum Daily
8 Loads (TMDLs) for waters that do not meet water quality standards even after technology-based
9 controls are in place. The TMDL process establishes allowable loadings of pollutants or other
10 quantifiable parameters for a waterbody on the basis of the relationship between pollutant
11 sources and instream water quality conditions.

12
13 Duchesne River Watershed. The Utah Department of Environmental Quality (UDEQ) listed
14 several stream segments in the Duchesne River watershed on Utah's 2004 Section 303(d) list of
15 impaired waters for TDS (Total Dissolved Solids). The beneficial uses that are impaired are
16 agriculture and the warm water fishery. A July 2007 report prepared by Tetra Tech, Inc. for the
17 Utah DEQ Water Quality Division and EPA Region 8 documents the development of TMDLs for
18 total dissolved solids for the Duchesne River (two segments) and Lake Fork River and
19 development of site-specific criteria for TDS in Antelope Creek and Indian Canyon Creek within
20 the Duchesne River watershed. The Duchesne River watershed drains approximately 2,679
21 square miles (1,714,553 acres) in northeastern Utah. It occupies approximately 102 square miles
22 of Wasatch County, 2,103 square miles of Duchesne County, and 474 square miles of Uintah
23 County.

24
25 The Duchesne River TMDL report notes that the subsurface bedrock formations in the basin are
26 saline and soluble, dissolving easily and contributing TDS to water flowing through them.
27 Natural background sources of TDS in the watershed include saline soils and areas of poor
28 drainage where groundwater rises to the surface and evaporates leaving the soluble salts on the
29 surface. This salt efflorescence is then available for wash-off and delivery to watershed streams.
30 Precipitation that falls in excess of plant uptake potential and soil holding capacity also
31 percolates down into the shallow alluvial aquifer where it comes in contact with saline bedrock
32 formations. The primary source of human induced TDS loading in the watershed has been
33 attributed to seepage from canals and deep percolation of irrigation water, which then discharges
34 to surface streams as base-flow.

35
36 Along the Duchesne River, from Myton to the County line, the TDS reduction sought is 40,101
37 kg/day. In the Lake Fork River, the TDS reduction sought is 11,070 kg/day. The report notes
38 that because load reductions in this TMDL document will focus on natural background and
39 nonpoint sources, implementation of best management practices (BMPs) is purely voluntary.
40 BMPs will preserve current water rights and needs while optimizing use and minimizing deep
41 percolation of irrigation water. If irrigation water is applied in excess of plant requirements, that
42 excess proportion will percolate below the rooting zone where it picks up TDS and returns it to
43 the watershed streams either as surface runoff or groundwater base-flow with elevated TDS
44 concentrations. Because TDS is also washed off watershed surfaces and delivered to receiving

1 streams, potential control options should address surface delivery as well as subsurface delivery
2 of TDS. The key to effectively reducing the anthropogenic TDS loads in the Duchesne River
3 watershed while maintaining current water rights and use is to improve the efficiency of water
4 use and transport and to minimize surface runoff, seepage, and deep percolation. Steps being
5 taken in the local salinity control efforts are making a difference.
6

7 Pariette Draw Watershed. A TMDL study for the Pariette Draw was prepared by the Utah
8 Division of Water Quality and approved by Region 8 EPA on September 28, 2010. The Pariette
9 Draw starts in Duchesne County then extends easterly into Uintah County on its way to the
10 Pariette Wetlands and the Green River. The Pariette Draw watershed receives most of its water
11 from the Duchesne River via the Pleasant Valley Canal. Pollutants of concern in this area are the
12 trace elements Selenium and Boron and Total Dissolved Solids. Levels of Selenium would
13 ideally be reduced by 0.33 lbs. /day to protect warm water fish, waterfowl and other aquatic life.
14 Boron levels need to be reduced by 36.38 tons/day to benefit agricultural uses (crops and stock
15 watering) in the area. Installing more efficient irrigation systems and following best management
16 practices for riparian areas will help reduce the level of these minerals and dissolved solids in the
17 water.
18

19 In 2015, a team of USGS scientists extracted and submitted for analysis various rock, soil,
20 sediment, surface water and groundwater samples at numerous sites within the Pariette Draw
21 watershed in an effort to “establish a process-based understanding of salt, Selenium, and Boron
22 behavior to address whether these contaminants can be better managed, or if uncontrollable
23 natural processes will overwhelm any attempts to bring Pariette Draw into compliance with
24 respect to recently established total maximum daily limits (TMDLs).” The results of this study
25 will better enable scientists to understand the mobility of these trace elements during water-rock-
26 soil interactions.
27

28 Nine Mile Creek Watershed. A TMDL study is currently being prepared for the Nine Mile Creek
29 located in Carbon and Duchesne counties. In this creek, the impact of water temperatures on fish
30 and other aquatic life is being studied. It is anticipated that the lower reaches of the creek will be
31 changed from a cold water fishery to a warm water fishery.
32

33 The Nine Mile Creek Total Maximum Daily Load (TMDL) water quality study was presented to
34 the Utah Water Quality Board on October 26, 2016. The Board approved staff’s request to
35 proceed to rule making to adopt the TMDL. A 30-day public notice period began on December 1,
36 2016 and ended on January 3, 2017. In summary, a 72% reduction in solar heating is needed to
37 meet Nine Mile Creek’s water quality standard of 20 degrees Celsius (68 degrees Fahrenheit).
38 Based on the analysis this can be achieved through a 36% increase in shading from riparian
39 vegetation, which will be the goal of voluntary projects outlined in the study’s
40 implementation plan. This goal applies to the Upper Nine Mile Creek Watershed (to the
41 confluence with Argyle Creek). Lower Nine Mile Creek, below the confluence with Argyle
42 Creek to the Green River, will be addressed separately due to results suggesting the 20 degree
43 standard cannot be reasonably achieved through increased shading.
44

1 Strawberry River Watershed. There are currently no point sources of pollution within the
2 Strawberry watershed. Total Phosphorous loading into Strawberry Reservoir is derived from non-
3 point sources such as soil erosion and land use. Examples of land use sources of pollution
4 include recreation, hydrologic modifications, grazing, roads, and energy development.

5
6 Uinta River Watershed. The following findings are excerpted from the 2006 Uinta River, Deep
7 Creek and Dry Gulch Creek TMDLs for Total Dissolved Solids (Tetra Tech, Inc. 2006).

8
9 “The Uinta River and Dry Gulch Creek watersheds are located in northeastern Utah
10 approximately 140 miles east of Salt Lake City in Uinta and Duchesne counties. The
11 Uinta River is approximately 60 miles long and drains the southern slope of King’s Peak,
12 Utah’s highest point, until it converges with the Duchesne River, a tributary of the Green
13 River. The Uinta River has a large network of tributary streams and mountain lakes that
14 make the river the largest on the southern slope of King’s Peak. Deep Creek is a tributary
15 of the Uinta River and drains the area northeast of the Uinta River. Dry Gulch Creek is a
16 tributary of the Uinta River and drains the area west of the Uinta River.

17
18 The Uinta River, Deep Creek and Dry Gulch Creek are included on the state of Utah’s
19 2000 303(d) list as a high priority for TMDL development due to impairments associated
20 with high concentrations of total dissolved solids (TDS).

21
22 The subsurface bedrock formations in the lower basin are saline and soluble, dissolving
23 easily and contributing TDS to any water that comes into contact with them.” (Tetra
24 Tech, Inc. 2006)

25 26 **BLM Water Quality Manual**

27
28 The Bureau of Land Management has developed a water quality manual to establish policies,
29 guidance, and assign responsibilities for the BLM’s stewardship of water resources, including
30 protecting, restoring, and maintaining the quality of waters located on the National System of
31 Public Lands.

32
33 The objectives of the water quality program on the BLM’s National System of Public Lands are
34 to:

- 35 1. Maintain and/or Restore Water Quality. In managing the public lands, protect, restore
36 and maintain the chemical, physical, and biological (ecological) services of surface and
37 groundwater to support resource management needs.
- 38
39 2. Maintain Functioning Hydrologic Systems. This section includes in-stream flows and
40 surface and groundwater interactions. In managing the public lands, protect, restore and
41 maintain the hydrologic regime (i.e., timing, magnitude, recharge, duration, stream
42 network/groundwater connectivity, temperature, and spatial distribution of peak, high,
43 and low flows) of surface and ground water, to the extent practical, to achieve sustainable
44 riparian, aquatic, and wetland habitats.

- 1 3. Provide for Compliance with Applicable Anti-Pollution Laws and Water Quality
2 Regulations. In managing and administering BLM programs, projects, and land use
3 activities, require users of the public lands to comply with applicable federal law, and to
4 the extent applicable to the BLM under the provisions of the Clean Water Act
5 (specifically 33 U.S.C. 1323), state, tribal, and local water laws and regulations.
6
- 7 4. Cooperate with Stakeholders. Coordinate, cooperate, and consult with federal, tribal,
8 state, and local agencies, private landowners, and stakeholder organizations to foster a
9 watershed-based approach to water resource stewardship.
10
- 11 5. Incorporate a Watershed Approach for Water Quality Protection and Restoration. Provide
12 a science-based watershed (and landscape) approach to natural and human-influenced
13 water systems. This approach should be consistent with federal and state water quality
14 assessment methods, including monitoring, sampling, and reporting protocols and public
15 availability, for example, following guidance provided in the Unified Watershed
16 Assessment Framework developed under the Clean Water Action Plan.
17
- 18 6. Protect Municipal and Sole Source Aquifers. Engage in collaborative planning,
19 protection and remediation efforts that focus on Municipal Supply watersheds and
20 Drinking Water Source Protection Zones. Many of these areas occur where the source or
21 diversion is off BLM lands, but the contributing surface/groundwater system extends onto
22 the National System of Public Lands.
23

24 **EPA Clean Water Rule**

25
26 Waters of the State of Utah are generally delineated as “blue lines” on topographic maps, named
27 features on maps, or support riparian vegetation. Surface waters including perennial,
28 intermittent, and ephemeral streams are regulated under the Clean Water Act and for these
29 reasons are considered waters of the U.S.
30

31 Stream gages and National Hydrography Dataset information pertaining to surface waters in
32 Duchesne County are illustrated in Map #29.
33

34 In January 2015, the U.S. Environmental Protection Agency's (USEPA) Office of Research and
35 Development finalized a report entitled “Connectivity of Streams and Wetlands to Downstream
36 Waters: A Review and Synthesis of the Scientific Evidence.” The report reviewed more than
37 1,200 peer-reviewed publications and summarized current scientific understanding about the
38 connectivity and mechanisms by which streams and wetlands, singly or in aggregate, affect the
39 physical, chemical, and biological integrity of downstream waters. The focus of the report is on
40 surface and shallow subsurface connections by which small or temporary streams, non-tidal
41 wetlands, and open waters affect larger waters such as rivers, lakes, reservoirs, and estuaries.
42 The report was developed to inform rulemaking by the U.S. EPA and the U.S. Army Corps of
43 Engineers on the definition of "waters of the United States" under the Clean Water Act (CWA).
44 Because the report is a technical review of peer-reviewed scientific literature, it neither considers

1 nor sets forth legal standards for CWA jurisdiction, nor does it establish EPA policy.

2
3 The report represents the state-of-the-science on the connectivity and isolation of waters in the
4 United States. It makes five major conclusions, summarized below, that are drawn from a broad
5 range of peer reviewed scientific literature.

- 6
7 1. The scientific literature unequivocally demonstrates that streams, regardless of their size
8 or frequency of flow, are connected to downstream waters and strongly influence their
9 function.
- 10
11 2. The scientific literature clearly shows that wetlands and open waters in riparian areas
12 (transitional areas between terrestrial and aquatic ecosystems) and floodplains are
13 physically, chemically, and biologically integrated with rivers via functions that improve
14 downstream water quality. These systems act as effective buffers to protect downstream
15 waters from pollution and are essential components of river food webs.
- 16
17 3. There is ample evidence that many wetlands and open waters located outside of riparian
18 areas and floodplains, even when lacking surface water connections, provide physical,
19 chemical, and biological functions that could affect the integrity of downstream waters.
20 Some potential benefits of these wetlands are due to their isolation rather than their
21 connectivity. Evaluations of the connectivity and effects of individual wetlands or groups
22 of wetlands are possible through case-by-case analysis.
- 23
24 4. Variations in the degree of connectivity are determined by the physical, chemical and
25 biological environment, and by human activities. These variations support a range of
26 stream and wetland functions that affect the integrity and sustainability of downstream
27 waters.
- 28
29 5. The literature strongly supports the conclusion that the incremental contributions of
30 individual streams and wetlands are cumulative across entire watersheds, and their effects
31 on downstream waters should be evaluated within the context of other streams and
32 wetlands in that watershed.

33
34 **Policies:** It is the policy of Duchesne County that:

- 35
36 1. Any proposed agency action must include an analysis of the effects on water quality,
37 stream flow, the amount of water yields, and the timing of those yields. Any proposed
38 action or non-action that results in a decrease in water quality, quantity, or flow, or
39 changes the timing of flows in a way that negatively affects water rights, shall be
40 opposed.
- 41
42 2. Any proposed agency action must be analyzed for impacts on water resource and
43 management facilities such as dams, reservoirs, delivery systems, culinary water supplies,
44 and monitoring facilities, etc., located on or downstream from land covered by the

1 proposal.
2

- 3 3. Livestock grazing and other multiple uses are compatible with watershed management.
4
5 4. All reasonable water conservation efforts shall be supported. Water conserved as a result
6 of these efforts shall be allocated to those persons or entities whose efforts created
7 savings, within the limits of their water rights.
8
9 5. The management of the watershed should allow for continued multiple use. It should
10 preserve the quality and quantity of water as well as environmental values and allow the
11 watershed to support existing as well as future uses.
12
13 6. Explore changing the focus of water storage sites from larger impoundments on federal
14 lands to small impoundments on private lands and storage of water off channel, away
15 from “waters of the U.S.”. Coordination with the Ute Tribe is needed to determine if
16 water storage sites benefitting all residents of the area could be located on tribal lands.
17
18 7. Increased coordination among water management entities is needed to ensure that timely
19 actions dealing with water storage and delivery systems are achieved.
20
21 8. Participation in the Colorado River Basin Salinity Control Program is important and will
22 require improved irrigation management and water conservation.
23
24 9. Increased educational efforts are needed to train water managers, producers, public
25 officials and the public so they understand the importance of water storage, water delivery
26 systems and water conservation.
27
28 10. Projects that will protect water quality during periods of flash flooding shall be
29 encouraged and supported. Such projects include installation of flood control structures,
30 dams, retention basins, gully plugs and seeding of drainage ways.
31

32 **Objective:** Duchesne County desires to protect and enhance the quality and quantity of useable
33 water by promoting and expanding the efficient management of water resources.
34

35 **Policy:** The County supports the development, adoption, and implementation of water storage
36 and distribution plans by individuals, irrigation companies, industrial users, and municipalities.
37

38 **SNOTEL Sites** 39

40 There are currently eight SNOTEL (snowpack telemetry) sites in the County, located in the
41 following areas: Brown Duck, Chepeta, Five Points Lake, Indian Canyon, Lake Fork #1, Lake
42 Fork #2, Lake Fork Basin and Rock Creek. There are an additional five sites that provide data
43 for the Duchesne River basin (Trial Lake, Mosby Mountain, Strawberry Divide, Daniels-
44 Strawberry and Currant Creek). The County is particularly interested in having the Lightning

1 Lake SNOTEL site reestablished to help forecast the stream flow for Rock Creek and Upper
2 Stillwater Reservoir.

3
4 **Policy:** The County supports the continued use of the NRCS Snow Survey Program’s SNOTEL
5 sites for forecasting snow pack and anticipated stream flows.

6
7 **Objective:** The County feels that adequate maintenance access to existing reservoirs should be
8 protected.

9
10 **Policy:** It is the policy of Duchesne County that access for maintenance of existing reservoirs
11 should be maintained and that potential reservoir sites should be protected from wilderness
12 designation and/or wild and scenic rivers status. The County feels that routine maintenance by
13 helicopter or snow machine should be allowed in wilderness areas, where necessary.

14 **Un-funded Mandates**

15
16
17 **Objective:** That mandates from federal and state agencies should be funded by those agencies
18 and tailored to fit local circumstances and need.

19
20 **Policy:** It is the policy of Duchesne County that water quality testing guidelines should be
21 established by the state and not the federal government. The County also feels that mandated
22 water quality tests should be financed by the agency requiring the testing. At a minimum, the
23 County feels that agencies should modify testing requirements to fit local necessity and
24 circumstances.

25 26 **Central Utah Project and Colorado River Water Leasing Proposal**

27
28 **Objective:** Duchesne County feels that the Central Utah Project has not provided the benefits or
29 physical facilities promised to the Basin under the initial agreement. The County supports the
30 timely completion of these projects as outlined in the Central Utah Completion Act.

31
32 The Central Utah Project was authorized in April 11, 1956 to help meet the long-term water
33 needs of Utah; especially the growing Wasatch Front. When Duchesne County agreed to join the
34 Central Utah Water Conservancy District in 1963 and allow for water to be transferred from the
35 Duchesne River basin to the Wasatch Front, the County stipulated that the following
36 compensatory measures be completed:

- 37
38 1. *The lining of several Duchesne County canals to reduce water loss and salinity. This has*
39 *been partially completed, but much remains to be done.*
40
41 2. *Adjudication of water rights on the Duchesne River would be completed.*
42
43 3. *Water rights held by the Utah Water and Power Board would be made available to*
44 *County water users or not be used to adverse interest against County water users.*

- 1 4. *Segregation of sufficient water to provide all of the storage necessary to supplement the*
2 *natural flow of the Duchesne River to provide the annual supply of water as specified in*
3 *the adjudication for all of the presently irrigated land in Duchesne County.*
4
- 5 5. *That water storage be provided for Duchesne County, without cost to the County, in*
6 *Starvation Reservoir, sufficient to supply the full duty of water for all of the presently*
7 *irrigated land in Duchesne County that is irrigated from the Duchesne River.*
8
- 9 6. *That Starvation Reservoir be the first feature of the Bonneville Unit of the Central Utah*
10 *Project to be constructed. Starvation Reservoir has been completed.*
11
- 12 7. *That at least 40,000 acre feet of additional water storage capacity be constructed in the*
13 *Lake Fork River system to serve the homestead land now irrigated from this river (using*
14 *the Utah Water and Power Board water right #18043 and the Moon Lake Water Users*
15 *Association water right #17978). This water storage has not been constructed as*
16 *promised.*
17
- 18 8. *That 15,000 acre feet of water storage capacity be constructed in the Uinta River system*
19 *for the benefit of the Moon Lake project area (using the Utah Water and Power Board*
20 *water right #18043) and a consistent amount for other homestead lands west of the Uinta*
21 *River. This water storage has not been constructed as promised.*
22
- 23 9. *That provisions be made for the use of Green River water by the construction of the final*
24 *phase of the Central Utah project to irrigate all non-Indian owned irrigable land in*
25 *Duchesne County for which there will be no water provided in the initial phase of the*
26 *project. The necessary pipeline to transport water from the Green River to the Upper*
27 *Stillwater Reservoir in Duchesne County has not been constructed as promised. The*
28 *Duchesne County has a 47,600 acre foot water right on the Green River but, because the*
29 *ultimate phase of the Central Utah Project was de-authorized, there is no way to transport*
30 *the water for use in the County.*
31

32 **Objective:** Provide adequate protection of private property rights during the implementation of
33 the CUP Completion Act.
34

35 In addition to having local water diverted to more populous areas, Duchesne County has been the
36 host to several mitigation measures committed to by the federal government in the CUP
37 Completion Act. This mitigation has resulted in the loss of private lands in the County; after
38 acquisition for conservation purposes by the Utah Mitigation Commission.
39

40 **Policy:** It is Duchesne County’s policy that the County Commissioners, the County Planning
41 Commission, and all affected landowners should be notified and consulted through the CUP
42 planning, implementation, and completion process.
43
44

1 **Objective:** Duchesne County is also interested in the Colorado River water leasing proposal and
2 will make every effort to ensure the interests of the County and its residents are adequately
3 addressed.

4
5 Through the Central Utah Project, Duchesne County entered into agreements that included the
6 development of Colorado River water to replace Uintah Basin water diverted to the Wasatch
7 Front. The State has discussed leasing this "replacement water" to Lower Colorado River Basin
8 states since the County has no current means of transporting and utilizing the water. Original
9 agreements with the Uintah Basin were never fulfilled.

10
11 **Policy:** It is the policy of Duchesne County that any programs, including the completion of the
12 Central Utah Project and/or future water leasing proposals, must adequately consider and address
13 the County's interests in order for the County to willingly participate and support.

14
15 Duchesne County would be directly impacted by the leasing of Colorado River water to
16 downstream users.

17
18 **Policy:** It is the policy of Duchesne County that Basin users be allowed to develop available
19 water resources, in accordance with the ultimate phase of the Central Utah Project, before the
20 option of leasing water to out-of-state interests is explored.

21
22 **Objective:** If the state pursues the "water banking" concept, the County feels that participating
23 water owners, regardless of sovereign status and/or number of shares, should be required to
24 contribute to the bank through the State of Utah and not as private interests.

25
26 **Policy:** It is the policy of Duchesne County that counties contributing resources to be leased
27 should be adequately compensated. Revenue derived from leasing Uintah Basin water should
28 come back to the Basin and be used to improve water storage and distribution facilities here. The
29 County does not support using revenues to improve water-handling facilities in other areas of the
30 State that have not contributed water to the project.

31
32 The County also prefers a shorter initial lease period. The County feels that a fifty-year lease
33 does not allow adequate flexibility to react to changing demand and markets.

34
35 **Objective:** The County will actively participate in all relevant local, regional, state, and federal
36 water management efforts.

37
38 **Policy:** To ensure that the County's water resource issues and interests are adequately heard and
39 addressed, the County will actively participate in the Colorado River water leasing discussion
40 and all other relevant federal and state water resource planning efforts and decisions.

41 42 **Water Resources**

43
44 Adequate water quality and availability is necessary for significant residential, industrial,

1 commercial, agricultural, and recreational development.

2
3 The county has a wide fluctuation of water availability from year to year. Some areas are still
4 lacking water storage and use snowpack and stream runoff as a water supply. Often this creates a
5 problem of too much water in the spring and not enough water in the summer. More water
6 storage would be very beneficial to this area. Continued work with the salinity control program,
7 implementing improved irrigation systems and piping canals is important to water conservation
8 and water quality. More water storage needs to be considered.

9
10 The “checker-boarded” land ownership pattern in Duchesne County continues to be a challenging
11 aspect of any water project. There is a need for more communication and cooperation between all
12 parties to meet the water concerns in the county.

13
14 The Utah Department of Natural Resources, Water Resources Division, has written a Utah State
15 Water Plan, which includes a plan for the Uintah Basin (*Uintah Basin Planning for the Future*),
16 updated in November 2016. This plan describes the Uintah Basin as follows:

17
18 “The Uintah Basin, located in the northeast corner of Utah, is defined in this UDWRe planning
19 document in terms of watersheds and includes Daggett, Uintah, and portions of Duchesne,
20 Grand, Emery, Carbon, Wasatch, and Summit Counties. The Uintah Basin receives an average of
21 15.5 inches of precipitation annually (only slightly more than the statewide average of 13 inches)
22 and contains many of Utah’s largest water supply reservoirs. While much of the water stored in
23 these reservoirs is used in the basin, a significant amount is transferred out of the basin to satisfy
24 water needs along the Wasatch Front.

25
26 The Uintah Basin is predominantly a rural agricultural area with farms distributed throughout the
27 basin. The Uintah Basin is not densely populated like other Utah basins, and while subject to
28 similar issues associated with providing water for a growing population, does not experience
29 them at the same magnitude. The basin is rich in energy resources and thus highly influenced by
30 the ebb and flow of the oil and gas industry.

31
32 The potential for large scale oil shale and tar sands extraction within the basin illustrates the need
33 for future water planning. In addition to uncertainties surrounding future energy development,
34 not all streams and other water bodies in the basin meet Utah’s water quality standards.

35
36 Increasing environmental and recreational demands bring greater competition for the water in the
37 basin and will require more emphasis on integrated water resource management and efficient use
38 of the basin’s water resources.” (DWRe 2015)

39
40 This water plan gives an overview of the water resources of the basin and the history of water
41 project development. Water supplies and water rights are covered, as well as population and
42 water use trends and projections. The population of Duchesne County is projected to grow to
43 about 29,275 people by the year 2060, which will increase demands for municipal and industrial
44 water. Water use in the basin is about 288 gallons per person, per day, which is about 20 percent

1 higher than the statewide average. The Uintah Basin water plan addresses future water needs for
2 the oil and gas industry, including oil shale and tar sands development. It includes a chapter on
3 water conservation and water management strategies that will be necessary to save millions of
4 dollars in future infrastructure costs. Water quality and salinity projects are covered by this plan
5 as well.
6

7 **Objective:** Duchesne County desires to protect and enhance the quality and quantity of usable
8 water by promoting and expanding the efficient management and use of water resources.
9

10 **Policies:**
11

- 12 1. The County supports timely completion of Central Utah Completion Act projects as long
13 as projects are shown to benefit the County as approved by the County Commission.
14
- 15 2. The County favors the continued efforts of the Duchesne County Water Conservancy
16 District to pursue development projects specific to County needs.
17
- 18 3. The County feels that private water rights should be protected from federal and state
19 encroachment and/or coerced acquisition.
20
- 21 4. The County supports the findings and recommendations of the 2016 Utah State Water
22 Plan for the Uintah Basin.
23

24 **Water Treatment**
25

26 A significant amount of the drinking water used in Duchesne County comes from the Central
27 Utah Water Conservancy District's Duchesne Valley Water Treatment Plant, located on the east
28 side of Starvation Reservoir. This plant is a direct filtration plant that uses ozone, coagulation,
29 flocculation and filtration to ensure that the water obtained from the reservoir is safe to drink.
30

31 **Objective:** It is important to protect Starvation Reservoir from contaminants, such as human and
32 livestock waste, spills from oil well drilling and operations, chemicals and other impurities that
33 can find their way into the lake. The Central Utah Water Conservancy District maintains a
34 Drinking Water Source Protection Plan for the drainage basin that feeds the reservoir. In
35 addition, a Strawberry River Watershed Restoration Plan was published in August, 2015 and can
36 be found on the Utah Department of Environmental Quality website at:

37 <http://www.deq.utah.gov/ProgramsServices/programs/water/watersheds/docs/2015/08Aug/StrawberryRiver.pdf>.
38
39

40 **Policy:** It is policy of Duchesne County to work with the Central Utah Water Conservancy
41 District, the Utah Department of Environmental Quality and the TriCounty Health Department to
42 enact ordinances as needed to protect the quality of water in Starvation Reservoir. For example,
43 no onsite wastewater system drain fields should be allowed at a distance of less than 500 feet
44 from the mean high water mark of the reservoir.

1 Duchesne County supports the findings and recommendations of the Strawberry River Watershed
2 Restoration Plan to protect the fishery at Strawberry Reservoir and the quality of the water that
3 flows into Starvation Reservoir. Duchesne County supports the findings and recommendations
4 of the Watershed Restoration Plan for the Duchesne River watershed with a goal of maintaining
5 acceptable water quality in the Duchesne River.
6

7 **Source Water Protection and Groundwater**

8

9 Another significant source of drinking water in the County are numerous water wells and springs
10 that supply water to several public and non-public water systems and individual property owners.
11 In 2009, the County passed Ordinance #09-273 to establish drinking water source protection
12 regulations. Various pollution sources are regulated by the ordinance when located within Zone
13 1 (which is within a 100 foot radius of the well head or spring source) or Zone 2 (which is within
14 an estimated 250-day groundwater travel time to a well head or spring source).
15

16 A team of researchers from Utah State University produced a publication in 1989 entitled
17 “Agricultural Pesticide Hazard to Groundwater in Utah.” This report found that contamination
18 of groundwater in Utah from pesticide use can be expected and that the agricultural areas of
19 Weber, Wayne, Cache, Davis, Utah, Wasatch, Duchesne, Summit and Juab counties are the most
20 vulnerable. The report noted that the likelihood of finding pesticides in water samples from
21 shallow aquifers:
22

- 23 a. Decreases with increasing depth to the groundwater;
- 24
- 25 b. Decreases with increasing distance between the pesticide application site and the
26 sampling site;
- 27
- 28 c. Increases with decreasing irrigation efficiency;
- 29
- 30 d. Depends on pesticide application and irrigation timing; and
- 31
- 32 e. Is virtually zero if the pesticide is applied downstream (in terms of groundwater flow)
33 from the sampling site.
34

35 The USU report concluded that pesticide selection and agricultural practices such as pesticide
36 incorporation, irrigation, and the time of pesticide application can significantly influence
37 pesticide movement. These influences should be investigated further and quantified. In addition,
38 site-specific strategies should be developed in order to prevent pesticide movement to
39 groundwater.
40

41 Since 1996, the State of Utah Department of Agriculture and Food has taken samples of
42 groundwater from water wells across the state. The most recent samples were taken in 2010 and
43 the results reported in a publication entitled “2010 State of Utah Ground-Water Program.”
44 During this latest survey, of the 100 water wells and springs tested statewide; three wells in

1 Duchesne County were sampled and 120 water quality tests were run. There were no confirmed
2 pesticide detections in the 2010 sampling season based on EPA standards. There were no
3 detections of coliform or E.coli bacteria in any of the Duchesne County wells. Statewide, 49% of
4 the wells and springs sampled in 2010 tested positive for coliform bacteria and 9.3% of the wells
5 and springs sampled tested positive for E.coli. The Duchesne County wells did show water
6 “hardness” and bicarbonate alkalinity to be above desired standards.

7
8 **Policies:**

- 9
10 1. It is the policy of Duchesne County that the TriCounty Health Department serve as the
11 culinary water authority for the County to ensure that drinking water sources are protected
12 and that clean, safe drinking water is supplied to new land uses.
13
14 2. It is policy of Duchesne County to work with culinary water suppliers using well or
15 spring sources to protect such sources from contamination in accordance with Ordinance
16 #09-273.

17
18 **Aquatic Invasive Species**

19
20 The Utah Division of Wildlife Resources adopted a Utah Aquatic Invasive Species Management
21 Plan in 2009. This plan notes that, over the years, the geographic area of Utah has unfortunately
22 become home to several aquatic invasive species (AIS). Some AIS that exist in other areas of the
23 nation and world have not yet made their way to Utah, it is feared they could. Prior to 2007, the
24 Utah Division of Wildlife Resources only committed a small part of one staff person’s time to
25 the problem, although biologists statewide occasionally directed their efforts toward specific
26 local AIS problems. Universities, tribal, federal, state and local government agencies, including
27 private interests and organized sportsman groups also on occasion directed some effort toward
28 the AIS problem. The advancing threat from Dreissenid mussels, of which the quagga mussel
29 was found in Lake Mead during January 2007, spurred the state of Utah to action. It was the
30 “straw that broke the camel’s back.” Threats and impacts from the multitude of AIS already in
31 the state, not to mention those on their way, became fully recognized as needing more attention.

32
33 The Utah Aquatic Invasive Species Task Force, representing a multitude of tribal, federal, state,
34 and local government agencies; water user interests; and organized fishing groups; was formed to
35 prepare and guide implementation of this Utah Aquatic Invasive Species Management Plan. The
36 plan was subjected to public review via Utah Division of Wildlife Resources’ five statewide
37 Regional Advisory Councils and approved by Utah’s Wildlife Board and the State of Utah’s
38 Governor, which led to ultimate approval by the national Aquatic Nuisance Species Task Force.
39 The main thrust of Utah’s Aquatic Invasive Species Management Plan is to deal with Dreissenid
40 mussels. A second priority group consisting of New Zealand mud snail and Eurasian watermilfoil
41 will receive less, but significant management attention. And a third priority group, consisting of
42 all other AIS will receive less management attention. This descending order of importance is
43 dictated by a lack of authority and funds for management actions by the Utah Division of
44 Wildlife Resources.

1 A significant staff is now assigned within Utah Division of Wildlife Resources to implement the
2 plan, accepting and directing assistance from cooperating partners, many of whom are members
3 of the Utah Aquatic Invasive Species Task Force. Stable funding at a level of \$1.4 million per
4 year has been provided for plan implementation by Utah’s Legislature. Some of the Utah Aquatic
5 Invasive Species Task Force partners have been able to secure additional funding to assist in this
6 effort, while others are seeking funds.

7
8 Implementation of the plan is largely steeped in public outreach about AIS, coupled with pre-
9 launch interdiction of watercraft and resultant decontaminations targeted on killing AIS being
10 inadvertently transported by outdoor recreationists or other pathways. The Utah Division of
11 Wildlife Resources’ Aquatic Invasive Species Program made a significant step forward in 2012,
12 bringing the Utah Division of State Parks and Recreation onboard via a contract for
13 implementation of the Utah Aquatic Invasive Species Plan at the State’s 22 water-based state
14 parks. The Parks and Recreation Division had always participated in the overall annual planning
15 for implementation of the AIS project, but now their personnel are implementing the Plan in each
16 of their parks.

17
18 To date, Lake Powell and Deer Creek Reservoir are the only Utah waters that require
19 decontamination of vessels to prevent the spread of AIS. However, monitoring is done at the
20 following water bodies in Duchesne County to ensure that they do not become contaminated:
21 Big Sandwash Reservoir, Big Springs Fish Hatchery, Midview Reservoir and Starvation
22 Reservoir.

23
24 **Policy:** Duchesne County supports efforts of the Divisions of Wildlife Resources and Parks and
25 Recreation to prevent the spread of aquatic invasive species to water bodies in the county.

26
27 **Energy Considerations**

28
29 Hydroelectric power accounts for only two percent of the power generated in Utah, according to
30 the Utah Geological Survey’s 2011 publication, “Utah’s Energy Landscape”, which was updated
31 in 2014. In Duchesne County, the Moon Lake Electric Association, Inc. operates a small
32 hydroelectric project on the Uinta River, on Ashley National Forest and tribal lands north of
33 Neola. The project has a capacity of 1,200 kilowatts (1.2 megawatts). The project has a FERC
34 license in effect until 2019 and Moon Lake is working on an extension of that license. Moon
35 Lake Electric also has a small hydroelectric facility on the Yellowstone River, which has a
36 capacity of 900 kilowatts; however, the company has elected not to pursue its relicensing.

37
38 Due to the large topographic variations in the County, additional opportunities for hydropower
39 generation certainly exist, but the undeveloped rivers tend to be small, and the amount of
40 hydropower potentially available is also small relative to other potential sources.

41
42 Water resources are important for fossil fuel energy development. Large amounts of water are
43 required to drill oil and gas wells; however, much of this water can be recycled and reused.
44 Water is also injected into oil fields to maintain subsurface pressures to help force oil into wells.

1 **Policies:**

- 2
- 3 1. It is the policy of Duchesne County to supports efforts to make adequate water available
- 4 for the energy industry and supports efforts of the industry to conserve, recycle and reuse
- 5 water.
- 6
- 7 2. The County discourages efforts to evaporate wastewater, but allows for evaporation
- 8 ponds to be constructed in accordance with the County zoning ordinance.
- 9

10 **Summary of Water Resource Objectives**

- 11
- 12 1. Maintain or improve water quality to protect the health and well-being of county residents
- 13 and the desirability of the county as a place to visit and recreate.
- 14
- 15 2. Balance water resource allocation among beneficial uses, e.g., agricultural, recognizing
- 16 that growing populations will require larger portions of municipal and industrial water
- 17 and an increased interest in water-based recreation.
- 18
- 19 3. Support ongoing water quality and quantity monitoring to inform water and land
- 20 management activities that protect surface water and groundwater.
- 21
- 22 4. Obtain benefits allocated to the county as part of state and federal water development
- 23 projects, e.g., Central Utah Project.
- 24
- 25 5. Ensure that allocation of water resources is administered under applicable Utah laws and
- 26 Prior Appropriation Doctrine.
- 27
- 28 6. Ensure that federal lands and watersheds are managed for optimal water yield.
- 29
- 30 7. Integrate multiple strategies for meeting future water demands not limited to
- 31 conservation, conversion, water transfers, water development, conjunctive use of surface
- 32 and ground water, aquifer storage and recovery, secondary irrigation systems, cooperative
- 33 agreements (arrangements with other water suppliers to share/lease their excess supplies),
- 34 and water reuse (recycling wastewater effluent).
- 35
- 36 8. The high quality of Ashely National Forest water should not be impaired.
- 37
- 38 9. Take an active role in state and federal water resource management processes, including
- 39 revisions to the definition of waters of the U.S. and groundwater management.
- 40
- 41
- 42
- 43
- 44

1 **Summary of Water Resource Policies**

- 2
- 3 1. Adhere to state-developed water quality standards.
- 4
- 5 2. Support ongoing water quality monitoring to establish baseline conditions to track
- 6 potential surface and groundwater contamination that could result from changes in land
- 7 use, e.g., oil shale and oil sands development.
- 8
- 9 3. Recognize that natural conditions and processes may affect achievement of state water
- 10 quality standards and might not be indicative of impairment.
- 11
- 12 4. Adhere to water quality standards and those mitigation strategies outlined for nonpoint
- 13 and point sources in local total maximum daily load documents.
- 14
- 15 5. Water quality studies undertaken by or on behalf of the public land management must be
- 16 coordinated with the counties.
- 17
- 18 6. Protect against surface and groundwater contamination.
- 19
- 20 7. Support projects that improve water quality and increase quantity and dependability of
- 21 water supply.
- 22
- 23 8. Impound wastewater/stormwater from agriculture, mining, or other surface disturbance
- 24 activities.
- 25
- 26 9. Water quality testing guidelines should be established by the state and not the federal
- 27 government. Mandated water quality tests should be financed by the agency requiring the
- 28 testing. At a minimum, the county feels that agencies should modify testing requirements
- 29 to fit local necessity and circumstances.
- 30
- 31 10. Participate in the Colorado River Basin Salinity Control Program.
- 32
- 33 11. Work toward recognition of industrial applications, e.g., mining processes, as a beneficial
- 34 use.
- 35
- 36 12. Participate in integrated water resource management processes that seek to coordinate
- 37 development and management of water, land, and related resources in order to maximize
- 38 economic and social welfare without compromising the sustainability of vital ecosystems.
- 39
- 40 13. Ensure that federal reserved water rights, tribal rights, and threatened and endangered
- 41 species conservation flow recommendations located within the county are included in
- 42 discussions regarding future water resource management, development, and conservation
- 43 decisions. The onus of water resource management, development, and conservation
- 44 should not fall only to the counties or individual water rights holders.

- 1 14. Use the best available water resource data when conducting planning activities.
2
- 3 15. Support maintenance of existing water quantity measurement equipment, e.g., U.S.
4 Geological Survey gauges and SNOTEL, to document water resource availability.
5
- 6 16. Consider installing water meters at appropriate locations.
7
- 8 17. Water rights held by federal entities must be obtained through the state water
9 appropriation process and will not infringe upon downstream water rights.
10
- 11 18. Protect property rights associated with implementation of state and federal water
12 development projects.
13
- 14 19. As a stakeholder, the county has a voice in any proposed sale, lease, exchange, or transfer
15 of water rights and should comment.
16
- 17 20. Decreases in consumptive and non-consumptive uses of water downstream of the Ashley
18 National Forest are not supported.
19
- 20 21. Incorporate a watershed approach for water quality protection and restoration that
21 supports current and potential future uses.
22
- 23 22. Initiate local water management planning that addresses water supply and demand for
24 agriculture, industry, recreation, culinary, ecosystem, and other uses and coordinates with
25 local water conservancy districts and DWRe plans (or planning processes) that currently
26 extend into the future.
27
- 28 23. Use existing local water resource knowledge and develop future knowledge through
29 education.
30
- 31 24. Use and adapt water conservation education strategies developed by the state and other
32 entities that focus on water supply and demand and on diverse strategies for meeting
33 demand.
34
- 35 25. Coordinate with county landowners, e.g., public, tribal, and private, to assess potential
36 water storage sites to meet increased demands for water.
37
- 38 26. Establish reasonable water conservation objectives as one way to meet future water
39 demands.
40
- 41 27. Direct water development for livestock outside of sensitive riparian, stream, and wetland
42 areas.
43
44

- 1 28. Encourage management of unpaved roads on the Ashley National Forest for watershed
2 and water quality protection while protecting existing access rights and public access.
3
- 4 29. As a stakeholder, provide comments on new Clean Water Act rules that modify the
5 definition of waters of the U.S. and increase federal jurisdiction among other topics.
6
- 7 30. Participate in upcoming Ashley National Forest plan revisions and all future revisions.
8

Section 10. Water Rights

Findings: Water is the lifeblood of the Uintah Basin and Duchesne County. Efficient water conservation is essential to maintain a balance of usage by agriculture, industry and public. Protection of water rights is important as the demand for water increases with growth and development.

As set forth in Section 73-1-1 of the Utah Code, all waters of the state are owned exclusively by the state in trust for its citizens. These waters are subject to appropriation for beneficial use; and are essential to the future prosperity of the County and the quality of life within the County. As set forth in Section 73-1-3 of the Utah Code, this beneficial use shall be the basis, the measure and the limit of all rights to the use of water in the state.

Most of Duchesne County lies within the Duchesne River drainage basin, where water appropriation is in the restricted category (see Map #30). Water rights applications are reviewed by the regional office of the Utah Division of Water Rights, located in Vernal (see Map #31).

The major elements of a water right include the priority date, the quantity of water involved (flow rate and volume), the source of the water supply, the approved point of diversion, the approved uses for which the water can be used (such as irrigation, domestic, stock water, mining or municipal), the period of allowed use and the place of allowed use.

The State of Utah will consider issuance of a water right after analysis of several factors, which are set forth in Section 73-3-8 of the Utah Code.

The State of Utah may allow changes in water rights, such as changing the point of diversion, the place of use, the nature of the use or the period of use after considering whether the change will impair existing water rights and determining that the change will not enlarge the underlying water right.

The State of Utah has the right to develop and use its entitlement to interstate rivers for the benefit of all citizens. All water rights desired by the federal government must be obtained through the state water appropriation system.

Flaming Gorge – Green River Water Rights

As stated in Section 9 above, Duchesne County has a 47,600 acre foot water right on the Green River but, because the ultimate phase of the Central Utah Project was de-authorized, there is no way to transport the water for use in the County.

In their 2015 publication *Uintah Basin Planning for the Future*, the Utah Division of Water Resources (DWRe) describes how local water districts intended to use the Flaming Gorge water rights. “In 2007, a collaborative study was done by the Central Utah Water Conservancy District (CUWCD), Duchesne County Water Conservancy District (DCWCD) and the Uintah Water

1 Conservancy Districts (UWCD). The purpose of this study was to show how the districts intended to
2 use the Flaming Gorge water rights awarded to them by the Board of Water Resource. The study also
3 identified and evaluated scenarios to use the water rights on the Uinta and Green Rivers (held by the
4 Duchesne County WCD and Uintah WCD) to meet municipal, agricultural, and energy industry
5 demands (Figure 2). These demands were split into two categories— near future and likely future.
6 Near future demands refer to applications for a portion of the Green River Allocation that have been
7 approved by the Uintah WCD and Duchesne County WCD and are imminent water needs. Likely
8 future water demands are those that are expected to be realized in the future because of projected
9 growth based on previous studies and discussions with land owners, municipalities and energy
10 industry.” (DWRe 2015)

11 12 **Energy Considerations**

13
14 The production of energy resources can have impacts on water supplies.

15
16 **Policy:** It is the policy of Duchesne County that the development of energy resources be
17 conducted in a manner that uses water in accordance with terms set forth by the Utah Division of
18 Water Rights, the State Engineer and the Utah Division of Oil, Gas and Mining fracking rules.

19 20 **Summary of Water Rights Policies**

21
22 It is the policy of Duchesne County that:

- 23
24 1. Utah State Water Laws of Prior Appropriation Doctrine and Beneficial Use are
25 recognized as the legal basis for perfecting all water rights for the use of all water within
26 Duchesne County.
- 27
28 2. Privately held water rights shall be protected from federal and/or state encroachment or
29 coerced acquisition. Duchesne County shall oppose any movement toward nationalization
30 or federal control of Utah water rights and resources.
- 31
32 3. State water right filings held by individuals, partnerships, irrigation districts, culinary
33 water districts, or corporations are a private property right that may be sold, exchanged, or
34 held separately from the land by any entity.
- 35
36 4. Individual stockholders within a mutual irrigation company are entitled to a proportionate
37 share of the company’s water for irrigation use, based on their shares of stock in the
38 company.
- 39
40 5. Any proposed sale, lease or exchange of water rights involving a public land management
41 agency shall address the interests of Duchesne County and such a sale must include
42 appropriate mitigation.
- 43
44

- 1 6. Duchesne County supports the State of Utah's "prior appropriation" and "beneficial use"
2 principles of water right allocations.
3
- 4 7. Duchesne County insists that all government agencies, private citizen groups, private
5 citizens, corporations, partnerships and any other organized or unorganized entity must
6 obey the current laws of the State of Utah and acknowledge the rules, by-laws, policies
7 and/or articles of incorporation that have been established over many years of operation
8 by water right owners.
9
- 10 8. Any non-owner entity must purchase, lease, trade, or borrow water rights using the
11 accepted legal processes of water right acquisition as allowed by State law and water right
12 owner procedures and policies. If someone wants in-stream flows, they should be
13 required to purchase the water for that use under a fair-market system.
14
15

Section 11. Irrigation

Findings:

The irrigation water supply comes from precipitation, mostly in the higher elevations of Duchesne County. Rainfall alone is not adequate for crop production. Therefore, irrigation water derived from winter snow pack is used to supplement plant growth requirements. Irrigation companies service approximately 122,400 acres of agricultural land in the county.

Duchesne County irrigators are served by several irrigation companies. The Utah Division of Water Rights lists the following companies (and acreage served) in their database: Dry Gulch Irrigation (over 53,000 acres), Red Creek Irrigation (2,763 acres) and the Pioneer Canal Company (1,180 acres). Other irrigation companies listed are the Hidden Valley Irrigation Company, the Midview Irrigation Company (470 acres) the Tabby Irrigation Company (529 acres), the Uintah Basin Irrigation Company (279 acres) and the Windy Ridge Water Company (30 acres). The following irrigation companies are not listed by the Division of Water Rights but are known to exist: Rhodes Canal Company, Lake Fork Company, Farnsworth Company, Rocky Point Company, Shank's Ditch/Knight's Canal and the Duchesne Feeder Company. Other irrigation companies with facilities in Duchesne County, but serving primarily Uintah County are the Ouray Park Irrigation Company and the Uintah River Irrigation Company.

These irrigation companies hold various water rights issued by the State and individual irrigators own shares of stock in the companies. Water is distributed based on hours, acres or water volume. Shareholders must meet certain rights or obligations established by the companies. Water right changes can be filed by the shareholder.

Irrigation water comes primarily from lakes in the Uinta Mountains and streams or canals that flow into the Uinta Basin from the south slopes of the Uintas. Early irrigation systems were constructed to serve Indian lands; then such systems were expanded once the Uinta Basin was opened to homesteading in 1905. A 1991 publication entitled, "Beyond the Wasatch: The History of Irrigation in the Uinta Basin and Upper Provo River Area of Utah," by Gregory D. Kendrick and Charles S. Peterson, the National Park Service and Bureau of Reclamation, goes into great detail regarding the development of the irrigation system that serves present day Duchesne County.

Wise use of irrigation water in the arid climate of Duchesne County is critical. The Natural Resources Conservation Service (NRCS) publishes an Irrigation Water Management Guide as part of its Conservation Practice Standards, Code 449. The document includes several purposes for such guidance, enabling irrigators to:

- Manage soil moisture to promote desired crop response.
- Optimize use of available water supplies.
- Minimize irrigation induced soil erosion.

- 1 • Decrease non-point source pollution of surface and groundwater resources.
- 2 • Manage salts in the crop root zone.
- 3 • Manage air, soil, or plant micro-climate.
- 4 • Proper and safe chemigation or fertigation.
- 5 • Improve air quality by managing soil moisture to reduce particulate matter movement.
- 6 • Reduce energy use.

7
8 This NRCS Guidance gives irrigators tips for meeting the purposes listed above and encourages
9 irrigators to take the following under consideration as they plan their irrigation systems:

- 10 • Consideration should be given to managing precipitation effectiveness, crop residues, and
11 reducing system losses.
- 12 • Consider potential for spray drift and odors when applying agricultural and municipal
13 waste waters. Timing of irrigation should be based on prevailing winds to reduce odor. In
14 areas of high visibility, irrigating at night should be considered.
- 15 • Consider potential for overspray from end guns onto public roads.
- 16 • Equipment modifications and/or soil amendments such as polyacrylamides and mulches
17 should be considered to decrease erosion.
- 18 • Consider the quality of water and the potential impact to crop quality and plant
19 development.
- 20 • Quality of irrigation water should be considered relative to its potential effect on the soil's
21 physical and chemical properties, such as soil crusting, pH, permeability, salinity, and
22 structure.
- 23 • Avoid traffic on wet soils to minimize soil compaction.
- 24 • Consider the effects that irrigation water has on wetlands, water related wildlife habitats,
25 riparian areas, cultural resources, and recreation opportunities.
- 26 • Management of nutrients and pesticides.
- 27 • Schedule salt leaching events to coincide with low residual soil nutrients and pesticides.
- 28 • Water should be managed in such a manner as to not drift or come in direct contact with
29 surrounding electrical lines, supplies, devices, controls, or components that would cause
30 shorts in the same or the creation of an electrical safety hazard to humans or animals.
- 31 • Consideration should be given to electrical load control/interruptible power schedules,
32 repair and maintenance downtime, and harvest downtime.
- 33 • Consider improving the irrigation system to increase distribution uniformity or
34 application efficiency of irrigation water applications.
- 35
- 36
- 37
- 38

1 **Salinity Control**

2
3 According to the USDA - Natural Resources Conservation Service, in the 1960s, more than two-
4 thirds of the water taken from the Colorado River and its tributaries was used to irrigate
5 agricultural lands. Flood irrigation was the main type of irrigation and such practices resulted in
6 massive amounts of salt being dissolved by excess irrigation water and carried back to the river.
7 Water diverted to irrigate cropland and pasture, deep percolates through saline soil formations,
8 transporting dissolved salts to the river system. Salts come from a source of dissolved solids from
9 Tertiary saline lacustrine deposits.

10
11 With irrigation being controllable and a major contributor to the salt load in the river, it was
12 determined that irrigation system improvements, both on-farm and off-farm, would provide the
13 most economical opportunity to reduce salt loading by improving irrigation efficiencies to reduce
14 deep percolation and seepage conditions.

15
16 The Colorado River Basin Salinity Control Act of 1974 authorized federal funding of salinity
17 control projects to manage salinity in the Colorado River. Each of the listed Salinity Control
18 Units was facilitated through the Salinity Control Act (PL-93-320) and subsequent legislation
19 authorizes the USDA Soil Conservation Service to implement and manage salinity control
20 throughout the Colorado River Basin.

21
22 Salinity control projects were launched in Utah starting with Uintah Basin Unit in 1982, Price-
23 San Rafael Rivers Unit in 1997, Manila-Washam Unit in 2007, Green River Unit in 2010 and
24 Muddy Creek Unit in 2010. The Uintah Basin Salinity Control Unit located in Duchesne and
25 Uintah counties, encompasses 225,000 irrigated agricultural acres irrigated with water diverted
26 from tributaries of the Duchesne and Green Rivers south of the Uinta Mountains and north of
27 Ouray, Utah (see Map #32).

28
29 The Salinity Control Act – Environmental Assessment (EA) requires that areas within the
30 designated project units where wildlife habitat values were lost due to irrigation improvements
31 will be replaced concurrently and proportionally to the installation of the improved irrigation
32 system acres. NRCS and U.S. Fish and Wildlife Service have agreed on set wildlife habitat
33 replacement acreage amounts for each designated project unit. NRCS is responsible to apply,
34 greater than 2% of the irrigation improvement acres in wildlife replacement habitat acres within
35 each Unit. The Uintah Basin wildlife replacement acreage goal of 3,200 acres is now at 21,000
36 acres, showing 656% of the acreage goal completed.

37
38 The 1982 EIS for the Uintah Basin anticipated treating 160,000 acres, controlling 140,500
39 tons/year of salt at a cost of \$196/ton. A second EIS was written in 1991 expanding the Uintah
40 Basin Unit by 20,800 acres, 8900 acres would be treated (7.5% improved flood) to reduce salt
41 load by 8600 tons/year of salt at a cost of \$188/ton.

42
43 Treatment options to reduce salinity have been continuously reevaluated. It is now expected that
44 70% of the original 225,000 irrigated acres in the Uintah Basin area will ultimately be treated

1 which is goaled at 160,000 acres.
2

3 During fiscal year 2015, the NRCS treated 923 acres in the Uintah Basin, controlling 692
4 tons/year of salt at a cost of \$196/ton. Cumulative thru fiscal year 2015, the NRCS has treated
5 158,092 acres, controlling 128,029 tons/year of salt, on-farm. Of the original 160,000 acres to be
6 treated, another 1908 acres or 1% will continue to be converted to improved irrigation systems.
7 In fiscal year 2015, no additional acres of wildlife habitat replacement has taken place in the
8 Uintah Basin Unit.
9

10 **Policies:** It is the policy of Duchesne County that:
11

- 12 1. Potential reservoir sites and delivery system corridors shall be identified in land use plans
13 and protected from federal or state action that would prohibit or restrict future use for
14 those purposes. Said plans would include provisions for adding or deleting potential
15 reservoir sites and delivery system corridors when deemed appropriate.
16
- 17 2. All federal agency actions shall recognize legal canal, lateral, and ditch easements and
18 rights-of-way.
19
- 20 3. Many wetlands are created by fugitive water from irrigation systems. It is the policy of
21 Duchesne County that when law requires mitigation of impacts from conservation and
22 other projects, the creation of artificial wetlands shall be considered only after all other
23 mitigation possibilities have been exhausted. Creation or maintenance of an artificial
24 wetland is contrary to the intent of conservation.
25
- 26 4. Irrigators should adhere to the Irrigation Water Management guidance set forth in the
27 Natural Resource Conservation Service Conservation Practice Standards.
28
- 29 5. Continued efforts should be made to reduce salinity impacts of irrigation on waters of the
30 Colorado River Basin.
31

Section 12. Ditches & Canals

Findings: The major rivers in the Duchesne County include the Duchesne River, Strawberry River, Lake Fork River, Rock Creek and the Yellowstone River. There are many other smaller creeks that feed into them. These streams are fed by springs, storm runoff, and snowmelt from the Uinta Mountains and foothills and by ground water discharge. These streams, lakes and reservoirs supply water via pipelines, ditches and canals to provide irrigation water for use in towns and communities.

Ditches and canals are an important part of the infrastructure of Duchesne County. Some can be traced back to pioneer times when the County was initially settled. These facilities convey water to agricultural uses and other secondary water irrigators. Some ditches and canals provide storm water services and some may mitigate high groundwater problems.

In Utah, there have been several situations where ditches or canals have failed. These failures have caused not only property and infrastructure damage, but injury and loss of life. The Utah Legislature, in the 2014 general session, attempted to address this problem. Section 73-5-7 of the Utah Code gives the State Engineer authority to inspect ditches and canals and order repairs as necessary to protect public safety. The State Engineer also has the responsibility to inventory and maintain a database of all human-made water conveyance systems that carry five cubic feet per second or more of water. Part of that responsibility is to ensure that each ditch or canal operator has prepared the management plan required under Section 73-10-33 of the Utah Code. This plan requires operators of water conveyance facilities to map their locations, identify any areas of potential slope instability, show proof of adequate liability insurance coverage in the event of a breach, adopt a maintenance and improvement plan, adopt an emergency response plan, identify sources of financing for maintenance and improvements and determine the effects of potential storm water flows into the ditch or canal.

Policies:

1. Duchesne County supports the efforts of ditch and canal operators to provide water to their customers and shareholders.
2. The County supports the efforts of the State Engineer to ensure that such water conveyances are operated and maintained in a safe manner.
3. Duchesne County supports efforts of ditch and canal operators to map their systems and provide such mapping to the county for use in making land use decisions.

Section 13. Flood Plains & River Terraces

Findings: According to the Federal Emergency Management Agency (FEMA), flooding is an ever present threat; it can happen at any time and in virtually any location. While certain areas may be more prone to flooding – especially those in coastal areas or riverine environments – history has shown that almost no place is immune to flooding. Flooding can have many causes: a quick heavy rainfall or rapid snowmelt can cause flash flooding, a blocked culvert or storm sewer drain can create flooding in a city neighborhood, or prolonged wet weather can swell streams and rivers. Even dry conditions can pose a threat, as minimal rainfall in wildfire burn areas or drought stricken regions can create flash flooding when soils are unable absorb even slight precipitation.

Flood events in Duchesne County usually result from snowmelt associated with above-average snow packs, rain-on-snow events, and summer storm precipitation events. Flood events are part of a stream’s natural hydrograph, and development in active floodplains often results in property damage.

Due to the lack of vegetation in many areas of the county, heavy storm waters can cause flash flooding and erosion, bringing tons of sediment and debris into the rivers and drainages. These events affect watershed health and water quality. Some practices that may help to alleviate this problem include flood structures, dams, catch basins, gully plugs, and reseeding grass ways.

Some floodplain areas have seen an over-growth of vegetation which can increase damage by flooding. Development of homes in floodplain areas is a concern. Historically, some homes have been constructed in floodplains and some have experienced damage during high runoff conditions.

Duchesne County has not been mapped for flood zones, in spite of formally requesting such mapping since 2005. The only jurisdictions in the County with official flood hazard zone maps are Duchesne City and Myton City. Federal funding limitations have resulted in more populated counties being mapped ahead of Duchesne County. The County passed flood zone regulations in its zoning ordinance in 2005, which were scheduled to become effective once flood zone locations are mapped. However, in 2016, the County was informed that it would need to participate in the National Flood Insurance Program (NFIP) before mapping would occur. A modified flood zone ordinance was approved on November 14, 2016 and became effective December 7, 2016. Participation in the NFIP began on March 30, 2017.

Policy: It is the policy of Duchesne County to continue its efforts to participate in the National Flood Insurance Program and have flood zones mapped so that property owners can be more aware of flood hazards and be eligible to obtain flood insurance at reasonable rates.

One potential source of flooding is from a failure of one of the 40 inventoried dams in Duchesne County (there are many smaller dams that are not inventoried – see Map #33). According to the Utah Division of Water Rights, Dam Safety Program, of the 40 dams in the county, 12 are rated

1 as High Hazard, 7 are rated Moderate Hazard and 21 are rated Low Hazard. Among the high
2 hazard dams are the larger dams, including Starvation, Stillwater, Big Sand Wash, Moon Lake,
3 Midview and Red Creek. The Soldier Creek Dam, on the Strawberry River, is located in
4 Wasatch County and is rated high hazard. A failure of that dam would impact lands in Duchesne
5 County.

6
7 According to the FEMA National Dam Safety Program Fact Sheet, the area downstream of a dam
8 that would be impacted in the event of a failure or uncontrolled release of water is called the dam
9 failure inundation zone. Map #34 depicts the location of predicted worse case inundation zones
10 in the event of a failure of some of the major reservoirs in the County; however, most of this data
11 (for the Midview, Moon Lake, Soldier Creek, Starvation and Upper Stillwater dams) is not
12 available to the public and does not appear on the map. Map #34 shows no FEMA flood zones
13 in the County (the only FEMA flood zones are currently located within Duchesne City and
14 Myton City).

15 **Objectives**

- 16 1. Restore floodplain connectivity for threatened and endangered species that rely on these
17 18 locations in areas outside human habitation while preserving the health and safety of
19 20 residents.
- 21 22 2. Restore floodplain connectivity for improved flood control in suitable areas.
- 23 24 3. Educate citizens regarding measures they may implement to help protect their property
25 26 from flood damage, such as the following recommended by FEMA:
 - 27 28 a. Make sure downspouts carry water several feet from your house to a well-drained
29 30 area. About 2,500 gallons of water will come from a 1,000 square foot roof with
31 one foot of snow depth across the roof. This much water may cause problems if
32 allowed to drain next to the house.
 - 33 34 b. Examine and clean your sump pump if you have one. Test your sump pump by
35 36 pouring water into the pit. Make sure the discharge hose carries the water several
37 feet away from the house to a well-drained area. Also make sure that the pipe is
38 on sloped ground so it drains to prevent it from freezing.
 - 39 40 c. Remove snow from around rural yards to minimize soft, wet soil conditions.
41 Remember that a 20-foot diameter 10-foot high pile of snow contains about 2,600
42 gallons of water. Move the snow to well-drained areas.
 - 43 44 d. Anchor any fuel tanks. An unanchored tank in your basement can be torn free by
45 floodwaters and the broken supply line can contaminate your basement. An
46 unanchored tank outside can be swept downstream, where it can damage other
47 houses.

- 1 e. Have a licensed electrician raise electric components (switches, sockets, circuit
- 2 breakers and wiring) at least 12" above your home's projected flood elevation.
- 3
- 4 f. Place the furnace and water heater on masonry blocks or concrete at least 12"
- 5 above the projected flood elevation.
- 6
- 7 g. If your washer and dryer are in the basement, elevate them on masonry or
- 8 pressure-treated lumber at least 12" above the projected flood elevation.
- 9
- 10 h. Plan and practice a flood evacuation route with your family.
- 11
- 12 i. Ask an out-of-state relative or friend to be the "family contact" in case your family
- 13 is separated during a flood. Make sure everyone in your family knows the name,
- 14 address, and phone number of this contact person.
- 15

16 **Policies:**

- 17
- 18 1. Support Utah Division of Water Rights Dam Safety Program that assesses existing dam
- 19 condition to prevent dam failure or uncontrolled release of water.
- 20
- 21 2. Restrict construction of habitable structures and non-essential infrastructure in
- 22 floodplains.
- 23
- 24 3. Manage flows from regulated streams and rivers when possible to periodically reestablish
- 25 floodplain connectivity.
- 26
- 27 4. Develop floodplain ordinances and overlays as appropriate in an effort to coordinate with
- 28 FEMA on floodplain mapping.
- 29
- 30 5. Encourage the use of flood structures, dams, catch basins, gully plugs, and reseeded of
- 31 grass ways to help reduce erosion during and after storm events.
- 32

Section 14. Wetlands

Findings: According to the U.S. Army Corps of Engineers, a wetland is an area that is covered by shallow water or has waterlogged soils for long periods of time during the growing season in most years. Prolonged saturation with water leads to chemical changes in wetland soils, which in turn affect the kinds of plants that can grow in wetlands. Some wetlands are easy to recognize because the water sits on the land surface for much of the year. Other wetlands exist due to saturation of the soil by groundwater and can be difficult to identify. Drawdown of groundwater levels can affect conditions of local wetlands.

The Corps lists the following definition of “Wetlands” in its compilation of regulatory terms (<http://www.lrl.usace.army.mil/Portals/64/docs/regulatory/Permitting/Terms.pdf>)

“Wetlands mean those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, and bogs. For official determination whether or not an area is classified as a wetland contact the Army Corps of Engineers.” (33 CFR 328)

Generally, wetlands are lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface. Wetlands vary widely because of regional and local differences in soils, topography, climate, hydrology, water chemistry, vegetation, and other factors, including human disturbance.

According to the National Wetlands Priority Conservation Plan (NWPCP) of the USFWS (USFWS 1989), wetlands are considered to be lands in transition zones between aquatic and terrestrial systems where the land is covered by shallow water or the water table is usually near or at the ground surface. The NWPCP was required by Public Law 99-645 and is intended to assist public agencies and the private sector with identifying wetlands warranting priority consideration for protection.

Wetlands are critical components of healthy regional ecosystems and provide a multitude of ecological, economic and social benefits. They provide essential habitat for many species of fish and amphibians, as well as important resting places for migrating birds. Wetlands support many plant and animal species, including the Ute ladies’-tresses (*Spiranthes diluvialis*), which is on the threatened and endangered species list. Wetlands are nurseries for fish of recreational importance in the County and also provide opportunities for hunting, boating and wildlife viewing. They can also provide and store water, control floods and erosion, purify wastewater and recharge groundwater. Wetlands support downstream aquatic systems by producing food and organic material that is flushed out of wetlands and into streams during high flows.

Wetlands are known by many different names, some of which are specific to particular regions of the country. Wetlands that are dominated by trees and shrubs are commonly called swamps.

Wetlands that consist of herbaceous vegetation are known as marshes and include wet meadows,

1 which are common in certain areas of Duchesne County. Wetlands come in other forms, such as
 2 ponds, lake fringes, vegetated playas, bogs, shrub-scrub wetlands, and forested wetlands.
 3 Riparian areas are not always wetlands.

4
 5 Wetlands are federally recognized as special aquatic sites and are regulated as waters of the U.S.
 6 under the Clean Water Act.

7
 8 The Bureau of Land Management and the U.S. Forest Service provide guidance for grazing
 9 management in riparian-wetland areas in *Grazing Management for Riparian-Wetland Areas*
 10 (Leonard et al. 1997).

11
 12 The National Wetland Inventory (NWI) program, administered by the U.S. Fish and Wildlife
 13 Service, consists of planning-level spatial data illustrating the extent and location of wetlands and
 14 other aquatic resources in the United States. Wetland and other aquatic resources are classified
 15 using the Cowardin (Cowardin et al. 1979) system. Table WET1 provides estimated acreages for
 16 different wetland classes at the county level, based on NWI data, and Map #35 shows the NWI
 17 data for Duchesne County. Palustrine emergent wetlands, which include marshes and wet
 18 meadows, have the largest area within the county. This class is also commonly affected by
 19 irrigation practices, which can reduce (hydrological modifications and construction of ditches) or
 20 increase (application of additional water to the landscape) wetland acreage. Wetland mapping
 21 for northeastern Utah was completed in federal fiscal year 2010. The National Wetland
 22 Inventory maps, now available at <http://www.fws.gov/wetlands/> provide County staff and the
 23 public with the general location of areas with wetland characteristics.

Table WET1. Acres of National Wetland Inventory Data in Duchesne County

Wetland Classification	Duchesne County
L1: lacustrine limnetic	8,985
L2: Lacustrine littoral	1,296
PAB: palustrine aquatic bed	2,730
PEM: palustrine emergent	34,136
PFO: palustrine forested	616
PSS: palustrine scrub-shrub	6,965
PUB: palustrine unconsolidated bottom	145
PUS: palustrine unconsolidated shore	357
Total	57,047

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

1 According to the state’s Comprehensive Outdoor Recreation Plan, wetlands account for about 0.2
2 percent of Utah’s land; however, the percentage of Duchesne County land considered wetlands is
3 approximately 2.7 percent.

4
5 The Utah Reclamation Mitigation and Conservation Commission (Mitigation Commission),
6 which was established in 1992 by the Central Utah Project Completion Act, administers
7 mitigation projects that “offset the impacts to fish, wildlife and related recreation resources
8 caused by the Central Utah Project and other federal reclamation projects in Utah.” The
9 Mitigation Commission has worked with the Bureau of Reclamation and the Ute Tribe to
10 establish a large wetlands mitigation project in Duchesne County, located southeast of Myton
11 City, known as the Lower Duchesne Wetlands Mitigation Project. This project, which was
12 approved despite the objections of the County, involved the acquisition of over 1,500 acres of
13 land between 2010 and 2012, with construction of the wetlands in 2014, 2015 and completion of
14 the entire project by 2018. Mosquito and weed control are major issues associated with this
15 project.

16
17 **Objectives**

- 18
19 1. Identify high priority or ecologically sensitive wetland areas for conservation.
20
21 2. Track changes and updates in federal regulations that affect wetland jurisdiction and
22 permitting to avoid overreach by the U.S. Environmental Protection Agency and the U.S.
23 Army Corps of Engineers.
24
25 3. Support wetland conservation through planning and management.
26
27 4. Support the treatment of invasive species, e.g., *Phragmites*, tamarisk, and Russian olive,
28 which can degrade habitat value and impact groundwater levels.
29
30 5. Ensure adequate mosquito and weed control measures are enacted in wetland areas.
31

32 **Policies:**

- 33
34 1. It is the policy of the Duchesne County to utilize information from the National Wetland
35 Inventory to determine where potential wetland conditions exist.
36
37 2. If wetland conditions exist in the vicinity, it is the policy of the County to require wetland
38 delineations prior to development. Such delineations will determine whether such
39 development will require a permit from the U.S. Army Corps of Engineers under Section
40 404 of the Clean Water Act. Section 404 requires a permit from the Corps for the
41 placement of fill or dredged material in a wetland, ditching activities, levee, dam or dike
42 construction, mechanized land clearing, land leveling and road construction.
43
44

- 1 3. Coordinate comments with other stakeholders regarding Clean Water Act rule revisions.
- 2
- 3 4. Participate in federal, tribal, state, and local wetland conservation planning processes.
- 4
- 5 5. Identify opportunities for creation, restoration, and enhancement of wetlands to augment
- 6 the ecosystem services these resources provide.
- 7
- 8 6. Manage access by livestock, wild horses and burros, and native ungulates to wetlands to
- 9 prevent overgrazing when appropriate, with the understanding that all have potential to
- 10 negatively affect these resources when sensitive vegetation, soil, and hydrology
- 11 conditions exist.
- 12
- 13 7. Use scientific methodology, e.g., proper functioning condition, to guide management
- 14 decisions regarding recreation and grazing exclosures in wetlands.
- 15
- 16 8. Offset road alignments at least 300 feet from riparian areas and wetlands as practicable.
- 17
- 18 9. Consider release of northern tamarisk beetle (*Diorhabda carinulata*) as a biological
- 19 control of tamarisk, an invasive plant species.
- 20
- 21 10. Cooperate with Natural Resources Conservation Service, Utah State University
- 22 Extension, and other entities responsible for integrated weed management in wetland
- 23 areas.
- 24
- 25 11. Cooperate with other entities to control mosquito populations in wetland areas to protect
- 26 public health.
- 27
- 28

Section 15. Riparian Areas

Findings: Quoting from a publication written by Mindy Pratt, Utah State University, entitled “What is a Riparian Area,” the term “riparian” is defined as vegetation, habitats, or ecosystems that are associated with bodies of water (streams or lakes) or are dependent on the existence of perennial, intermittent, or ephemeral surface or subsurface water drainage. Put more simply, riparian areas are the green ribbons of trees, shrubs, and grasses growing along water-courses.

Riparian areas occur in a wide range of climatic, hydrologic and ecological environments. Different latitudes and altitudes can support very different riparian communities. This is caused primarily by changes in precipitation and temperature. In Duchesne County, you can find riparian areas everywhere from high elevation montane forests through intermediate-elevation woodlands to low-elevation shrub lands and desert grasslands.

Riparian areas are ecosystems. An ecosystem is a functional system that includes both a biotic part in the organisms, such as the plants and animals, and an abiotic part which factors in their immediate environment such as soil and topography. These organisms interact both with each other and with their environment. Each ecosystem is unique because the organisms and the environment differ significantly from other ecosystems.

Riparian areas are functioning properly when adequate vegetation, landforms, or large woody debris is present to dissipate stream energy, filter sediment, capture bedload, aid floodplain development, improve floodwater retention and groundwater recharge, develop root masses that stabilize streambanks against cutting action, develop diverse ponding and channel characteristics, and support greater biodiversity (Leonard et al. 1997).

The three main characteristics that define riparian area ecosystems are hydrology, soils and vegetation. These reflect the influence of additional moisture compared to the adjacent, drier uplands. Riparian areas are the transition zones, or ecotones, between aquatic (water-based) systems and terrestrial (land-based) systems, and usually have characteristics of both. These characteristics and location make it habitat for a larger number of species of plants and animals.

Because riparian areas are at the margin between water and land, their soil was most likely deposited by water and could be washed away by water. Protecting soil, stream banks or water edges from excess erosion is an important function of riparian plants. Thus, properly functioning riparian areas absorb the water, nutrients, and energy from big events and use them to recover from disturbances while improving water quality. The toughness of riparian plants with dense, strong root systems, stems the flow of flood waters, and adds to riparian stability and habitat diversity.

Some riparian areas, especially those not functioning properly or in high energy - high sediment locations are very dynamic and disturbance-driven. Plant communities may be susceptible to rapid change, if soil and water conditions change dramatically. These changes might include:

- 1 a. Flooding or lack of flooding either temporary or more long term, as caused by beavers, or
2 man-made structures;
- 3
- 4 b. Deposition of sediment on stream banks and across floodplains;
- 5
- 6 c. Dewatering of a site by a variety of means; and
- 7
- 8 d. Changes in channel location or elevation.
- 9

10 Riparian areas are found at every elevation and in all landforms, and differ depending on local
11 physical conditions (water, soil, temperature, etc.) and their location (elevation, valleys, canyons,
12 etc.). High mountain riparian areas may be narrow and in deep ravines or canyons, while
13 lowland floodplains in wide valleys may have large meanders. Desert washes may be sandy and
14 only have water for a short time each year. These differences in vegetation, landform, and
15 geology have led to a wide variety of terms used to denote riparian areas. These include riparian
16 buffer zones, cottonwood floodplains, alluvial floodplains, floodplain forests and meadows.

17
18 In Duchesne County, with a low precipitation climate, the transition between riparian and upland
19 terrestrial systems is easily identifiable. This distinction is abrupt because the surrounding
20 terrestrial habitat is much drier than the riparian area. Riparian areas in the arid western United
21 States have different plant composition but are also lushier than their adjacent uplands.

22
23 Although riparian areas can differ greatly, they all have several things in commons. They are
24 shadier, cooler, and moister than the adjacent upland environments. A wide variety of animals
25 are attracted to these areas including insects, amphibians, reptiles, fish, birds, and mammals.
26 Suitable habitat (food, water, and shelter) is often provided in riparian areas to support these
27 animals which may not occur in surrounding drier areas.

28
29 In Duchesne County, riparian areas compromise less than 1 percent of the land area, but they are
30 among the most productive and valuable natural resources, rivaling our best agricultural lands.
31 They are particularly efficient at storing water, dissipating flow energies, improving water
32 quality, trapping sediment and building and maintaining stream banks. Table RIP1 below
33 provides the acreage of native and invasive riparian communities in Duchesne County as
34 determined by the U.S. Geological Survey's (USGS) National Gap Analysis Program. Map #36
35 shows the location of these riparian communities.

1

Table RIP1. Acres of Southwestern Regional Gap Analysis Riparian Communities in Duchesne County

Riparian Community	Duchesne County
Invasive Southwest Riparian Woodland and Shrubland	1,126
Rocky Mountain Lower Montane Riparian Woodland and Shrubland	16,795
Rocky Mountain Subalpine-Montane Riparian Shrubland	7,314
Total	25,235

Source: USGS (2004).

2

3 **Riparian Areas and Wildlife**

4

5 The Utah Division of Wildlife Resources (DWR) considers mountain riparian and lowland
 6 riparian areas as key habitats in their *Utah Comprehensive Wildlife Strategy*, effective October 2
 7 2005–2015 (DWR 2005). The *Utah Wildlife Action Plan* references riparian areas under key
 8 aquatic habitats and includes policies promoting their protection (Utah Wildlife Action Plan Joint
 9 Team 2015). The DWR document *A Handbook of Riparian Restoration and Revegetation for the
 10 Conservation of Land Birds in Utah with Emphasis on Habitat Types in Middle and Lower
 11 Elevations* indicates the importance the state places on these resources (Gardner et al. 1999).

12

13 **Riparian Areas on BLM and Forest Service Land**

14

15 The Utah Bureau of Land Management (BLM) uses a statewide guidance document called
 16 *Riparian Management Policy* to manage riparian areas. The policies in this document generally
 17 include maintaining or improving riparian areas to proper functioning condition through
 18 enhancement, restoration, protection, and preservation in cooperation with interested federal,
 19 state, tribal, and local governments as well as private conservation and volunteer groups. The
 20 BLM and the U.S. Forest Service (USFS) use the *Riparian Area Management* technical report
 21 (Leonard et al. 1997), to provide guidance for grazing management in riparian-wetland areas.

22

23 The Ashley National Forest reports the mileage of stream/riparian habitat restored or enhanced in
 24 Table RIP2 below.

25

Table RIP2. Miles of Stream Habitat Restored or Enhanced on the Ashley National Forest

Fiscal Year	Miles
2010	16.0
2011	14.3
2012	29.0
2013	18.0
2014	18.9
2015	23.82
2016	14.89
Total	134.91

Source: Ashley National Forest (2017).

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Riparian Areas and Timber Harvest

In forested areas, recent science published by the Pacific Northwest Research Station of the USDA Forest Service in “Science Findings, Issue #178, October 2015,” recommends that riparian areas be left undisturbed during vegetation management projects, with a minimum 50-foot wide buffer area. This buffer area protects water quality and habitat for aquatic and riparian species. In the November 2016 edition of the US Forest Service, Pacific Northwest Research Station, *Science Findings, Issue #191*, the impacts of timber harvest on streams was explored. The article, entitled “*The Idiosyncrasies of Streams: Local Variability Mitigates Vulnerability of Trout to Changing Conditions*,” noted that it is important to leave buffers along streams, minimize soil disturbance during logging and use BMPs to reduce sediment runoff on forest roads. However, it was also noted that fish are vulnerable to predation; especially during low stream flow periods and that timber harvest can increase summer flows, having a positive effect on fish growth and survival. The study also found that habitat diversity (having adequate stream shading, more places for fish to hide and more pools in the stream) minimizes the effects of climate change and timber harvest. Using this information, land managers can tailor protective measures to specific stream segments where timber harvest is planned.

Riparian area improvement projects in some areas, such as along the Duchesne River, are limited because of endangered species that limit the timing and extent of the projects.

Objectives

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

- 1 2. Conserve and protect riparian areas through application of best management practices.
- 2
- 3 3. Support the establishment of riparian buffer areas, which not only protect riparian plant
- 4 and animal species but also protect aquatic systems and water quality associated with
- 5 them.
- 6
- 7 4. Participate in state and local riparian planning opportunities, e.g., Duchesne River
- 8 Watershed Restoration Plan, as a way to prioritize water quality enhancement and water
- 9 resource protection projects, and identify funding sources.
- 10
- 11 5. Support the treatment of invasive species, e.g., *Phragmites*, tamarisk, and Russian olive,
- 12 which can degrade habitat value and impact groundwater levels.
- 13
- 14 6. Use naturalized flow management regimes from dams or other impoundments to enhance
- 15 aquatic and riparian habitat along waterways, where appropriate, and not in conflict with
- 16 human habitation.
- 17
- 18 7. Increase cover and extent of native riparian vegetation.
- 19

20 **Policies:**

- 21
- 22 1. It is the policy of Duchesne County to encourage private and public land
- 23 owners/managers to maintain the important functions of riparian areas under their
- 24 jurisdiction.
- 25
- 26 2. The County subdivision ordinance shall require identification of riparian areas on
- 27 subdivision plats so that measures can be taken to protect them.
- 28
- 29 3. Duchesne County supports the maintenance of such riparian buffer areas and creation of
- 30 habitat diversity along stream segments to mitigate impacts of timber harvest on riparian
- 31 resources.
- 32
- 33 4. Duchesne County supports the use of BMPs to avoid sedimentation impacts to riparian
- 34 areas from road development. This includes offsetting road alignments at least 300 feet
- 35 from riparian areas and wetlands and relocating or improving road crossings as
- 36 practicable.
- 37
- 38 5. Manage recreation (e.g., camping and OHV use) in riparian areas to conserve the resource
- 39 while still providing access to streams and rivers.
- 40
- 41 6. Manage access of livestock, wild horses, and native ungulates to sensitive riparian areas
- 42 using exclosures when appropriate with the understanding that all have potential to
- 43 negatively affect these resources from overgrazing.
- 44

- 1 7. Use guzzlers, reservoirs, wells, and springs to attract livestock and native wildlife away
2 from riparian areas, which can help decrease soil disturbance and impacts to aquatic
3 resources.
- 4
- 5 8. Use bio-engineering methods that facilitate riparian vegetation growth for bank
6 stabilization in lieu of hardened structures or surfaces.
- 7
- 8 9. Use scientific methodology, e.g., proper functioning condition or multiple indicator
9 monitoring, to guide management decisions in riparian areas.
- 10
- 11 10. Use riparian overlays at local levels to guide protection of riparian zones.
- 12
- 13 11. Consider releasing northern tamarisk beetle (*Diorhabda carinulata*) as a biological control
14 of tamarisk, an invasive plant species. Follow release with revegetation treatments to re-
15 establish riparian area, stabilize streambanks, and protect water quality. Support for
16 biological control and restoration is available from organizations like the Tamarisk
17 Coalition of Grand Junction, Colorado.
- 18
- 19 12. Support application of aquatic-approved herbicides to remove undesired vegetation.
- 20
- 21 13. Conduct riparian vegetation treatments to restore characteristic vegetation and reduce
22 uncharacteristic fuel types and loads.
- 23
- 24 14. Consider removing or introducing beavers to the landscape where permitted by social and
25 environmental factors.
- 26
- 27 15. Modify grazing use to avoid overgrazing if appropriate.
- 28

Section 16. Fisheries

Findings: In Utah, the Utah Division of Wildlife Resources (DWR) manages the state’s fisheries. Fish habitats (that is the state’s streams, rivers, lakes, ponds, and reservoirs) are managed by the underlying landowner, which can include state and federal agencies. Over 1000 lakes or ponds and 400 miles streams are located in the Uinta Mountains as well as several lower elevation lakes and rivers, which provide a variety of fishing experiences. Many of these are in Duchesne County.

Important fisheries exist in Utah for a variety of sportfish species, usually grouped into (a) cold water species, which typically include the whitefish, trout, char, and salmon, and (b) warm water/cool water species which include sportfish such as bass, pike, walleye, perch, catfish, bluegill, crappie, and a number of others. Rare fish species and those subject to federal listing under the Endangered Species Act are referenced more fully in the “Threatened, Endangered, and Sensitive Species” section below. For the most part, there is no fishery for imperiled species.

The Economic Value of Fisheries in Utah

From high-mountain streams and lakes, to larger reservoirs, to small community ponds, Utah offers many places to fish. Recreational fishing provides a significant economic benefit to the Utah economy and particularly benefits anglers. Economic impacts or contributions have been estimated based on anglers’ expenditures associated with the fishing trips. Estimates by the Department of Applied Economics at Utah State University indicate that in 2011 a typical angler spent \$90 per fishing trip to identified Blue Ribbon waters in Utah. This resulted in \$184 million in direct expenditures made by anglers for Utah goods and services, which generated an additional \$143 million in economic output, resulting in a total economic output of nearly \$327 million. Approximately 3,976 jobs were associated with this expenditure related to Blue Ribbon waters. Tax revenue generated by this increased level of output, labor income and value added was estimated to be \$35 million for state/local government. The variety of angling experiences available to Utahans is important, and it helps to sustain recreational activity in a number of state parks associated with reservoirs (such as Starvation Reservoir in Duchesne County).

Fish Stocking

Fish stocking takes place at many waters around the state. A regularly updated list of stocking waters with dates and details of fish species stocked can be checked whenever a person is interested. We are fortunate to have an extensive and well-managed system of state fish hatcheries which makes it possible to supply more people with a better quality fishing experience, involving higher catch rates and/or larger fish specimens than would otherwise be possible given the capacity of our waters to produce fish, compared with our increasing human population.

1 **Utah's Community Fisheries Program**
2

3 The DWR is committed to developing and stocking more community fisheries — places one can
4 walk, bike or bus to, and catch a fish or two. Community fisheries provide a fun, easy way to
5 spend quality time with family and friends outdoors, near home. They offer a setting for parents
6 and kids to talk, enhance family interaction, and keep busy Utahans in touch with the natural
7 world surrounding them. Fishing provides families with opportunities to get away from their day-
8 to-day problems and share time together. Unfortunately, there are currently no community
9 fisheries in Duchesne County.

10
11 **Youth Fishing Clubs**
12

13 Kids benefit immensely from fishing. It's a sport that builds self-esteem and confidence while
14 enhancing problem-solving and decision-making skills. DWR's Community Fishing Program
15 includes an educational component for urban children (ages six to 13) who have never fished, or
16 haven't fished as much as they'd like. Youth fishing clubs form each spring in various
17 communities to introduce young people to the joys of responsible sport fishing. The clubs are led
18 by adult mentors who teach interested youth about fish, the places they live, and how to catch
19 them. Those interested in volunteering or enrolling children in a youth fishing club can visit
20 DWR's website to view a list of these clubs. There are currently no youth fishing clubs in
21 Duchesne County; however, the formation of a local club is encouraged by the County.
22

23 **Seasons, limits, and other wildlife regulations**
24

25 The process for determining the balance among competing uses and establishing the best fishery
26 and wildlife management policies is described in state law. This process is founded on an open,
27 public dialogue concerning these issues. Five regional advisory councils (RACs) are active
28 across the state, each consisting of a dozen or more individuals nominated by various interest
29 groups. Council members can include citizens, local elected officials, sportsmen, agriculturists,
30 federal land managers, and members of the public at large. The duty of each RAC is to hear
31 input and recommendations, to gather data and evaluate expert testimony, and then to make
32 informed policy recommendations to the Wildlife Board.
33

34 The Wildlife Board uses public input, the recommendations of the RACs, and the assembled
35 facts to make determinations and establish policies best designed to accomplish the purposes and
36 fulfill the intent of the wildlife laws. The Wildlife Board generates wildlife management policy,
37 and exercises its powers by promulgating administrative rules and issuing proclamations and
38 orders under Utah Code.
39

40 **Sportfish Management**
41

42 Angling preferences have evolved over time, and DWR has adapted its management of fisheries
43 to these changing preferences. Within the last decade, the UDWR has begun focusing its
44 sportfish management direction more on: 1) protection and enhancement of conservation

1 sportfish species (i.e., cutthroat trout), 2) quality and trophy fishing opportunities, 3) recruiting
2 and retaining new anglers through development of community fisheries, and 4) biological control
3 of undesirable species through the stocking of predators like “wipers” (white bass/striped bass
4 hybrids) and tiger muskie, and management of multi-story fisheries .
5

6 The increased emphasis on the above mentioned concepts provides new opportunities for
7 fisheries management. It also increases the challenges of selecting the appropriate stocking plan
8 for waters of the state. Compounding the biological challenges has been an increased diversity in
9 the fishing public and their expectations on what constitutes a successful fishery. In 1984,
10 anglers in Utah preferred catching rainbow trout, and angler satisfaction was tied to the ability to
11 harvest a limit of 10-12 inch fish. Consequently, virtually all hatchery production was devoted to
12 the culture of rainbow trout. Over the last 30 years, however, angler interest in warm and cool
13 water fisheries has grown. UDWR is working to meet this increased demand for warm/cool
14 water angling opportunities into the future.
15

16 The UDWR actively manages for the following warm and cool water species: bluegill, channel
17 catfish, black crappie, largemouth bass, smallmouth bass, tiger muskie, walleye, hybrid striped
18 bass and yellow perch. There are a number of other species of warm and cool water game fish
19 that exist in Utah waters and provide angling opportunities such as: Sacramento perch, green
20 sunfish, white bass, black bullhead and northern pike. For the most part, these other species are
21 not being actively managed.
22

23 Trout are still dominant in smaller cold water systems throughout the state such as the waters
24 along the Mirror Lake Highway or elsewhere in the Uinta Mountains, Boulder Mountains,
25 Wasatch Mountains, the Manti Mountains, and the LaSal Mountains.
26

27 Regardless of the management concept or species selected, the protection of native aquatic
28 species is a principal concern for fisheries managers. Stocking and management practices that
29 would be detrimental or cause the decline of native species are typically avoided.
30

31 **Species stocked in lakes and ponds**

32
33 The following species are typically stocked in flatwater environments: rainbow trout, tiger trout,
34 brown trout, cutthroat trout, kokanee salmon, splake, lake trout, brook trout, largemouth bass,
35 bluegill, channel catfish, tiger muskie, striped bass / white bass hybrids (wipers), yellow perch,
36 walleye, and black crappie. Future development of sterile variants of certain species may
37 increase demand for them.
38

39 **Stream Fisheries**

40
41 Managing for self-sustaining fisheries in Utah streams should be a priority. The species which
42 are typically stocked in streams are (sterile) brook trout, brown trout, or tiger trout. Tiger trout
43 can be used in stream and river systems primarily in conjunction with cutthroat trout restoration
44 projects. Tiger trout also have advantages in waters that present significant water quality

1 challenges, making the use of rainbow trout impractical.

2
3 Protecting native aquatic species and avoiding the spread of undesirable non-native species and
4 aquatic diseases (e.g., whirling disease) are principal concerns for fisheries managers.
5 Undesirable non-native species and aquatic diseases are easily and inadvertently spread by the
6 recreating public.

7 8 **Planning**

9
10 Management plans are developed by UDWR for certain high-profile waters. These plans are
11 developed in cooperation with the public through internet-based surveys, as well as committee-
12 based approaches involving interested members of the public. When completed, these plans are
13 presented to the Regional Advisory Councils for additional public review and input.

14 15 **Duchesne County**

16
17 Fishing has long been a favorite recreational activity for Duchesne County residents and visitors.
18 A December 2008 report published by Utah State University entitled “Public Lands and Utah
19 Communities: A Statewide Survey of Utah Residents,” found (in Table 24) that 92.2% of
20 residents surveyed in the Daggett-Duchesne-Uintah County region felt that opportunities to fish
21 in area lakes, streams and rivers are moderately important (23.6%) or very important (68.6%) to
22 the overall quality of life in the community. Of these same respondents, only 7.2% had moderate
23 (4.1%) or strong (3.1%) opposition to public land managers increasing the extent to which
24 protection of important fish and wildlife habitat occurs on Utah’s public lands (see Table 38 of
25 the report).

26
27 Fishing also provides economic benefits and employment opportunities for local residents
28 through the operation of outfitter and guide businesses and destination hunting and fishing
29 resorts. The County boasts destination fishing resorts at Falcon’s Ledge (the Orvis 2001 and
30 2012 fly-fishing lodge of the year), the LC Ranch, Hidden Springs Ranch and the Six Lakes
31 Resort. Falcon’s Ledge offers many different angling experiences for brown trout, rainbow trout,
32 wild cutthroats and brook trout in nearby Uinta Mountain streams, at the Lake Fork River Ranch
33 or their resort lakes. LC Ranch, located east of Altamont, is operated as an exclusive
34 membership only private fly fishing club. The Ranch offers a unique, relaxed, unpressured
35 trophy trout fly fishing experience on over 20 different lakes and ponds for its members. In order
36 to preserve the resource and provide an uncrowded fishing experience, a limited number of
37 annual memberships are offered and fishing is only allowed for members and invited guests.
38 Hidden Springs Ranch, located northeast of Altamont, offers guided fly fishing trips or fly
39 fishing lessons with expert fly fishing guides on their ponds or on area streams. Six Lakes Resort,
40 located adjacent to Big Sand Wash Reservoir, offers guests one of the top trout fisheries in Utah
41 and perhaps one of the best lake fisheries in the West. These lakes are home to several trout
42 species and varieties including Rainbow, Brown, Brook, and Tiger trout.

43
44

1 Starvation Reservoir State Park is a popular destination for fishermen seeking rainbow trout, bass
2 and walleye.

3
4 The Big Sand Wash Reservoir produces good fishing for rainbow trout, bass, brown trout and
5 yellow perch.

6
7 The Moon Lake area, which has a popular national forest campground and the Moon Lake
8 Resort, offers fishing for Rainbow Trout, Splake, Kokanee Salmon, Brook Trout, Cutthroat
9 Trout, Tiger Trout, Mountain Whitefish and Arctic Greyling (see:
10 <http://www.moonlakeresort.com/faqs.html#fishes>).

11
12 According to the 2016 Utah Fishing Guide, the daily catch limits are 4 trout (or 8 if at least 4 are
13 Brook Trout), 6 Largemouth or Smallmouth Bass, 10 Walleye (but only one can be over 24
14 inches long) and 50 Yellow Perch. There is no limit for Striped Bass.

15 **Blue Ribbon Fisheries**

16
17
18 The Utah Division of Wildlife Resources lists several Blue Ribbon fishing opportunities in lakes
19 and streams in the County (see Map #37). Blue Ribbon fisheries are waters that provide highly-
20 satisfying fishing and outdoor experiences for diverse groups of anglers and enthusiasts. Blue
21 Ribbon status indicates that a water feature has been reviewed by Utah Division of Wildlife
22 Resources biologists and the Blue Ribbon Fisheries Advisory Council and is found to have:
23 fishing quality, a quality outdoor experience, quality fish habitat and economic benefits. Criteria
24 such as water quality and quantity, water accessibility, natural reproduction capacity, angling
25 pressure and specific species are factored into the designation.

26
27 The Blue Ribbon Fisheries Advisory Council was created by Executive Order of Governor Mike
28 Leavitt and charged with identifying Blue Ribbon fisheries in Utah, recommending
29 enhancements to Blue Ribbon waters, recommending protections for Blue Ribbon fisheries and
30 promoting Blue Ribbon fisheries. The Council's mission statement is "To identify, enhance and
31 protect those Utah waters and their watersheds that provide, or have the potential to provide,
32 Blue Ribbon quality public angling experiences for the purpose of preserving and enhancing
33 these economically valuable natural resources." The Council is composed of thirteen members;
34 two representing cold water anglers, two representing warm water anglers, one representing
35 commercial interests, five representing each of the Utah Division of Wildlife Resources
36 Divisions, three at-large members and one UDWR representative.

37
38 The Council allocates funds, generated by the sale of fishing licenses, on an annual basis to
39 projects that benefit Blue Ribbon fisheries. In the Northeast Region of the UDWR, these funds
40 have been used in the past to acquire land around Lake Canyon Lake, build a fish barrier on the
41 West Fork of the Duchesne River and enhance fish habitat on the Duchesne River near Tabiona.
42 The Strawberry River (from Starvation Reservoir downstream to the confluence with the
43 Duchesne River) is a Blue Ribbon fishery where Brown and rainbow trout provide most of the
44 angling action. This section of the river also supports a large, healthy, whitefish population. The

1 Strawberry River, from just above its confluence with Red Creek to the Soldier Creek Dam in
2 Wasatch County, is frequently referred to as the "Wild Strawberry." This section of the
3 Strawberry River is considered a Blue Ribbon fishery for Brown Trout, Brook Trout and
4 Colorado River cutthroat trout.

5
6 The section of the Duchesne River located along SR 35, from Hanna upstream to the confluence
7 of the North Fork is considered a Blue Ribbon fishery for mountain whitefish; brown, cutthroat
8 and rainbow trout. The West Fork of the Duchesne River is a productive Blue Ribbon stream
9 that maintains a population of native Colorado River cutthroat trout as well as a naturally
10 reproducing population of brown trout.

11
12 Lake Canyon Lake is a fairly remote, small lake that is also a Blue Ribbon fishery providing
13 anglers with good fishing opportunities, in a beautiful setting, for Colorado River cutthroat trout
14 and Tiger trout. Lake Canyon Lake is utilized by the UDWR as a brood stock lake for Colorado
15 River cutthroat trout.

16
17 Blue Ribbon fisheries in Utah draw visitors from across the United States and around the world.
18 In 2010, over 120,000 non-resident fishing licenses were sold; which constituted 23% of all
19 fishing licenses sold. The economic impact of fishing is significant to the state and to our region.

20
21 **Policy:** It is the policy of Duchesne County that public land management agencies shall make
22 every effort to provide and maintain sufficient opportunities for fishing on public lands in the
23 County.

24 25 **Water Considerations**

26
27 Healthy fisheries require good water quality and high quality fish habitat. The Utah Department
28 of Environmental Quality, Water Quality Division, monitors water quality in Duchesne County.
29 Fish habitat is managed by the landowner or the public land management agency.

30
31 The Ashley National Forest reports the following accomplishments to restore or enhance lake
32 habitat, which provides better water quality and habitat for fish (see Table FIS1).

33
34
35
36
37
38
39

Table FIS1. Ashley National Forest Lake Habitat Restoration/Enhancement (2010 – 2015)

Fiscal Year	Acres of Lake Habitat Restored or Enhanced
2010	70.0
2011	8.0
2012	160.0
2013	142.0
2014	-
2015	11.0
Total	321.0

Source: Ashley National Forest (2017).

1
 2 Fish are important in a healthy diet. They are a lean, low-calorie source of protein. However,
 3 some fish from specific areas in Utah may contain chemicals that could pose health risks. When
 4 contaminant levels are unsafe, Utah Public Health Officials issue fish consumption advisories.
 5 These advisories outline recommendations for limiting intake of specific fish at specific
 6 locations.
 7
 8 Fish advisories have been issued in Utah due to elevated levels of arsenic, mercury, selenium,
 9 and PCBs. Some of these contaminants occur naturally, whereas others are from anthropogenic
 10 sources. Four such advisories have been issued for Duchesne County.
 11
 12 In the Big Sand Wash Reservoir, elevated levels of mercury in Smallmouth Bass, Walleye and
 13 Yellow Perch lead to recommended limits of consumption of no servings for pregnant women
 14 and children under 6 years of age and 8 ounces per month for women of childbearing age and
 15 children 6-16 years of age. For adult women past child bearing age and men over 16 years of
 16 age, Smallmouth Bass consumption is advised not to exceed three 8-ounce servings per month,
 17 while Walleye and Yellow Perch consumption is advised not to exceed five 8-ounce servings per
 18 month.
 19
 20 In the Duchesne River, near Tabiona, elevated levels of mercury in Brown Trout make it
 21 advisable for adult women past child bearing age and men over 16 years of age to eat no more
 22 than six 8-ounce servings per month. Pregnant women and children under 6 years of age are
 23 advised not to consume more than one 4-ounce serving per month. Women of child bearing age
 24 and children aged 6-16 are advised to consume no more than two 8-ounce servings per month.
 25
 26 In Rock Creek, below the Upper Stillwater Reservoir, elevated levels of mercury in Brown Trout
 27 make it advisable for adult women past child bearing age and men over 16 years of age to eat no

1 more than nine 8-ounce servings per month. Pregnant women and children under 6 years of age
2 are advised not to consume more than one 4-ounce serving per month. Women of child bearing
3 age and children aged 6-16 are advised to consume no more than three 8-ounce servings per
4 month.

5
6 In the Starvation Reservoir, elevated levels of mercury in large Walleye (over 12 inches long)
7 make it advisable for adult women past child bearing age and men over 16 years of age to eat no
8 more than three 8-ounce servings per month. Pregnant women and children under 6 years of age
9 are advised not to consume this fish. Women of child bearing age and children aged 6-16 are
10 advised to consume no more than one 8-ounce servings per month.

11
12 **Objectives:**

- 13
- 14 1. Maintain, enhance, and expand sport fishing opportunities.
- 15
- 16 2. Protect and preserve water quality and fish habitat while balancing the needs of other
17 water users, including those holding water rights.
- 18
- 19 3. Enhance public access to fishing opportunities.
- 20
- 21 4. Prevent spread of invasive species or diseases that negatively affect fish populations.
- 22
- 23 5. Support economic development associated with fishing, including private businesses and
24 facilities.
- 25

26 **Policies:**

- 27
- 28 1. Support and encourage public land management agencies to provide and maintain
29 sufficient opportunities for fishing on public lands.
- 30
- 31 2. Support DWR's efforts to work with landowners to voluntarily acquire public fishing
32 access through the Walk-in-Access program.
- 33
- 34 3. Support DWR's efforts to educate the recreating public about preventing the spread of
35 aquatic invasive species and diseases.
- 36
- 37 4. Support efforts to protect water quality and the quality of the associated fisheries.
- 38
- 39 5. Support efforts to improve fish habitats while balancing the rights of adjacent landowners
40 and holders of water rights.
- 41
- 42 6. Coordinate and communicate with DWR to ensure that public fishing opportunities are
43 maintained and enhanced, including appropriate stocking levels.
- 44

- 1 7. Support tourism and associated businesses and commercial enterprises that are supported
2 by local fisheries such as destination resorts and guide services.
3
- 4 8. Promote land uses that are compatible with maintaining healthy fisheries on lands
5 adjacent to fish bearing streams, lakes, and reservoirs.
6
- 7 9. Continue coordination between the county and federal land management agencies on
8 treatments, such as rotenone.
9
- 10

Section 17. Wild & Scenic Rivers

Findings: The Wild and Scenic Rivers Act was passed by Congress in 1968. Congress declared that “certain selected rivers of the Nation, which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations.” Congress also declared “that the established national policy of dam and other construction at appropriate sections of the rivers of the United States needs to be complemented by a policy that would preserve other selected rivers or sections thereof in their free-flowing condition to protect the water quality of such rivers and to fulfill other vital national conservation purposes.” Section 5(d)(1) of the act directs federal agencies to consider the potential for national wild, scenic, and recreational river areas in all planning for the use and development of water and related resources. The Act provides standards for determining whether certain rivers should be classified, designated and administered as wild, scenic or recreational rivers.

The act is notable for safeguarding the special character of these rivers while also recognizing the potential for their appropriate use and development. It encourages river management that crosses political boundaries and promotes public participation in developing goals for river protection. The act purposefully strives to balance dam and other construction at appropriate sections of rivers with permanent protection for some of the country's most outstanding free-flowing rivers. To accomplish this, it prohibits federal support for actions such as the construction of dams or other instream activities that would harm the river's free-flowing condition, water quality, or outstanding resource values. However, designation does not affect existing water rights or the existing jurisdiction of states and the federal government over waters as determined by established principles of law.

Under the Wild and Scenic Rivers Act, rivers may be designated by U.S. Congress or, if certain requirements are met, by the Secretary of the Interior. Each river is administered by either a federal or state agency. Designated segments need not include the entire river and may include tributaries. For federally administered rivers, the designated boundaries generally average 0.25 mile on either bank in the lower 48 states in order to protect river-related values.

Under the Wild and Scenic Rivers Act, rivers are classified as wild, scenic, or recreational. Wild River Areas are those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America. Scenic River Areas are those rivers or sections of rivers that are free of impoundments, have shorelines or watersheds still largely primitive and shorelines largely undeveloped, but are accessible in places by roads. Recreational River Areas are those rivers or sections of rivers that are readily accessible by road or railroad, may have some development along their shorelines, and may have undergone some impoundment or diversion in the past.

1 About thirty percent of the lands in Duchesne County are administered and managed by the
2 Bureau of Land Management and the Forest Service. Section 5(d) (1) of the Wild and Scenic
3 Rivers Act directs federal agencies to identify potential additions to the National Wild and Scenic
4 Rivers System through federal agency plans. Under these provisions, federal agencies study the
5 suitability of river sections they manage for designation under the Wild and Scenic Rivers Act.
6 Sections that are determined to be suitable can be managed to preserve their suitability by an
7 agency land management plan while awaiting congressional designation.
8

9 Four federal land management agencies [the U.S. Forest Service (USFS), the Bureau of Land
10 Management (BLM), the U.S. Fish and Wildlife Service, and the National Park Service (NPS)]
11 administer the Wild and Scenic Rivers Act. This includes managing rivers that have been
12 designated by U.S. Congress and managing rivers that have been studied and determined to be
13 suitable for designation and that are awaiting congressional action.
14

15 The US Forest Service and the Bureau of Land Management will continue to assess river and
16 stream segments in Duchesne County to determine whether or not they are suitable for inclusion
17 in the national Wild and Scenic River system. In most cases, these agencies are identifying
18 numerous segments that they deem suitable and will begin to manage such segments in order to
19 maintain the identified values in the event that Congress or the Secretary of Interior chooses to
20 designate them as Wild and Scenic Rivers. Even in the event that an “eligible and suitable”
21 stream segment is not officially designated, it can continue to be managed as though it were.
22

23 Wild and Scenic River designation will have a lasting effect, for better or worse, on the
24 designated stream segment and the surrounding area. Federal land management agencies should
25 carefully select Wild and Scenic Rivers based on their regional and national significance, rather
26 than local significance. These selections should be supported by data that clearly show such
27 selection will not negatively impact the ability of agriculture and other industry to access the
28 water it needs and of Duchesne County communities to develop water supplies and other
29 resources to meet future needs. Where such impacts are unavoidable, a plan to mitigate such
30 impacts should be presented.
31

32 There are many questions associated with Wild and Scenic River designations, such as:
33

- 34 a. How would Wild, Scenic, or Recreational designations affect future water management
35 and development?
- 36
- 37 b. Are there planned or potential projects that would be adversely affected by Wild, Scenic,
38 or Recreational designations?
- 39
- 40 c. Are there stream segments, particularly in upper watersheds, that could be designated
41 without harm to water users and which might be of benefit locally?
- 42
- 43 d. Are there any possible benefits associated with the designation (i.e. tourism)?
44

1 Designation of river segments as Wild, Scenic, or Recreational would restrict many activities
2 related to the stream and other uses within ¼ mile of it, and in some cases could be detrimental to
3 Duchesne County’s ability to develop and manage water resources necessary to meet future
4 growth needs. The ability to get approval of water right change applications on, or upstream of,
5 designated streams by existing water users may also be limited. Similarly, federal permits cannot
6 be issued for uses on a stream segment that would be in conflict with the Wild and Scenic
7 designation.

8
9 Designation of wild and scenic rivers may result in non-use, restricted use, or environmental
10 impacts on public and private lands. These restrictions may prohibit future uses that are
11 necessary to continue to assure economic prosperity or may adversely affect the operation,
12 management, and maintenance of existing facilities.

13
14 Since the passage of the Act and subsequent amendments, there has been much speculation
15 regarding the costs and benefits of wild and scenic river designation. A December 2008 report
16 prepared by Utah State University for the Governor’s Public Lands Policy Coordination Office,
17 entitled “Impacts of Wild and Scenic River Designation,” helped answer that speculation. This
18 report found no scientific evidence that wild and scenic river designation led to increased
19 recreational use of such rivers and no scientific evidence that the economic benefits of
20 designation would offset potential economic losses from decreased timber production, grazing,
21 mining and water development.

22
23 The USFS completed a statewide *Wild and Scenic River Suitability Study for National Forest*
24 *System Lands in Utah* in 2008 (USFS 2008), and BLM completed the *Bureau of Land*
25 *Management Vernal Field Office Record of Decision and Approved Resource Management Plan*
26 (BLM Vernal ROD/RMP) in 2008. Both evaluate and recommend suitability of river segments
27 on USFS and BLM-administered lands. A wild and scenic river study and environmental impact
28 statement was published in 1980 for NPS-administered lands in Dinosaur National Monument.

29
30 From USFS scoping comments and 17 public meetings held around the State of Utah, six key
31 issues emerged as a concern with wild and scenic river designation.

- 32
33 1. Designation of river segments into the National Wild and Scenic River System may affect
34 existing and future water resource project developments.
35
36 2. Uses and activities may be precluded, limited or enhanced if the river segment and its
37 corridor were included in the Wild and Scenic Rivers System.
38
39 3. Designation of a Wild and Scenic River could change the economy of a community.
40
41 4. Designation offers long-term protection of resource values.
42
43 5. Consistency with wild and scenic river studies conducted by the BLM and NPS.
44

6. Consistency with state, county, and local government laws and plans.

The Forest Service completed its suitability analysis of Wild and Scenic Rivers in Utah in November 2008. The Forest Service’s record of decision concludes that a suitable determination is made for 10 river segments in Utah, totaling approximately 108 miles (74 miles classified as Wild, 22 miles classified as Scenic, and 12 miles classified as Recreational). Based upon the effects of the alternatives, the responsible officials will decide which, if any, of the eligible river segments under consideration should be recommended to the Congress of the United States for inclusion in the National Wild and Scenic Rivers System.

During the Forest Service suitability process, the following river segments in Duchesne County were designated as Wild: 40 miles of the Upper Uinta River, including Gilbert Creek, Center Fork and Painter Draw, covering about 12,758 acres of land within the High Uintas Wilderness area (see Table WSR1 and Map #38). The designation was based on the outstanding remarkable Geologic, Hydrologic and Wildlife values along these streams.

In the 2008 BLM Vernal Field Office RMP, no Wild and Scenic River designations were made in Duchesne County. The closest BLM designation is along the Lower Green River in Uintah County.

Table WSR1. Recommended Wild and Scenic Rivers in Duchesne County

Agency	Duchesne County
BLM	–
USFS	Upper Uinta River, including Gilbert Creek, Center Fork, and Painter Draw (40 miles) – Suitable, wild
NPS	–

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

There is minimal public support for Wild and Scenic river designations in the Uintah Basin. A December 2008 report published by Utah State University entitled “Public Lands and Utah Communities: A Statewide Survey of Utah Residents,” found (in Table 44) that only 20.5% of the survey respondents in the Daggett-Duchesne-Uintah County area believed that public land managers should moderately (15.4%) or substantially (5.1%) increase the extent to which wild and scenic rivers designations occur on Utah’s public lands. The majority (48.2%) that wild and scenic river designations should stay the same as present. Twenty one percent felt that such designations should have moderate or major reductions.

1 **Objectives**

- 2
- 3 1. Avoid designating rivers as wild and scenic if the designation would adversely affect the
- 4 economic interests of the county, including enjoyment of private property rights, mineral
- 5 extraction, timber harvest, agriculture, water rights, water storage, or water delivery.
- 6
- 7 2. Manage rivers and river corridors not designated as wild and scenic by U.S. Congress but
- 8 deemed suitable based on the multiple-use and sustained-yield management standard
- 9 prescribed in Federal Land Policy and Management Act of 1976.
- 10
- 11 3. Ensure that any designation of rivers as wild and scenic supports the economic interests
- 12 of the county.
- 13

14 **Policies:**

- 15
- 16 1. The county will be actively involved in all studies or plans that may consider or evaluate
- 17 eligibility or may recommend inclusion of rivers in the National Wild and Scenic River
- 18 System.
- 19
- 20 2. The county will be actively involved in all legislation that could result in designation of
- 21 wild or scenic rivers within the boundaries of the county.
- 22
- 23 3. Potential reservoir sites should be protected from designation as wild and scenic rivers.
- 24
- 25 4. Any instream water right created by the designation of wild and scenic rivers is junior to
- 26 all absolute and conditional water rights existing before the special designation is
- 27 finalized.
- 28
- 29 5. Wild and scenic rivers should be identified based on their regional and national
- 30 significance rather than on their local significance. These selections should be supported
- 31 by data that clearly show such selection will not negatively impact the ability of
- 32 agriculture and other industry to access the water it needs and the county to develop water
- 33 supplies and other resources to meet future needs. Where such impacts are unavoidable, a
- 34 plan to mitigate such impacts should be presented.
- 35
- 36 6. In accordance with Section 63J-4-401 of the Utah Code, it is the policy of Duchesne
- 37 County that county support for the addition of a river segment to the Wild and Scenic
- 38 Rivers System shall be withheld until:
- 39
- 40 a. It is clearly demonstrated that water is present and flowing at all times. Dry
- 41 washes or stream segments below dams and other controls, and other stream
- 42 segments that have been physically altered by human activity should not be
- 43 considered, even in the eligibility stage.
- 44

- 1 b. It is clearly demonstrated that the required water-related value is considered
2 outstandingly remarkable within a region of comparison consisting of one of the
3 three physiographic provinces in the state. The rationale and justification for the
4 conclusions shall be disclosed;
5
- 6 c. It is clearly demonstrated that the inclusion of each river segment is consistent
7 with the plans and policies of the state and the county or counties where the river
8 segment is located as those plans and policies are developed according to
9 Subsection (3) of Section 63J-4-401 of the Utah Code;
10
- 11 d. The effects of the addition on the local and state economies, private property
12 rights, agricultural and industrial operations and interests, tourism, water rights,
13 water quality, water resource planning, and access to and across river corridors in
14 both upstream and downstream directions from the proposed river segment have
15 been evaluated in detail by the relevant federal agency;
16
- 17 e. It is clearly demonstrated that the provisions and terms of the process for review
18 of potential additions have been applied in a consistent manner by all federal
19 agencies;
20
- 21 f. The rationale and justification for the proposed addition, including a comparison
22 with protections offered by other management tools, is clearly analyzed within the
23 multiple-use mandate, and the results disclosed. All valid existing rights,
24 including grazing leases and permits shall not be affected;
25
- 26 g. It is clearly demonstrated that the federal agency with management authority over
27 the river segment, and which is proposing the segment for inclusion in the
28 National Wild and Scenic River System will not use the actual or proposed
29 designation as a basis to impose management standards outside of the federal land
30 management plan;
31
- 32 h. It is clearly demonstrated that the terms and conditions of the federal land and
33 resource management plan containing a recommendation for inclusion in the
34 National Wild and Scenic River System:
35
 - 36 1. Evaluates all eligible river segments in the resource planning area
37 completely and fully for suitability for inclusion in the National Wild and
38 Scenic River System;
39
 - 40 2. Does not suspend or terminate any studies for inclusion in the National
41 Wild and Scenic River System at the eligibility phase;
42
 - 43 3. Fully disclaims any interest in water rights for the recommended segment
44 as a result of the adoption of the plan; and

Section 18. Recreation & Tourism

Findings: Duchesne County has identified the recreation and tourism industries as part of its economy and tax base. These industries have a stabilizing effect on the economic cycles of agriculture and the oil and gas industry. Public lands are a critical component of tourism and recreation in Northeastern Utah.

Federal, state, county, and even private lands offer a broad range of recreational opportunities, including camping, hiking, fishing, hunting, horseback riding, biking, nature appreciation, interpretive trips, wildlife watching, boating, and other tourism-related activities. Public lands also support businesses that offer such opportunities to the public, including outfitters and guides, whitewater rafting, outdoor camps, wilderness/survival schools, and dude ranches.

A variety of recreational opportunities and experiences are available for residents and visitors alike to enjoy in Duchesne County. The Uinta Mountains have more than 1,000 natural lakes and small streams, over half of which support populations of game fish. These mountains contain Utah's largest designated wilderness area and highest peak (Kings Peak). Many of the trailheads in this beautiful backcountry are within a 90-minute drive from Salt Lake City (State of Utah, 2013). High desert landscapes provide unparalleled vistas and opportunities for OHV use, hunting, and other recreational pursuits.

Public lands in Duchesne County provide many landscapes, resources, and unique features for recreation. These lands include a myriad of opportunities for hunting, hiking, and wildlife watching. Some of these areas, such as Nine Mile Canyon, have been included as part of larger special recreation management areas designated in the *Bureau of Land Management Vernal Field Office Record of Decision and Approved Resource Management Plan* (Bureau of Land Management [BLM] 2008).

Duchesne County offers a variety of recreational opportunities and experiences. Residents and visitors alike enjoy the mountains, forests, and water resources. While the majority of recreational activities center on fishing, hunting, hiking, camping, and site seeing; other "non-traditional" activities such as mountain biking, cross-country skiing, and Off Highway Vehicle use are on the rise.

One of the major attractions in Duchesne County is Starvation State Park, which reported 55,382 visitors during the first nine months of FY 2015, which was up 17% from the same period during FY 2014 (2015 Utah Travel & Tourism Profile for Duchesne County). Water-based recreation opportunities (e.g., boating, rafting, and fishing) in Duchesne County has relatively fewer managerial concerns than the other regions throughout the state. Starvation Reservoir has the mandate to increase use and subsequently increase revenue (UDPR 2010). Fishing is a tremendously popular recreation activity in the Uintah Basin (UDPR 2013).

There is overwhelming public support for increased recreation facilities on public lands. A December 2008 report published by Utah State University entitled "Public Lands and Utah

1 Communities: A Statewide Survey of Utah Residents,” found (in Table 52) that only 13.1% of
 2 the survey respondents in the Daggett-Duchesne-Uintah County area believed that public land
 3 managers should moderately (6.4%) or substantially (6.7%) reduce their emphasis on developing
 4 visitor facilities to increase tourism when making decisions about how to manage public lands in
 5 Utah.

6
 7 The Ashley National Forest (North and South Units) provide a vast recreational “backyard” area
 8 for residents of Duchesne County and the Uinta Basin. The forest struggles to keep up with
 9 maintenance on trails and other recreation facilities as demonstrated by Tables REC1 and REC2
 10 below.

Table REC1. Ashley National Forest Trail System (2010 – 2014)

Fiscal Year	Trail Miles	Trail Miles Meeting Standards
2010	1,035.4	160.0
2011	1,077.7	396.8
2012	1,095.5	432.0
2013	1,106.7	114.1
2014	1,108.4	154.2

Source: Ashley National Forest (2017).

Table REC2. Ashley National Forest Recreation Sites (2010 – 2014)

Fiscal Year	Recreation Sites	Recreation Sites Meeting Standards
2010	154	110
2011	153	111
2012	150	108
2013	159	122
2014	158	117

Source: Ashley National Forest (2017).

11
 12 According to The Policy Institute of the University of Utah, in their Utah Travel & Tourism
 13 Profile for Duchesne County, published in July 2015, Duchesne County ranks dead last (29th)
 14 among Utah counties for tourism, based on the share of private leisure and hospitality jobs to
 15 total private jobs. This study revealed that tourism-related tax revenues were only \$112,509 in

1 the 2013 fiscal year, with a 6.2% increase to \$119,513 in fiscal year 2014. During that same time
2 period; however, leisure and hospitality jobs in Duchesne County decreased from 450 to 444 and
3 tourism-related taxable sales decreased 13.9% from \$5.73 million to \$4.93 million. Leisure and
4 hospitality wages stayed constant between 2013 and 2014 at \$5.3 million dollars.

5
6 According to the Profile of Industries that Include Travel & Tourism, found in the Headwaters
7 Economics Economic Profile System (EPS), Duchesne County, as of 2013, had only 9.3% of its
8 total jobs in the travel and tourism industry, compared to 15.5% nationwide. This percentage
9 decreased to 8.0% in 2014 (compared to 13.3% nationwide). This study also noted that the
10 average annual wage for a tourism job in Duchesne County in 2014 was \$14,432. The average
11 annual wage for non-tourism jobs was \$58,863. It is apparent that travel and tourism jobs are not
12 adequate to support a family, but can be a valuable second income for a household.

13
14 Currently, Duchesne County is considered a "pass through" area for many recreationists traveling
15 to other sites in the region. The County views these visitors as opportunities for additional
16 economic development and is interested in better understanding area tourism trends and
17 forecasts. Through an ongoing partnership with the Chamber of Commerce, Duchesne County
18 will explore strategies targeted to "capture" this market.

19
20 Adjacent counties capture many overnight stays from Duchesne County destination marketing.
21 Many lodging opportunities are located just outside of the county boundaries in nearby Ballard
22 (Uintah County). Many Duchesne County events and activities increase spending and tax
23 revenue in adjacent counties while the cost of organizing the event falls primarily on Duchesne
24 County organizers.

25
26 In 2011, Duchesne County opened a Welcome Center in the new Duchesne City building. With a
27 convenient location on Highway 40, signage and strong promotion has resulted in brisk walk-in
28 traffic to the Welcome Center, which allows staff to encourage visitors to spend additional time
29 in the County. Duchesne County promotional information is readily available at no cost to
30 travelers; including maps and travel guides. Duchesne County also builds partnerships with
31 adjacent counties to cross-promote by making available travel guides and promotional
32 information from other areas of the state. Duchesne County has its travel guides available at
33 many visitor centers. Local businesses have observed increased customer traffic because of the
34 guidance the welcome center gives to the traveling public. Additional information centers, which
35 include a stationary brochure rack, have been added to several locations in the county including
36 hotels, eateries and convenience stores. They are maintained weekly and are utilized fully by the
37 traveling public which adds to their desire to spend additional time in Duchesne County.

38
39 Duchesne County participates through the Duchesne County Chamber of Commerce on various
40 committees and working groups in the State of Utah including the Utah Travel Council sub-
41 committees, Utah Travel Industry Coalition and the State Scenic Byway Committee. Duchesne
42 County recently completed the Duchesne County Centennial Event Center in Duchesne City at
43 the county fairgrounds, which will allow for destination promotion of Duchesne County for a
44 variety of uses including trade shows, conferences, meetings, and family reunions. Equally

1 important is the adjoining arena which allows for equestrian, sporting and consumer trade show
2 opportunities. The goal is to increase overnight stays and spending in Duchesne County.
3

4 Duchesne County has embraced the digital age in the promotion of the county in a multi-prong
5 approach to destination marketing. These methods are proving very valuable as visitors are
6 researching travel choices on-line prior to their visits. Duchesne County has secured contracts
7 with a professional studio and advertising company to highlight Duchesne County's many
8 destinations for outdoor enthusiasts. Duchesne County receives multiple opportunities to have
9 professional filming of destinations and events which are later viewed on several platforms
10 including primetime television viewing. Also, VTV, a subsidiary of Strata Networks, regularly
11 films events and currently is working with several large community events including Uintah
12 Basin in Celebration (UBIC) and the Duchesne County Fair to film and simulcast on large
13 screens throughout the venues as well as re-post on their website and You Tube. Also, the
14 Duchesne County Chamber of Commerce has an in-house photographer and videographer who
15 regularly generates volumes of material which is later shared with news outlets, magazines and
16 film crews. Regular videos of Duchesne County are posted on You Tube and on various
17 websites. Additional promotion is done through websites and Facebook.
18

19 Duchesne County is home to over 10 privately-owned destination resorts & areas for family
20 gatherings. These venues range from rustic to "3 Star" accommodations. These travel favorites
21 have become an annual tradition to thousands of visitors. Strong partnerships need to be
22 maintained with these valuable partners to ensure their continued success.
23

24 Duchesne County Chamber of Commerce has developed a strong working relationship with
25 organizers of dozens of county events, meetings and activities. Outreach during these events has
26 become a great way to encourage an expanded trip or return visit to Duchesne County.
27 Conference bags and or gift baskets filled with promotional information, coupons and incentives
28 have dramatically increased visitors to our private businesses. This value-added component has
29 elevated the experience enjoyed by visitors and has been successful in achieving additional
30 commerce to local businesses. The number of these unique opportunities has tripled in recent
31 years.
32

33 Every five years, the State of Utah, through its State Parks Division, develops a State
34 Comprehensive Outdoor Recreation Plan (SCORP), which enables the state to qualify for
35 funding under the federal Land & Water Conservation Fund. The most recent SCORP was
36 completed in September, 2013.
37

38 The SCORP planning process includes a survey of Utah residents to assess their perception of
39 needed recreation facilities in the state. Duchesne County residents were surveyed as part of the
40 Uintah Basin Planning District. Survey results show that over 60% of the basin residents felt that
41 opportunities for outdoor recreation are extremely important. Over 50% of the survey
42 respondents stated they are willing to travel over 25 miles to participate in outdoor recreation.
43
44

1 SCORP survey respondents indicated that they frequently participate in camping-picnicking,
2 fishing, swimming, OHV riding, horseback riding, hunting, hiking, motorized water sports,
3 wildlife viewing and birdwatching. Field-based sports, court-based sports, walking, running and
4 golf were also popular. Those surveyed saw a need for more swimming pools, paved trails, OHV
5 riding areas, camping areas and parks. A new swimming pool completed in Roosevelt in 2016
6 will help address that need. Surveys of municipalities in the basin showed that new community
7 or recreation centers were high priority needs, followed by new ball fields and walking trails.
8 The new Centennial Event Center in Duchesne, completed in 2015, will help address the need for
9 community centers in Duchesne County.

10
11 According To the SCORP survey, the percentage of Uintah Basin respondents who participated
12 in camping over the previous 12 months was 85.9%; the highest of any planning district in the
13 state. Among the planning districts, the Uintah Basin also had the overall highest proportion of
14 fishing participants at 76%. There were also relatively high proportions of participants in OHV
15 riding, horseback riding, hunting, and wildlife viewing or birdwatching. Basin respondents
16 placed high importance on OHV riding areas, but commented on low area availability (12%).
17 This indicates that people in the basin are extremely engaged in outdoor recreation pursuits and
18 that these activities are often resource based (Utah Division of Parks and Recreation, 2013).

19
20 Statewide, Utah residents make up approximately 45% of visitors to Utah national and state
21 parks. After transportation costs, non-resident visitors spend more of their total expenditures on
22 lodging and dining out; whereas resident travelers spent larger shares of their total spending on
23 groceries, shopping, and entertainment (Leaver 2016). Non-resident visitor spending is
24 significant because it augments and adds outside dollars to Utah’s economy. Resident spending
25 recirculates dollars already present in the state’s economy; however, Utah resident visits do
26 contribute non-local dollars and spend their money outside of their county of origin (BEBR
27 2014). Regarding spending in the Uintah Basin, anecdotal information suggests that because
28 Duchesne County is close to the Wasatch Front, which comprises most of Utah’s population,
29 Utah resident visits may involve more day trips and; subsequently, such visitors do not spend as
30 much locally before returning home.

31
32 While tourism and recreation are an important part of Duchesne County’s economic base, that
33 industry provides a minimal contribution in comparison to the mining, energy, government,
34 utility and health care sectors. Moving forward, Duchesne County should be cautious about
35 advocating tourism to be a larger part of the economic base. A 1996 study prepared by
36 researchers at the Utah State University Department of Economics, entitled “*Recreation as an*
37 *Economic Development Strategy: Some Evidence from Utah*” found that the economies of
38 tourism-dependent counties are subject to annual variances which are relatively large and appear
39 to be increasing in absolute value. This kind of employment cycle may be difficult to deal with
40 from an annual planning perspective. In contrast, counties whose economic bases are less
41 dependent on the tourism industry appear to have less short-run variation, even though long-run
42 variability may exist. This study concluded that tourism has clearly added to the long-term
43 growth of rural communities in Utah, and particularly in those rural communities which are
44 associated with high levels of visitation (skiing and national parks). However, it is also clear that

1 communities dependent upon tourism alone must expect seasonal employment changes rivaling
2 the relative size of the long-run cycles of traditional extractive industries.

3
4 Alternative paths to less volatile long-term growth appear to lay in the direction of long-term
5 manufacturing, utilities, in diversified economies which reduce reliance on extractive industries,
6 or in attracting a permanent population base such as retirees. The study suggests that those
7 individuals responsible for community and regional development must be cautious about
8 advocating tourism as an economic base. The relatively low salaries in retail trade and service
9 sectors may exacerbate the problems associated with a tourism-based economy, in that
10 communities must provide services for significant increases in population as employment grows
11 but may have limited fiscal resources available from that population.

12
13 **Policies:**

- 14
15 1. Duchesne County encourages private sector development of recreational facilities and
16 services and may offer development incentives as doing so becomes feasible.
17
18 2. The County supports cultivating recreation facility development and maintenance
19 "partnerships" with other entities, agencies, and special interest groups.
20
21 3. The County desires to expand and improve recreational opportunities, facilities, and
22 services for County residents. The County has identified youth and family oriented
23 activities, such as family reunions, as priorities.
24
25 4. When evaluating recreational developments and investments Duchesne County will
26 consider:
27
28 a. The County's ability to provide essential services (law enforcement, emergency
29 services, water and waste management, search and rescue);
30
31 b. Impacts on traditional recreational uses, e.g. Off Highway Vehicle (OHV) trail
32 development at the expense of traditional hiking or riding trails; and
33
34 c. Anticipated economic costs and returns.
35

36 The following objectives were identified as the Duchesne County Recreation and Tourism
37 priorities.

38
39 **Objectives:**

- 40
41 1. Continue to build an inventory of digital material including video, photos and drone
42 footage which presents Duchesne County in a positive light and shows the diversity of
43 landscapes and opportunities.
44

- 1 2. Continue to encourage private industry to build traveler-friendly services such as boat and
2 ATV rentals, additional lodging and restaurants and additional guides and outfitters to
3 enhance travelers’ experiences.
- 4
- 5 3. Work closely with public land agencies to designate additional trails for OHV, ATV,
6 mountain bikes and hiking which can be promoted through all channels.
- 7
- 8 4. Conduct a farm/ranch recreational opportunity feasibility study.
- 9
- 10 5. Include Duchesne County trails and related facilities in all **tourism** brochures.
- 11
- 12 6. Develop an outdoor field institute or nature center.
- 13
- 14 7. Form a Nine-Mile Canyon partnership with Carbon County. This would include
15 upgrading access and facilities.
- 16
- 17 8. Cultivate recreation and tourism facility development and maintenance "partnerships"
18 with agencies and special interest groups.
- 19
- 20 9. Develop a museum and/or visitor information center.
- 21

22 **Policy:** The County, in cooperation with the Duchesne County Chamber of Commerce and
23 regional tourism organizations, will actively support and pursue these objectives.

24
25 **Off Highway Vehicles (OHV)**

26
27 OHV’s have become an important segment of the County’s recreation industry. A December
28 2008 study of Recreational Off-Highway Vehicle Use on Public Lands in Utah, prepared by a
29 research team from the Institute for Outdoor Recreation and Tourism at Utah State University,
30 found that the number of registered OHV’s in Utah more than tripled from 1998 to 2006; from
31 51,686 to 172,231 units. A companion study of the Economic Impacts of Land Use Restrictions
32 on OHV Recreation in Utah found that some 44 million people participated in OHV recreation in
33 2007 nationwide and that participation rates in this form of recreation in Utah are about 32%
34 (well above the national average). The OHV use study found that the nearly half of the OHV
35 owners surveyed use their vehicles one to five times per year; so while the number of OHV’s is
36 increasing, the number of trips taken per year by these owners is decreasing. The economic study
37 found that the average OHV owner took 10.5 trips per year to recreate. The study also found that
38 proposed changes in OHV management in the Vernal BLM resource management plan would
39 have a negligible impact on the economies of Duchesne, Daggett and Uintah counties.

40
41 A December 2008 report published by Utah State University entitled “Public Lands and Utah
42 Communities: A Statewide Survey of Utah Residents,” found (in Figure 10) that 44.2% of
43 residents surveyed in the Daggett-Duchesne-Uintah County region reported participating in
44 ATV/OHV riding on public lands. This same study showed substantial public support for

1 development of more ATV/OHV trails in the region. Only 20.6% of the survey respondents (see
2 Table 48 of the report) believed that public land managers should moderately (10.9%) or
3 substantially (9.7%) reduce their emphasis on developing trails for off-highway motorized
4 recreation when making decisions about how to manage public lands in Utah. There was also
5 strong support for the development of more trails for non-motorized use and for motorized
6 vehicles to stay on designated routes.

7
8 Duchesne County projects that the number of OHV registrations will continue to increase as the
9 statewide population increases. The challenge facing the county and public land agencies is to
10 provide for more trails and routes for OHV users to enjoy this form of recreation in a manner that
11 is environmentally responsible. Partnerships with the Forest Service and the BLM will be
12 important if more routes and loops are to be identified. Providing adequate and easily
13 identifiable signage will help ensure that riders stay on designated routes. Grant programs exist
14 to provide financial assistance to develop or improve recreation trails.

15
16 OHV's provide an important tool and mode of transportation for farmers, ranchers, and resource
17 developers. However, because of their ability to travel across rugged landscapes and climb steep
18 hills they are often used to chase livestock and wildlife. These abuses damage vegetation and
19 cause soil damage especially on steep grades. OHV's can reach high speeds and it is a common
20 practice for parents to allow inexperienced and daring youth or adults to drive them, which often
21 result in human accident, or death.

22 23 **BLM Policies**

24
25 The Vernal BLM RMP contains the following policies associated with OHV use:

26
27 TMD-1 "Motorized camping vehicles will be allowed to travel off designated routes on a
28 single path up to 300 feet to access an existing disturbed dispersed campsite, except in
29 non-WSA lands with wilderness characteristics and WSA lands."

30
31 TMD-8 "OHV use for big game retrieval off designated routes will not be allowed."

32
33 RIP-2 "Allow no new surface-disturbing activities within active flood plains, public water
34 reserves, or 100 meters of riparian areas unless:

- 35 • There are no practical alternatives, or
- 36 • Impacts will be fully mitigated, or
- 37 • The action is designed to enhance the riparian resources."

38
39 **Policies:** It is the position of Duchesne County that:

- 40
41 1. Public land agencies shall limit OHV's to trails, roads, or areas specifically designated by
42 the agency for that purpose. However, the availability and mileage of such trails should
43 be expanded to meet demand and provide OHV loops that connect communities. Open
44 area riding as well as looped and stacked trail systems should be offered, with a variety of

1 levels of trail difficulty.

2
3 2. Public land agencies shall accommodate livestock permit holders, resource developers
4 and managers who have a legitimate need to enter a specific area on public lands by
5 making OHV licenses available.

6
7 3. OHV users should acquaint themselves with federal land management agency rules and
8 travel management maps. OHV users who find such rules and maps to not meet their
9 recreation needs should communicate any issues to local land managers for consideration.

10 **Snowmobiling**

11
12
13 A comprehensive study of snowmobiling in Utah was last conducted by the Institute for Outdoor
14 Recreation and Tourism at Utah State University in 2001. In this study, a survey of
15 snowmobilers found that many of their favorite snowmobiling areas are located in or near
16 Duchesne County. Popular locations include the Strawberry Valley, Wasatch Mountains, Mirror
17 Lake, Currant Creek and the Uintah Basin. The study found that about 82% of the trips are one-
18 day trips and that February, March and April are the most popular months. Total annual
19 expenditures for snowmobile trips and snowmobile ownership in the Uintah Basin in 2001
20 constituted about 1.5% of the expenditures statewide.

21
22 **Policy:** Although the economic impact of snowmobiling in Duchesne County is small, the
23 County supports efforts to make lands available for continuation of this popular wintertime
24 activity in areas where resource damage is unlikely to occur.

25 **Recreation on Federal & State Lands**

26 **Objectives:**

- 27
28
29
30 1. Support outdoor recreation on public lands as part of a balanced plan of economic growth
31 and quality of life.
- 32
33 2. Leverage public land recreation areas, parks, and sites as county-based scenic and
34 recreation economic assets.
- 35
36 3. Cultivate recreation and tourism facility development and maintenance “partnerships”
37 with public land agencies and special interest groups.
- 38
39 4. Identify and preserve locally important recreation resources on public lands for future
40 generations.
- 41
42 5. Support active management of conflicting recreational uses on public lands so that
43 multiple users, e.g., motorized and non-motorized user groups, are accommodated to the
44 greatest extent practicable.

1 **Policies:**

2
3 It is the policy of Duchesne County that:

- 4
- 5 1. The BLM or U.S. Forest Service must coordinate and closely consult with county and
6 municipal governments who are conducting inventories related to recreation resources
7 and opportunities or scenic values, and these inventories should reflect a consensus
8 among those governmental agencies.
9
 - 10 2. Public land agencies must evaluate proposed plans and actions for impacts on existing
11 recreational resources and activities and potential future activities. This should be
12 coordinated with county and municipal governments.
13
 - 14 3. Public land agencies shall plan and manage recreational activities to be compatible with
15 resource development. Resource development, recreation, and tourism are compatible
16 when properly managed.
17
 - 18 4. Management plans and decisions must provide opportunities to meet the increased
19 demand for dispersed and developed recreational opportunities.
20
 - 21 5. County land use plans and regulations will support expanding recreation opportunities
22 and the protection and enhancement of traditional recreation areas and sites.
23
 - 24 6. The BLM or U.S. Forest Service must coordinate and consult closely with county and
25 municipal governments on any proposals for special designations (Special Recreation
26 Management Areas, wilderness, etc.) that may affect current and future recreation use.
27
 - 28 7. During land use planning processes, the county will identify potential locations of desired
29 recreational facilities.
30
 - 31 8. When possible, development proposals will be sensitive to county outdoor recreation,
32 scenic quality, and open space preservation objectives.
33
 - 34 9. County-identified public recreation areas and lands with unique natural features may be
35 preserved through easements or other common open space preservation strategies.
36
 - 37 10. Federal and state land management should support recreation and tourism and associated
38 businesses in the county, including the broad range of activities from off-road vehicle use
39 to primitive outdoor adventures.
40
 - 41 11. Encourage private sector development of recreational facilities and services using
42 development incentives or other feasible tools as appropriate and in coordination with
43 county commissioners and city councils.
44

- 1 12. Cultivate recreation facilities and services (e.g., trail systems) development and
2 maintenance "partnerships" with other entities, agencies, and special interest groups as
3 appropriate and in coordination with county commissioners, city councils, and recreation
4 special service district boards.
5
- 6 13. Permitting of commercial business enterprises or concessions on federal lands that reflect
7 the custom and culture of the county in terms of recreation and outdoor lifestyles and uses
8 should be encouraged.
9
- 10 14. Management decisions should provide for the continuation or expansion of outfitting and
11 lodge operations. They are an important part of local history and tradition and they
12 contribute substantially to the local economies.
13
- 14 15. Public land managers shall encourage recreation-oriented economic development
15 activities that are consistent with the Uintah Basin's character and lifestyle.
16
- 17 16. Permit or lease terms and conditions (e.g., grazing permits) must allow OHV access and
18 use for needed and legitimate purposes to enter a specific area on public lands.
19
- 20 17. In accordance with Utah Code 63J-8-104(g), federal land management agencies shall
21 achieve and maintain traditional access to outdoor recreational opportunities available on
22 federal lands as follows:
23
 - 24 a. Hunting, trapping, fishing, hiking, camping, rock hounding, OHV travel, biking,
25 geological exploring, pioneering, recreational vehicle camping, and sightseeing
26 are activities that are important to the traditions, customs, and character of the
27 county and should be allowed to continue.
28
 - 29 b. Wildlife hunting, trapping, and fishing should continue at levels determined by
30 the Utah Wildlife Board and the Utah Division of Wildlife Resources. Traditional
31 levels of group camping, group day use, and other traditional forms of outdoor
32 recreation, both motorized and non-motorized, should be allowed to continue.
33
 - 34 c. The broad spectrum of outdoor recreational activities available on the subject
35 lands should be available to citizens for whom a primitive, non-motorized,
36 outdoor experience is not preferred, affordable, or physically achievable.
37
- 38 18. Federal land outdoor recreational access should not discriminate in favor of one particular
39 mode of recreation to the exclusion of others. However, the County recognizes that not
40 all modes of recreation may be accommodated at all locations.
41
- 42 19. Recreation resource protection and management must provide for continued and
43 reasonable access to and development of property rights within the area and provide for
44 full use and enjoyment of these rights.

- 1 20. Existing levels of motorized public access to traditional outdoor recreational designations
2 in the county must be continued, including both snow machine and OHV use, in areas
3 where resource damage is unlikely to occur.
4
- 5 21. OHV use should be limited to trails, roads, or areas specifically designated by the agency
6 for that purpose. However, the availability and overall mileage of such trails should be
7 expanded to meet demand. OHV loops should be provided to connect communities with
8 the region. Open area riding as well as looped and stacked trail systems should be offered,
9 with a variety of levels of trail difficulty.
10
- 11 22. Group camping and day use sites and availability must be continued and expanded to
12 meet demand.
13
- 14 23. Duchesne County will continue to support private individuals and companies who hold
15 permits on public lands related to recreation and tourism.
16

17 **Scenic and Back Country Byways**

18
19 Duchesne County has one National Scenic Byway within its borders; the Dinosaur Diamond
20 Prehistoric Highway follows U.S. Highway 40/191 between Roosevelt and Duchesne and then
21 heads south on Highway 191 along the state-designated Indian Canyon Scenic Byway from
22 Duchesne toward Carbon County (see Map #39).
23

24 Duchesne County has one additional Utah State Scenic Byway within its borders - a five mile
25 section of the Mirror Lake Scenic Byway [State Highway 150] in the very northwest corner of the
26 county (see Map #39).
27

28 The Bureau of Land Management has designated one Back Country Byway that is partially
29 within Duchesne County; the Nine Mile Canyon Back Country Byway (see Map #39). The BLM
30 Price Field Office website describes this byway as “an exciting journey into the history of
31 prehistoric cultures, early travelers, and the fast-disappearing Utah rural lifestyle. Magnificent
32 canyon scenery, still home to an array of easily spotted wildlife also awaits your visit.”
33

34 **Policy:** Duchesne County supports the continuation of the scenic and back country byway
35 programs for their value in promoting tourism, provided that the county legislative body
36 continues to have the authority to designate certain segments of these roads as non-scenic areas.
37

38 **“Rourism”**

39
40 Rural tourism or “rourism” opportunities exist in Duchesne County. The state Office of Tourism
41 has resources to help the County better market itself and capitalize on these opportunities.
42

43 **Policy:** Duchesne County will explore its “Rourism” potential and consider participation in
44 available state programs to help the county promote and market itself for such opportunities.

1 **Energy Considerations**

2
3 Recreation and Tourism activities sometimes come into conflict with energy development
4 activities, especially for those seeking solitude, non-motorized or primitive recreational
5 experiences. Duchesne County offers a wide range of recreational activities and believes that
6 they can continue to co-exist with energy development activities. Fortunately, many of the
7 energy development areas of the County are not in prime recreational or tourism locations.
8

9 Over the past several years, energy development has increasingly moved to private lands. This
10 shift has led to conflicts between surface owners of recreational property and the interests of the
11 underlying mineral owners. The County has appointed an Oil and Gas Liaison to help mediate
12 differences between surface owners and mineral owners.
13

14 **Water Considerations**

15
16 **Policy:** Duchesne County supports efforts to maintain clean water so that the County maintains
17 its position as a desirable place to visit and recreate.
18

Section 19. Fire Management

Findings: Duchesne County has an emergency management plan that contains a chapter addressing fire management. The purpose of that chapter is “to ensure the safety of life and property within the County during emergency situations.” The plan states that existing fire personnel and equipment will be able to cope with most emergency situations through the use of existing mutual aid agreements. When additional support is required, assistance can be obtained from neighboring counties and state agencies.”

Each of the five incorporated cities/towns in Duchesne County has a fire department. Altamont has one pumper truck, one tender and one brush truck, manned by 10 volunteers. By agreement with the city, Duchesne County paid Altamont a fee of \$27,102.06 in 2014 to offset the cost of providing fire protection in rural areas around Altamont. The fee increases by 2.5 percent each year. Also, the County reimburses the City an agreed amount for the hours that City firefighters work in unincorporated areas. This agreement is in effect until December 31, 2017.

Duchesne has two pumpers, one tender and one brush truck, manned by 17 volunteers. By agreement with the city, Duchesne County paid Duchesne a fee of \$38,267.56 in 2014 to offset the cost of providing fire protection in rural areas around Duchesne. The fee increases by 2.5 percent each year. Also, the County reimburses the City an agreed amount for the hours that City firefighters work in unincorporated areas. This agreement is in effect until December 31, 2017.

Myton has two pumpers, one tender and two brush trucks, manned by 17 volunteers. By agreement with the city, Duchesne County paid Myton a fee of \$21,396.35 in 2014 to offset the cost of providing fire protection in rural areas around Myton. The fee increases by 2.5 percent each year. Also, the County reimburses the City an agreed amount for the hours that City firefighters work in unincorporated areas. This agreement is in effect until December 31, 2017.

Roosevelt has two pumpers, one tender, three brush trucks and one rescue vehicle, manned by 21 volunteers. By agreement with the city, Duchesne County pays Roosevelt a fee of \$47,780.90 to offset the cost of providing fire protection in rural areas around Roosevelt. The fee increases by 2.5 percent each year. Also, the County reimburses the City an agreed amount for the hours that City firefighters work in unincorporated areas. This agreement is in effect until December 31, 2017.

Tabiona has one pumper, one tender and one brush truck, manned by 9 volunteers. By agreement with the City, Duchesne County receives \$1,000.00 annually from Tabiona for county assistance in fighting fires within the City. This agreement is in effect until January 2018.

In addition, county fire stations are located in two unincorporated communities. Fruitland has one pumper, one tender and one brush truck (manned by 14 volunteers) and Neola has one pumper, one tender and two brush trucks (manned by 9 volunteers).

1 **Policies:**

- 2
- 3 1. It is the policy of Duchesne County that adequate resources, including trained personnel
4 and equipment, be made available in each community to manage fire events.
5
 - 6 2. It is the policy of Duchesne County that mutual aid agreements or fire protection
7 agreements be maintained with each fire department to protect the lives and property of
8 citizens.
9

10 **Fire Management on Public Lands**

11

12 **Findings:**

13

14 As stated in local forest plans, fire is an important component of almost every ecosystem, albeit
15 in varying degrees, on the Ashley National Forest. However, wildfire has been suppressed across
16 the Forest, increasing the fire return interval and fuel loads in coniferous forests, and increasing
17 conifer encroachment in shrublands and grasslands. While the Forest is implementing fuel
18 reduction projects, this trend may continue. The degree of departure from historical fire return
19 intervals and the amount of fuel that historically existed within vegetation communities has been
20 assessed across the Forest using the Fire Regime Condition Class (FRCC) protocol. This
21 assessment suggests roughly 67 percent of Forest lands are moderately to highly different than
22 would be expected under a natural disturbance regime. The Watershed Condition Framework
23 captures this important watershed management information. Fire Regime Groups in the county
24 are depicted on Map #40.
25

26 Watershed studies and post-fire monitoring in snow-dominated hydrologic systems indicate
27 wildfire can result in increases in annual water yield proportional to that seen from timber harvest
28 (reference the Coon Creek Water Yield Augmentation Project). Wildfire can also change,
29 sometimes significantly, the response to short-duration, high-intensity summer thunderstorms,
30 resulting in considerable soil erosion, sediment delivery, flash floods, higher peak flows, and
31 down cutting of stream channels. High severity fire consumes ground cover and alters the soil
32 surface creating water repellency. The water repellency reduces infiltration rates, resulting in
33 erosion and overland flow to channels. The increased delivery of sediment and streamflow
34 produces debris flows and floods that down cut channels and produce floods. These responses are
35 typically a part of the ecosystem but can result in issues and concerns in the wildland-urban
36 interface. Such responses and associated effects however are usually only seen for the first three
37 to five years after a significant high-severity fire due to vegetative recovery and its ability to
38 assimilate thunderstorm intensity, duration, and volume.
39

40 According to the 2016 *Utah Forest Health Highlights* report, in 2016 there were 1,072 wildland
41 fires in the state, which burned 101,328 acres (Utah Forestry Fire and State Lands 2016).
42 Multiple fires burned close to 5,000 acres each. Similarly, according to the National Interagency
43 Coordination Center (2016a), in 2016, there were 1,078 wildland fires in Utah that consumed
44 101,096 acres (a large increase from the 10,203 acres burned in 2015). However; nation-wide,

1 fire acreage decreased from 10,125,149 acres in 2015 to 5,509,995 acres in 2016 (National
 2 Interagency Coordination Center 2016b). The year 2015 saw the largest federal fire suppression
 3 costs (\$2,130,543,000) over the past 30 years (National Interagency Coordination Center, 2016c).
 4 Since 2000, only four years have had federal suppression costs under \$1 billion dollars. Forest
 5 management policies need to change in order to reduce the acreage consumed by wildfire.

6
 7 Acres of hazard fuel treatments and burn areas (1980-2016) are illustrated in Table F1 and Map # 41.
 8

Table F1. Acres of Fire/Burn Areas and Hazardous Fuel Treatments in Duchesne County in the Years 1980–2016

	BLM	USFS	DNR	Private	SITLA	Tribal
Fire/burn areas	265	73,899	90	5,357	616	15,759
Insect-disease	–	204	–	–	–	–
Mechanical add (mowed or chipped)	–	15,852	6,224	261	347	41
Mechanical remove (cutting, felling, and gathering)	–	8,781	–	1,835	122	70

* Data from U.S. Department of Agriculture (2016a) and LANDFIRE (2017).

9
 10 Fire management on public lands in the region is coordinated by the Uintah Basin Interagency
 11 Fire Center in Vernal. This organization coordinates aviation, equipment and ground resources
 12 and provides logistical support for anticipated and ongoing wildfire activity on lands managed by
 13 the Uintah and Ouray Agency of the BIA, Ashley National Forest, Ouray National Wildlife
 14 Refuge, Green River District of the Bureau of Land Management, Utah Division of Forestry, Fire
 15 and State Lands and Dinosaur National Monument.

16
 17 The Uintah Basin Interagency Fire Center maintains a database of the types of incidents they are
 18 deployed to. These include wildfires, structure fires, vehicle fires, smoke checks, medical aid,
 19 emergency standby, public assist, law enforcement, traffic collision, prescribed fires, aircraft
 20 down, hazmat response, search and rescue, natural disasters and miscellaneous. For the first half
 21 of 2015, the center provided services for 55 incidents in the area.

22
 23 The Chepeta Wildland Fire Module is a ten-person crew based in Vernal that provides fire
 24 containment or suppression services. The King’s Peak Wildland Fire Module (another ten-
 25 person crew) is stationed in Duchesne. These crews generally work on prescribed burns, stand
 26 thinning, project monitoring and fuels planning in the Spring and Fall and work during the
 27 summer on fire containment or suppression assignments across the country. They specialize in
 28 observing and collecting information about a fire, such as weather, fire behavior and smoke data.
 29 This helps fire managers predict wildfire spread, map fire growth and document fire effects.

30
 31 Duchesne County maintains a cooperative agreement with the Utah Division of Forestry, Fire
 32 and State Lands for wildland fire protection. To participate in this agreement, the County
 33 adopted the Wildland Urban Interface (WUI) Code, meets agreed standards for wildland fire

1 training, certifications and equipment and budgets an amount of funding for fire suppression
2 costs as required by the State. The County and State split the costs of employing a District Fire
3 Warden and an Assistant District Fire Warden to administer wildland fire programs and services
4 in the County. The State helps the County pay for wildland fire suppression costs through its
5 Wildland Fire Suppression Fund.

6
7 According to the Profile of Development and the Wildland-Urban Interface, found in the
8 Headwaters Economics Economic Profile System (EPS), Duchesne County, as of 2010, has 148
9 homes located in a wildland-urban interface area, of which 144 are vacation or secondary homes.
10 This represents 1.6% of the total housing stock. The same report indicates that the average lot
11 size of these WUI residences is 1.1 acres, with a total of 166 acres of residential land in WUI
12 residential acres. The report ranks Duchesne County 16th of the 29 Utah counties for existing
13 wildland-urban interface risk and 4th in terms of potential risk.

14
15 The County believes that the number of WUI homes and acres has increased since 2010;
16 however, the WUI code has required that measures (such as defensible space, non-combustible
17 roofs and driveways constructed to support fire trucks) be taken to help protect these homes from
18 wildfire.

19
20 The Utah Division of Forestry, Fire and State Lands published a list of communities at risk of
21 wildland fire in 2016 (http://www.ffsl.utah.gov/images/Fire/wui/2016CARsListFFSL_2016.pdf).
22 Various communities in the wildland urban interface were ranked with overall scores of zero to
23 12, with higher scores indicating more severe fire danger (0-3 points are assigned based on
24 ratings in the categories of fire occurrence, fuel hazard levels, values protected and fire protection
25 capability). In Duchesne County, the Currant Creek Mountain, Fruitland, Golden Eagle, Orange
26 Mountain, Pinion Ridge, Rabbit Gulch and West Sundance areas scored 12 for high fire danger.
27 Several other areas of the county scored an 11, which are also high risk areas: Argyle Canyon,
28 Bandanna Ranch, Clark Estates and the Pin Willies area. These high risk areas are on private
29 lands; however, fire could start on and spread from public lands and put these private lands in
30 danger if proper forest and vegetation management does not occur on public lands. Another look
31 at fire risk in Duchesne County is provided by the LANDFIRE database, which is depicted on
32 Map #42.

33
34 Duchesne County adopted and began enforcing the Wildland Urban Interface Code in 2006 to
35 reduce fire risk on private lands and efforts to reduce fuel loads and fire hazards are ongoing.

36
37 A September 2016 *Science Findings* report from the Pacific Northwest Research Station, US
38 Forest Service entitled “*Polishing the Prism: Improving Wildfire Mitigation Planning by*
39 *Coupling Landscape and Social Dimensions,*” contained some interesting findings associated
40 with fire in the Wildland Urban Interface, which is defined as a landscape on which structures
41 and flammable vegetation potentially merge in a wildfire-prone environment. It is estimated that
42 the Wildland Urban Interface has grown at the rate of about 2 million acres per year across the
43 country as housing developments expand into fire-prone wildlands as a result of population
44 growth, exurban development, and Internet access, which allows people more choice in where

1 they work. The study noted that more than 34,000 homes were destroyed by wildfire in the
2 United States between 2003 and 2012 and that among people living in fire-prone areas, there is
3 wide variation both in awareness of wildfire risk and the capacity to reduce it. Some
4 communities are aware of the high wildfire risk in their area, but don't have the resources or
5 money to do anything about it. Many of the high hazard areas of Duchesne County fall into this
6 category. Other communities may have the resources but are in denial as wildfires are a
7 relatively rare event for individual communities, which contributes to poor risk perception.

8
9 The researchers found that the area of wildfire exposure around communities is often more than
10 50 times larger than the community itself. In some cases, these areas include federal lands where
11 mechanical fuel treatments are prohibited or highly restricted—as in federally designated
12 wilderness or roadless areas, which encompass 43 percent of the area of 82 western U.S. national
13 forests. Federal budgets and environmental restrictions will not allow for the level of forest
14 management necessary to eliminate wildfire risk and researchers found that groups that focus on
15 forest restoration and those that focus on fire protection don't interact nearly as much as they
16 should.

17
18 The study noted several land management implications:

- 19
- 20 • Wildfire risk management opportunities can be identified by examining the juxtaposition
21 of wildfire risk transmission and the capacity and likelihood that landowners will conduct
22 mitigation activities. Biophysical-social assessments within firesheds are a key step in
23 identifying localized comparative advantages in mitigation.
24
 - 25 • Wildfire mitigation planning could partition wildfire risk within firesheds among major
26 land ownerships according to mitigation capability. Locations where wildfire risk
27 transmission and risk mitigation potential coincide would indicate places where the most
28 significant opportunities exist for reducing wildfire risk.
29
 - 30 • Areas where high risk of wildfire transmission coincides with low mitigation potential by
31 landowners could benefit from targeted policy interventions, such as education and
32 technical assistance, to facilitate efforts among private landowners to reduce wildfire
33 hazards.
34

35 In conclusion, the researchers recommended a four step assessment of each fireshed:

- 36
- 37 • Run simulations to map perimeters of firesheds;
38
 - 39 • Describe the connectivity of the landscape within the fireshed, particularly in terms of
40 ownership and management capability (for example, noting if regulations limit what can
41 be done inside wilderness areas);
42
 - 43 • Conduct a social network analysis and add to the map locations where property owners
44 are more or less likely to mitigate risk; and

- Consider the social and biophysical information together to assess the problem strategically.

Grazing and Wildfire

The Utah Grazing Improvement Program within the Utah Department of Agriculture and Food has demonstrated that livestock grazing helps control wildfires. Regular grazing will reduce or eliminate fine, grassy fuels, which will help prevent wildfire from spreading across the range.

Policies:

1. It is the policy of Duchesne County to continue participation and cooperation with the Utah Division of Forestry, Fire and State Lands and the Uintah Basin Interagency Fire Center to address wildfire issues in the unincorporated areas of Duchesne County, on private, federal, state and tribal lands.
2. It is the policy of Duchesne County to provide and promote education of communities and property owners in the wildland-urban interface regarding fuels mitigation, creating defensible space and fuel breaks and meeting other standards of the Wildland Urban Interface Code.
3. Good fire management requires active vegetation management that addresses concerns such as the spread of Pinion/Juniper woodlands, cheatgrass proliferation, stand density and fuel build up in forested areas. Mechanical vegetation treatment, grazing and prescribed fire can be effective tools in the quest to establish resilient landscapes. It is the policy of Duchesne County to encourage active vegetation management on public lands, by the use of mechanized vegetation treatments, grazing, prescribed fire and other treatments that will result in resilient landscapes.

State of Utah Catastrophic Wildfire Reduction Strategy

Following a particularly severe fire season in 2012, the State of Utah formed a steering committee to prepare a Catastrophic Wildfire Reduction Strategy. The Steering Committee was chaired by the Director of the Department of Agriculture and Food and included representation from across the state. Committee members represented state and federal land management agencies, conservation and sportsmen's groups, the Governor's Office and county commissioners. Many on the committee had experience in preventing, suppressing and otherwise managing wildland fires in the state for decades. Other committee members had extensive land management expertise.

The committee was asked to advise the State about:

- Measures of success and an approach for adaptive implementation of the state strategy

- 1 • Identifying and overcoming barriers to successful strategy development and
2 implementation
- 3
- 4 • Promoting awareness of existing efforts (e.g., Watershed Restoration Initiative, Utah’s
5 “Forest Action Plan,” Secure Rural Schools program, National Cohesive Strategy, etc.)
6 that may be leveraged to contribute to the success of the state’s strategy
- 7
- 8 • Facilitating coordination of agency and stakeholder resources, and integration of
9 management
- 10
- 11 • Developing shared messages and being spokespersons for and champions of the strategy
12 to reduce the risk of catastrophic wildfire.
- 13

14 During the Catastrophic Wildfire Reduction Strategy process, six regional committees were
15 formed to discuss regional issues in more detail and to recommend priority projects to reduce the
16 threat of wildfire. Duchesne County is in the Uintah Basin region, which recommended one high
17 priority wildfire mitigation project in the Dutch John area of Daggett County.

18

19 In developing the Utah Catastrophic Wildfire Reduction Strategy, the steering committee sought
20 to understand the current fire management situation in the state. They also reviewed the goals of
21 the National Cohesive Wildfire Management Strategy (to create landscapes that are resilient to
22 fire-related disturbances, to help humans and infrastructure withstand fire without loss of life or
23 property and to assist local jurisdictions in making safe, effective and efficient risk-based wildfire
24 management decisions). Finally, the committee established a number of “guiding principles” as
25 a framework for their deliberations:

- 26
- 27 • Identifying the gaps between the existing conditions and the desired conditions.
- 28
- 29 • Exploring alternative solutions to fill the gaps and reach desired conditions.
- 30
- 31 • Developing recommendations for action-oriented solutions to implement the strategy.
- 32
- 33 • Protecting health, safety and welfare of residents and visitors and protect key
34 infrastructure.
- 35
- 36 • Addressing the underlying problem of improving forest, range, watershed and ecosystem
37 health.
- 38
- 39 • Benefitting local economies and leveraging public dollars to implement the strategy.
- 40
- 41 • Recognizing regional differences and needs and seeking public support of solutions.
- 42

43 During the process, the Catastrophic Wildfire Reduction Strategy committee identified several
44 issues that need to be addressed in the future:

- 1 • Many fires start as a result of weather conditions (lightning) and rugged conditions make
2 their control difficult.
- 3
- 4 • Air support equipment is aging or being decommissioned.
- 5
- 6 • Policy impediments, such as insufficient regulation of land use in the wildland-urban
7 interface, inadequate investment in fire prevention and fuel reduction activities, restrictive
8 environmental laws and air quality laws that limit prescribed burns.
- 9
- 10 • Need to bolster coordination and cooperation with non-traditional land management
11 entities and stakeholders, such as agricultural, recreation and environmental groups.
- 12
- 13 • Build public support and secure adequate funding for preventative measures, suppression
14 and post-fire rehabilitation.
- 15
- 16 • Overcoming hurdles to using controlled burns as a tool to prevent catastrophic fire events.
- 17
- 18 • Landscape level issues such as fuel loads, invasive species, jurisdictional boundaries and
19 insects and disease.
- 20
- 21 • Common failure to recognize grazing as an important tool to reduce fuels and fire risk.
- 22
- 23 • The decline of the timber industry has reduced the supply of businesses who could bid on
24 forest treatment projects.
- 25

26 As a result of identifying the issues and constraints, the committee developed the following
27 recommendations:

- 28 • Achieve statewide coordination of mitigation resources.
- 29
- 30 • Establish a Catastrophic Fire Reduction Fund.
- 31
- 32 • Establish regional collaborative working groups across the state to perform needs
33 assessments and prioritize projects.
- 34
- 35 • Form a technical committee to respond to specific concerns of statewide importance.
- 36
- 37 • Adopt key recommendations from the National Cohesive Wildfire Management Strategy.
- 38
- 39 • Increase public understanding and participation, particularly to build public support for
40 prescribed fire to reduce fuels and help prevent catastrophic fires.
- 41
- 42 • Implement the strategy and report annually to the Governor and Legislature about actions
43 planned and taken.

1 **Policy:** It is the policy of Duchesne County to support the efforts and findings of the
2 Catastrophic Wildfire Reduction Strategy committee and encourage measures locally to reduce
3 fuel loads, regulate development in the wildland urban interface and otherwise protect life, safety
4 and property from the effects of wildfire. This policy is not meant to oppose the use of fire
5 managed for resource benefit (managed wildland fire, prescribed burns and training burns).
6

7 **House Bill 464**
8

9 The 2016 Utah Legislature took additional steps to address the issue of potential catastrophic
10 wildfire on public lands in the state. House Bill 464 was passed and became law when signed by
11 the Governor on March 22, 2016. The bill appropriated \$200,000.00 for the Conservation
12 Commission within the Utah Department of Agriculture and Food to work with Utah State
13 University and local conservation districts to conduct a study and analysis of the environmental
14 and economic impact of:
15

- 16 a. Potential catastrophic wildfires on public lands within Utah, including the impact to the
17 state and the state's counties, of catastrophic wildfire on the state's watershed and air
18 quality; and
19
- 20 b. Changing rangeland and forest management practices to reduce the probability and
21 severity of wildfires in Utah.
22

23 The study and economic analysis funded by the bill is to:
24

- 25 a. Document historical acreage and severity of wildfires in Utah;
26
- 27 b. Assess and document differences in state and federal wildfire preparedness activities;
28
- 29 c. Update and expand upon existing studies of wildfire fuel loads on public lands, including
30 consideration of insect damage, invasive species, grazing management, and timber
31 management;
32
- 33 d. Assess the relative size, probability, and severity of wildfires on public lands in Utah,
34 including consideration of factors that lead to wildfires, including biology and
35 characteristics of land;
36
- 37 e. Identify the most cost-effective wildfire preparedness actions; and
38
- 39 f. Develop a statistical model that would allow public land managers to more efficiently
40 allocate funds between wildfire expenditures and other expenditures.
41

42 **Policy:** It is the policy of Duchesne County to support the efforts associated with House Bill 464
43 to reduce the potential for resource damage associated with wildfires on public lands.
44

1 **Fire Management and Sage Grouse**
2

3 The Western Association of Fish and Wildlife Agencies has a Wildfire and Invasive Species
4 Initiative Working Group that published a report in 2013 entitled “*Fire and Fuels Management*
5 *Contributions to Sage Grouse Conservation.*” This report concluded that “proactive measures in
6 the fire operations and fuels management arenas are crucial to long-term sage-grouse
7 conservation. Approximately 97% of initial attack efforts are successful at keeping fires under
8 1,000 acres. Site-appropriate measures before and after the fire represent the greatest
9 opportunities to interrupt the invasive plant and wildfire cycle, and potentially augment initial
10 attack effectiveness.”

11
12 This working group also identified challenges and barriers affecting efficient fire and fuel
13 management at the federal, state and local level. For counties, the following barriers and
14 challenges were identified:

- 15 • Firefighter retention and the loss of institutional knowledge of managing wildfire;
- 16 • There is insufficient funding for preparedness and response capacity including training,
17 heavy equipment/engines, PPE, radios, and facilities.
- 18 • Shortages of qualified wildfire management trainers, programs and inadequate delivery
19 systems in rural areas create operational constraints.
- 20 • Inconsistent federal land management policies are negatively impacting the sustainability
21 of multiple land uses on public lands.
- 22 • There is a significant need for developing and utilization of integrated and dynamic
23 livestock grazing plans that assist with fuels reduction through targeted grazing and
24 consistent monitoring.
- 25 • It is difficult to implement a landscape approach to fuels management because of
26 challenges posed by environmental regulations, the availability of sufficient funding, the
27 lack of qualified contractors and the complicated NEPA permit process.
- 28
- 29
- 30
- 31
- 32
- 33
- 34

35 The Utah Bureau of Land Management office has published data associated with their efforts to
36 manage fuels for the benefit of sage grouse habitat (“*Fuels Management Benefits toward Sage-*
37 *Grouse Habitat*”) at:
38 [https://www.forestsandrangelands.gov/success/stories/2015/documents/UtahBLMFuelsManagem](https://www.forestsandrangelands.gov/success/stories/2015/documents/UtahBLMFuelsManagementSageGrouse20150128.pdf)
39 [entSageGrouse20150128.pdf](https://www.forestsandrangelands.gov/success/stories/2015/documents/UtahBLMFuelsManagementSageGrouse20150128.pdf). Quoting from this document, the BLM recognizes that one of the
40 greatest single threats to the survival of the Greater Sage-Grouse is fire and invasive plant
41 species.

42
43 The Bureau of Land Management (BLM) fuels management program involvement with Sage-
44 Grouse spans all three National Cohesive Wildland Fire Management Strategy goals: Restoring

1 and Maintaining Fire Resilient Landscapes, Creating Fire Adapted Communities, and
2 Responding to Wildfire.

3
4 The BLM Fuels Management Program cooperates extensively with other resource programs and
5 external partners to conserve and maintain Sage-Grouse habitat by removing early to mid-phase
6 pinyon-juniper encroachment, establishing fuel breaks in strategic locations to protect areas with
7 sagebrush where large and destructive wildfires have occurred in the past and treating new non-
8 native weed infestations.

9
10 The fuels program, in combination with the Emergency Stabilization and Rehabilitation (ESR)
11 program, places priority on pro-actively working to restore Sage-Grouse habitat by increasing, at
12 a landscape level, sagebrush cover through removal of late-phase pinyon-juniper encroachment,
13 reducing cheatgrass cover and other non-native species cover, and increasing perennial
14 grass/herbaceous, and sagebrush cover.

15
16 In the Green River Zone, which includes Duchesne County, Pinyon-juniper encroachment
17 removal by mechanical means has been a major focus, along with the use of prescribed fire to
18 ultimately reduce the size and intensity of wildfires. Between 2003 and 2014, BLM has spent
19 \$26,078,909 in Utah treating 334,136 acres of land to accomplish the purposes noted above.

20 21 **Policy**

22
23 It is the policy of Duchesne County to work with federal and state agencies, the Ute Tribe and
24 other organizations to address the barriers and challenges associated with fire and fuels
25 management in the interest of wildlife habitat and species conservation.

26 27 **Water Considerations**

28
29 Proper and effective fire management will reduce the amount of land scarred by fire. Lands
30 where destruction of vegetation has occurred are more subject to erosion and sedimentation of
31 waterways.

32 33 **Policies:**

- 34
35 1. It is the policy of Duchesne County that fire management shall take into account that
36 healthy vegetation will reduce the chances for damaged water quality associated from
37 erosion of soils in fire scarred areas.
38
39 2. It is the policy of Duchesne County that fire-damaged areas shall be re-vegetated with
40 seedings or plantings as soon as possible after the fire event.
41

Section 20. Land Access

Findings: Duchesne County has a Transportation Plan (currently in draft form) that was prepared by Jones & DeMille Engineering for the Duchesne County Special Service District #2. This plan analyzes existing roadway and traffic conditions, looks at transportation projects needed to accommodate future growth [within a short range and long range transportation improvement plan], establishes management guidelines and policies and addresses access management and corridor preservation. This plan will be a stand-alone document considered for adoption via a public process separate from and following the 2017 general plan update.

While the Duchesne County Transportation Plan focuses on transportation facilities serving the entire county, this section focuses on the transportation system within Duchesne County that crosses federal lands.

RS 2477 Roads are defined as roads built prior to October 21, 1976, on rights-of-way across non-reserved federal lands granted in accordance with the Act of July 26, 1866. Roads are a vital part of the infrastructure of Duchesne County providing access to public lands for development of natural resources, agriculture, recreation, and the preservation of the county's culture and heritage. RS 2477 rights-of-way may include, and are not limited to, horse paths, cattle trails, irrigation canals, waterways, ditches, pipelines or other means of water transmission and their attendant access for maintenance, wagon roads, jeep trails, logging roads, homestead roads, mine to market roads and all other ways established and held consistent with Section 72-5-104 of the Utah Code.

Goals:

- 1) Protect current and future access to, and use of lands managed by the Bureau of Land Management, the U.S. Forest Service and all other publicly owned areas within Duchesne County.
- 2) Work to have federal agencies recognize citizen's legal access rights to and across federal lands.

Objectives:

- Protecting Duchesne County citizens' vested rights of access to all publicly owned areas of the County. This is a responsibility of Duchesne County, to be executed through its duly elected board of county commissioners.
- Protect traditional and cultural access to public lands.
- Maintain access to all R.S. 2477, Class B, and Class D roads and pursue judicial recognition of vested interests and rights through the Quiet Title Act and other legal means.

- 1 • Strategically expand access to State School & Institutional Trust Lands Administration (SITLA),
2 and federal lands to increase the value and enjoyment of such parcels.
- 3 • Encourage regular review of existing roadway infrastructure, planning documents, and policies to
4 address future needs.
- 5 • Maintain road systems for safe, convenient, and equitable access for citizens of all ages and
6 physical conditions.
- 7 • Provide and protect access for utility and communication providers.
- 8 • Oppose new roadless areas and similar designations that limit access.
- 9 • Traditional access roads and trails serving mines and other historical uses, in current and future
10 special designation areas, should be preserved and incorporated into travel management plans and
11 land use plans.
- 12 • Educate the public about the importance of public land access for multiple-use and sustainable
13 yield purposes and activities.
- 14 • Encourage the provision of additional road infrastructure to accommodate safe and enjoyable
15 outdoor recreation practices on public lands.
- 16 • Expedite the National Environmental Policy Act (NEPA) and policy process in order to avoid,
17 minimize, or mitigate access limitations on public lands.
- 18 • Ensure access for emergency responders for fire management, medical incidents, search and rescue
19 and similar efforts.
- 20 • Ensure access to forestry, mineral, energy, and other resources needed for state and national
21 security and for economic prosperity.
- 22 • Ensure access for forest management and stewardship projects.

23
24 Public rights of way established under RS 2477 are not negotiable and cannot be subjugated or
25 taken by any state or federal agency. They are vested property rights duly recognized in federal
26 and state law.

27
28 RS 2477 is a property right claim of the public for transportation routes that cannot be given or
29 taken away by any federal agency. Duchesne County acknowledges that in 1866 Congress
30 granted access across federal land not otherwise reserved. The evidence of acceptance of that
31 grant is the Duchesne County Transportation Map, renderings of historic documents, and the
32 public's continued presence on and use of these routes. Duchesne County will continue to
33 legally enforce and litigate for access as it has historically done. Duchesne County will also
34 continue to support any action to legally dismiss the Federal Government from the public
35 domain, and demand the disposal of Federal title to the land.

36
37 Title V grants to local county governments or the States are in perpetuity and do not diminish any
38 RS 2477 claim or right of way. Nothing in Title V gives the Secretary of the Interior authority to
39 arbitrarily close a road or a corridor once it is granted except by cooperation and coordination
40 with the government entity holding the Grant. In applying for a right of way, or other use of lands
41 under Title V of FLPMA consistent with section 72-3-108 of State Statute, Duchesne County

1 does not relinquish its rights to the land, its use or property ownership under RS 2477 or any
2 other law, regulation or Act. Further, a federally sanctioned gating, road use prohibition or any
3 other Federal action taking the public's existing rights to access is not acceptable and constitutes
4 a threat to the health, safety and welfare of Duchesne County citizens and others who travel such
5 routes. Duchesne County will not in any manner exchange or waive any of its public or of its
6 individual citizen's rights for any permission or consent from the Federal Government or any of
7 its agencies.

8
9 It is the policy of Duchesne County that:

- 10
11 1. Access to and across public lands, including RS2477 roads and rights-of-way shall
12 remain open. The right of the public to have unrestricted access to all roads granted
13 under R.S. 2477 or FLPMA Title V shall be held inviolate. As a co-holder of R.S. 2477
14 rights-of-way with the State, Duchesne County supports the recognition by the federal
15 government of the public use of R.S. 2477 rights-of-way and urges the federal
16 government to fully recognize the rights-of-way and their use by the public as
17 expeditiously as possible.
18
- 19 2. All necessary action will be taken to protect access. It is the policy of Duchesne County
20 to use reasonable administrative and legal measures to protect and preserve valid existing
21 rights-of-way granted by Congress under R.S. 2477 and to support and work in
22 conjunction with the State of Utah to redress cases where R.S. 2477 rights-of-way are not
23 recognized or are impaired.
24
- 25 3. The county will identify and inventory roads and participate with federal and state land
26 management agencies in decision-making.
27
- 28 4. Transportation and access routes to and across federal lands, including all rights-of-way
29 vested under R.S. 2477, are vital to the economy and to the quality of life in the County
30 and must provide, at a minimum, a network of roads throughout the resource planning
31 area that provides for:
 - 32
33 a. Movement of people, goods, and services across public lands;
34
 - 35 b. Reasonable access to a broad range of resources and opportunities throughout the
36 resource planning area, including:
 - 37
38 1. Livestock operations and improvements;
39
 - 40 2. Solid, fluid, and gaseous mineral operations;
41
 - 42 3. Recreational opportunities and operations, including motorized and non-
43 motorized recreation;
44

- 1 4. Search and rescue needs;
- 2
- 3 5. Public safety needs (including firefighting and EMS); and
- 4
- 5 6. Access for transportation of wood products to market;
- 6
- 7 7. Access to federal lands for people with disabilities and the elderly; and
- 8
- 9 8. Access to state lands and school and institutional trust lands to accomplish
- 10 the purposes of those lands.
- 11
- 12 5. Access and transportation needs shall be considered, evaluated and analyzed in the land
- 13 use planning process. No roads, trails, rights-of-way, easements or other traditional
- 14 access for the transportation of people, products, recreation, energy or livestock may be
- 15 closed, abandoned, withdrawn, or have a change of use without full public disclosure and
- 16 analysis.
- 17
- 18 6. Future access must be planned and analyzed to determine its disposition at the completion
- 19 of its intended life. This is to ensure needed access is maintained or that such access is
- 20 removed and resulting disturbances are reclaimed.
- 21
- 22 7. Access to all water related facilities such as dams, reservoirs, delivery systems,
- 23 monitoring facilities, livestock water and handling facilities, etc., must be maintained.
- 24 This access must be economically feasible with respect to the method and timing of such
- 25 access.
- 26
- 27 8. Duchesne County supports the protection of traditional, customary and cultural access to
- 28 public lands, including access to the infrastructure needed to meet visitors' current and
- 29 future needs (such as trailheads, parking areas, restrooms, information centers, and
- 30 signage).
- 31
- 32 9. Duchesne County supports expanding access to State and SITLA lands to increase the
- 33 economic value of such parcels.
- 34
- 35 10. Duchesne County encourages regular review of existing public lands access infrastructure
- 36 and future needs in an effort to maintain transportation systems for safe and convenient
- 37 access.
- 38
- 39 11. Roads shall remain open for utility and communications companies to ensure reliable
- 40 delivery of services to citizens of Duchesne County and the state of Utah and allow for
- 41 the maintenance of current and future infrastructure, including but not limited to
- 42 transmission and distribution lines, pipelines, and communications towers.
- 43
- 44 12. Duchesne County encourages the U.S. Forest Service to review and amend the roadless

1 rule to allow for additional access, to reduce fuel loads and to improve water quality and
2 quantity, wildlife habitat, species diversity, and forest ecosystem health.

3
4 13. Roads that provide access to and across public lands managed by any land management
5 agency shall remain open unless concurrence on the closure of unnecessary or unsafe
6 roads can be met through cooperation and coordination with the state and Duchesne
7 County.

8
9 14. Access to lands managed by the State of Utah shall remain open and new roads
10 established where access to state lands is currently not available.

11
12 15. Duchesne County will assist in identifying and inventorying roads and participate with
13 federal land management agencies in the land use planning process including travel and
14 transportation management.

15
16 16. Access provided by Utah code 72-5-104 is essential in many instances for landowners to
17 access private property and for the public to access and use public lands. As such,
18 Duchesne County shall avoid vacating the public's interest in existing roads across
19 private property that provide access to public lands.

20
21 17. Duchesne County supports and protects private property rights, including access rights,
22 within the confines of Utah law.

23
24 18. State and federal lands and amenities should be accessible by multiple modes of
25 transportation, be inclusive to all persons with disabilities, and follow relevant
26 accessibility guidelines to the maximum extent possible.

27
28 19. Duchesne County reserves the ability to maintain and protect access to approved roads,
29 trails, mines, historic uses, in areas under state or federal management, and to add or
30 reroute any access network if needed for the safety, health, economy, and welfare of
31 county and state citizens.

32
33 20. Duchesne County supports educational campaigns and marketing strategies that educate
34 the public about access to and multiple-use and sustainable yield practices on public
35 lands.

36
37 21. Duchesne County supports and will assist in obtaining and maintaining access to public
38 lands to facilitate vegetation management and wildlife habitat projects being implemented
39 by the Shared Stewardship, Watershed Restoration Initiative, or other similar programs.

40
41 22. Duchesne County will identify individual roads of significant importance and will address
42 associated concerns regarding those roads with federal, tribal and county stakeholders
43 during the management planning process rather than deferring conversations to later
44 dates.

- 1 23. Duchesne County supports administrative access for all valid permit holders.
- 2
- 3 24. Duchesne County supports increasing access to, and providing infrastructure for, outdoor
- 4 recreational activities on public lands.
- 5
- 6 25. Duchesne County opposes pauses or moratoriums that limit access to public lands for
- 7 multiple-use, sustainable yield, historic, cultural, or traditional practices.
- 8
- 9 26. Duchesne County supports and encourages an expedited NEPA process and policy
- 10 decisions associated with road or access projects.
- 11
- 12 27. Duchesne County supports the provision of safe and comfortable access for people of all
- 13 age groups and physical abilities. This includes, for example, allowing the use of Class 1
- 14 and Class 2 electric assist bicycles wherever mountain bike use is permitted in an effort to
- 15 provide equity in access to federal lands.
- 16

17 The County has undertaken efforts over the past several years to identify and plot the location of
18 all Class B and Class D roads that are legitimately part of Duchesne County's transportation
19 system. The County has prepared a map of its current transportation system in areas within the
20 stewardship of the Bureau of Land Management, setting forth all roads claimed by the County as
21 part of its transportation system (see Map #43). The map includes but is not limited to all roads
22 claimed by Duchesne County pursuant to RS-2477. It is expected that the Bureau of Land
23 Management will conform the transportation provisions of the Resource Management Plan to be
24 consistent with this map, as required by FLPMA Section 1712(c)(9). It is also expected that
25 when such mapping is completed for areas under the stewardship of the United States Forest
26 Service, that the Forest Service will conform the transportation provisions of its forest plans to be
27 consistent with such a map.

28

29 **Roadless Areas**

30

31 **Policies:** Duchesne County opposes any additional evaluation of national forest service lands as
32 "roadless" or "un-roaded" beyond the forest service's second roadless area review evaluation and
33 opposes efforts by agencies to specially manage those areas in a way that:

- 34
- 35 1. Closes or declassifies existing roads unless multiple side by side roads exist running to
- 36 the same destination and state and local governments consent to close or declassify the
- 37 extra roads;
- 38
- 39 2. Permanently bars travel on existing roads;
- 40
- 41 3. Excludes or diminishes traditional multiple-use activities, including grazing and proper
- 42 forest harvesting;
- 43
- 44 4. Interferes with the enjoyment and use of valid, existing rights, including water rights,

1 local transportation plan rights, R.S. 2477 rights, grazing allotment rights, and mineral
2 leasing rights; or

- 3
4 5. Prohibits development of additional roads reasonably necessary to pursue traditional
5 multiple-use activities.
6

7 Duchesne County calls for the re-inventory, boundary adjustment, consolidation or deletion of
8 the Inventoried Roadless Areas within or partially within the County and their suggested future
9 management classifications as set forth in Appendix D of this plan.

10
11 Duchesne County supports efforts by the State of Utah to petition the Department of Agriculture
12 and Congress to establish new management provisions for Inventoried Roadless Areas across the
13 state, incorporating the recommendations set forth in Appendix D.
14

15 **Road Closures**

16
17 **Findings:** There is overwhelming public support for the preservation of access routes across
18 public lands. A December 2008 report published by Utah State University entitled “Public Lands
19 and Utah Communities: A Statewide Survey of Utah Residents,” found (in Table 46) that only
20 8.7% of the survey respondents in the Daggett-Duchesne-Uintah County area believed that public
21 land managers should moderately (6.5%) or substantially (2.2%) reduce their emphasis on
22 providing road access to recreation areas when making decisions about how to manage public
23 lands in Utah.
24

25 **Policies:**

- 26
27 1. All rights of Duchesne County and the State of Utah in and to roads, ways and routes
28 crossing federal may be revoked only in compliance with Utah Code Section 72-5-105
29 and by formal action of the Board of Duchesne County Commissioners to abandon such
30 route as a public way pursuant to Utah Code Section 72-3-108 and consistent with the
31 principles of due process enshrined in the Constitutions of the United States and the State
32 of Utah.
33 2. Duchesne County shall continue to enforce its access and travel rights, resist any federal
34 efforts to interfere with or erode those rights, and press all means of litigation to legally
35 redress those rights.
36
37 3. In accordance with Section 63J-8-104 (h) of the Utah Code, it is the policy of Duchesne
38 County that federal land management agencies shall:
39
40 a. Keep open to motorized travel, any road in the subject lands that is part of
41 Duchesne County’s duly adopted transportation plan;
42
43 b. Provide that R.S. 2477 rights-of-way should be recognized by the BLM;
44

- 1 c. Provide that a county road may be temporarily closed or permanently abandoned
2 only by statutorily authorized action of the county or state;
3
- 4 d. Provide that the BLM and the Forest Service must recognize and not unduly
5 interfere with a county's ability to maintain and repair roads and, where reasonably
6 necessary, make improvements to the roads; and
7
- 8 e. Recognize that additional roads and trails may be needed in the subject lands from
9 time to time to facilitate reasonable access to a broad range of resources and
10 opportunities throughout the subject lands, including livestock operations and
11 improvements, solid, fluid, and gaseous mineral operations, recreational
12 opportunities and operations, search and rescue needs, other public safety needs,
13 access to public lands for people with disabilities and the elderly, and access to
14 Utah school and institutional trust lands for the accomplishment of the purposes
15 of those lands.
16

17 **Energy Considerations**

18
19 **Findings:** Land access is important to allow for development of the vast energy resources
20 existing in Duchesne County.
21

22 **Policy:** It is the policy of Duchesne County to assert the public's right to travel over federal
23 lands under the RS 2477 statute or by acquisition of Title V rights of way.
24

25 **Water Considerations**

26
27 **Policy:** It is the policy of Duchesne County that land access shall be maintained in a manner,
28 using sound engineering and mitigation practices, that does not degrade water quality.
29
30

Section 21. Cultural, Historical, Geological and Paleontological Resources

Findings: The Uintah Basin and its counties have a large quantity and variety of cultural and historical resources.

Cultural History: According to the Utah Division of State History, the history of the Uintah Basin is broken down into five major periods: 1) the Paleo Archaic period (ca. 10,000–6000 B.C.), 2) the Archaic period (ca. 6000–500 B.C.), 3) the Formative period (ca. 500 B.C.–A.D. 1300), 4) the Protohistoric or Historic Ute period (ca. A.D. 1300–1800), and 5) the Historic Euro-American period (ca. 1800–present). Sites from the Formative and Historic Euro-American periods dominate the archaeological and historical record in the Uintah Basin and include resources such as granaries, rock art, villages (as seen in sites found in Nine Mile Canyon), ranches, irrigation systems, and forts (as seen in Fort Duchesne).

Other researchers offer a slightly different view of the Cultural History of the region. The following general chronological description of cultural activities, focusing on the area of the Ashley National Forest (part of which is in Duchesne County), is derived from publications prepared for and published by the USDA Forest Service, authored by Byron Loosle, Clay Johnson and others.

The Paleoindian Period (10,000 BC - 6,500 BC)

The Paleoindian period represents the earliest occupation of the Ashley National Forest (ANF). This period commenced with the arrival of humans in the area around 10,000 BC and concluded around 6,500 BC. The Paleoindian people are generally characterized as highly mobile, following and primarily subsisting on herds of now-extinct megafauna that were killed with spears, and later, with atlatl darts. The Paleoindian period is represented on the Ashley NF by infrequent surface finds.

The Archaic Period (6,500 BC to AD 100)

The Archaic period (6,500 BC – AD 100) was characterized by modern flora and fauna, a broad spectrum of which was utilized by foraging Archaic peoples. Seasonal rounds were timed to exploit peaking plant and animal resources. In mountainous areas, peak availability of some resources varies with elevation; seasonal travel to various elevations could exploit this extended period of availability. Exploitation of various elevations also varied in response to climate change. At least some Archaic groups were seasonally (winter) sedentary in the lowlands. Typical artifacts or features include rock lined storage and thermal features (including slab-lined basins), basketry, nets, snares, groundstone, atlatls and darts, stemmed, comer-notch and side-notch projectile points, scrapers and occasional rock art. Caves and rock shelters were utilized, but ephemeral (brush structure) and more permanent (pit house) habitations were also constructed.

1 Early Archaic components at Dutch John were activity areas and relatively substantial brush
2 structures with internal hearths and pits, groundstone and large side notch points, bracketed by
3 (I-sigma range) dates of 8005 and 6605 Cal BP (before present). Late summer or fall season
4 occupation appears to have focused on a combination of plant seeds and fauna) (predominantly
5 Artiodactyl) resources. These structures and activity areas may represent a strategy of central
6 place foraging. Later Archaic era components bracketed by (I-sigma range) dates of 4610 and
7 3290 Cal BP at Dutch John were typically slab-lined basins in open situations, representing a
8 highly mobile strategy focused on late winter or early spring season processing of roots, tubers,
9 and possibly cactus pads. Elko series projectile points replaced large side-notch points during the
10 Late Archaic period. At Dutch John, hearth and roasting pit components in two rock shelters
11 were bracketed by (I-sigma range) dates of 2784-1880 Cal BP. Dramatic changes in mobility and
12 feature type documented at Dutch John supported subdivision of the Archaic era into the Early
13 Archaic period (8000-5000 Cal BP) and the Late Archaic period (5000-2000 Cal BP) in the
14 eastern Uintas.

16 **The Fremont Period (AD 100 to 1350)**

18 Around AD 100, the bow and arrow and cultigens appear in the region. For the following
19 thousand years, a pattern prevails of increased sedentism and cultigen use, with a series of new
20 traits added over time. In northeastern Utah this period and culture is known as the Fremont.
21 Although variable with location and elevation, Fremont sites tend to feature some combination of
22 cultigens, ceramics, architecture, constructed storage facilities, and distinctive rock art. In
23 general, lowland sites tend to have the most evidence of sedentary occupation and the most
24 extensive material inventory. Between AD 1100 and AD 1350, the Fremont pattern of cultigen
25 use and traits including projectile point types, ceramic types, and farming appears to vanish from
26 the region. Decreased sedentism and cultigen reliance thereafter are coupled with reduced storage
27 and changes in occupation type, projectile points, ceramics, rock art and basketry techniques.

29 Evidence of the Uinta Fremont variant, representing Fremont occupation in northeastern Utah, is
30 most prevalent on the northern edge of the Uinta Basin, along the foot of the Uintas south slope.
31 Introduction of corn and the bow and arrow probably occurred around AD 100 and ceramics by
32 AD 400. Lowland occupation typically occurred as small clusters of pit houses. Large lowland
33 villages have not been securely identified, although occupational density did increase after AD
34 600. Occupational density as measured by radiometric dates from the Uinta Basin peaks between
35 AD 600 and AD 1100 then declines abruptly. At Dutch John, brush structures and open
36 campsites with hearths and roasting pits indicate short duration camps bracketed by (I-sigma
37 range) dates of 1750 Cal BP and 925 Cal BP. Rose Spring Corner-notch points are indicative of
38 bow and arrow technology. Limestone tempered ceramics, more formal metates and corn occur
39 in brush structures dating late in the period (I-sigma range brackets of 1105-925 Cal BP). Based
40 on the Dutch John excavations and on proxy data from the surrounding areas, the Formative
41 period interval is between AD 100 and AD 1350.

1 **The Late Prehistoric Period (AD 1300 to 1600)**
2

3 Between AD 1100 and AD 1350 the people in the Uinta Basin and along the Green River
4 abandoned corn horticulture and returned to a strategy of hunting and gathering foods. A
5 lifestyle of hunting and gathering results in greater mobility and a change from sedentary villages
6 to more seasonal hunting camps scattered across the landscape. Mobility also necessitates a
7 reduction in personal materials and saw the abandonment of the Fremont ceramic tradition.
8 Between AD 1300 and AD 1500, the archaeological record is very sparse, but shows that people
9 during the period we call the “Late Prehistoric” used the bow and arrow for hunting (desert side
10 notch and cottonwood triangular points) and gathered available plants and seeds. They used very
11 expeditious thick-walled earthenware ceramics called “Intermountain Brownware,” and built
12 temporary shelters of brush and logs. The invasion of European peoples in the Americas
13 commenced multiple changes that were to indirectly change the Ute way of life. European
14 diseases spread across the Americas during the 1500s and changed lifeways and patterns with
15 massive deaths of native peoples. The Late Prehistoric peoples are most likely also the ancestors
16 of the Ute and Shoshone people who were encountered by Euro-American explorers in the 1700
17 and 1800s.
18

19 **The Ute (AD 1600 to Present)**
20

21 The Ute people inhabited much of the Colorado Plateau and are most likely descendants of the
22 people living in the area during the “Late Prehistoric” period. The Ute hunted and gathered
23 native plants and animals with highly mobile family groups. The introduction of the horse,
24 especially after the pueblo revolt in 1680 changed the Ute lifestyle more dramatically than almost
25 any other event. The introduction of European trade goods, such as metal axes and knives, metal
26 arrowheads, and firearms forever changed the native inhabitants of the area. The Ute people
27 maintained many cultural traditions and practices, but the influence of European animals, plants,
28 diseases, and materials were forces of change that are not completely understood.
29

30 **European Contact (AD 1536 to 1847)**
31

32 The year 1492 commenced a period of massive changes across the American continent as
33 European peoples began to exploit available resources and claim lands inhabited by indigenous
34 peoples. From 1536 to 1821, most of the western United States, including the plan area, was
35 claimed by the kingdom of Spain. Locally, the Ute and Eastern Shoshone Indians were not
36 directly affected by the claims of Spain, but were affected by the spread of horses, trade goods,
37 and the spread of European diseases.
38

39 Native Americans in northeastern Utah and surrounding areas were Numic-speaking Ute,
40 Shoshone, and (possibly) Comanche, many of whom practiced a mobile foraging lifeway over
41 large areas, often using horse transportation. Little or no written evidence survives from 1776 to
42 1821, when the area was under Spanish rule. The few Spanish trade routes or exploration parties
43 (such as Escalante and Dominguez in 1776) were closely controlled by the Spanish government.
44 The area was closed to exploration by people of other nationalities during that period.

1 In 1821, Mexico (including what is now Utah) gained independence from Spain. Mexican
2 control of trade was very lax and the Rocky Mountains experienced an influx of Euro-American
3 fur trappers hoping to take advantage of the abundance of fur bearing animals in an area, now
4 void of Spanish rule. Americans, French and British fur trappers quickly began to explore
5 Mexico's northern territory. Trade with the American Indians was enhanced by the establishment
6 of trading posts along the Green River. Henrys Fork, Little Hole and Dutch John Flat, and
7 Browns Hole provided somewhat temperate microclimates where winter months were a little
8 easier. During the fur trapping era, Browns Hole (later in the century to be known as Browns
9 Park) was occupied by Shoshone and Ute Indians, with the Shoshone also occupying the Henrys
10 Fork area. In 1827, Fort Davy Crockett, a fur trading post in Browns Hole, was established.

11
12 By the mid-1840s the region's fur bearing animals had been over-exploited and the demand for
13 lucrative beaver pelts had declined because of fashion changes in Europe. Trade relationships
14 with the Utes and other tribes soured when Euro-American trappers were no longer willing to
15 pay for pelts brought by the native people. Euro-American trading posts and forts, such as Fort
16 Robidoux near Whiterocks, were burned by disillusioned Utes and the trade networks were
17 essentially dissolved.

18 19 **Euro-American Settlement and the Displacement of the American Indian (1847 to 1882)**

20
21 The arrival of thousands of Euro-American Mormon settlers along the Wasatch Front beginning
22 in 1847 set off a series of conflicts between the new arrivals and the Ute bands already living in
23 the Utah and Salt Lake Valleys. Utah and the surrounding areas were ceded to the United States
24 from Mexico in 1848 and westward expansion, settlement, and development by Euro-American
25 Immigrants began with a fury.

26
27 In order to solve the land conflicts between the Ute bands and the newly arrived Euro-Americans,
28 the U.S. Government set aside much of the Uinta Basin as a reservation for the Utes. The Uinta
29 Basin had been previously surveyed by Mormon settlers and deemed undesirable for Euro-
30 American settlement. By 1865, all Utes along the Wasatch Front were being moved to the Uinta
31 Valley Reservation. In a similar way, Ute Bands in Colorado were also moved onto two
32 Reservations, one on the White River and one near the Uncompahgre River.

33
34 Captain Parson Dodds, the first Indian agent on the newly created Uintah Valley Indian
35 Reservation, arrived in late 1868 with seven other employees at Whiterocks, known originally as
36 Uintah Valley. Whiterocks was the Indian agency's permanent headquarters and, by the
37 following year, it was Uintah County's first Euro-American settlement. Dodds, recognizing the
38 agricultural potential of the area, chose to settle near the reservation in 1873 after completing his
39 term as Indian agent. Other Euro-American immigrants followed Dodds to Ashley Valley soon
40 thereafter and started the Ashley settlement.

41
42 In Colorado, at the White River Agency headquarters, the Ute bands became upset with Agent
43 Nathan Meeker's attempts to reform them into an agricultural society. In September of 1879,
44 when Meeker plowed under their favorite pasture used for horse racing, one of the chiefs didn't

1 appreciate his heavy handedness and walked into the agency headquarters and gave Mr. Meeker a
2 terrific beating. Meeker called for military protection and Major Thomas Thornburgh and four
3 cavalry companies (about 140 men) were dispatched from Fort Steel, Wyoming to protect
4 Meeker. When the White River Utes learned that troops were being sent to the reservation, they
5 immediately began to prepare to defend their land. When the military column arrived,
6 Thornburgh and his men were met by over 700 mounted Utes. Sixteen soldiers died, including
7 Thornburgh, and 43 were wounded. At the same time, Meeker and 10 employees were killed at
8 the Agency.

9
10 Colorado settlers in the area immediately declared that the Utes were in open rebellion and called
11 for their removal. By 1882, additional lands were added to the Uintah Valley Reservation and
12 the Utes on the White River Reservation were forced to leave their homelands and move to the
13 Uintah Basin. Euro-American settlers in Colorado and the Colorado State Governor also insisted
14 that the Utes on the Uncompahgre Reservation, led by Chief Ouray and his wife Chipeta, also be
15 moved to the Uinta Basin, even though they had not been involved with the Meeker incident nor
16 had they been uncooperative with reservation administrators. After the Utes from the reservation
17 in Colorado were moved to the Uinta Basin, their reservation lands in Colorado were opened up
18 for Euro-American settlement.

19
20 Starting In 1894, congress passed several bills that allotted a specified number of acres to each
21 adult male Ute Indian, and then opened up the rest of the Uintah Valley reservation for Euro-
22 American settlement. In 1934, congress passed the Indian Self Determination Act which allowed
23 American Indian Tribes to develop their own constitution and be relatively self-governing. All
24 remaining un-allotted (public) lands within the original Uintah Valley treaty boundary were
25 recognized as tribal property.

26 27 **Cultural and Historic Resources**

28
29 Cultural and historical resources are defined as the physical evidence or place of past human
30 activity, such as a site, an object, a landscape, or a structure. Archaeological sites and historic
31 built environments (such as buildings) are two of the most common types of cultural and
32 historical resources.

33
34 Cultural and historical resources can be further defined as non-archaeological sites and non-
35 structural sites (such as waterways, viewsheds, and resource procurement areas) that have been
36 identified as important for traditional and/or ideological reasons by either Native American
37 groups or other organizations with ancestral and/or present ties to an area.

38
39 Federal laws, procedures, and policies affecting the treatment of cultural resources include the
40 Antiquities Act of 1906, Public Law 59-209, Executive Order 11593, Section 106 of the National
41 Historic Preservation Act (NHPA) of 1966 (Public Law 91-190), the Federal Land Policy
42 Management Act (Public Law 94-579), and 36 Code of Federal Regulations (CFR) 60 and 36
43 CFR 800. The American Indian Religious Freedom Act (42 United States Code [USC] 1996) has
44 also been established to protect religious practices, ethnic heritage sites, and land uses of

1 federally recognized Native Americans. The Native American Graves Protection and
2 Repatriation Act applies to human remains found on federal lands.

3
4 Duchesne County is blessed with a concentration of historic and archaeological resources. These
5 resources are located in towns, cities, and main streets, as individual sites or grouped in historic
6 districts. Others are scattered throughout the County in the form of rock art, archaeological
7 structures, archaeological sites of scientific importance, and historic landscapes or settings.

8 As we know from experience, any great community (or county) is enhanced by looking to its
9 future and new development but also by keeping a steady hand on its past. History can become
10 an enhancer for our quality of life and a stimulator for economic development. Businesses in
11 some industries often look for historic settings in historic buildings in order to provide character,
12 the sense of stability, and a unique marketing angle for their products and services.

13
14 This requires a balance and a careful planning approach. All too often, we find ourselves in a
15 situation where we tear down the old in the name of progress, only to realize too late that the old
16 could have been a better economic stimulus than the new. Or we find ourselves so encumbered
17 by the past and that new is not entertained. If we create a balance and dialogue between old and
18 new, we can take advantage of the benefits of both. The new can be given broader character by
19 referring to heritage and tradition, while the old can be reinvigorated by new development.
20 Utah Code 9-8-401 states, “The Legislature determines and declares that the public has a vital
21 interest in all antiquities, historic and prehistoric ruins, and historic sites, buildings, and objects
22 which, when neglected, desecrated, destroyed or diminished in aesthetic value, result in an
23 irreplaceable loss to the people of this state.”

24
25 As a public recognition of the importance of historic and archaeological resources to
26 communities, large and small, the federal National Historic Preservation Act (NHPA) of 1966 set
27 forth a process where any project involving federal lands, funds, permits, or licenses needs to
28 take into account the action's effects on cultural resources. Similarly, Utah Code Annotated 9-8-
29 404 established a similar process for any project involving state lands, funds, or permits in 1973.
30 These two laws do not prevent the demolition or removal of cultural resources but require
31 diligence in planning efforts involving cultural resources.

32
33 Because of the importance of historic resources, the Legislature has established economic
34 incentives for their preservation and re-use. The State of Utah, through Utah Code Annotated
35 59-7-609, has implemented a tax credit for the rehabilitation expenditures associated with
36 qualifying residential historic buildings. Further, the United States Tax Code has provided a
37 similar investment tax credit for the rehabilitation of historic commercial and residential rental
38 properties.

39
40 To promote local preservation and historic revitalization, the Utah Division of State History
41 (UDSH) oversees a Certified Local Government program backed with funding from the National
42 Park Service. Duchesne County was made a CLG in 1986, and Duchesne City received that
43 designation in 1993. While both of these organizations have not been active recently, a CLG
44 designation with an ordinance and a commission allows these communities to apply for grants

1 through UDSH to conduct historic preservation activities such as building rehabilitations,
2 planning, and others.

3
4 In historic preservation, there are many issues and trade-offs to consider. Does the historic
5 resource add to the quality of life of the county? Are these historic sites, settings and landscapes
6 an important factor in the quality of life and why people want to live/move here? Are there ways
7 to include new with old, where the new is compatible and yet functional? Does the old prevent
8 us from needed new development, or can new development and old development exist together
9 with creative design? Do the historic resources and archaeological sites add value to an
10 economic development plan?

11
12 Energy development may need to be designed in a way that considers the past and archaeology in
13 particular. The co-existence of archaeology and energy development can create conflicts, which
14 with advanced planning can be minimized or removed.

15
16 New business development needs resources and careful planning in order to keep as much of the
17 old as possible when it has been determined it is important, so that old and new complement each
18 other.

19
20 The full range of choices should be examined with respect to historic and archaeological
21 resources because they are finite and can be lost without careful planning. The County needs to
22 explore all options for keeping and enhancing its historic and archaeological heritage while
23 providing for growth and new development. Options may include locating new development in
24 areas without significant resources, or designing new projects so that historic resources are
25 maintained and enhanced. National Register resources do not limit property right or
26 development options, but should be taken into account because of the historic value they add to a
27 community.

28
29 As found in a recent study promoted by the Utah Heritage Foundation and the Utah Division of
30 State History, entitled “Profits through Preservation” (found at utahheritagefoundation.org) the
31 economic benefits of historic preservation and tourism are significant. In this study, the
32 researchers found that there 7.2 million visitors to Utah’s heritage sites and events with over
33 \$717 million in direct and indirect expenditures. Unfortunately, most of this heritage tourism is
34 centered in communities outside Duchesne County.

35
36 Further, historic preservation rehabilitation projects (such as façade improvements) have far-
37 reaching local effects where for every \$1,000,000 spent on rehabilitation yields 10.2 direct jobs,
38 7.5 indirect jobs, more than \$845,000 in local wages, and nearly \$1 million in economic activity.
39 Through the proposed project, sub-grants to local communities for façade improvements and
40 other historic preservation activities will increase the vitality of these commercial downtown
41 districts and make the communities more attractive and visible for the proposed influx of heritage
42 tourists. Jobs created through historic preservation could include the building trades, service
43 industries, and educational and interpretive opportunities.

1 Duchesne County recognizes the need to preserve its cultural heritage and foster the economic
2 potential tied to heritage tourism. Culture refers to the integrated pattern of human knowledge,
3 belief, and behavior that depends upon man’s capacity to learn and transmit knowledge to
4 succeeding generations.

5
6 Once land is settled and subsequent generations come and go, the ensuing culture becomes
7 attached to the land. Such ties transcend the physical or tangible relationship wherein man
8 walks, tills and otherwise works the land; thus becoming implicit in the soul of people to make
9 up the patina that colors and gives character to their heritage. It is these “intangible” elements
10 that place significance upon environmental features and attendant life ways. Indeed, the lay of
11 the land, its plants and animals, and even its unrelenting weather patterns, serve as metaphorical
12 images to guide the people. As born out in vernacular phrases such as “Times back then were
13 tough,” it is important to keep alive the tacit understanding of what it means to belong to a
14 certain area such as Duchesne County.

15
16 Duchesne County recognizes that County culture is among its most valued and important assets.
17 It is the intent of the County to protect and enhance its natural environment, identify, preserve,
18 protect and enhance its historic buildings, structures, sites, objects, and districts, and to guard and
19 foster traditional ways of life rising out of the history attached thereto and forming the basis upon
20 which its heritage rests.

21
22 Natural landforms and wildlife species often serve as touchstones to community life and values.
23 Livestock grazing, farming, mining and other mineral extraction, along with other endeavors
24 have left an imprint on the landscapes of the west and form the core of an old and enduring
25 economic and cultural heritage for residents of Duchesne County. Detachment to the land
26 creates a phenomenon known as “extinction of experience,” and brings about a great cultural loss
27 of stories and meanings tied to the land and nature. Once these reservoirs of folklore and cultural
28 understanding have been dissipated, it is increasingly hard to replenish them.

29
30 Structural objects are crafted from the materials of nature and the local environment and display
31 cultural and individual distinctiveness that often serve as symbols of personal, occupational, and
32 regional identity. Many sites represent a unique settlement history that is closely related to
33 prehistoric Indians and early homesteaders. Camp sites, pit houses, artifacts, trails, ceremonial
34 and religious sites, burials, out-buildings, hay derricks, canals, sheds, fence forms, and other
35 contrivances of man fall within the realm of cultural heritage and should be preserved.

36
37 The NHPA is the basis for cultural and historical preservation and defines the responsibility of
38 federal agencies for protection and preservation of cultural and heritage resources. The standards
39 and guidelines established by the Bureau of Land Management (BLM) take this into
40 consideration and are used to assist with inventorying and evaluating cultural and historical
41 resources (BLM 2004).

42
43 The National Register of Historic Places (NRHP) lists properties that have been found eligible
44 through the Section 106 process.

1 Table CHP1 provides the following information for the 37 NRHP listed properties in Duchesne
2 County:

- 3
- 4 • The name of the property (if applicable)
- 5
- 6 • The date the property was constructed (if known)
- 7
- 8 • A brief description of its original use (if known)
- 9
- 10 • The city that the property is located in
- 11
- 12 • The Utah Division of State History Record ID number
- 13
- 14 • The property’s NRHP register number
- 15
- 16 • The property’s current NRHP status
- 17

Table CHP1. NRHP-Listed Properties in Duchesne County

Property Name or ID Number	Construction Date	Original Use	City	UDSH Property Record ID	NRHP Register Number	NRHP Status
Centennial House	–	Archeology Site	Nine Mile Canyon	–	09001042	Listed
Fool’s Pinnacle	–	Archeology Site	Nine Mile Canyon	–	09001041	Listed
Indian Canyon Guard Station	1914	Institution housing	N/A	46325	N/A	Listed
Karen’s Cist	–	Archeology Site	Nine Mile Canyon	–	09001043	Listed
Maxie’s Pad	–	Archeology Site	Nine Mile Canyon	–	09001044	Listed
Nordell’s Fort	–	Archeology Site	Nine Mile Canyon	–	09001045	Listed
Redman Village	–	Archeology Site	Nine Mile Canyon	–	09001047	Listed
Simmons Ranch	1913/1920	Agriculture storage	N/A	55192	92000463	Listed
Stockmore Ranger Station	1914	Institution housing	Stockmore	70858	99001293	Listed
Sunstone Village	–	Archeology Site	Nine Mile Canyon	–	09001046	Listed

Table CHP1. NRHP-Listed Properties in Duchesne County

Property Name or ID Number	Construction Date	Original Use	City	UDSH Property Record ID	NRHP Register Number	NRHP Status
Taylor's City	–	Archeology Site	Nine Mile Canyon	–	09001048	Listed
42DC306	–	Archeology Site	Nine Mile Canyon	–	09001040	Listed
42DC331	–	Archeology Site	Nine Mile Canyon	–	12000772	Listed
42DC530	–	Archeology Site	Nine Mile Canyon	–	12000773	Listed
42DC638	–	Archeology Site	Nine Mile Canyon	–	09001039	Listed
42DC645	–	Archeology Site	Nine Mile Canyon	–	12000774	Listed
42DC682	–	Archeology Site	Nine Mile Canyon	–	09001026	Listed
42DC683	–	Archeology Site	Nine Mile Canyon	–	09001027	Listed
42DC684	–	Archeology Site	Nine Mile Canyon	–	09001038	Listed
42DC685	–	Archeology Site	Nine Mile Canyon	–	09001037	Listed
42DC686	–	Archeology Site	Nine Mile Canyon	–	09001036	Listed
42DC687	–	Archeology Site	Nine Mile Canyon	–	09001035	Listed
42DC688	–	Archeology Site	Nine Mile Canyon	–	09001034	Listed
42DC696	–	Archeology Site	Nine Mile Canyon	–	09001025	Listed
42DC700	–	Archeology Site	Nine Mile Canyon	–	09001025	Listed
42DC702	–	Archeology Site	Nine Mile Canyon	–	09001033	Listed
42DC703	–	Archeology Site	Nine Mile Canyon	–	09001031	Listed
42DC704	–	Archeology Site	Nine Mile Canyon	–	09001030	Listed
42DC705	–	Archeology Site	Nine Mile Canyon	–	09001023	Listed
42DC708	–	Archeology Site	Nine Mile Canyon	–	09001029	Listed
42DC709	–	Archeology Site	Nine Mile Canyon	–	09001028	Listed

Table CHP1. NRHP-Listed Properties in Duchesne County

Property Name or ID Number	Construction Date	Original Use	City	UDSH Property Record ID	NRHP Register Number	NRHP Status
42DC710	–	Archeology Site	Nine Mile Canyon	–	09001029	Listed
42DC712	–	Archeology Site	Nine Mile Canyon	–	09001032	Listed
42DC1302	–	Archeology Site	Nine Mile Canyon	–	12000775	Listed
42DC1618	–	Archeology Site	Nine Mile Canyon	–	12000776	Listed
42DC1619	–	Archeology Site	Nine Mile Canyon	–	12000758	Listed
42DC1620	–	Archeology Site	Nine Mile Canyon	–	12000837	Listed

1
 2 Occasionally, resources managed by agencies are not included in the most up-to-date NRHP
 3 listing. This is usually the result of batch nominations, that is, properties submitted to the SHPO
 4 in groups (usually as multiple properties listings) for the SHPO’s review and evaluation. These
 5 batches are usually only submitted to the SHPO on an “as-needed basis.”

6
 7 The Bureau of Land Management (BLM)’s Vernal Field Office recently submitted such a batch
 8 nomination to the SHPO for properties associated with the West Tavaputs Programmatic
 9 Agreement (PA). The work conducted for this PA identified 445 NRHP-evaluated properties
 10 within the Nine-Mile Canyon Area that have been recommended eligible for the NRHP.
 11 Although they may not be included in the most up-to-date NRHP listing, their NRHP status
 12 should be considered “pending”.

13
 14 The preservation of historic properties and cultural landscapes has the potential to add economic
 15 value to an economy by balancing preservation and need. A county that is a certified local
 16 government (CLG) with a historic preservation committee can apply for federal grants and gain
 17 the tools and resources needed to integrate historic buildings into the community’s social and
 18 economic fabric. Supporting information and a model Historic Preservation Ordinance are found
 19 on the Utah Division of State History website.

20
 21 **Geological and Paleontological Resources**

22
 23 **Findings:** Fossils are the remains or traces of organisms preserved in the earth’s crust, and
 24 paleontology is the study of these fossils. Through scientific study of carefully collected and
 25 preserved fossils, we gain a better understanding of the history of life on earth.

26
 27 Human development of the earth’s surface can be detrimental to fossils if the development
 28 includes surface-disturbing activities in areas containing important fossils. Paleontological

1 issues include: (1) avoiding destruction of scientifically important fossils, (2) identifying areas
2 having scientifically important fossils, (3) collecting (removing) and preserving scientifically
3 important fossils, and (4) allowing and maintaining access to scientific study of important fossils.
4

5 Both the Federal Government and State Government have laws and rules regarding the
6 collection, preservation, and curation of fossils, while allowing for personal, professional and
7 academic study and research. In general, personal hobby collecting of invertebrate and plant
8 fossils (for example, clams and leaves) is legal on many State and Federal lands, but collection of
9 vertebrate fossils (for example, dinosaurs) requires that a detailed permit be issued by the land's
10 governing agency. Destruction of vertebrate fossils originating on state and federal lands in Utah
11 is illegal. State and federal fossil resource laws do not pertain to private lands. The state law
12 does apply, at least in part to county-owned lands as well.
13

14 Utah State Code (63-73-11 through 63-73-19) states that paleontological resources are important
15 and requires the preservation of critical fossil resources on State lands. The Code mandates that
16 those removing or excavating critical fossils on State lands be qualified and permitted under joint
17 jurisdictional cooperation from: the Utah Geological Survey (UGS), Utah Museum of Natural
18 History, and the School and Institutional Trust Lands Administration. State Code (53B-17-603)
19 also requires that important extracted fossils be curated by an approved and qualified institution.
20 The BLM and Forest Service have similar laws concerning the collection of vertebrate fossils on
21 federal lands.
22

23 Federal laws, policies, and guidelines affecting fossil resources include the Paleontological
24 Resources Preservation Act (PRPA) of 2009. The PRPA is codified in Title VI of the Omnibus
25 Public Lands Management Act of 2009 (Public Law 11- 011, Title VI, Subtitle D), which defines
26 paleontological resources, resource-use permit criteria, requirements for curation, and the
27 criminal and civil penalties. In addition, the Federal Land Management and Policy Act of 1976
28 (Public Law 94-579; 90 Stat. 2743; USC 1701–1782), the National Environmental Policy Act
29 (Public Law 91-190; 31 Stat. 852; 42 USC 4321–4327), and general procedural guidelines for
30 management are provided in the BLM's Instructional Memorandum (IM) 2008-009 (2007),
31 Manual H-8270-1 (BLM 1998), and IM 2009-011 (BLM 2008), which define management,
32 preservation, and protection of paleontological resources.
33

34 The Bureau of Land Management has classification and assessment & mitigation guidelines in
35 their Handbook for Paleontological Resource Management, which is currently under revision.
36 The Society of Vertebrate Paleontology has also adopted Standard Guidelines for the Assessment
37 and Mitigation of Paleontological Resources.
38

39 The 2008 Resource Management Plan for the Vernal BLM Field office and BLM Instruction
40 Memorandum #2016-124 provide details on the Potential Fossil Yield Classification (PFYC)
41 system that is used to classify paleontological (fossil) resource potential on BLM lands in
42 Duchesne County and elsewhere. The system establishes levels of potential as follows:
43

1 *Class 1 – Very Low.* Geologic units that are not likely to contain recognizable paleontological
2 resources. Units assigned to Class 1 typically have one or more of the following characteristics:
3

- 4 1. Geologic units are igneous or metamorphic, excluding air-fall and reworked volcanic ash
5 units.
6
- 7 2. Geologic Units are Precambrian in age.
8

9 Management concerns for paleontological resources in Class 1 units are usually negligible or not
10 applicable. Paleontological mitigation is unlikely to be necessary except in very rare or isolated
11 circumstances that result in the unanticipated presence of paleontological resources, such as
12 unmapped geology contained within a mapped geologic unit. For example, young fissure-fill
13 deposits often contain fossils but are too limited in extent to be represented on a geological map;
14 a lava flow that preserves evidence of past life, or caves that contain important paleontological
15 resources. Such exceptions are the reason that no geologic unit is assigned a Class 0.
16

17 Overall, the probability of impacting significant paleontological resources is very low and further
18 assessment of paleontological resources is usually unnecessary. An assignment of Class 1
19 normally does not trigger further analysis unless paleontological resources are known or found to
20 exist. However, standard stipulations should be put in place prior to authorizing any land use
21 action in order to accommodate an unanticipated discovery.
22

23 *Class 2 – Low.* Geologic units that are not likely to contain paleontological resources. Units
24 assigned to Class 2 typically have one or more of the following characteristics:
25

- 26 1. Field surveys have verified that significant paleontological resources are not present or
27 are very rare.
28
- 29 2. Units are generally younger than 10,000 years before present.
30
- 31 3. Recent Aeolian deposits.
32
- 33 4. Sediments exhibit significant physical and chemical changes (i.e., diagenetic alteration)
34 that make fossil preservation unlikely.
35

36 Except where paleontological resources are known or found to exist, management concerns for
37 paleontological resources are generally low and further assessment is usually unnecessary except
38 in occasional or isolated circumstances. Paleontological mitigation is only necessary where
39 paleontological resources are known or found to exist.
40

41 The probability of impacting significant paleontological resources is low. Localities containing
42 important paleontological resources may exist, but are occasional and should be managed on a
43 case-by-case basis. An assignment of Class 2 may not trigger further analysis unless

1 paleontological resources are known or found to exist. However, standard stipulations should be
2 put in place prior to authorizing any land use action in order to accommodate unanticipated
3 discoveries.

4
5 *Class 3 – Moderate.* Sedimentary geologic units where fossil content varies in significance,
6 abundance, and predictable occurrence. Units assigned to Class 3 have some of the following
7 characteristics:

- 8
9 1. Marine in origin with sporadic known occurrences of paleontological resources.
- 10
11 2. Paleontological resources may occur intermittently, but abundance is known to be low.
- 12
13 3. Units may contain significant paleontological resources, but these occurrences are widely
14 scattered.
- 15
16 4. The potential for an authorized land use to impact a significant paleontological resource
17 is known to be low-to-moderate.

18
19 Management concerns for paleontological resources are moderate because the existence of
20 significant paleontological resources is known to be low. Common invertebrate or plant fossils
21 may be found in the area, and opportunities may exist for casual collecting. Paleontological
22 mitigation strategies will be proposed based on the nature of the proposed activity.

23
24 This classification includes units of moderate or infrequent occurrence of paleontological
25 resources. Management considerations cover a broad range of options that may include record
26 searches, pre-disturbance surveys, monitoring, mitigation, or avoidance. Surface-disturbing
27 activities may require assessment by a qualified paleontologist to determine whether significant
28 paleontological resources occur in the area of a proposed action, and whether the action could
29 affect the paleontological resources.

30
31 *Class 4 – High.* Geologic units that are known to contain a high occurrence of paleontological
32 resources. Units assigned to Class 4 typically have the following characteristics:

- 33
34 1. Significant paleontological resources have been documented, but may vary in occurrence
35 and predictability.
- 36
37 2. Surface disturbing activities may adversely affect paleontological resources.
- 38
39 3. Rare or uncommon fossils, including non-vertebrate (such as soft body preservation) or
40 unusual plant fossils, may be present.
- 41
42 4. Illegal collecting activities may impact some areas.

1 Management concerns for paleontological resources in Class 4 are moderate to high, depending
2 on the proposed action. Paleontological mitigation strategies will depend on the nature of the
3 proposed activity, but field assessment by a qualified paleontologist is normally needed to assess
4 local conditions.

5
6 The probability for impacting significant paleontological resources is moderate to high, and is
7 dependent on the proposed action. Mitigation plans must consider the nature of the proposed
8 disturbance, such as removal or penetration of protective surface alluvium or soils, potential for
9 future accelerated erosion, or increased ease of access that could result in looting. Detailed field
10 assessment is normally required and on-site monitoring or spot-checking may be necessary
11 during land disturbing activities. In some cases avoidance of known paleontological resources
12 may be necessary.

13
14 *Class 5 – Very High.* Highly fossiliferous geologic units that consistently and predictably
15 produce significant paleontological resources. Units assigned to Class 5 have some or all of the
16 following characteristics:

- 17
18 1. Significant paleontological resources have been documented and occur consistently.
19
20 2. Paleontological resources are highly susceptible to adverse impacts from surface
21 disturbing activities.
22
23 3. Unit is frequently the focus of illegal collecting activities.
24

25 Management concerns for paleontological resources in Class 5 areas are high to very high. A
26 field survey by a qualified paleontologist is almost always needed. Paleontological mitigation
27 may be necessary before or during surface disturbing activities.

28
29 The probability for impacting significant paleontological resources is high. The area should be
30 assessed prior to land tenure adjustments. Pre-work surveys are usually needed and on-site
31 monitoring may be necessary during land use activities. Avoidance or resource preservation
32 through controlled access, designation of areas of avoidance, or special management designations
33 should be considered.

34
35 *Class U – Unknown Potential.* Geologic units that cannot receive an informed PFYC assignment.
36 Characteristics of Class U may include:

- 37
38 1. Geological units may exhibit features or preservational conditions that suggest significant
39 paleontological resources could be present, but little information about the actual
40 paleontological resources of the unit or area is known.
41
42 2. Geological units represented on a map are based on lithologic character or basis of
43 origin, but have not been studied in detail.

- 1 3. Scientific literature does not exist or does not reveal the nature of paleontological
2 resources.
- 3
- 4 4. Reports of paleontological resources are anecdotal or have not been verified.
- 5
- 6 5. Area or geologic unit is poorly or under-studied.
- 7
- 8 6. BLM staff has not yet been able to assess the nature of the geologic unit.
- 9

10 Until a provisional assignment is made, geologic units that have an unknown potential have
11 medium to high management concerns. Lacking other information, field surveys are normally
12 necessary, especially prior to authorizing a ground-disturbing activity. An assignment of
13 “Unknown” may indicate the unit or area is poorly studied, and field surveys are needed to verify
14 the presence or absence of paleontological resources. Literature searches or consultation with
15 professional colleagues may allow an unknown unit to be provisionally assigned to another
16 Class, but the geological unit should be formally assigned to a Class after adequate survey and
17 research is performed to make an informed determination.

18

19 *Class W – Water.* Includes any surface area that is mapped as water. Most bodies of water do not
20 normally contain paleontological resources. However, shorelines should be carefully considered
21 for uncovered or transported paleontological resources. Reservoirs are a special concern because
22 important paleontological resources are often exposed during low water intervals. In karst areas
23 sinkholes and cenotes may trap animals and contain paleontological resources. Dredging river
24 systems may result in the disturbance of sediments that contain paleontological resources.

25

26 *Class I – Ice.* Includes any area that is mapped as ice or snow. Receding glaciers, including
27 exposed lateral and terminal moraines should be considered for their potential to reveal recently
28 exposed paleontological resources. Other considerations include melting snow fields that may
29 contain paleontological resources with possible soft-tissue preservation.

30

31 According to the Instruction Memorandum, the PFYC system is utilized for land use planning
32 efforts and for the preliminary assessment of potential impacts and proper mitigation needs for
33 specific projects. It is intended to provide a tool to assess potential occurrences of significant
34 paleontological resources. It is meant to be applied in broad approach for planning efforts, and as
35 an intermediate step in evaluating specific projects. Map #44 shows the Potential Fossil Yield
36 Classifications identified for lands in Duchesne County. Table CHP 2 shows the percentage of
37 land area in each of the PFYC categories.

38
39
40

Table CHP2. Duchesne County Acreage of Potential Fossil Yield Classifications

Classification	Acres
Class 1 (Very Low)	289,875.9
Class 2 (Low)	199,269.6
Class 3 (Moderate)	472,790.4
Class 4 (High)	0
Class 5 (Very High)	1,109,934.8
Class W (Water)	6,934.8
Total	2,078,805.5

Source: Bureau of Land Management

- 1
- 2 Remnants of early life forms, geological history and cultures have evolved as an important
- 3 segment of the local economy and have become the signature of the local tourist trade.
- 4 Considerable investment has been made in museums and visitors centers to promote these
- 5 important resources.
- 6
- 7 When considering undertaking ground-disturbing development, or when evaluating such
- 8 potential development by others, questions to keep in mind are:
- 9
- 10 a. Is the developing entity aware of (or does it intend to determine) what areas within the
- 11 project site may contain important fossil resources?
- 12
- 13 b. Does the developing entity have a mitigation plan that spells out how fossil resources will
- 14 be handled? (For example, pre-disturbance paleontological survey, real-time onsite
- 15 evaluation of fossils during excavation activities, etc.)
- 16
- 17 c. Does the developing entity allow access for qualified individuals/institutions to collect
- 18 (remove) important fossils that may otherwise be lost to scientific study if merely left in
- 19 the near-surface to decompose?
- 20
- 21 d. If a major and important fossil discovery is made, does the County want a say in where
- 22 the materials are ultimately housed or displayed (degree of involvement)?
- 23
- 24 Potential conflict issues regarding paleontological resources are:
- 25
- 26 a. Limiting road or trail access (land preservation) to important fossil sites.
- 27
- 28 b. Allowing extractive industries to operate in areas of high paleontological sensitivity.

1 This is not an “all-or-nothing” issue; there can be a range of management options that vary
2 depending on the paleontological sensitivity of the geologic formations exposed in a specific
3 study area. The paleontological resources of each Utah county range from almost non-existent to
4 highly significant, so paleontological resource management plans for each county will be equally
5 diverse.

6 7 **Geologic Hazards**

8
9 Unlike areas along the Wasatch Front, where urban development has crept up hillsides into
10 geologically unstable areas, Duchesne County has been relatively free of landslides in privately
11 owned areas. The Utah Geological Survey has a database of landslide history in Utah from 1850
12 to 1978. This database was compiled from archived newspapers and other sources. Of the 356
13 documented landslides in Utah during that time period, only four were located in Duchesne
14 County. The latest one occurred somewhere in the Indian Canyon area south of Duchesne in
15 1958. Another landslide occurred in the Moon Lake area in 1935. A landslide was reported
16 “five miles above Tabiona” in 1916. The same year had a report of a landslide in Roosevelt at
17 the “electric light plant.”

18 19 **Energy Considerations**

20
21 **Findings:** In the development of energy resources, Cultural, Historical, Geological and
22 Paleontological Resources shall be protected in accordance with state and federal laws.
23 However, the presence of Cultural, Historical, Geological and Paleontological Resources should
24 not, by themselves, prevent the development of energy resources. Surface disturbance associated
25 with energy development may expose Cultural, Historical, Geological and Paleontological
26 Resources that add to the body of scientific knowledge.

27 28 **Objectives**

- 29
30 1. Preserve the cultural, historical, and paleontological heritage of the Uintah Basin.
- 31
32 2. Support the protection, study, and excavation of unique cultural and historical resources
33 that occur within the Uintah Basin, including the responsible stewardship of these
34 resources through balancing resource protection with visitor values.
- 35
36 3. Provide for the protection of cultural, historical, and paleontological resources through
37 management decisions that are based on the quality and significance of each individual
38 resource.
- 39
40 4. Allow for public education, visitation opportunities, and site protection for cultural,
41 historical, and paleontological resources (where appropriate).
- 42
43 5. Preserve and perpetuate the heritage and culture of the Uintah Basin for both the Native
44 American community and other communities.

- 1 6. Mitigate to the furthest extent possible all adverse effects to cultural, historical, and
2 paleontological resources.
3

4 **Polices**
5

- 6 1. Ensure that the county has appropriate opportunities to participate in all management
7 decisions regarding cultural, historical, and paleontological resources.
8
9 2. Where significant prehistoric and historic sites and scientifically important resources can
10 be protected, consider developing them for education and tourism (where appropriate).
11
12 3. Manage potential adverse effects to significant and scientifically important cultural,
13 historical, and paleontological resources to the extent possible through avoidance before
14 other protections are considered (such as removal/excavation and mitigation).
15
16 4. All federal undertakings that could affect significant cultural values require, under
17 NHPA, an archaeological review and inventory before they are implemented. Historic and
18 cultural sites inventoried will be evaluated for significance by a qualified archaeologist in
19 cooperation with the state historic preservation officer.
20
21 5. Additionally, state legislation such as Utah Code 9-8-401 states that “The Legislature
22 determines and declares that the public has a vital interest in all antiquities, historic and
23 prehistoric ruins, and historic sites, buildings, and objects which, when neglected,
24 desecrated, destroyed or diminished in aesthetic value, result in an irreplaceable loss to
25 the people of this state.” Cultural and historical resources that have been evaluated and
26 determined to be significant (such as those listed on the NRHP) will have special
27 consideration.
28
29 6. In accordance with Utah Code 63J-8-104 (i) regarding state land use planning and
30 management, federal lands shall be managed “so as to protect prehistoric rock art, three-
31 dimensional structures, and other artifacts and sites recognized as culturally important
32 and significant by the state historic preservation officer or each respective county by
33 imposing reasonable and effective stipulations and conditions reached by agreement
34 between the federal agency and the state authorized officer pursuant to the authority
35 granted by the National Historic Preservation Act, 16 USC 470 et seq.”
36
37 7. Federal and state agencies must not jeopardize private property rights or existing land
38 uses, such as oil and gas exploration, mining, logging and harvesting of forest products,
39 road maintenance, and grazing, through the protection of cultural and archaeological sites.
40 This can be accomplished by carefully assessing the sensitivity and importance of the site
41 relative to the economic and cultural impacts associated with land management decisions
42 based around cultural and archaeological sites in the Uintah Basin.
43
44

- 1 8. Consider a historic preservation committee for the purpose of protecting cultural
2 resources.
- 3
- 4 9. Establish a county register of cultural and heritage resources to discover and describe the
5 nature of cultural resources. Assess and rank resources according to need relevant to
6 preservation and enhancement.
- 7
- 8 10. Give priority to the retention and display of locally collected artifacts within the Uintah
9 Basin.
- 10
- 11 11. In the case of natural and built forms upon the land, and in accordance with the protocols
12 and rankings set forth above, measures to stabilize and enhance historic sites and objects
13 shall be an ongoing objective of the county and its historic preservation committee.
- 14
- 15 12. Many of the cultural and historical sites in the Uintah Basin represent a unique culture
16 and are closely related to early settlements of the area. They continue to have historical
17 significance and are held by many residents as reverent or consecrated sites. Preserve
18 these sites and keep them accessible.
- 19
- 20 13. Any alteration of landforms, waterways, closure of roads, and other such matters shall be
21 carried out only after full consideration of each county's prehistoric and historical cultural
22 heritage.
- 23
- 24 14. Develop mitigation measures and treatment options when it has been determined that a
25 project will have an adverse effect on significant cultural and historical resources.
26 Mitigation measures can range from preservation through avoidance to analysis and
27 research through scientific study, although they should be project specific and tailored in
28 such a way that each resource is specifically analyzed and dealt with.
- 29
- 30 15. Although this land use document addresses such issues as roadways and trails access,
31 wildlife, water, timber and range use, it shall be referred to on all matters regarding the
32 use of natural resources as part of cultural identity. Traditional ways of life such as
33 harvesting cedar posts, running cattle on the open range, and agriculture shall be
34 protected.
- 35
- 36 16. Preserve all remnants of prehistoric lifeforms, geological traces, and cultural elements in
37 accordance with existing laws, and ensure that they remain within the county, either in
38 appropriate museums or in the Utah State University Uintah Basin Special Collections
39 Archive. These items shall be made available to the public in an appropriate setting of
40 discovery and study.
- 41
- 42 17. Utah Code Sections 63-73-11 through 63-73-19 state that paleontological resources are
43 important and require the preservation of scientifically significant fossil resources on state
44 lands. These sections mandate that those removing or excavating critical fossils on state

1 lands must be qualified and permitted under joint jurisdictional cooperation from the
2 Utah Geological Survey, the Utah Museum of Natural History, and the State School and
3 Institutional Trust Lands Administration. Additional state codes (Utah Code 53B-17-603,
4 Utah Administrative Code R807-1) also require that important extracted fossils be
5 curated by an approved and qualified institution. These mandates will be followed.
6

7 18. All scientifically important fossils found in the area should remain in each particular
8 county. The County recognizes that vertebrate fossils may be collected from BLM–
9 administered lands under a permit issued to qualified individuals and that such fossils
10 remain the property of the federal government and must be placed in a suitable repository
11 (such as a museum or university) identified at the time of permit issuance. Additionally,
12 the County recognizes that all scientifically significant fossils collected on Utah state
13 lands must be curated with the Natural History Museum of Utah. Recreational collectors
14 may collect and retain reasonable amounts of common invertebrate and plant fossils for
15 personal, non-commercial use. No vertebrate fossils or associated trace fossils such as
16 tracks, eggs, etc. may be collected without a permit. Any fossils collected on non-federal
17 lands belong to the landowner.
18

19 19. Management plans must provide the opportunity for amateur collectors and students of
20 natural resource–related sciences to study, explore, and collect related items as provided
21 by law.
22

23 20. Public land management agencies should promote these resources with educational
24 material, signage, and information centers where appropriate.
25

26 21. When designating locations for sites, trails and other public use spaces, consider the
27 following for cultural, historical, and paleontological resources: physical location and
28 non-tangible elements (such as its sense of place or historical value).
29

Section 22. Threatened, endangered & sensitive species

Findings: A December 2008 report published by Utah State University entitled “Public Lands and Utah Communities: A Statewide Survey of Utah Residents,” found (in Table 39) that only 24.8% of the respondents in the Daggett-Duchesne-Uintah County area wanted moderate (14.1%) or major (10.7%) increases in the extent to which protection of endangered species occurs on public lands in Utah.

Federally Listed Species

Findings: Once a species of plant or animal becomes federally listed as threatened or endangered, the range of options for managing lands and waters where that species occur substantially narrows. A common approach by federal agencies following listing is to follow the prescriptions outlined in recovery plans or habitat conservation plans developed by the U.S. Fish and Wildlife Service, which are expensive to develop and challenging to implement. Duchesne County will seek opportunities to influence how these plans are developed once a listing occurs, but the freedom to manage species in a way that best suits a the county has been lost once an affirmative listing decision has been issued.

Impacts of New Threatened or Endangered Species Listings

Findings: A threatened species is any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. An endangered species is any species that is presently in danger of extinction throughout all or a significant portion of its range. The Endangered Species Act (ESA) requires stringent review and management protocols for lands and waters occupied by threatened and endangered species, dramatically reducing the flexibility to address land and resource management decisions at a local or regional level. Listings often impact management regardless of land ownership, although plant listings may not impact private lands as stringently.

A sensitive species is a species facing one or more threats to its population or habitats, which needs special management attention to reduce the likelihood of a future threatened or endangered status. No one seeks the loss of rare native plants or sensitive wildlife species, but most would prefer not to have to deal with the procedural difficulties, diminished flexibility, and increased costs inherent to new listings of species under the ESA.

Better Methods Needed for Conserving Sensitive Species

Findings: ESA listings may occur in certain instances as a last step to prevent the ultimate loss of distinct populations of native plants or sensitive wildlife species. A far more desirable approach than regulation under ESA, however, would be to systematically evaluate which species may be facing trouble, and then to take logical steps to reverse declines in populations or important habitats. The right system would help focus actions where they could do the most good, so that higher priorities would get the necessary attention to generate preferred outcomes.

1 This was part of the intent behind Utah’s Wildlife Action Plan for 2015-2025. UDWR worked
2 with other agencies, stakeholders, and organizations to identify the wildlife species (not plants)
3 most in need of conservation attention, and to determine which key habitats were essential for
4 their survival. County-by-county lists of threatened, endangered, and sensitive species known to
5 occur within a given county are provided via the link given for the plan. Known locational
6 occurrences (by quadrangle map) of threatened, endangered, and sensitive wildlife species are
7 available as Geographic Information System (GIS) data at:
8 <http://dwrcdc.nr.utah.gov/ucdc/downloadgis/disclaim.htm>.

9
10 Threats, limiting factors, crucial data gaps and conservation actions have also been identified
11 within the Wildlife Action Plan. The Wildlife Action Plan provides strong, clear guidance for
12 developing creative, solution-based partnership actions to manage threats, reduce limiting
13 factors, and resolve critical data gaps. The plan includes provisions for gaining feedback:
14 periodic status assessment and effectiveness monitoring to permit informed adjustments to
15 management actions.

16
17 **Policy:** Duchesne County calls for effective implementation of the recommendations from the
18 *Utah Wildlife Action Plan 2015–2025* (DWR 2015b). DWR worked with other agencies,
19 stakeholders, and organizations to identify the wildlife species (not plants) most in need of
20 conservation attention, and to determine which key habitats were essential for their survival. The
21 wildlife action plan provides strong, clear guidance for developing creative, solution-based
22 partnership actions to manage threats, reduce limiting factors, and resolve critical data gaps. The
23 plan includes provisions for gaining feedback, including periodic status assessments and
24 effectiveness monitoring to allow for informed adjustments to management actions. If effectively
25 implemented, the plan would result in healthier habitats and more secure wildlife populations,
26 therefore reducing the likelihood of new listings under the ESA.

27 28 **T&E Species in Duchesne County**

29
30 **Findings:** Introduced, reintroduced, sensitive, threatened and endangered species; recovery
31 plans; experimental populations; and related guidelines and protocols are addressed in this
32 section. The County supports the Endangered Species Act of 1973, which is administered by the
33 United States Fish and Wildlife Service, and recognizes that it is intended to prevent the
34 extinction of threatened and endangered plant and animal species by preserving the ecosystems
35 upon which these species depend. The County also realizes that various species play an
36 important role in the natural environment and may have important future values that are presently
37 unknown.

38
39 According to the U.S. Fish and Wildlife Service, the following threatened or endangered birds
40 are known to or are believed to occupy habitat in Duchesne County:

- 41
- 42 • Yellow-billed Cuckoo (*Coccyzus americanus*) (Threatened)
- 43 • Mexican spotted owl (*Strix occidentalis lucida*) (Threatened)
- 44

1 Critical Habitat for the Yellow-billed Cuckoo has been proposed by the U.S. Fish and Wildlife
2 Service in Duchesne County (see Map #45).

3
4 The Mexican Spotted Owl Recovery Plan, First Revision, was approved by the Southwest
5 Region of the US Fish and Wildlife Service on September 5, 2012. Figure II.2 of that plan shows
6 the location of Mexican Spotted Owl sites within the Colorado Plateau Ecological Management
7 Unit, which includes the southern portions of Duchesne County. Map #45 shows no Mexican
8 Spotted Owl sites within Duchesne County, with the closest sites being southeast of the county,
9 along the Green River, on the west side of the Hill Creek Extension of the Ute Indian
10 Reservation.

11
12 According to the U.S. Fish and Wildlife Service, the following threatened or endangered fish are
13 known to or are believed to occupy habitat in Duchesne County:

- 14
- 15 • Humpback chub (*Gila cypha*) (Endangered)
- 16 • Colorado pikeminnow (squawfish) (*Ptychocheilus lucius*) (Endangered)
- 17 • Bonytail chub (*Gila elegans*) (Endangered)
- 18 • Razorback sucker (*Xyrauchen texanus*) (Endangered)
- 19

20 According to the U.S. Fish and Wildlife Service, the following threatened or endangered
21 flowering plants are known to or are believed to occupy habitat in Duchesne County:

- 22
- 23 • Shrubby reed-mustard (*Schoenocrambe suffrutescens*) (Endangered)
- 24 • Barneby ridge-crest (*Lepidium barnebyanum*) (Endangered)
- 25 • Ute ladies'-tresses (*Spiranthes diluvialis*) (Threatened)
- 26 • Pariette cactus (*Sclerocactus brevispinus*) (Threatened)
- 27 • Uinta Basin hookless cactus (*Sclerocactus wetlandicus*) (Threatened)
- 28

29 According to the U.S. Fish and Wildlife Service, the following threatened or endangered
30 mammal is known to or is believed to occupy habitat in Duchesne County:

- 31
- 32 • Canada Lynx
- 33

34 Sensitive Species

35
36 Findings: The Utah Sensitive Species List is prepared pursuant to the Utah Division of Wildlife
37 Resources' Administrative Rule R657-48. By rule, wildlife species that are federally-listed
38 candidates for federal listing, or for which a conservation agreement is in place, automatically
39 qualify for the list. The additional species on the Utah Sensitive Species List, "wildlife species
40 of concern," are those species for which there is credible scientific evidence to substantiate a
41 threat to continued population viability. It is anticipated that wildlife species of concern
42 designations will act as an "early warning" system to identify species for which conservation
43 actions are needed, and that timely and appropriate conservation actions can then be implemented
44 on their behalf, precluding the need to list these species under the provisions of the federal

1 Endangered Species Act. This is important because when a species is federally-listed, there are
2 restrictions on land use within the species' habitat. These restrictions, which may have
3 significant negative economic impacts, can be avoided if appropriate measures are taken before
4 federal-listing becomes necessary. State-listed species are not protected by any special
5 regulations.

6
7 The Sensitive Species list maintained by the Utah Division of Wildlife Resources, for Duchesne
8 County, contains the following species:

- 9
- 10 • American Three-toed Woodpecker (*Picoides dorsalis*)
 - 11 • Bald Eagle (*Haliaeetus leucocephalus*)
 - 12 • Black Swift (*Cypseloides niger*)
 - 13 • Black-footed Ferret (*Mustela nigripes*)
 - 14 • Bluehead Sucker (*Catostomus discobolus*)
 - 15 • Bonneville Cutthroat Trout (*Oncorhynchus clarkii* Utah)
 - 16 • Brown (Grizzly) Bear (*Ursus arctos*)
 - 17 • Burrowing Owl (*Athene cunicularia*)
 - 18 • Colorado River Cutthroat Trout (*Oncorhynchus clarkii pleuriticus*)
 - 19 • Eureka Mountainsnail (*Oreohelix eurekensis*)
 - 20 • Ferruginous Hawk (*Buteo regalis*)
 - 21 • Flannelmouth Sucker (*Catostomus latipinnis*)
 - 22 • Fringed Myotis (*Myotis thysanodes*)
 - 23 • Gray Wolf (*Canis lupus*)
 - 24 • Greater Sage-grouse (*Centrocercus urophasianus*)
 - 25 • Kit Fox (*Vulpes macrotis*)
 - 26 • Lewis's Woodpecker (*Melanerpes lewis*)
 - 27 • Long-billed Curlew (*Numenius americanus*)
 - 28 • Mountain Plover (*Charadrius montanus*)
 - 29 • Northern Goshawk (*Accipiter gentilis*)
 - 30 • Roundtail Chub (*Gila robusta*)
 - 31 • Short-eared Owl (*Asio flammeus*)
 - 32 • Smooth Greensnake (*Opheodrys vernalis*)
 - 33 • Spotted Bat (*Euderma maculatum*)
 - 34 • Townsend's Big-eared Bat (*Corynorhinus townsendii*)
 - 35 • Western Toad (*Bufo boreas*)
 - 36 • White-tailed Prairie-dog (*Cynomys leucurus*)
- 37

38 The purpose of state wildlife species of concern designations is to preclude the need for future
39 listings under the Endangered Species Act. The Utah Sensitive Species List allows the Utah
40 Division of Wildlife Resources, land management agencies, local governments, and others to
41 prioritize their efforts so that those species in the most need will benefit from conservation
42 actions. Meaningful long-term mitigation for impacts to sensitive species is essential for
43 maintaining healthy populations of those species. Common conservation actions for sensitive

1 species include: 1) habitat conservation/restoration, 2) research to learn more about the species
 2 and the causes for its decline, and 3) minimizing/mitigating impacts from development.

3

4 **BLM Sensitive Species**

5

6 The BLM identifies a list of sensitive species on BLM-administered lands. State directors
 7 designate species within their respective states as BLM sensitive using the following criteria:

8 a. There is information that a species has recently undergone, is undergoing, or is predicted
 9 to undergo a downward trend such that the viability of the species or a distinct population
 10 segment of the species is at risk across all or a significant portion of the species range, or

11 b. The species depends on ecological refugia or specialized or unique habitats on BLM-
 12 administered lands, and there is evidence that such areas are threatened with alteration
 13 such that the continued viability of the species in that area would be at risk.

14

15 BLM sensitive wildlife and plant species in the BLM Vernal Field Office are listed in Table
 16 TES1 below. Not all of these species occur in Duchesne County.

Table TES1. BLM Sensitive Wildlife and Plant Species in the Vernal Field Office

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

Table TES1. BLM Sensitive Wildlife and Plant Species in the Vernal Field Office

Common Name	Scientific Name
Flannel mouth sucker	<i>Catostomus latipinnis</i>
Round tail chub	<i>Gila robusta</i>
Colorado River cutthroat trout	<i>Oncorhynchus clarki pleuriticus</i>
Mammals	
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>
White-tailed prairie dog	<i>Cynomys leucurus</i>
Reptiles	
Smooth green snake	<i>Opheodrys vernalis</i>
Plants	
Atwood's columbine	<i>Aquilegia atwoodii</i>
Goodrich's columbine	<i>Aquilegia scopulorum</i> var. <i>goodrichii</i>
Park rockcress	<i>Arabis vivariensis</i>
Horseshoe milkvetch	<i>Astragalus equisolensis</i>
Hamilton milkvetch	<i>Astragalus hamiltonii</i>
Goodrich stinkweed	<i>Cleomella palmeriana</i> var. <i>goodrichii</i>
Oilshale cryptantha	<i>Cryptantha barnebyi</i>
Fragrant cryptantha	<i>Cryptantha grahamii</i>
Untermann daisy	<i>Erigeron untermannii untermannii</i>
Ackerman's green gentian	<i>Frasera ackermaniae</i>
Rock hymenoxys	<i>Hymenoxys lapidicola</i>
Huber's pepperweed	<i>Lepidium huberi</i>
Goodrich blazingstar	<i>Mentzelia goodrichii</i>
Stemless penstemon	<i>Penstemon acaulis</i> var. <i>acaulis</i>
Gibbens penstemon (Gibbens beardtongue)	<i>Penstemon gibbensii</i>
Goodrich penstemon (Goodrich beardtongue)	<i>Penstemon goodrichii</i>
Graham's beardtongue	<i>Penstemon grahamii</i>

Table TES1. BLM Sensitive Wildlife and Plant Species in the Vernal Field Office

Common Name	Scientific Name
White River beardtongue	<i>Penstemon scariosus</i> var. <i>albifluvis</i>
Argyle Canyon phacelia	<i>Phacelia argylensis</i>
Uinta greenthread	<i>Thelesperma caespitosa</i>
Hairy Townsend daisy	<i>Townsendia strigose</i> var. <i>prolixa</i>
Sterila yucca	<i>Yucca sterilis</i>

U.S. Forest Service Sensitive Species

The USFS identifies a list of sensitive species on USFS-administered lands. The list of USFS sensitive species includes plant and animal species identified by a regional forester and for which population viability is a concern, as evidenced by the following:

- a. Significant current or predicted downward trends in population numbers or density.
- b. Significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution.

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

Sensitive wildlife and plant species in the Ashley National Forest are presented in Table TES2 (USFS 2016). An update of this list is currently underway as part of the upcoming forest plan revision. Not all of these species occur in Duchesne County.

Table TES2. Sensitive Wildlife and Plant Species in the Ashley National Forest

Common Name	Scientific Name
Birds	
Northern goshawk	<i>Accipiter gentilis</i>
Boreal owl	<i>Aegolius funereus</i>
Greater sage-grouse	<i>Centrocercus urophasianus</i>
Peregrine falcon	<i>Falco peregrinus</i>

Table TES2. Sensitive Wildlife and Plant Species in the Ashley National Forest

Common Name	Scientific Name
Bald eagle	<i>Haliaeetus leucocephalus</i>
American three-toed woodpecker	<i>Picoides dorsalis</i>
Flammulated owl	<i>Psiloscops flammeolus</i>
Great gray owl	<i>Strix nebulosa</i>
Fish	
Colorado river cutthroat trout	<i>Oncorhynchus clarkii pleuriticus</i>
Mammals	
Townsend's western big-eared bat	<i>Corynorhinus townsendii</i>
Spotted bat	<i>Euderma maculatum</i>
Bighorn sheep	<i>Ovis canadensis</i>
Amphibians	
Boreal toad	<i>Bufo boreas</i>
Columbia spotted frog	<i>Rana luteiventris</i>
Plants	
Graham columbine	<i>Aquilegia grahamii</i>
Petiolate wormwood	<i>Artemisia campestris</i> ssp. <i>borealis</i> var. <i>petiolata</i>
Dainty moonwort	<i>Botrychium crenulatum</i>
Slender moonwort	<i>Botrychium lineare</i>
Brownie lady'slipper	<i>Cypripedium fasciculatum</i>
Rockcress draba	<i>Draba globosa</i>
Untermann daisy	<i>Erigeron untermannii untermannii</i>
Goodrich stickleaf	<i>Mentzelia goodrichii</i>
Arctic poppy	<i>Papaver radicum</i> var. <i>pygmaeum</i>
Stemless beardtongue	<i>Penstemon acaulis</i> var. <i>acaulis</i>
Caespitose greenthread	<i>Thelesperma caespitosum</i>

Source: USFS (2016).

U.S. Forest Service Management Indicator Species (MIS)

In addition to sensitive species, the USFS also identifies management indicator species (MIS). MIS are defined as certain vertebrate and invertebrate species selected because their population changes are believed to indicate the effects of management activities (36 Code of Federal Regulations 219.19(a) (1)). Population trends of MIS are monitored and relationships to habitat changes are determined to assess the effects of management activities. Important characteristics of a MIS are that they have narrow habitat associations, respond to the effects of management, and can be effectively monitored.

MIS for the Ashley National Forest are presented in Table TES3 (U.S. Department of Agriculture 1986). Some of these species may not occur in Duchesne County.

Table TES3. Management Indicator Species in the Ashley National Forest

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

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

1 **U.S. Forest Service Species of Conservation Concern (SCC)**

2
3 The U.S. Forest Service 2012 planning rule requires that the Ashley National Forest analyze
4 Species of Conservation Concern, which are defined as a species, other than federally recognized
5 as threatened, endangered, proposed or candidate species, that is known to occur in the planning
6 area and for which the regional forester has determined that the best available scientific
7 information indicates substantial concern about the species' capability to persist over the long
8 term in the planning area.

9
10 In August of 2016, the Ashley National Forest conducted a *Species at Risk Assessment*. The
11 assessment initially identified 96 animal and 81 plant species as potential Species of
12 Conservation Concern. The list was narrowed to the following:

13
14 Animals

- 15
16
 - Greater Sage-Grouse
 - 17 • Peregrine Falcon
 - 18 • Black Rosy-Finch
 - 19 • Pygmy Rabbit
 - 20 • Fringed Myotis (bat)
 - 21 • Colorado River Cutthroat Trout

22
23 Of the animals listed above, all have habitat in Duchesne County, except for the Pygmy Rabbit,
24 which is found only in the Wyoming section of Flaming Gorge National Recreation Area.

25
26 Plants

- 27
28
 - Handsome Pussytoes
 - 29 • Graham's Columbine
 - 30 • Ownbey's Thistle
 - 31 • Evert's Wafer Parsnip
 - 32 • Clustered Lady's Slipper
 - 33 • Wasatch Draba
 - 34 • Rockcress Draba
 - 35 • Tundra Draba
 - 36 • Untermann's Daisy
 - 37 • Compound Kobresia
 - 38 • Huber's Pepperplant
 - 39 • Goodrich's Blazingstar
 - 40 • Maybell Locoweed
 - 41 • Alpine Poppy
 - 42 • Stemless Beardtongue
 - 43 • Desert Phacelia

- 1 • Silvery Primrose
- 2 • Marsh Cinquefoil

3
4 Of the plants listed above, all appear to have habitat in Duchesne County, with the exception of
5 Graham’s Columbine and Evert’s Wafer Parsnip [habitat is in Uintah County] Ownbey’s Thistle
6 and Desert Phacelia [habitat is in the Flaming Gorge area of Wyoming].

7
8 **Greater Sage Grouse**

9
10 **Findings:** On February 14, 2013, the State of Utah adopted an updated conservation plan for
11 Greater Sage Grouse. Utah’s Conservation Plan for Greater Sage-grouse is designed to protect
12 high-quality habitat, enhance impaired habitat and restore converted habitat to support, in Utah, a
13 portion of the range-wide population of greater sage-grouse (*Centrocercus urophasianus*)
14 necessary to eliminate threats to the species and negate the need for the listing of the species
15 under the provisions of the federal Endangered Species Act (ESA). The plan is designed to
16 eliminate the threats facing the sage-grouse while balancing the economic and social needs of the
17 residents of Utah through a coordinated program which provides for incentive-based programs
18 for private, local government and School and Institutional Trust Lands Administration (SITLA)
19 lands and reasonable and cooperative regulatory programs on other state and federally managed
20 lands. Implementation of the Plan requires a cooperative effort among local, state and federal
21 agencies, working in concert with private interests.

22
23 The biological pillars of sage-grouse conservation include protection of habitat which provides
24 for the year-round life-cycle needs of the species, perpetuation of conditions necessary to ensure
25 recruitment of a continuing population within the aggregate state population, and enhancement or
26 improvement of sage-grouse habitat that has been impaired or altered through restoration or
27 rehabilitation activities.

28
29 Sustaining the best-of-the-best existing sage-grouse populations and increasing populations
30 through habitat restoration and rehabilitation are the basis of the state plan. Currently, Utah
31 supports about 4-5% of the total range-wide population of greater sage-grouse. Utah’s current
32 distribution of sage-grouse is dictated by the discontinuous nature of habitat which reflects the
33 rugged and incised topography in the eastern and southern parts of the state, previous human-
34 caused habitat modifications, natural events (such as wildfire), and the connection of habitat with
35 habitat occupied by birds in Nevada and Idaho, and physical and genetic connections to larger
36 populations in the Wyoming Basins, Great Basin in the northern and western parts of the state,
37 and to populations in northwest Colorado. Duchesne County contains a minor amount of the
38 state’s sage grouse population within the Carbon and Strawberry sage grouse management areas
39 (See Map #15).

40
41 The state sage grouse plan establishes objectives that will be tracked on a statewide basis through
42 the Public Lands Policy Coordination Office (PLPCO), with support from the Division of
43 Wildlife Resources (DWR), the BLM, the U.S. Forest Service, the U.S. Fish and Wildlife
44 Service and local governments. Habitat enhancement, improvement and restoration will be

1 implemented and coordinated on a statewide basis through programs such as the Watershed
2 Restoration Initiative (WRI), Utah Partners for Conservation and Development (UPCD), the
3 Natural Resources Conservation Service’s (NRCS) Sage-grouse Initiative (SGI), the Grazing
4 Improvement Program (GIP) and others.

5
6 The State of Utah has hired Stag Consulting to provide written progress reports to the legislature
7 regarding the efforts being made to enhance sage grouse populations and habitat, use legal
8 strategies, educate members of Congress and engage the public in the process of preventing ESA
9 listing of the bird. The latest annual report was submitted on August 18, 2015. Stag Consulting
10 concludes that “state-based, common sense solutions are demonstrating a clear commitment to
11 maintain Sage-grouse populations in a manner expressly designed, to not only avoid the threat of
12 extinction...but also maintain robust numbers of birds in areas where Sage-grouse can be
13 successful.”

14
15 This report indicates that Utah has spent \$5 million annually on sage grouse conservation,
16 restored 1.2 million acres of habitat since 2006 and has protected 94% of the sage grouse
17 population on 7.4 million acres of habitat. The report also concludes that sage grouse
18 populations in Utah have been increasing over the last 15 years, with a 40% increase in 2014 and
19 increases also being documented for 2015.

20
21 The 2015 Stag Consulting report finds that projected new development by 2030 is not expected
22 to be a threat to long term sage grouse survival in any of the state sage grouse management areas.
23 The report also concludes that oil and gas development is not a major threat to sage grouse in
24 Utah as 7.29 million of the 7.4 million acres of habitat protected by the state plan are located
25 outside of oil and gas fields or units. Only 6% of Utah’s sage grouse population is located within
26 oil and gas development areas; which properly balances responsible energy development with
27 long term conservation of the Greater Sage-grouse.

28
29 Stag Consulting concludes that “diverse interests are working together to implement science-
30 based solutions to meet agreed upon conservation objectives and to ensure conservation of
31 Greater Sage-grouse in ways that also ensure a bright future for jobs, local communities and
32 Western economies.”

33
34 A July 2015 report prepared by researchers at Utah State University gives an excellent summary
35 of Greater Sage-grouse research in Utah from 1996 to 2015. This study, entitled “*Sage Grouse*
36 *Conservation and Management Through Science, The Utah Experience,*” notes that the Utah
37 Conservation Plan for Greater Sage-grouse was based on a database for sage-grouse that is the
38 most comprehensive source for local population occurrences of its kind. The Utah Plan
39 synthesized Utah Division of Wildlife Resources sage-grouse lek location data and seasonal
40 movement information, obtained by two decades of research to delineate eleven sage grouse
41 management areas. This approach, based on the best available research and data, recognized and
42 accepted current land uses and identified potential future uses which may conflict with species
43 conservation. As a result, Utah’s sage grouse management areas encompass over 90 percent of
44 Utah breeding populations, seasonal movements, and the landscapes that provide the greatest

1 potential to increase sage-grouse usable space through habitat protection and enhancements. The
2 BLM and U.S. Forest Service failed to use this best available science when they adopted land use
3 plan amendments for federal lands in Utah.

4
5 The Utah plan recognizes that half of Utah’s greater sage-grouse populations occur on private
6 lands and that successful conservation depends upon gaining broad support from local
7 communities and private landowners. For this reason, ten Local Working Groups consisting of
8 private and public stakeholders have been operating in specific regions of the state to enhance
9 sage grouse populations and habitat.

10
11 The Uintah Basin Adaptive Resource Management (UBARM) sage-grouse local working group
12 covers parts of Duchesne, Uintah, and Daggett counties. In March, 2016, the Utah Community-
13 Based Conservation Program, based in the Jack H. Berryman Institute, Department of Wildland
14 Resources, and the Utah State University Extension Service, filed a 2014-15 annual report with
15 the State of Utah. The report addressed the activities of all of the local working groups. The
16 report noted that the UBARM group, which functions in close partnership with the Uintah Basin
17 Utah Partners and Conservation Development, has developed multiple habitat improvement
18 projects for sage-grouse, including a large number of conifer-removal projects across the basin.
19 Recently, the Ute Tribe has become more involved in project discussions and planning, sharing
20 knowledge and ideas with others in the group. The NRCS Sage-Grouse Initiative has increased
21 its impact on the area as well, working with private landowners, often those near existing or
22 planned projects on public lands.

23
24 The UDWR, Forest Service, and BLM, in addition to wildlife partners in Colorado, have been
25 working together on increased monitoring of sage-grouse in areas where bird movements were
26 previously unknown or only anecdotal. Many collars, including GPS-enabled transmitters, have
27 been placed around the basin, including on Blue Mountain, the three corners area, Little
28 Mountain, and other areas. The information provided is helping provide a more complete picture
29 of bird movements and habitat use in the area.

30
31 The UBARM group has also been actively engaged in state plan implementation work, such as
32 conifer removal strategy assistance, and painstaking review of the disturbance map baseline
33 layers.

34
35 The Utah sage grouse plan has placed emphasis on increasing usable space for sage-grouse in
36 naturally fragmented habitat as a means of increasing both production and connectivity. The
37 reduction and removal of juniper and pinyon pine encroachment in sage grouse management
38 areas where the sagebrush and herbaceous understory is relatively intact is thought to provide the
39 greatest potential to create and enhance sage-grouse habitat in Utah. According to the Stag
40 Consulting report, Utah is spending \$5 million per year on sage grouse habitat conservation, with
41 over 75,000 acres of habitat restored annually and approximately 1.2 million acres of habitat
42 restored since 2006.

1 In addition to habitat restoration, there have been efforts to translocate sage grouse to Duchesne
2 County; particularly in the Anthro Mountain area. The USU study mentioned above concluded
3 that successful sage-grouse translocations require suitable contiguous sagebrush habitats
4 enveloped by geomorphic barriers, a residual resident population, pre-nesting releases, and active
5 mammalian predator management.
6

7 Predators are a major reason for sage grouse mortality in Duchesne County and many other areas
8 of Utah. Ravens, eagles, fox, skunks, coyotes and raccoons are among the common predators
9 who feast on sage grouse eggs or chicks. A 2011 study in Wyoming by the USDA's Wildlife
10 Services, published in the Billings Gazette, used radio collars and cameras near nesting sites to
11 monitor grouse and predator activities. These devices were used in areas where predator control
12 was active and areas with no predator control. The study found that predation accounted for 81%
13 of chick mortality and that sage grouse were seven times more likely to survive in areas where
14 predator control is being implemented. This same study also found that sage grouse may move
15 toward human development, as the activity tends to drive predators away.
16

17 A Uinta Basin sage grouse conservation plan was prepared by the local working group in January
18 2007. This plan found that:
19

- 20 • There is little empirical evidence available regarding the direct or indirect impacts of
21 home and cabin development, powerlines, fences and tall structures, energy development
22 and roads on sage grouse populations in the Uinta Basin.
23
- 24 • Sage-grouse population declines in some areas have been linked to years of low
25 precipitation. Severe winter conditions can be a factor in reducing grouse survival. Good
26 winters followed by relatively wet springs promote good insect and forb production,
27 which help sage grouse thrive.
28
- 29 • Because sage grouse have the lowest reproductive potential of the upland game birds,
30 small populations are highly vulnerable and hunting harvest rates should not exceed 10%
31 of the fall population.
32
- 33 • After wildfire occurs, it is important to implement a post-burn rehabilitation plan to seed
34 and establish beneficial vegetation rather than allow invasive or noxious species to
35 emerge in the area.
36
- 37 • Livestock grazing is an important use of sagebrush rangelands in the Resource Area.
38 Although some incompatible grazing likely occurs within the Resource Area, the majority
39 of livestock operations appear to be coexisting with sage-grouse and sage-grouse
40 populations are stable to increasing. Evidence exists that indicates that sheep grazing can
41 enhance and maintain sagebrush communities that are used by sage-grouse. Livestock
42 grazing may be a useful tool in the Resource Area to manipulate, maintain, or enhance
43 sagebrush habitats. No empirical studies have been conducted in the Resource Area to
44 address the issue of grazing impacts on sage-grouse and this is a topic that may warrant

1 future research.

- 2
- 3 • OHV recreation is relatively common in the Resource Area; however, specific impacts to
4 sage grouse populations are unknown and are potentially increasing as people
5 increasingly move into areas where sage-grouse exist. Little information is available on
6 how OHV recreation impacts sage-grouse populations, behavior, and habitat use; this
7 issue may warrant additional research.
8
 - 9 • West Nile Virus is the disease with greatest potential to impact sage grouse populations in
10 the Resource Area. Sage-grouse deaths associated with the virus have occurred in the
11 Uinta Basin. Parts of Colorado and Wyoming have also detected infected birds. There is
12 potential for disease persistence from transmission between these areas.
13
 - 14 • Predation is the end result for the vast majority of sage-grouse throughout their range,
15 both historically and presently. Documented nest predators include weasel, badger, elk,
16 coyote, common raven, crow, red fox, striped skunk, black-billed magpie and various
17 snakes. Documented predators of sage grouse chicks and adults include American
18 kestrels, merlin, Northern harrier, common raven, weasel, golden eagle, Cooper’s hawk,
19 ferruginous hawk, re-tailed hawk, Swainson’s hawks, Northern goshawks, coyote, red fox
20 and bobcat. In the Strawberry sage grouse management area, red fox and ravens were the
21 most common predators. In artificial nest studies conducted in Strawberry Valley, remote
22 cameras caught ravens depredating 98% of artificial nests within 48 hours of their
23 placement. Past reductions in the use of poisons have allowed raven populations to
24 increase by roughly 300% since 1968. It is no coincidence that sage grouse populations
25 have decreased at a time when predator populations have increased.
26

27 As stated earlier, in September 2015, the BLM and Forest Service signed a Sage Grouse EIS that
28 establishes new guidance for sage grouse habitat management on federal lands in the West. The
29 RMP Amendments for managing Greater Sage-Grouse in Utah can be found at:
30 [https://eplanning.blm.gov/epl-front-](https://eplanning.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage¤tPageId=99423)
31 [office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage¤tPageId=9](https://eplanning.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage¤tPageId=99423)
32 [9423](https://eplanning.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage¤tPageId=99423).

33

34 **Policy:** Duchesne County encourages the use of predator control to maintain or increase sage
35 grouse populations.

36

37 The Utah sage grouse plan also found that habitat loss due to fire and replacement of (burned)
38 native vegetation by invasive plants is the single greatest threat to sage-grouse that inhabit sage
39 grouse management areas in Utah’s Great Basin region. The wildland fire threat is great in
40 Duchesne County and is addressed in Section 19 of this plan.

41

42 **Policy:** Duchesne County supports the protection of sage grouse habitat from the effects of
43 wildfire and the restoration of burned habitat with plant species that will benefit sage grouse
44 populations.

1 The July 2015 USU study noted that, in 2010, there were no peer-reviewed, experimental studies
2 reported in the scientific literature that specifically documented increased avoidance or predation
3 on sage-grouse because of the construction, operation, and maintenance of tall structures. A
4 review of the scientific literature regarding sage-grouse since 2010 produced no new published
5 information, but recent unpublished reports have begun to address the issue. Until better
6 information is available, the Utah Plan recommends siting new electrical transmission lines in
7 existing corridors, or at a minimum, in concert with existing linear features in sage-grouse
8 habitat. Siting linear features accordingly is deemed to be mitigation for the siting of that linear
9 feature.

10
11 **Policy:** Duchesne County will not support the concept of buffers or setbacks from tall structures
12 unless new science answers the following questions:

- 13
- 14 • Do sage-grouse avoid tall structures and in particular what are they avoiding?
- 15 • If sage-grouse avoid tall structures, what are the individual and population impacts, and
- 16 when would the impacts be manifested?
- 17 • Will the effects be permanent?
- 18 • Will the effects be limited to the area of disturbance?
- 19 • What measures (BMPs) can be implemented to mitigate impacts and alleviate the
- 20 negative impacts?
- 21 • Will these BMPs be universally effective?
- 22

23 The Duchesne County Commissioners adopted Resolution #13-09 on May 6, 2013. This
24 resolution established the Utah Conservation Plan for Greater Sage-grouse as the County's sage
25 grouse management plan.

26 27 **Objectives**

28
29 Achieve consistency between federal, state and local efforts to manage greater sage grouse
30 populations in Duchesne County.

31 32 **Overall T&E Species Objectives**

- 33
- 34 1. Avoid listings of species as threatened or endangered or designation of critical habitats
35 under the ESA.
- 36
- 37 2. Delist special-status species and designated critical habitats that were erroneously listed
38 (e.g., listed based on incorrect data or assumptions) and/or that are no longer threatened
39 and endangered species or sensitive based on criteria established by BLM, USFS, or the
40 State of Utah. Based on their observed local abundance, the county believes that the
41 following species may have been erroneously listed under the ESA:
42
- 43 a. Pariette cactus (*Sclerocactus brevispinus*)
- 44

1 b. Ute ladies'-tresses (*Spiranthes diluvialis*)
2

- 3 3. Reduce the impacts of endangered and sensitive species listings on private and public
4 lands. Listings typically include land use restrictions and hamper multiple use of public
5 lands.
6
7 4. Avoid special management of lands and associated land use restrictions associated with
8 reintroduction of large predators that are listed as threatened or endangered (e.g., gray
9 wolf (*Canis lupis*), grizzly bear (*Ursus arctos*), and Canada lynx (*Lynx canadensis*).
10
11 5. Minimize the land use restrictions associated with any reintroduction of large predators
12 that are listed as threatened or endangered.
13
14 6. Ensure federal agencies accurately inventory threatened, endangered, and sensitive
15 species across all state, federal, and tribal lands.
16

17 **Overall T&E Species Policies:**
18

- 19 1. Do not support actions to list any species as a threatened or endangered species under the
20 ESA or actions to add any species to the State of Utah's sensitive species list until
21 verifiable scientific data have been available to the public that demonstrate:
22
23 a. The need for the designation;
24
25 b. That protections cannot be provided by other methods, and
26
27 c. That the area in question is truly unique compared to other area lands.
28
29 2. No species shall be proposed for listing in Duchesne County until verifiable scientific
30 data has been available to the public that there is a need for the designation; that
31 protections cannot be provided by other methods, and the area in question is truly unique
32 compared to other area lands. Such data shall include species populations on all lands
33 within the county, regardless of jurisdiction.
34
35 3. Support alternatives to listing under the ESA, including conservation plans, initiatives, or
36 agreements to address threats to species and their habitats. Examples of successful
37 collaborative conservation agreements include the Conservation Agreement and Strategy
38 for Graham's beardtongue (*Penstemon grahamii*) and White River beardtongue (*P.*
39 *scariosus* var. *albifluvis*) (SWCA 2014) and the State of Utah's Conservation Plan for
40 Greater Sage-Grouse in Utah (DWR 2013).
41
42 4. Support efforts to update and modernize the ESA, such as those undertaken by the
43 Western Governors' Association, to address issues that affect local governments,
44 including the difficulty of delisting species, even once recovery objectives are met and the

1 use of the ESA by special interest groups in efforts to influence land use decisions by
2 petitioning USFWS to list large groups of species as threatened or endangered.

- 3
- 4 5. Do not support buffer zones for the protection of threatened and endangered species
5 unless such buffers are demonstrated to be necessary to protect the species pursuant to the
6 best available science.
- 7
- 8 6. When developing recovery plans for species listed as threatened or endangered, it is
9 typically not necessary to restore a species to all habitats once occupied by the species to
10 achieve a population that is not at risk of extinction. Recovery plans should establish
11 objectives that restore and preserve only the amount of habitat and population size needed
12 to protect the species from extinction.
- 13
- 14 7. The USFWS shall exclude areas from critical habitat designation if the economic damage
15 is considered too great.
- 16
- 17 8. The USFWS shall involve local and county government representatives in their
18 assessment of the economic impact of critical habitat designations.
- 19
- 20 9. Designation of critical habitats for threatened and endangered species or reintroductions
21 must not be allowed to grow beyond the originally intended physical boundaries and
22 scope resulting in detrimental effects on the economy, life styles, culture, and heritage.
- 23
- 24 10. Designation or reintroduction plans, guidelines, and protocols must not be developed or
25 implemented without full County involvement and public disclosure.
- 26
- 27 11. Any analysis of proposed designations or reintroductions must be inclusive and analyze
28 needed actions associated with the proposal to prevent growth beyond the scope and
29 boundaries.
- 30
- 31 12. Recovery plans, reintroduction plans, guidelines, and protocols for species listed as
32 threatened or endangered under the ESA should be developed with full public disclosure
33 and in coordination with private property owners and local governments that will be
34 affected by the recovery plan. Recovery plans must contain indicators of effectiveness
35 and recovery progression, identifiers of recovery completion, self-terminating provisions
36 upon successful recovery, and management provisions after the plan is terminated.
- 37
- 38 13. Recovery plans for species listed as threatened or endangered should clearly identify the
39 parties responsible for collecting data to monitor species recovery and how that data will
40 be collected. Funding adequate to collect the data required to monitor progress toward
41 recovery should be appropriated by federal agencies at the time of listing.
- 42
- 43 14. Such designations shall provide access for reservoirs, maintenance of irrigation facilities,
44 fire, noxious weed and pest control.

- 1 15. Devaluation of private property by the Endangered Species Act is a “taking” under the 5th
2 Amendment of the U.S. Constitution and compensation must be paid.
3
- 4 16. On BLM, National Forest, Utah Reclamation, Mitigation and Conservation Commission
5 and Utah Division of Wildlife Resources lands within the Strawberry and Carbon Greater
6 Sage Grouse Management Areas in Duchesne County, the Greater Sage-grouse shall be
7 managed in accordance with the 2013 State of Utah Conservation Plan for Greater Sage
8 Grouse in Utah and any subsequent amendments thereto. On private, local government
9 and SITLA lands within the sage grouse management areas, compliance with this plan is
10 strictly voluntary.
11
- 12 17. Portions of the Endangered Species Act that are in conflict with the above policies should
13 be amended to become consistent with these policies.
14
- 15 18. Focus necessary conservation efforts on species identified on the State of Utah’s sensitive
16 species list. This list identifies “wildlife species of concern,” which are those species for
17 which there is credible scientific evidence to substantiate a threat to continued population
18 viability. Conservation efforts could include the following:
19
 - 20 a. Avoiding impacts to sensitive species and their habitats when possible.
 - 21
 - 22 b. When avoidance is not possible, taking reasonable steps to minimize the effects of
23 development on sensitive species and their habitats.
 - 24
 - 25 c. When high levels of impact on sensitive species are unavoidable, meaningful
26 long-term mitigation may be necessary. Depending upon the species in question,
27 meaningful long-term mitigation could include habitat conservation/restoration
28 (e.g., rangeland restoration, wetland enhancement, noxious weed control, pinyon-
29 juniper removal, or other actions that provide new or enhanced wildlife habitats)
30 or research to learn more about the species and the causes for its decline.
31
- 32 19. Any species identified as sensitive by the State of Utah that either no longer exists in
33 Duchesne County or were introduced experimentally are not appropriate for the State of
34 Utah sensitive species list.
35
- 36 20. Support mitigation banking programs as a way to offset impacts to threatened and
37 endangered species, species at risk of becoming threatened or endangered, and their
38 habitats.
39
- 40 21. Do not support the creation or expansion of grizzly bear, gray wolf, wolverine and
41 Canada lynx populations or the protection of their habitats, ranges, or migration corridors
42 within the county.
43
44

1 **Energy Considerations**

2
3 **Findings:** Energy development provides a major economic stimulus for Duchesne County and
4 the State of Utah. However, energy development and transmission also may cause impacts to
5 rare plants or sensitive wildlife species. Typical impacts include loss, damage, or fragmentation
6 of important habitats, increased disturbance, reduced water quality, and the faster spread of
7 invasive species. These kinds of impacts should be mitigated to promote a balance among
8 competing uses of the natural resources occurring within a given county.

9
10 One-size-fits-all efforts by the federal government to conserve species shall be resisted as such
11 efforts can reduce the feasibility of energy development in the County.

12
13 **Policy:** It is the policy of Duchesne County to support efforts to preserve threatened and
14 endangered species, using incentives and cooperative agreements agreed to by property owners,
15 land lessees and the agencies with jurisdiction.

16
17 **Water Considerations**

18
19 **Findings:** Water is important to all life, and it is limited across many areas of the West
20 including much of Duchesne County. The supply of this critical resource may be further reduced
21 by projected growth in our human population. Water management becomes relevant in the
22 conservation of listed or sensitive species whenever they depend on aquatic systems such as
23 healthy streams, rivers, wetlands, or riparian habitats. Management issues include water supply,
24 water quality (e.g., temperature, sediment load, or nutrient content), and the timing or duration of
25 flows in streams and spring-fed aquatic systems. Extraction and consumption of water and the
26 accompanying alteration of aquatic habitats generate the single most significant source of stress
27 to Utah's sensitive wildlife species and their habitats. Water management demands our best
28 attention, if we hope to be able to meet municipal and industrial needs, while preserving
29 traditional agricultural uses, and ensuring persistence of sufficient plant and animal diversity in
30 our aquatic systems. Water is a fundamental requirement for healthy landscapes which support
31 our quality of life.

32
33 **Policy:** Duchesne County supports the careful evaluation of all plans which guide the use or
34 management of water.

35

Section 23. Wilderness

Findings: The Department of Interior, National Park Service, provides a summary of the meaning of wilderness as follows:

The Wilderness Act of 1964 created the National Wilderness Preservation System and recognized wilderness as “an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain.” The Act further defined wilderness as “an area of undeveloped Federal land retaining its primeval character and influence without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions...” (16 USC 1131).

Designated wilderness is the highest level of conservation protection for federal lands. Only Congress may designate wilderness or change the status of wilderness areas. Wilderness areas are designated within existing federal public land. Congress has directed four federal land management agencies—U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service, and National Park Service—to manage wilderness areas so as to preserve and, where possible, to restore their wilderness character.

The Wilderness Act requires management of human-caused impacts and protection of the area's wilderness character to ensure that it is "unimpaired for the future use and enjoyment as wilderness" (16 USC 1131). To comply with this standard, wilderness areas generally do not allow motorized equipment, motor vehicles, mechanical transport, temporary roads, permanent structures, or installations. Motorized equipment and equipment used for mechanical transport may be allowed in certain circumstances such as search and rescue. This includes the use of motor vehicles, motorboats, motorized equipment, bicycles, hang gliders, wagons, carts, portage wheels, and the landing of aircraft including helicopters, unless provided for in specific legislation. The Wilderness Act also prohibits permanent roads and commercial enterprises, except commercial services that may provide for recreational or other purposes of the Wilderness Act. Livestock grazing is allowed in wilderness areas. Wilderness areas are to be primarily affected by the forces of nature, though the Wilderness Act does acknowledge the need to provide for human health and safety, protect private property, control insect infestations, and fight fires.

The Wilderness Act protects designated wilderness areas by law "for the permanent good of the whole people." With the Wilderness Act, Congress secures "for the American people of present and future generations the benefits of an enduring resource of wilderness."

Through the Wilderness Act, Congress recognized the intrinsic value of wild lands. Some of the tangible and intangible values mentioned in the Wilderness Act include "solitude or a primitive and unconfined type of recreation," as well as “ecological, geological, or other features of scientific, educational, scenic, or historical value." Wilderness areas provide habitat for wildlife and plants, including endangered and threatened species.

1 Wilderness protects open space, watersheds, natural soundscapes, diverse ecosystems and
2 biodiversity. The literature of wilderness experience frequently cites the inspirational and
3 spiritual values of wilderness, including opportunities to reflect on the community of life and the
4 human place on Earth. Wilderness provides a sense of wildness, which can be valuable to people
5 whether or not those individuals actually visit wilderness.

6
7 In 1976, the U.S. Congress directed BLM through Section 603(a) of Federal Land Policy and
8 Management Act (FLPMA) to inventory and respond to Congress within 15 years "... those
9 roadless areas of five thousand acres or more and roadless islands of the public lands, identified
10 during the inventory required by section 201(a) of this Act as having wilderness characteristics
11 described in the Wilderness Act of September 3, 1964 and shall from time to time report to the
12 President his recommendation as the suitability or non-suitability of each such area or island for
13 preservation as wilderness ..." (43 USC 35).

14
15 The wilderness characteristics that were used in the inventory as described in the 1964
16 Wilderness Act were as follows:

- 17
18 1. Generally appears to have been affected primarily by the forces of nature, with the
19 imprint of humankind's work substantially unnoticeable.
20
21 2. Has at least 5,000 acres of land or is of sufficient size as to make practicable its
22 preservation and use in an unimpaired condition.
23
24 3. Has outstanding opportunities for solitude, or a primitive or unconfined type of recreation
25 in at least part of the area.
26
27 4. May also contain ecological, geological, other features of scientific, scenic, or historical
28 value.
29

30 Congress has now designated more than 106 million acres of federal public lands as wilderness:
31 44 million of these acres are in 47 national parks and total 53 percent of National Park System
32 lands. Additional national park areas are managed as "recommended" or "proposed" wilderness
33 until Congress acts on their status.
34

35 Duchesne County is host to one federally designated wilderness (the High Uintas Wilderness
36 Area, see Map #46), which comprises 13.8% percent of the county's land area. Land features
37 include vistas of high barren peaks, dense lodge pole forests, rugged canyon lands, lakes and
38 streams, and significant watershed areas. The County has previously made a disproportionate
39 contribution to the nation's wilderness system. The Bureau of Land Management and the
40 National Park Service have no designated wilderness in Duchesne County.
41

42 The High Uintas Wilderness is the largest wilderness area in the state of Utah and is over three
43 and half times larger than Utah's second largest wilderness area. The Ashley National Forest
44 manages 60% of the wilderness, with the remainder managed by the Uinta-Wasatch-Cache

1 National Forest. Management of the wilderness is coordinated between the Ashley and the
2 Uinta-Wasatch-Cache, but the Ashley is the lead forest for the management of the High Uintas
3 Wilderness. The recreational opportunities available are horse and foot trails to lakes and other
4 natural features, fishing, hunting and climbing. The size of the High Uintas Wilderness allows
5 for extended backpacking or horse packing trips not possible in other Utah wilderness areas.

6
7 Wilderness.net has produced a fact sheet for the High Uintas Wilderness which states that:

8
9 The United States Congress designated the High Uintas Wilderness in 1984 and it now has a total
10 of 456,705 acres (of which 289,311 acres are in Duchesne County). All of the wilderness is
11 within Utah and is managed by the Forest Service.

12
13 The Uinta Mountains were named for the Uintaat Indians, early relatives of the modern Ute
14 Tribe. The High Uintas Wilderness envelops the wild core of this massive mountain range.
15 Characterized by the highest peaks in Utah, countless lakes, and a unique alpine ecosystem, it is
16 among the nation's most outstanding wilderness areas. The High Uintas Wilderness is
17 administered jointly by the Ashley and Wasatch-Cache National Forests.

18
19 The Uinta Mountains were carved by glaciers from an immense uplift of Precambrian rock.
20 Some of this rock is exposed as colorful quartzite and shales. The main crest of the Uinta
21 Mountains runs west to east for more than 60 miles, rising over 6,000 feet above the Wyoming
22 and Uinta Basins to the north and south. Massive secondary ridges extend north and south from
23 the crest of the range, framing glacial basins and canyons far below. This rugged expanse of
24 peaks and flat-top mountains is the largest alpine area in the Intermountain West and is the
25 setting for Kings Peak, the highest peak in Utah. Hundreds of picturesque lakes, streams, and
26 meadows lie within sculpted basins. Cold, clear rivers plunge from the basins into deep canyons
27 that form the headwaters of Utah's major rivers.

28
29 The Uinta Mountains rise from 7,500 to 13,528 feet at the summit of Kings Peak, offering
30 diverse habitat for a wide variety of flora and fauna. Above tree line, tundra plant communities
31 thrive in the harsh climate of the highest altitudes. Thick forests of Engelmann spruce, subalpine
32 fir, and Lodge pole pine blanket the land below tree line. These forests are interrupted by park-
33 like meadows and lush wetlands. In the lower elevations, aspen groves and countless mixed
34 species offer contrast to the scene. The Uinta Mountains are home to: elk, mule deer, moose,
35 mountain goat, coyote, black bear, bighorn sheep, ptarmigan, river otter, pine marten, cougar, and
36 75 percent of Utah's bird species, among many others.

37
38 The High Uintas Wilderness boasts 545 miles of trail, which may be accessed from a number of
39 trailheads surrounding the wilderness near the gateway communities of Duchesne, Roosevelt,
40 and Kamas, UT and Evanston and Mountain View, WY. This extensive network of trails leads
41 visitors deep into the wilderness, through thick forests, past rushing streams and placid lakes, to
42 sweeping alpine vistas below majestic peaks. Opportunities for exploration are endless.

1 Motorized equipment and equipment used for mechanical transport is generally prohibited on all
2 federal lands designated as wilderness. This includes the use of motor vehicles, motorboats,
3 motorized equipment, bicycles, hang gliders, wagons, carts, portage wheels, and the landing of
4 aircraft including helicopters, unless provided for in specific legislation. These prohibitions
5 make maintenance of historic water facilities very difficult and costly.
6

7 These general prohibitions have been implemented for all national forest wildernesses in order to
8 implement the provisions of the Wilderness Act of 1964. The Wilderness Act requires
9 management of human-caused impacts and protection of the area's wilderness character to insure
10 that it is "unimpaired for the future use and enjoyment as wilderness." Use of the equipment
11 listed as prohibited in wilderness is inconsistent with the provision in the Wilderness Act which
12 mandates opportunities for solitude or primitive recreation and that wilderness is a place that is in
13 contrast with areas where people and their works are dominant.
14

15 Wilderness managers often need to take action to limit the impacts caused by visitor activities in
16 order to protect the natural conditions of wilderness as required by the Wilderness Act of 1964.
17 Managers typically implement 'indirect' types of actions such as information and education
18 measures before selecting more restrictive measures. When regulations are necessary, they are
19 implemented with the specific intent of balancing the need to preserve the character of the
20 wilderness while providing for the use and enjoyment of wilderness.
21

22 The following prohibitions are in effect in the High Uintas Wilderness area:
23

- 24 a. Groups exceeding 14 persons and/or 15 head of stock. Groups exceeding this size must
25 divide into separate parties and remain at least one mile apart.
- 26 b. Camping within 200 feet of any occupied campsite, designated trail, or water source.
27
- 28 c. Failing to properly dispose of all garbage (pack it out) and leaving human waste in an
29 exposed or unsanitary manner.
30
- 31 d. Building a campfire or using a wood stove within 1/4 mile of a location closed to these
32 activities.
33
- 34 e. Restraining a saddle or pack animal for longer than one hour within 200 feet of a water
35 source or tying an animal directly to a tree for more than one hour. Animals must be
36 moved sooner if damage to the tree, soil, or vegetation is occurring.
37
- 38 f. Short-cutting a switchback in a trail.
39
- 40 g. Damaging any natural feature, including, but not limited to: falling or damaging trees,
41 trenching and vandalism.
42
43
44

- 1 h. Constructing any structure or improvement, including, but not limited to hitch rails,
2 furniture, shelters and rafts.
3

4 Although Duchesne County acknowledges the values of the High Uintas Wilderness Area, use is
5 highly restricted and does not provide the desired wilderness experience for citizens and groups
6 unable to see the area due to age, physical, economic or other limitations. In addition, the
7 prohibition on mechanical equipment makes trail maintenance difficult. Trees falling across
8 trails create barriers to human and horse travel and can result in hazardous conditions and new
9 surface disturbance.

10
11 Designating an area as a wilderness area is often not an appropriate, effective, efficient,
12 economic, or wise use of land. Lands can often be adequately protected with other management
13 options. Wilderness designation, due to highly restrictive management prescriptions, is
14 inconsistent with the philosophy of multiple use and sustained yield and adversely affects the
15 County's economy in terms of the grazing, tourism, and timber industries and water resources.
16 Management for wilderness characteristics also negatively affects forest health, water quality,
17 watershed health, and increases catastrophic fire risk.
18

19 A December 2008 report published by Utah State University entitled "Public Lands and Utah
20 Communities: A Statewide Survey of Utah Residents," found (in Table 36) that the majority of
21 Utah residents prefer that public lands managers maintain the same amount of wilderness or
22 decrease the amount. Only residents of the Summit-Morgan-Wasatch County area supported
23 increases in wilderness acreage. In the Daggett-Duchesne-Uintah County area, 70.5 percent of
24 the residents surveyed supported major reductions in wilderness (11.5%), moderate reductions in
25 wilderness (18.5%) or for the acreage to stay about the same (40.5%). Only 19.4% of residents
26 in the Uintah Basin region supported moderate (16.2%) or major (3.2%) increases in wilderness.
27

28 **Wilderness Study Areas (WSAs)**

29

30 The federal agencies that manage wilderness areas also inventory other lands under their
31 jurisdiction to assess the presence of wilderness characteristics. The agencies may manage areas,
32 such as BLM lands with wilderness characteristics and natural areas that have not been
33 designated as wilderness by U.S. Congress in various fashions that preserve their wilderness
34 values while awaiting congressional action.
35

36 Section 201 of FLPMA requires the BLM to maintain an inventory of all public lands and their
37 resources and other values, including wilderness characteristics. It also provides that the
38 preparation and maintenance of the inventory shall not, in and of itself, change or prevent change
39 of the management or use of public lands. BLM Instruction Memorandum 2011-154, 2013-106,
40 and Manuals 6310 and 6320 set out the BLM's approach inventorying and managing wilderness
41 characteristics on the public lands (BLM 2011, 2013, 2012b, 2012c).
42

43 Each inventory is a snapshot of the existing character of the landscape at a particular time;
44 therefore, BLM will continue to update the inventories as inventoried conditions on the ground

1 change over time in response to both human activities and natural environmental changes.

2
3 For an area to qualify as lands with wilderness characteristics, the area must possess sufficient
4 size, naturalness, and outstanding opportunities for either solitude or primitive and unconfined
5 recreation. In addition, it may also possess supplemental values.

- 6
7 a. Size: The area must be over 5,000 acres of roadless, contiguous BLM-managed lands.
8 Areas smaller than 5,000 acres may qualify if it is practical to preserve and use them
9 without damaging their current condition. In addition, roadless areas less than 5,000 acres
10 that are contiguous with lands that have been formally determined to have wilderness or
11 potential wilderness values, or any federal lands already managed for the protection of
12 wilderness characteristics (e.g., wilderness areas or WSAs), may also qualify.
13
14 b. Naturalness: Must appear to have been affected primarily by the forces of nature, and any
15 work of human beings in the area must be substantially unnoticeable. Minor human
16 impacts such as a water trough or fences may often be considered substantially
17 unnoticeable.
18
19 c. Outstanding Opportunities for Solitude or Primitive, Unconfined Recreation: The area
20 must offer a visitor the chance to avoid evidence of other people or provide for
21 outstanding opportunities for primitive and an unconfined type of recreation activity like
22 hiking, fishing, etc. Solitude or outstanding primitive recreation opportunities do not have
23 to be available in all portions of the area. An area may possess outstanding opportunities
24 through either the diversity of possible recreation opportunities in the area or the
25 outstanding quality of one opportunity.
26
27 d. Supplemental Values: If size, naturalness, and outstanding opportunities criteria are met,
28 then ecological, geological, or other features of scientific, educational, scenic, or
29 historical values may be noted, but are not required to qualify as lands with wilderness
30 characteristics.

31
32 After an area is inventoried and found to possess wilderness characteristics, the BLM must then
33 make a decision as to whether the area will be managed for those characteristics or for other
34 priority multiple uses. This analysis and management decision is made through a public land use
35 planning process.

36 The BLM completed an initial inventory and identification of WSAs in Utah in 1980, identifying
37 3.2 million acres of WSAs statewide. On October 18, 1991, BLM submitted a report to the U.S.
38 Congress recommending which WSAs in Utah should be designated as Wilderness and which
39 should be released for other purposes. This recommendation included 1.9 million acres of
40 Wilderness from the 3.2 million acres of WSAs. Congress has received BLM's Wilderness
41 recommendation from the Secretary of the Interior and the President. However, the full 3.2
42 million acres continue to be managed so as not to impair wilderness character pending
43 congressional action.

1 In 1996, then-Secretary of Interior Babbitt initiated a “re-inventory” of public lands in Utah
2 under Section 201 of FLPMA and identified 2.6 million acres of federal land as wilderness
3 inventory areas (WIAs). This re-inventory process was not subject to public comment or
4 environmental analysis under the National Environmental Policy Act (NEPA) and was
5 challenged by the State of Utah and the Utah Association of Counties. The federal district court
6 initially enjoined the re-inventory; however, this injunction was overturned by the Tenth Circuit,
7 allowing the re-inventory to proceed. The re-inventory was completed in 1999. This controversial
8 wilderness re-inventory was a key scoping issue in BLM’s land use plan revisions for the Vernal
9 resource management plan, initiated in 2001. WIAs proposed for designation as “new” WSAs
10 through the planning process were to be protected pending congressional review for possible
11 wilderness designation pursuant to BLM’s *H-8550-1 - Interim Management Policy for Lands
12 Under Wilderness Review* (BLM 2007). In March 2003, the State of Utah revived its lawsuit
13 challenging the wilderness inventory. The Department of the Interior and the State of Utah settled
14 the case in April 2003, which nullified the re-inventory but retained 3.2 million acres as WSAs
15 under BLM’s 1991 wilderness recommendations. BLM also rescinded, as inconsistent with the
16 settlement, the wilderness handbook, adopted in January, 2001, entitled *Wilderness Inventory
17 and Study Procedures H-6310-1* (BLM 2001).

18 BLM’s 1980 WSA inventory and the 2008 Vernal BLM RMP identified no WSAs in Duchesne
19 County.
20

21 Section 603(c) of FLPMA provides direction to BLM on the management of wilderness study
22 areas (WSAs) and states that with some exceptions “During the period of review of such areas
23 and until the U.S. Congress has determined otherwise, the Secretary shall continue to manage
24 such lands according to his authority under this act and other applicable law in a manner so as
25 not to impair the suitability of such areas for preservation as wilderness” (43 USC 35). BLM
26 manuals refer to this language as the “non-impairment” mandate. BLM developed a non-
27 impairment standard to meet this mandate. In general, Section 603(c) of FLPMA requires BLM
28 to maintain the wilderness characteristics of each WSA until U.S. Congress decides whether it
29 should either be designated as a Wilderness or should be released for other purposes.
30

31 BLM's management of WSAs is guided by BLM Manual 6330 – Management of Wilderness Study
32 Areas, which was published on June 13, 2012 (BLM 2012a). This manual describes BLM’s non-
33 impairment standard to meet the mandates for managing WSAs described in FLPMA. Valid
34 existing rights are recognized, and grandfathered uses such as grazing and mineral uses are
35 allowed but restricted to the same manner and degree as on the date FLPMA was approved.
36 Although many activities are allowed within WSAs, some have specific restrictions.
37

38 The only legal designations of WSAs are those designated under the Wilderness Act of 1964 and
39 under Section 603 of FLPMA, or WSAs subsequently designated by U.S. Congress. On BLM-
40 administered lands, the opportunity to create additional wilderness ended in 1991 except as
41 authorized by U.S. Congress.
42
43

1 Some or all of the area WSA designations pending before U.S. Congress are legally and/or
2 technically flawed. The counties will pursue that position when the WSAs go before U.S.
3 Congress for approval.

4
5 Similar to wilderness areas, use of WSAs is highly restricted and does not provide the desired
6 wilderness experience for most citizens and groups.

7
8 Similar to Wilderness designation, BLM's management of WSAs is inconsistent with the
9 multiple-use mandate. Managing public lands for "wilderness characteristics" circumvents the
10 statutory wilderness process and is inconsistent with the multiple-use and sustained-yield
11 management standard that applies to all BLM and USFS lands that are not wilderness areas or
12 WSAs and adversely affects the counties' economy in terms of the grazing, tourism, oil and gas
13 extraction, mining, timber industries, and water resource development.

14
15 The BLM lacks congressional authority to manage lands, other than WSAs, as if they are or may
16 become wilderness, as follows:

- 17
18 a. BLM lacks authority to designate geographic areas as lands with wilderness
19 characteristics or designate management prescriptions for such areas other than to use
20 specific geographic-based tools and prescriptions expressly identified in FLPMA.
21
22 b. BLM lacks authority to manage the lands in any manner other than to prevent
23 unnecessary or undue degradation, unless BLM uses geographic tools expressly identified
24 in FLPMA and does so pursuant to a duly adopted provision of a resource management
25 plan adopted under FLPMA, 43 USC 1712.

26
27 BLM's *Conducting Wilderness Characteristics Inventory on BLM Lands* Manual (MS-6310) is
28 legally and technically flawed (BLM 2012b).

29 30 **USFS Inventoried Roadless Areas**

31
32 The 2001 Roadless Area Conservation Rule generally prohibits road building and commercial
33 logging in 58.5 million acres of national forest roadless areas across the United States. The 2001
34 Roadless Area Conservation Rule, unlike the establishment of wilderness areas, permits a wide
35 range of activities in roadless areas. Permitted activities include timber harvesting for limited
36 purposes, livestock grazing, off-highway vehicle use, and oil and gas development that do not
37 require new roads in roadless areas. Timber harvest in inventoried roadless areas is limited to
38 clearly defined, limited purposes; when incidental to the implementation of an activity not
39 otherwise prohibited by this rule; for personal and administrative uses; or where roadless
40 characteristics have been substantially altered in a portion of an inventoried roadless area due to
41 the construction of a classified road and subsequent timber harvest.

42
43 The 2001 Roadless Area Conservation Rule established extensive roadless areas on USFS-
44 administered lands in Duchesne County (see Table WLD1 and Map #46).

Table WLD1. Acres of Inventoried Roadless Areas in Duchesne County

National Forest	Duchesne County
Ashley National Forest	355,737
Wasatch-Cache National Forest	7,940
Total	363,677

The Ashley National Forest is updating its forest plan and additional wilderness and roadless areas will be considered. Duchesne County opposes any new designations.

Duchesne County calls for the re-inventory, boundary adjustment, consolidation or deletion of the Inventoried Roadless Areas within or partially within the County and their suggested future management classifications as set forth in Appendix D of this plan.

Duchesne County supports efforts by the State of Utah to petition the Department of Agriculture and Congress to establish new management provisions for Inventoried Roadless Areas across the state, incorporating the recommendations set forth in Appendix D.

Objectives

1. Avoid designation of additional areas within the county as federally designated wilderness, wilderness study areas or roadless areas.
2. Release WSAs not recommended for designation as wilderness by U.S. Congress for uses other than preservation of wilderness character and multiple-use sustained yield management.
3. Avoid management of any additional federal lands within the county as non-WSA lands with wilderness characteristics, natural areas, inventoried roadless areas, or similarly intentioned management regimes.
4. Remove management provisions from federal lands that promote their management for wilderness characteristics and roadless qualities over other uses consistent with the multiple-use and sustained-yield management standard.
5. Actively manage forests to promote forest and watershed health.
6. Manage lands not designated as wilderness or WSAs by U.S. Congress based on the

1 multiple-use and sustained-yield management standard prescribed in FLPMA and
2 National Forest Management Act of 1976.
3

4 **Policies:** It is the position of Duchesne County that:
5

- 6 1. The county's support for any recommendations made under a statutory requirement to
7 examine the wilderness option during the revision of land and resource management
8 plans or other methods will be withheld until the following are clearly demonstrated that:
 - 9 a. The adopted transportation plans of the state and county or counties within the
10 federal land management agency's planning area (National Forest or BLM land)
11 are fully and completely incorporated into the baseline inventory or information
12 from which plan provisions are derived.
13
 - 14 b. Valid state or local roads and rights-of-way are recognized and not impaired in
15 any way by the recommendations.
16
 - 17 c. The possibility of future development of mineral resources by underground
18 mining or oil and gas extraction by directional or horizontal drilling or other non-
19 surface disturbing methods are not affected by the recommendations.
20
 - 21 d. The need for additional administrative or public roads necessary for the full utility
22 of the various multiple uses, including recreation, mineral exploration and
23 development, forest health activities, operation and maintenance of water
24 facilities, and grazing operations on adjacent land, or on subject lands for grand-
25 fathered uses, are not unduly affected by the recommendations.
26
 - 27 e. Analysis and full disclosure are made concerning the balance of multiple-use
28 management in the proposed areas.
29
 - 30 f. The analysis compares the full benefit of multiple-use management to the
31 recreational, forest health, and economic needs of the state and the county to the
32 benefits of the requirements of wilderness management.
33
 - 34 g. The conclusion of all studies related to the requirement to examine the wilderness
35 option are submitted to the county for review and action, and the results in support
36 of or in opposition to, are included in any planning documents or other proposals
37 that are forwarded to the United States U.S. Congress.
38
 - 39 h. Areas must merit the suitability requirements contained in the Wilderness Act of
40 1964 unless requirements are changed by U.S. Congress.
41
- 42 2. Public lands that were determined to lack wilderness character during previous wilderness
43 review processes cannot be managed as if they were wilderness based on new or revised
44 views of wilderness character. These areas were studied and released and must remain

1 subject to the full range of multiple uses.
2

- 3 3. Any proposed wilderness designations in the county forwarded to U.S. Congress for
4 consideration must be based on a collaborative process in which support for the
5 wilderness designation is unanimous among federal, state, and county officials.
6
- 7 4. All WSAs awaiting congressional action, which were not recommended for wilderness
8 designation by the Secretary of Interior or are released by U.S. Congress, shall be released
9 and managed for multiple use and sustained yield. The management plans must be
10 amended in a timely manner to reflect change in status. The county defines a “timely
11 manner” as not to exceed 2 years.
12
- 13 5. All wilderness management plans must provide for access for the elderly and physically
14 disabled individuals to the fullest extent possible provided by law.
15
- 16 6. Wilderness management must provide for continued and reasonable access to and
17 development of valid, existing property rights within the area and provide for full use and
18 enjoyment of these rights.
19
- 20 7. BLM inventories for the presence of wilderness characteristics must be closely
21 coordinated with inventories for those characteristics conducted by state and local
22 governments, and they should reflect a consensus among those governmental agencies
23 about the existence of wilderness characteristics, as follows:
24
- 25 a. Any inventory of wilderness characteristics should reflect all of the criteria
26 identified in the Wilderness Act of 1964, including a size of 5,000 acres or more,
27 containing no visible roads and the presence of naturalness, the opportunity for
28 primitive and unconfined recreation, and the opportunity for solitude.
29
- 30 b. Geographic areas found to contain the presence of naturalness must appear
31 pristine to the average viewer and must not contain any of the implements,
32 artifacts, or effects of human presence (including visible roads, whether
33 maintained or not) and must not contain human-made features such as vehicle
34 bridges, fire breaks, fisheries, enhancement facilities, fire rings, historic mining,
35 and other properties, including tailings piles, commercial radio and
36 communication repeater sites, fencing, spring developments, linear disturbances,
37 stock ponds, visible drill pads, pipeline and transmission line rights-of-way, and
38 other similar features.
39
- 40 c. Factors, such as the following, though not necessarily conclusive, should weigh
41 against a determination that a land area has the presence of naturalness, the area is
42 or once was the subject of mining and drilling activities, mineral and hard rock
43 mining leases exist in the area, and the area is in a grazing district with active
44 grazing allotments and visible range improvements.

- 1 d. Geographic areas found to contain the presence of solitude should convey the
2 sense of solitude within the entire geographic area identified; otherwise boundary
3 adjustments should be performed.
4
- 5 e. Geographic areas found to contain the presence of an opportunity for primitive
6 and unconfined recreation must find these features within the entire area and
7 provide analysis about the effect of the number of visitors to the geographic area
8 upon the presence of primitive or unconfined recreation; otherwise boundary
9 adjustments should be performed.
10
- 11 f. In addition to the actions required by the review for roads pursuant to the
12 definitions of roads contained in BLM Manual H 6301, or any similar authority,
13 BLM should, pursuant to its authority to inventory, identify and list all roads or
14 routes identified as part of a local or state governmental transportation system, and
15 consider those routes or roads as qualifying as roads within the definition of the
16 Wilderness Act of 1964.
17
- 18 g. BLM should adjust the boundaries for a geographic area to exclude areas that do
19 not meet the criteria of lacking roads, offering solitude, and offering primitive and
20 unconfined recreation, and the boundaries should be redrawn to reflect an area
21 that clearly meets the criteria above, and which does not employ minor
22 adjustments to simply exclude small areas with human intrusions; specifically, the
23 boundaries of a proposed geographic area containing lands with wilderness
24 characteristics should not be drawn around roads, rights-of-way, and intrusions;
25 and lands located between individual human impacts that do not meet the
26 requirements for lands with wilderness characteristics should be excluded.
27
- 28 8. In accordance with Utah Code 63J-8-104 (b) and (c), it is the policy of the county that
29 federal land management agencies shall:
30
- 31 a. Not designate, establish, manage, or treat any of the subject lands as an area with
32 management prescriptions that parallel, duplicate, or resemble the management
33 prescriptions established for wilderness areas or WSAs, including the non-
34 impairment standard applicable to WSAs or anything that parallels, duplicates, or
35 resembles that non-impairment standard.
36
- 37 b. Recognize, follow, and apply the wilderness settlement agreement between the
38 State of Utah and the U.S. Department of the Interior.
39
- 40 c. Revoke and revise BLM Manuals H 6310, 6320, and 6330.
41
- 42 d. Recognize that BLM lacks congressional authority to manage subject lands, other
43 than WSAs, as if they are or may become wilderness.
44

- 1 e. Recognize that even if BLM were to properly inventory an area for the presence of
2 wilderness characteristics, BLM still lacks authority to make or alter project level
3 decisions to automatically avoid impairment of any wilderness characteristics
4 without express congressional authority to do so.
5
- 6 9. The only legal designations of WSAs are those designated under the Wilderness Act of
7 1964 and under Section 603 of FLPMA, or WSAs subsequently designated by U.S.
8 Congress. On BLM-administered lands, the opportunity to create additional wilderness
9 ended in 1991 except as authorized by U.S. Congress.
10
- 11 10. Some or all of the area WSA designations pending before U.S. Congress are legally
12 and/or technically flawed. The counties will pursue that position when the WSAs go
13 before U.S. Congress for approval.
14
- 15 11. Similar to wilderness areas, use of WSAs is highly restricted and does not provide the
16 desired wilderness experience for most citizens and groups.
17
- 18 12. Similar to Wilderness designation, BLM's management of WSAs is inconsistent with the
19 multiple-use mandate. Managing public lands for "wilderness characteristics"
20 circumvents the statutory wilderness process and is inconsistent with the multiple-use and
21 sustained-yield management standard that applies to all BLM and USFS lands that are not
22 wilderness areas or WSAs and adversely affects the counties' economy in terms of the
23 grazing, tourism, oil and gas extraction, mining, timber industries, and water resource
24 development.
25
- 26 13. Management of WSAs must provide for continued and reasonable access to and
27 development of property rights within the area and provide for full use and enjoyment of
28 these rights.
29
- 30 14. Designation of additional roadless areas shall be opposed.
31

32 **Energy Considerations**

33
34 **Findings:** Duchesne County finds that wilderness designations could be used inappropriately to
35 make energy rich lands unavailable for development.
36

37 **Policy:** It is the policy of Duchesne County that no lands within the Uintah Basin Energy zone
38 shall be designated as wilderness.
39

40 **Water Considerations**

41
42 **Findings:** Duchesne County finds that there are positive and negative impacts on water from
43 wilderness designations. Designating land for wilderness will make it impossible to use
44 motorized recreation or develop natural resources, which would tend to improve water quality.

1 However, designating land for wilderness also means that active land management does not take
2 place and natural systems, such as wildland fire, are not suppressed. Failure to suppress wildfire
3 results in barren areas subject to erosion during precipitation events. Such events can produce
4 mudflows, landslides and sedimentation of streams to a degree that can easily rival or exceed that
5 produced by multiple uses in undesignated areas. Failure to actively manage wilderness areas
6 also reduces the potential water yield from that drainage basin, which means less water for
7 agricultural, residential and business use.

1 **Section 24. Law Enforcement**

2
3 **Findings:** The Duchesne County Sheriff's Office provides law enforcement services to all areas
4 of Duchesne County and contract cities, as well as co-operative support services to local, state
5 and federal law enforcement agencies and organizations.

6
7 The mission of the Sheriff's Office is to protect the lives, property, and rights of all people, to
8 maintain order, and to enforce the law. This mission is achieved through the efforts of
9 experienced and well trained officers and staff of the Duchesne County Sheriff's Office who
10 strive to improve and maintain the quality of life enjoyed in the County and make it a safe place
11 to live, work, and visit.

12
13 The stated vision of the Sheriff's Office is:

- 14
15 a. To set goals and objectives to meet the high standards of law enforcement services in
16 accordance with our mission.
17
18 b. To exemplify our core values in accordance with our Code of Ethics.
19
20 c. To operate in a fiscally responsible manner.
21
22 d. To uphold the Constitution of the United States of America by enforcing the rights
23 guaranteed to the citizens of the County through lawful deterrents to crime.

24
25 Duchesne County's powers as a political subdivision of the State of Utah derive from the United
26 States and Utah Constitutions, the Utah Code, the common law, and Duchesne County
27 ordinances and resolutions.

28
29 The State of Utah, of which Duchesne County is a part, has general powers of jurisdiction unless
30 expressly assigned to the government of the United States in the United States Constitution.

31
32 The government of the United States, on the other hand, has only those powers expressly
33 delegated to it in the United States Constitution, as expressly exercised by the Congress of the
34 United States.

35
36 Planning and zoning authority for all lands within its borders is a prerogative of Duchesne
37 County as expressed through its duly appointed planning and zoning commission and elected
38 board of county commissioners.

39
40 Law enforcement authority for all lands within its borders is a prerogative of Duchesne County as
41 expressed through its duly elected Sheriff and duly hired and appointed and contracted deputy
42 law enforcement agents.

43
44

1 Law enforcement officials and other officials of federal land management agencies such as the
2 BLM and the US Forest Service, have no authority, right or permission to enforce state and local
3 criminal and civil laws except as authorized by and consistent with the Federal Assimilative
4 Crimes Act.

5
6 The Federal Assimilative Crimes Act permits federal officers to enforce state and local laws by
7 reference (assimilation) only on federal lands that are under either exclusive U.S. jurisdiction or
8 concurrent U.S/State jurisdiction.

9
10 On federal lands under federal proprietary jurisdiction, which is virtually all BLM and Forest
11 Service lands in Utah, federal agents may not rely on the Federal Assimilative Crimes Act as a
12 basis to enforce state or local laws.

13
14 In Duchesne County, all BLM and Forest Service lands are proprietary jurisdiction lands, not
15 concurrent or exclusive jurisdiction lands. Therefore, federal agents are NOT permitted by the
16 Federal Assimilative Crimes Act to enforce state and local laws on those lands.

17
18 **Policies:**

- 19
20 1. It is the policy of Duchesne County, in the interest of the health, safety and welfare of its
21 citizens, to not recognize any attempt by a federal official to try to enforce state or local
22 criminal or civil laws on any lands in Duchesne County, including any BLM and Forest
23 Service lands in Duchesne County, and to declare that all criminal and civil state and
24 local laws shall be enforced in Duchesne County only by the Sheriff and Board of County
25 Commissioners. This applies to all land within the boundaries of Duchesne County,
26 including federal lands whether mandated for disposal or not, and whether such duty for
27 disposal has been fulfilled or not.
28
29 2. Duchesne County serves notice of full reliance upon and integrity with House Bills 67,
30 147, 149 and 225, 2014 Utah General Legislative Session as codified in Utah Code
31 Sections 11-51-102 through 104, 63-13-106, 63-13-106.1 through 106.10, and 17-22-31.
32
33 3. It is the policy of Duchesne County that the right of the Duchesne County Sheriff to
34 exclusively and primarily exercise all law enforcement powers to police and enforce all
35 state and local criminal and civil laws upon any lands within Duchesne County, federally
36 owned or otherwise (with the exception of tribal lands and lands within cities or towns
37 with their own law enforcement agency), shall be held inviolate. Any such attempted
38 exercise of law enforcement powers by an official of a federal land management agency is
39 not recognized by Duchesne County, and shall be deemed an imminent threat to the
40 health, safety and welfare of the citizens of Duchesne County, unless properly exercised
41 under an exception codified under Utah Code 53-13-101.1 through 106.10.
42
43 4. It is the policy of Duchesne County that any official of any federal land management
44 agency who is situated within Duchesne County who intends to exercise any law

1 enforcement powers of any kind against any person or entity which may result in the
2 deprivation of property or personal liberty, regardless of whether the action may take
3 place on federal lands or otherwise, and any such official not already within Duchesne
4 County who intends to enter into Duchesne County for such purpose, shall first declare
5 his presence and intended action to the Sheriff of Duchesne County and seek permission
6 from the Sheriff to pursue such intended action.
7

8 5. It is the policy of Duchesne County shall continue to support any and all actions to legally
9 relieve the Federal Government of ownership, control and jurisdiction over public lands
10 in Duchesne County, and demand the Federal Government dispose and convey all right,
11 title and interest thereto to the State of Utah. This transfer of land to the State will
12 resolve the law enforcement jurisdiction issues stated above.
13

14 6. Duchesne County encourages law enforcement agencies in the region to enter into
15 Memorandums of Agreement that clearly establish lines of authority, first responder
16 protocols and mutual aid agreements.
17
18

Section 25. Economic Considerations

Findings: Duchesne County enjoys a strong economic base and employment profile. However, recent reports show that a relatively small number of industries, especially the energy industry, generate the majority of economic returns. To illustrate, in 2016, during a slump in the energy industry, the unemployment rate in Duchesne County increased to over 11 percent. This rate is about 8 percent higher than during energy boom periods, when unemployment can drop below 3 percent.

The Duchesne County Economic Profile, published by the Economic Development Corporation of Utah, in 2015, shows that the top non-farm job producers in Duchesne County in 2014 were Mining (2,493 jobs), Trade-Transportation-Utilities (2,225 jobs) and Government (2,065 jobs). These three sectors produced 71.4 percent of the non-farm jobs in the county.

Duchesne County is very dependent on the energy industry. The Utah Department of Workforce Services (UDWS), in 2014, ranked Duchesne County as having the least diverse economy in the state, followed by Uintah County and Emery County (see “Utah Insights,” Summer 2014 edition). UDWS publishes “Economic Snapshots” of Utah counties; and, in the January 26, 2017 update, found that Duchesne County lost 542 non-farm jobs between September 2015 and September 2016 (7% of the county’s total non-farm jobs).

According to the *Profile of Mining, Including Oil & Gas*, found in the Headwaters Economics Economic Profile System (EPS), Duchesne County mining jobs generated annual average wages in 2014 of \$77,832 compared to \$41,936 for non-mining jobs and \$33,710 for government jobs. These figures do not include the value of benefits and do not include earnings from those self-employed.

According to the *Profile of Government Employment*, found in the Headwaters Economics Economic Profile System (EPS), of the government jobs in Duchesne County, as of 2014, 90.9% were local government employees, 5.7% were state employees and the remainder is federal employees. This study counted 2,130 government jobs in the county, slightly higher than the Economic Development Corporation of Utah estimate. This was a 187% increase over the 742 government jobs in Duchesne County in 1970. The 2,130 government jobs in Duchesne County are about 15.2% of the total employment and produce about 14.8% of the total labor earnings.

According to the *Profile of Service Sectors*, found in the Headwaters Economics Economic Profile System (EPS), Duchesne County has 61.2% of its employment in Service Sectors as compared to 85.1% nationwide. The top four service sectors in Duchesne County are Health Care and Social Assistance, Transportation and Warehousing, Retail Trade and Accommodation and Food Services, with 12.8%, 12.7%, 10.4% and 6.8% of the service sector employment respectively. From 1998 to 2014, service sector employment in Duchesne County grew by 117 percent, but lagged behind non-service sector employment, which grew by 336 percent. Average annual wages in service sector jobs in 2015 was \$38,935. This compares to \$67,008 in non-service sector jobs and \$74,138 in Natural Resource and Mining jobs. The relatively lower

1 wages in service sector jobs highlights the need to maintain and expand jobs in the traditional
2 resource-based economy of the County and to find ways to attract other non-service jobs to the
3 County.

4
5 According to the *Profile of Federal Land Payments*, found in the Headwaters Economics
6 Economic Profile System (EPS), the federal lands in Duchesne County generated over \$2.49
7 million in federal payments to local governments in FY 2015. Forest Service land generated
8 80.5% of the payments and BLM lands 16.7%. The bulk of these payments were associated with
9 the Payment in Lieu of Taxes (PILT) program, which constituted over \$1.92 million in that fiscal
10 year. This was a substantial increase from the \$882,980 PILT payment received in FY 2007.
11 County government received 88.4% of the federal land payments in 2015, with school districts
12 receiving 9.5% of the total. A small percentage of these federal funds had restrictions on their
13 use (12.5%). The study also found that, in FY 2012, that federal land payments represented
14 10.4% of the total general government revenue in Duchesne County. Federal land payments
15 represent a significant revenue source to Duchesne County; but the amount received in PILT
16 payments is substantially less than what the county would receive if the lands were taxable and
17 PILT payments are made at the whim of Congress and must uncertainty exists from year to year.
18 This uncertainty makes it difficult for counties to make revenue forecasts.

19
20 The county also receives PILT revenue from the state, based on formulas set forth in Section 59-
21 21 of the Utah Code. Currently, the amount is 52 cents per acre of land owned by SITLA, the
22 Division of Parks and Recreation and Division of Wildlife Resources. There are about 151,280
23 acres of such lands in the county, which results in an annual payment of just under \$79,000.00.

24
25 According to the *Profile of Non-Labor Income*, found in the Headwaters Economics Economic
26 Profile System (EPS), 26.7% of personal income in the county comes from non-labor sources.
27 This is 9.1% below the national figure of 35.8% (showing less dependence on non-labor income
28 sources in the County). About half of non-labor income is generated from dividends, interest and
29 rent earnings and about half from transfer payments; including Social Security, Medicare,
30 Welfare, Unemployment, Worker's Compensation and Veteran's benefits and education and
31 training assistance. Non-labor sources generated over \$215.5 million in income in Duchesne
32 County in 2014.

33
34 A study released in July 2013, entitled "*The Equality of Opportunity Project*," found that the
35 Duchesne County area, along with other areas of the West affected by the energy boom, had high
36 levels of upward mobility. The study found that areas with economic growth and strong family
37 structure fared better in upward mobility. A strong family structure was typified by two-parent
38 families with religious values, which is a common family structure in the County.

39
40 During 2012, according to the Utah State Tax Commission, the average adjusted gross household
41 income in Duchesne County was the third highest in Utah, at \$60,640 (behind only Summit and
42 Morgan counties). By 2014, according to the Profile of Demographics, found in the Headwaters
43 Economics Economic Profile System (EPS), the median household income was \$60,700,
44 compared to \$53,482 nationwide. This high income rate can be attributed to energy industry

1 jobs. The total per capita personal income in Duchesne County was \$39,574 in 2014, according
2 to the Bureau of Economic Analysis. This income level ranked Duchesne County 6th out of 29
3 counties in Utah. In FY 2016, the Utah State Tax Commission reported that Duchesne County
4 taxpayers had an Average Adjusted Gross Income of \$64,520, which was the 3rd highest in the
5 state (behind only Summit and Morgan Counties) and that the average federal tax paid was
6 \$9,863 (4th highest in the state).

7
8 In spite of the higher income levels, taxable purchases in Duchesne County have decreased
9 substantially from the “boom” years of 2012-2014 to the “bust” year of 2015. According to the
10 Utah State Tax Commission FY 2016 annual report, taxable purchases in Duchesne County were
11 over \$830 million in 2012, over \$876 million in 2013 and \$895 million in 2014. However, with
12 the job losses that occurred in 2015, taxable purchases dipped to just over \$443 million (a drop
13 of about 50%, which was the largest percentage drop in the state). The amount of sales tax
14 revenue received by the county and cities dropped by 30.5% from FY 2015 to FY 2016.

15
16 During periods of an active energy industry in Duchesne County, the population grows.
17 According to the *Profile of Demographics*, Duchesne County, Utah,” Headwaters Economics
18 Economic Profile System (EPS), the population of the County increased from 14,371 (2000
19 Census) to 19,378 by 2014 (which is lower than the July 2014 population of 20,380 estimated by
20 the state). This 34.8% population change was faster than nationwide growth of 11.6%. The
21 State of Utah reports that Duchesne County added 1,977 residents between 2010 and 2014, of
22 which 423 came from net migration into the county and 1,554 from natural increase (births
23 minus deaths). That growth trend was short-lived due to the downturn in the energy industry in
24 2015 and 2016.

25
26 Of the estimated 19,378 residents in 2014, 86.1% were White, 4.8% were Native American and
27 7.2% were Hispanic. Duchesne County has a younger population than the nation, with a median
28 age of 30.2 years in 2014 compared to 37.4 years nationwide. The percentage of males in
29 Duchesne County is 50.6% compared to 49.2% nationwide.

30
31 The largest cities in Duchesne County, according to the *2016 Economic Report to the Governor*,
32 had the following estimated populations as of 2014: Roosevelt (6,777), Duchesne (1,801),
33 Myton (619), Altamont (251) and Tabiona (186).

34
35 The *Profile of Demographics* also reveals that 10.1% of the population and 8.6% of the families
36 in Duchesne County live below the poverty level established by the federal government. These
37 percentages are below the national rate of 15.6% of people and 11.5% of families living in
38 poverty.

39
40 **Objective:** In an effort to decrease "single industry dependence", the County will continue to
41 support the economic diversification strategies of the Duchesne County Chamber of Commerce.
42 These efforts include, but are not limited to, economic growth and development in the following
43 areas: business retention and expansion, business recruitment, value-added agriculture, and
44 tourism and recreation.

1 County residents enjoy a quality of life unique in today's society. This lifestyle and rural
2 environment also attracts businesses to the area. Residents and local leaders desire economic
3 development, but feel that this growth should complement, rather than detract from the County's
4 character. Residents feel that responsible natural resource use and development should be
5 included as part of this priority.
6

7 **Objective:** Continue participation in the Seven County Infrastructure Coalition. The Coalition
8 is currently comprised of seven counties in eastern Utah: Carbon, Daggett, Duchesne, Emery,
9 San Juan, Sevier, and Uintah. The coalition was formed in 2014 in an effort to promote
10 cooperative regional planning, increase economic opportunities and to implement sustainable
11 infrastructure projects in these rural counties.
12

13 The Coalition Board meets monthly to discuss major projects that would benefit the region. The
14 Board has established the following strategies as they seek to carry out their mission to improve
15 the quality of life in the region:
16

- 17 • Continue Coordination and Public Outreach
- 18
- 19 • Coordinate planning, needs, and infrastructure corridors with adjacent counties, both
20 inside and outside Utah
- 21
- 22 • See meaningful, productive relationships with public entities and individuals
- 23
- 24 • Develop actionable directives at monthly board meetings
- 25
- 26 • Maintain current meaningful content on the Coalition website
- 27
- 28 • Update the List of Priority Projects
- 29
- 30 • Evaluate additional potential projects as they arise or as conditions change
- 31
- 32 • Create project momentum and interest for priority projects and corridors
- 33
- 34 • Identify, prioritize, and conduct project-specific plans and studies
- 35
- 36 • Develop relationships with potential project-funding partners
- 37
- 38 • Maintain GIS database
- 39
- 40 • Seek funding solutions from Federal, State, Local and Private sources
- 41
- 42 • Execute projects
- 43

1 Among the Coalition projects with the most direct benefit to Duchesne County are a proposed oil
2 pipeline between Duchesne County and the rail facilities in Carbon County and the Pariette Road
3 extension. Many other road, pipeline and power line projects proposed by the Coalition would
4 have significant indirect benefits to the county.

5
6 **Objective:** The County will also continue to work with the Tribe and federal and state agencies
7 to identify mutual economic objectives. Partnerships with these entities will be formed when
8 applicable and feasible.

9
10 With the assistance of the Duchesne County Chamber of Commerce and the Duchesne County
11 Economic Development Board, the County will continue to implement and pursue the following
12 policies and objectives:

13 **Business Recruitment, Expansion, and Retention**

14
15
16 **Objective:** The County feels that the majority of economic development efforts should focus on
17 assisting existing businesses.

18 **Policies:**

- 19
20
- 21 1. The County, with the assistance of government agencies, institutions of higher learning,
22 and private interests, will continue to assess current conditions and identify opportunities
23 to maintain and expand existing in-county businesses and markets. The County currently
24 contributes to, and participates in, a number of business assistance programs. The County
25 will also continue these efforts.
 - 26
27 2. Duchesne County recognizes that the State is pursuing business recruitment for rural
28 Utah. The County will continue to participate in these activities to identify appropriate
29 business opportunities compatible with the area and its lifestyle.
 - 30
31 3. Mineral resource use and development continues to serve the County economically.
32 Additional opportunities will be pursued as they become available and/or as new
33 technology allows.

34 **Small Business Assistance**

35
36
37 **Objective:** The County supports the Small Business Development Center and other ongoing
38 small business assistance efforts.

39
40 **Findings:** Several small business assistance strategies have been implemented. Many of the
41 County's "smaller" businesses have survived and expanded due to this assistance.

42
43 The County also recognizes the Small Business Center at USU Uintah Basin as a valuable
44 resource and will continue to support its efforts.

1 County entrepreneurs also have several other resources available for assistance including the
2 Chamber, the Uintah Basin Applied Technology Center, Dinosaurland Resource Conservation
3 and Development, Utah State University, and the State of Utah Department of Community and
4 Economic Development.

5
6 **Natural Resource Use and Development**

7
8 **Objective:** Responsible natural resource use and development.

9
10 **Findings:** Duchesne County enjoys an abundance of natural resources including hydrocarbons,
11 minerals, timber, water, wildlife and recreation. Historically, these resources have contributed
12 significantly to the County's economic growth and development. Today, the County continues to
13 depend on these resources for economic stability. The County will pursue further development
14 of these resources as they become available and/or as new technology allows.

15
16 **Policy:** Since much of the natural resource base of the County is located on federal lands, in
17 accordance with Section 63J-8-104 (2) of the Utah Code, it is the policy of Duchesne County that
18 all BLM and Forest Service decision documents should include an analysis of the social and
19 economic impact of the decision. Such analysis should:

- 20
21 a. Consider all facets of the decision in light of valuation techniques for the potential costs
22 and benefits of the decision;
23
24 b. Clarify whether the costs and benefits employ monetized or non-monetized techniques;
25
26 c. Compare the accuracy, completeness, and viability of monetized and non-monetized
27 valuation techniques used as part of the analysis, including all caveats on use of the
28 techniques; and
29
30 d. Compare the valuation techniques employed in the analysis to the federal standards for
31 valuation employed by the U.S. Department of Justice in court actions.

32
33 **Objective:** The County feels that resource use or development on private, public, or tribal lands
34 should be sensitive to Tribal interests and the County's rural lifestyle, quality of life, and scenic
35 environment.

36
37 Specific County interests to protect, maintain, and expand natural resource use and development
38 include:

- 39
40 a. Maintaining multiple-use management of public lands,
41
42 b. Preserving public access, and
43
44 c. Identifying existing and potential areas of development.

1 **County and Community Image**
2

3 **Objective:** Support community and county sponsored beautification and cleanup efforts.
4

5 **Policies:** Duchesne County feels that "well kept" and "orderly" communities not only attract new
6 businesses, but improve the business of existing establishments as well. With this philosophy in
7 mind, the County will provide the following:
8

- 9 a. Assistance, as feasible, to prepare grant applications and locate matching funds for
10 "community enhancement" projects,
11
12 b. Support for strategic renovation and revitalization of community-centered businesses,
13
14 c. Incentive programs to encourage individual property owners to take responsibility and
15 pride in their personal properties,
16
17 d. Expansion of existing community-based/sponsored cleanup and beautification activities
18 to County-wide/sponsored cleanup and beautification activities,
19
20 e. Support for communities to become involved in the Highway Enhancement Program, and
21
22 f. Increased enforcement of County "nuisance" ordinances.
23

24 **Tourism**
25

26 The Utah State Tax Commission collects tourism taxes, such as the transient room tax on motel
27 rooms and other accommodations. The Tax Commission's annual report for fiscal year 2016
28 revealed that about \$103,000 of transient room tax revenue was generated in Duchesne County in
29 FY 2014 and 2015; however, the amount of revenue dipped to just over \$65,000 in FY 2016.
30 The revenue was the third lowest in the state, exceeding that of only Morgan and Piute Counties.
31 This decrease can likely be attributed to fewer rooms being occupied by oilfield workers.
32

33 **Objective:** Diversify the economy by strengthening the tourism sector of the economy.
34

35 **Policy:** It is the policy of Duchesne County to promote economic development by supporting
36 efforts to increase tourism in the county.
37

38 **Broadband Infrastructure**
39

40 **Findings:** As high speed Internet connections become an increasingly critical asset for economic
41 development, education, healthcare, public safety, and general quality of life, it is essential that
42 future management plans address the development of broadband infrastructure throughout the
43 county. The need for reliable and redundant broadband is growing as rapidly as the tech industry,
44 and governments must work with broadband providers collaboratively to prepare for the growing

1 need. Broadband infrastructure needs to be deployed with the capacity to adapt for evolving
2 technologies.

3
4 The Utah Broadband Outreach Center works with providers to assess the levels of broadband
5 services available throughout the State. Currently in Duchesne County, 92.39% of addressed
6 properties have broadband service of 10 Mbps or higher and 41% of properties have access to
7 speeds of 25 Mbps. Broadband service in the county (see Map #47) has been continually
8 increasing in Duchesne County since the Broadband Outreach Center began tracking services.
9 For example, in 2012, only 85% of households had access above 10 Mbps and few areas had
10 services above 25 Mbps. These changes indicate significant provider investment during this time
11 period. By working together with local providers, we anticipate that speeds will continue to
12 increase in Duchesne County.

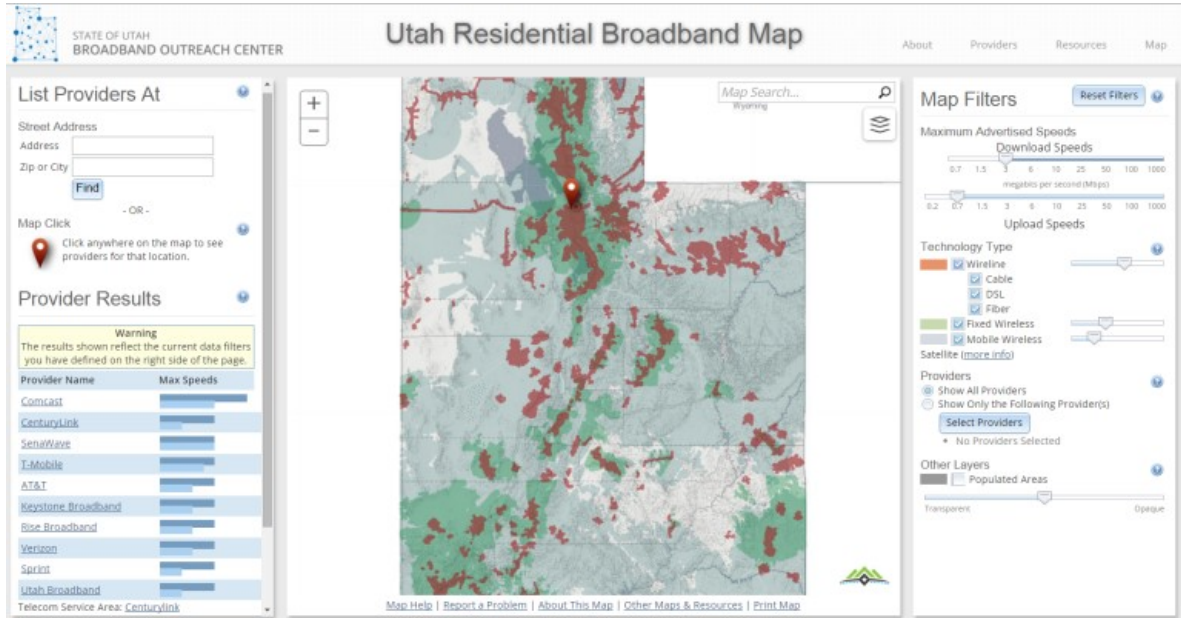
13 14 **County Recommendations**

15
16 Local communities play an important role in whether or not broadband networks get built.
17 Counties can encourage development by following a few best practices to help streamline the
18 process and create a business-friendly environment for broadband providers to help improve
19 access for citizens.

20 21 **Utilize Current Broadband Data in the Planning Process**

22
23 The Utah Broadband Outreach Center in the Governor’s Office of Economic Development is a
24 state program focused on mapping available broadband services and promoting the development
25 of additional infrastructure in Utah. The county can work with the Utah Broadband Outreach
26 Center as a resource for planning assistance. The Center can provide supporting informational
27 data and resources to implement favorable policies into practice and can assist with planning
28 activities. The Outreach Center maintains two interactive broadband maps that show the current
29 state of broadband availability:

- 30
31 • The Utah Residential Broadband Map (broadband.utah.gov/map) displays residential
32 broadband speeds throughout Utah. The Residential Broadband Map indicates where
33 coverage is offered by service providers, and can be filtered by:
 - 34 ○ Individual provider
 - 35 ○ Speed
 - 36 ○ Technology type
 - 37 ○ Populated areas

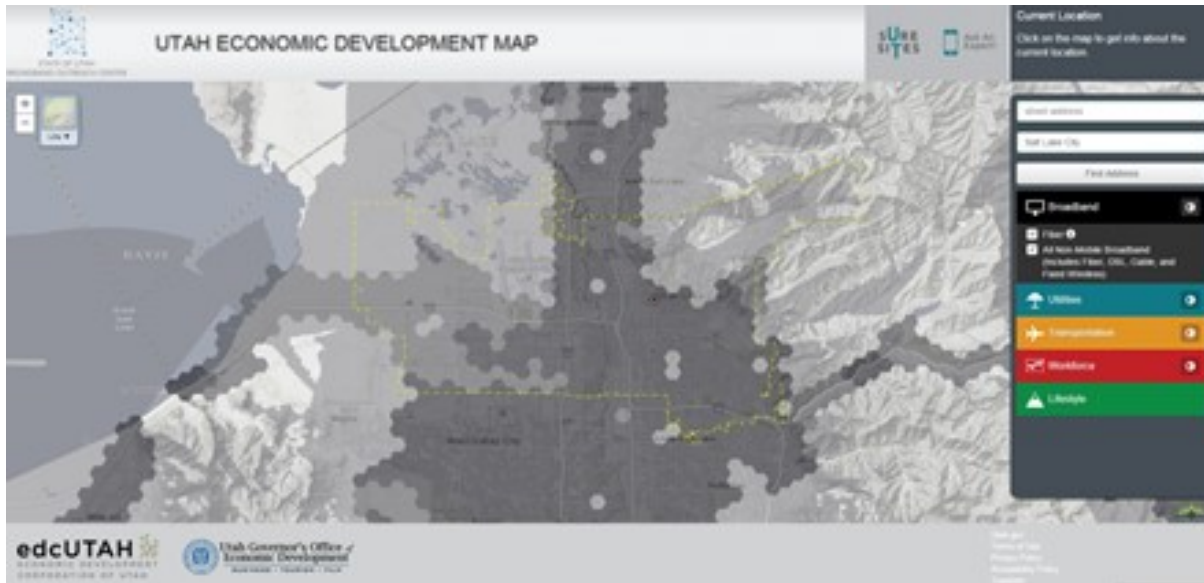


1
2

3 • The Broadband Outreach Center also maintains an Economic Development Map
4 (locate.utah.gov) that allows users to explore the state in detail. Businesses can use this
5 map to scout for locations using interactive data on:

- 6 ○ Broadband availability
- 7 ○ Utility information (natural gas, electricity, culinary water)
- 8 ○ Transportation (rail lines, airports, major roads)
- 9 ○ Workforce (higher education institutions)
- 10 ○ Recreation (state and national parks, ski areas, golf courses)
- 11 ○ Health Care Facilities

12



1
2
3 Both maps can be used as a resource in planning efforts, particularly for expanding coverage in
4 underserved areas. Data for these maps is provided by broadband providers and updated by the
5 Broadband Outreach Center every six months. Additionally, the Outreach Center can work with
6 county stakeholders to fulfill custom mapping requests.

7
8 **Policy: Implement County Best Practices that Encourage Broadband Investment**

9
10 Duchesne County will coordinate with other jurisdictions and broadband providers and
11 encourage use of the following best practices to facilitate timely and cost-efficient broadband
12 deployment:

- 13
14
- 15 • Use the residential and economic development maps available through the Utah
16 Broadband Outreach Center to help assess community wide access and identify areas of
17 need.
 - 18 • Set goals to prioritize communities with the lowest business and residential average
19 speeds and work with broadband providers in those areas to determine strategies to
20 improve services. These areas should be evaluated in terms of wired (cable, DSL, fiber),
21 fixed wireless and mobile broadband coverage (see Map #48).
 - 22 • Implement best practices to save time and money, such as:
 - 23 ○ Identify which existing poles and conduits are owned by local governments and
24 which existing poles and conduits have other owners and make them easily
25 available to providers when possible.
 - Ensure broadband providers access to existing publically owned infrastructure.

- 1 ○ Work with broadband providers to coordinate fiber installation with regular utility
2 and road maintenance by informing them of opportunities where they can install
3 services.

- 4 ● Identify likely corridors to connect underserved areas and powered cellular
5 communications sites to expand mobile service and create a streamlined process to allow
6 providers to install services.

- 7 ● Coordinate with key stakeholders on infrastructure deployment, which can be achieved
8 using the following strategies:
 - 9 ○ Form a Joint Utility Committee (JUC) where county and city officials, developers
10 and other utilities meet with broadband providers to coordinate planning efforts.
11 For example, providers should be given the opportunity to incorporate broadband
12 infrastructure into future developments as part of the approval process.
 - 13 ○ Designate a broadband development liaison to notify providers of opportunities to
14 install services.
 - 15 ○ Create a permitting or public works department database to track projects and
16 notify providers of opportunities to access poles, open trenches, and conduits.
 - 17 ○ Hold regular meetings with local leaders and telecommunications companies to
18 discuss projects. Public officials should consider asking providers about future
19 areas of development and collaborate on reducing barriers to entry.
 - 20 ○ Maintain open and friendly relationships with providers.

- 21 ● Create broadband-friendly policies and planning documents, with considerations
22 including:
 - 23 ○ Zoning laws that encourage deployment, with added requirements for broadband
24 consideration during new construction and new developments.
 - 25 ○ Codified collaboration between public agencies, private providers, and end users.
 - 26 ○ Standards of construction that can assist with issues that arise based on unknown
27 variables in the right-of-way.
 - 28 ○ Streamlined local permitting with predictable timelines, reduced regulatory
29 barriers, and centralized communication between local planning offices.

- Less expensive rights-of-way fees in areas lacking sufficient broadband in order to incentivize broadband providers into underserved areas.

Broadband Policies for Federal Lands

Federal land management agencies also play a critical role in successful broadband deployment (see Map #49). It is important for these agencies to approach planning in a methodical and efficient way so that underserved county residents gain access to broadband, public lands are minimally disturbed, and service providers can engage in deploying services that benefit the county. In considering future resource management planning, Duchesne County establishes the following priorities to further the growth of broadband services.

Make Federal Data Relevant to Broadband Planning Projects Readily Available to States, Counties, Local Governments and Broadband Providers

Crossing federal lands can often be expensive and time consuming as service providers try to identify appropriate corridors and areas to install infrastructure. Making data publically accessible, such as the locations of federal assets, tower locations, and areas which have undergone environmental review under the National Environmental Policy Act (NEPA), may assist in this effort. Duchesne County recommends the following actions:

- Federal agencies shall maintain an online inventory and map of federal assets that the county can utilize in broadband planning efforts. This recommendation has been supported by several key stakeholders. Following President Obama’s 2012 Executive Order No. 13616, “Accelerating Broadband Infrastructure Deployment,” federal coalitions have worked to discuss administrative reforms that would encourage timely infrastructure growth. The Broadband Deployment on Federal Property Working Group, comprised of representatives from 14 federal agencies responsible for managing federal lands, determined that, “although the Federal Government owns or administers nearly 30 percent of all land in the United States and owns thousands of buildings, information about Federal assets and administered lands is not readily available.” The Broadband Opportunity Council, created by President Obama’s 2014 Presidential Memorandum, “Expanding Broadband Deployment and Adoption by Addressing Regulatory Barriers and Encouraging Investment and Training,” recommended executive actions for existing agencies that would increase broadband deployment and encourage competition. In its August 2015 report titled, “Broadband Opportunity Council Report and Recommendations Pursuant to the Presidential Memorandum on Expanding Broadband Deployment and Adoption by Addressing Regulatory Barriers and Encouraging Investment and Training,” the Council promoted expanding access to federal assets as one of its overarching recommendations.

- 1 • In accordance with NEPA standards, federal land management agencies have already
2 reviewed lands within the county to approve proposed utility infrastructure projects.
3 These same corridors are likely to be targeted for future broadband deployment. A
4 regularly updated and publically available map or a website with downloadable GIS
5 shapefiles showing previously reviewed and cleared locations would prove an extremely
6 useful tool for broadband providers and municipalities. This mapping data would help
7 providers target areas for development that are likely to pass environmental review, and
8 limit the burden on public lands.

- 9 • GIS shapefiles of areas that have undergone NEPA environmental review and previously
10 disturbed areas should also be sent to or made available online to state, county, and local
11 GIS departments so they can use this information in planning efforts. These agencies may
12 serve as a repository by creating a local database and map tools of this information for
13 future planning efforts. If land management agencies do not make this data readily
14 available, the county may consider undertaking an effort to identify and inventory assets,
15 communications sites, and corridors that could play a role in expanding broadband.

- 16 • Since there are many recreation areas that can track visitation based on fees or permits,
17 Duchesne County recommends visitation rates be used in conjunction with broadband
18 coverage data to prioritize high user areas. Areas where visitors cannot be tracked but are
19 known to have high usage should also be included. These areas may include locations
20 where agriculture, grazing, fishing, hunting, hiking, rock climbing, cycling, ATV use,
21 industry exploration and other activities are known to occur.

22 While some land management agencies are making progress centralizing this information,
23 providers still lack a complete inventory they can access for planning purposes. Making this data
24 publicly available will allow providers and communities to undertake meaningful broadband
25 planning efforts.

26
27 **Encourage Utilization of and Access to Federally Designated Communications Sites and**
28 **Work with Providers to Designate New Sites.**
29

30 Federally designated communications sites are used to facilitate orderly development of
31 telecommunications to benefit the public's demand. Uses include radio and television
32 transmission, as well as low power uses like two-way radio, microwave, cellular, and broadcast
33 translators. Authorities can also authorize construction of new buildings and towers, including
34 the necessary generators, grounding systems, access ways, and parking areas needed to operate at
35 the site. Sites must be managed based on a current site management plan, and authorities can
36 issue special use authorizations for each site based on the plan. Management plans can indicate
37 priority uses for each communications site.
38

1 Chapter 90 of the Forest Service Handbook addresses communications site management.
2 According to the handbook, a plan “should reflect the complexity of the current situation and the
3 anticipated demand for the site,” including the goal to, “consider anticipated changes and trends
4 in technology, current demand, and projected future demand for the site in the next five to ten
5 years.” Given that broadband demand is expected to increase rapidly in the next five to ten years,
6 we recommend all federal agencies that manage land use adapt and adhere to policies that
7 support broadband deployment. In particular, Duchesne County recommends the following:
8

- 9 • Sites that can potentially be used for telecommunications infrastructure should be mapped
10 and evaluated and land management agencies should work with providers to identify
11 future communications sites.
- 12 • Prioritize designated communications sites for development based on need in the area.
- 13 • Form collaboration between the county governments, other local governments, and land
14 management agencies to designate broadband corridors that would connect
15 communications sites, communities, cell tower sites, schools, libraries, government
16 facilities and other areas of economic activity.
- 17 • Once corridors are established, federal and state agencies should actively collaborate to
18 encourage providers into underserved areas by streamlining, accelerating, and
19 consolidating permitting for designated locations. County leaders, with the help of the
20 State of Utah Broadband Outreach Center, can help recruit providers to build
21 infrastructure in these prioritized areas.

22 Communications site management, broadband corridor designation, and planning efforts should
23 also consider how to best leverage different existing facilities. Wireless broadband, or “over the
24 top” broadband, in combination with wired connections greatly increase the broadband capacity
25 in any given area. Wireless towers and access points are also a necessary feature for emergency
26 communications on federal lands. Wireless towers must be connected with fiber, so concurrent
27 planning is necessary. The following considerations should be made when planning for wireless
28 broadband on public lands:
29

- 30 • Plan to integrate fiber and wireless broadband by deploying fiber to the edge of
31 wilderness areas to maximize coverage.
- 32 • Plan for inconspicuous wireless tower locations that won’t intrude on views or add
33 additional intrusion to views.
- 34 • Feed fiber to tower locations or future tower locations when deploying fiber for other
35 projects (e.g., highway construction and maintenance, new developments, etc.) to save
36 costs and time.
37
38
39

1 **Streamline Permitting to Encourage Broadband Deployment**

2
3 There is significant value for quick approvals for fiber and conduit expansion projects within the
4 constructed or disturbed portion of the federal and state highway systems, and along the federal
5 aid-eligible (FAE) local roads and their rights-of-way. All of these highways and FAE roads are,
6 at a minimum, improved road surfaces with significant pre-existing ground disturbance for the
7 roadway itself, and possibly shoulder and drainage features.

8
9 President Obama’s Executive Order No. 13616 addressed the challenges related to broadband
10 infrastructure deployment. The Working Group assembled to respond to the order recommended
11 changes to ensure coordination and streamlining of procedures, requirements, and policies related
12 to deployment. While progress has been made in some areas, the county recommends continued
13 work that would remove administrative barriers, reduce duplicative studies and documentation,
14 and shorten waiting periods for permitting.

15
16 Permitting policies that allow broadband providers access to open conduits will reduce
17 infrastructure costs related to broadband expansion. For policies to be successful, federal land
18 management agencies need to be involved in projects so that rights-of-way can be established in
19 a timely manner. Providers across Utah have expressed concern about extensive waiting periods
20 when working with federal land management agencies. Duchesne County is concerned this will
21 become a barrier and deter providers from expanding into areas that require passage through
22 federal lands.

- 23
24 • The county recommends public landholding agencies identify areas where permitting
25 could be streamlined, particularly easing permitting restrictions in previously disturbed
26 areas. Proposed fiber installation along existing highways should be permitted on an
27 accelerated pace. These disturbed corridors would face only minor temporary impacts.
28 Such corridors often already have underground and overhead utility lines, making fiber
29 deployment even less impactful.
- 30 • Allow for state Departments of Transportation to permit the installation of fiber optic
31 lines or empty conduit within the constructed roadway prism (to include the improved
32 surface, shoulder, and immediate constructed drainage) of any federal or state highway, or
33 local road that qualifies and receives maintenance funding under the Federal Highway
34 Administration (FHWA) federal-aid program. These qualifying projects should be
35 exempted from NEPA review or granted categorical exclusions.
- 36 • Highway easements across federal lands should be defined to include broadband service
37 providers. Establishing this public-private partnership, with the public partner as the
38 highway owner, would make the Utah Department of Transportation (UDOT) the
39 permitting agency for providers wishing to build or access conduits along the highway.
40 UDOT has already successfully partnered with providers in this way by establishing

1 internal policies to build conduits that can be used by providers, and by notifying them
2 about upcoming projects. Establishing UDOT as the single point of contact would limit
3 confusion on permitting requirements and fees and would clarify the role of both
4 agencies, resulting in considerable cost and time savings. In the past, these issues have
5 resulted in delays that have sometimes lasted more than a year. Giving this authority to
6 transportation agencies would expedite the process by limiting the time consuming and
7 redundant reviews currently performed by federal land management agencies.

8 **Increase Agency Capacity in Order to Prioritize Telecommunications and Broadband**
9 **Permitting**

10
11 In addition to adopting streamlining procedures that could free up the capacity of federal
12 agencies, such as allowing UDOT to assist in permitting, the county also advocates for the hiring
13 of additional staff responsible for telecommunications permitting. Processing times need to be
14 reduced for broadband expansion to take place with reasonable cost and time commitments.
15 Increasing the capacity of the Bureau of Land Management (BLM) should coincide with the
16 establishment of a standard processing time for permitting (less than one month) so providers can
17 schedule construction in a timely manner.

18
19 **Energy Considerations**

20
21 **Policy:** It is the policy of Duchesne County to promote economic development by recruiting
22 businesses that complement the energy industry. However, due to the cyclical nature of the
23 energy industry, it is the policy to also recruit businesses that will enable the economy to become
24 more diversified.

25
26 **Water Considerations**

27
28 **Policy:** It is the policy of Duchesne County that economic development is promoted without
29 sacrificing local water quality and recognizing that water supplies must be found adequate to
30 support such development.

31
32

1 **Section 26. Air**

2
3 **Findings:** The Clean Air Act, last amended in 1990, requires that U.S. Environmental
4 Protection Agency (EPA) set National Ambient Air Quality Standards (NAAQS) for pollutants
5 considered harmful to public health and the environment. Standards have been set for six criteria
6 pollutants: carbon monoxide (CO), lead, nitrogen dioxide (NO₂; also known as nitrogen oxides,
7 oxides of nitrogen, or NO_x), ozone (O₃), sulfur dioxide (SO₂), and particulate matter (PM).
8 Once emitted into the atmosphere, NO_x and volatile organic compounds (VOC) emissions react
9 together to form O₃. Sunlight provides the energy for the reaction, and extremely reactive gases
10 called radicals serve as catalysts.

11
12 The Utah Department of Environmental Quality (UDEQ), Division of Air Quality (DAQ)
13 operates a network of 24 permanent air monitoring stations across the state; one of which is
14 located in Roosevelt City (see Map #50). This station monitors meteorological conditions,
15 Nitrogen Dioxide (NO₂), Ozone (O₃) and particulate matter (PM 2.5). This monitor shows that
16 Duchesne County has been in compliance with all of the federal air quality standards, with the
17 exception of occasional exceedances of the Ozone standard.

18
19 In addition to the air monitoring stations operated by the DAQ in Roosevelt and Vernal, EPA, the
20 Ute Tribe, the Bureau of Land Management (BLM), and the National Park Service (NPS)
21 maintain permanent air monitoring stations in the Uintah Basin. EPA and the Ute Tribe operate
22 stations in Indian Country in Myton, Ouray, Redwash, and Whiterocks. NPS operates a station in
23 Dinosaur National Monument, and BLM operates a station in the community of Fruitland. A
24 semi-permanent air monitoring station at Horsepool has been used as a National Oceanic and
25 Atmospheric Administration research site during winter intensive studies. The locations of the
26 permanent and semi-permanent air monitoring stations located in or near Duchesne County are
27 shown in Map #50. Up to two dozen temporary, portable air monitors are also set up at different
28 locations throughout the Uintah Basin during the winter to measure meteorological conditions,
29 O₃ concentrations, and levels of O₃ precursors. Utah State University has been involved in
30 operating a number of the temporary monitors as well as assisting with permanent monitoring
31 stations.

32
33 The 2015 Annual Report (“the Report”) on air quality from the Utah Department of
34 Environmental Quality, Air Quality Division (DAQ), provides the most up to date and accurate
35 air quality information available to Duchesne County. Table 4 of the Report contains a Triennial
36 Inventory of the amount of pollutants produced in Utah’s 29 counties, in tons per year.
37 Emissions from Duchesne County are summarized in Table A1.
38

Table A1. 2011 Triennial Emissions Inventory for Duchesne County (tons per year)

Pollutant Type	Duchesne County
CO	19,793
NO _x	11,934
PM ₁₀	6,912
PM _{2.5}	1,082
SO _x	144
VOC	57,798

Notes: PM₁₀ = PM less than 2.5 micrometers in diameter; SO_x = sulfur oxides.

Source: DAQ (2015).

1

2

Duchesne County has the 17th highest production of Carbon Monoxide (CO), the 6th highest production of Nitrogen Oxides (NO_x) the 11th highest production of Particulate Matter (PM₁₀), the 15th highest production of Particulate Matter (PM 2.5), the 15th highest production of Sulfur Oxides (SO_x) and the 3rd highest production of Volatile Organic Compounds (VOC) compared to other counties in Utah.

7

8

The Triennial Inventory shows that Duchesne County is near the average in the production of most pollutants, with the exception of Nitrogen Oxides (NO_x) and Volatile Organic Compounds (VOC). Unfortunately, the high levels of these pollutants contribute to the formation of Ozone.

11

12

The Report contains the following summary of the Uinta Basin Ozone problem, which affects Duchesne County:

14

15

Uinta Basin Ozone

16

17

Since 2005, the National Park Service has been measuring summertime ozone at the Dinosaur National Monument located near Vernal and, beginning in 2006, at the Colorado National Monument located near Grand Junction, Colorado. In 2009, the EPA began measuring year-round ozone at two sites on the Ute Indian Reservation, located near Redwash and Ouray [in Uintah County]. Data collected from the two tribal sites during the winter of 2010 indicated that high ozone levels are occurring in the Basin during the middle of winter. This finding was unexpected since ozone is normally an air pollutant that is formed during the summertime when there are high temperatures and bright sunshine.

25

26

The Uintah Basin is bounded on the north by the Uinta Mountains, on the south by the Tavaputs Plateau, on the west by the Wasatch Mountains, and on the east by elevated terrain that separates it from the Piceance Basin in Colorado. Because the Uintah Basin is surrounded on all four sides

28

1 by mountains, it is shaped physically like a basin and tends to trap polluted air and facilitate
2 inversion formation. In recent years, concentrations of wintertime O₃ in the Uintah Basin have
3 been elevated and at times exceed the NAAQS. High episodes are typically observed during
4 winter inversion periods when the ground is covered by snow and stagnant air conditions are
5 present.

6
7 In the winter of 2010/11, the Uintah Basin Impact Mitigation Special Services District
8 (UBIMSSD) funded a study conducted by Utah State University's Energy Dynamics Lab and the
9 DAQ. Using data collected from 18 permanent and temporary air monitoring stations placed
10 throughout the basin, researchers found elevated wintertime ozone concentrations throughout the
11 basin during temperature inversion events when snow covered the ground. The highest values
12 were found in the central basin area, with many exceeding the ozone national ambient air quality
13 standards (NAAQS).

14
15 In the winter of 2011/2012, cooperating agencies, including the BLM, the EPA, Western Energy
16 Alliance, and the UBIMSSD, coordinated by the DAQ, embarked on a multi-winter effort to
17 study and address ozone levels in the Uinta Basin. The first year's study was called the Uinta
18 Basin Winter Ozone Study 2012 (UBWOS 2012). The goal was to understand how ozone is
19 formed in the Basin during wintertime inversion conditions and to implement appropriate and
20 effective strategies for mitigating high ozone levels in order to avoid nonattainment. Researchers
21 from the National Oceanic and Atmospheric Administration (NOAA), several university research
22 groups, the EPA, and the DAQ worked together to study ozone formation in the basin during
23 wintertime inversion conditions. Although no temperature inversion/snow events occurred and
24 ozone levels remained low, much valuable information was collected on emissions, inventories,
25 and sources. The first year's study concluded that:

- 26
- 27 • Ozone formation is associated with stable meteorological conditions, snow cover, and
28 sunshine.
 - 29
 - 30 • Chemical precursors to ozone formation are NO_x and VOCs.
 - 31
 - 32 • NO_x comes from hot combustion sources, and the highest levels are in the oil production
33 areas and population centers. (Oil and gas operations have been found to be responsible
34 for 57 to 61 percent of the NO_x emissions).
 - 35
 - 36 • VOC comes from oil and gas production with the highest levels in the gas production
37 areas. (Oil and gas operations have been found to be responsible for 98 to 99 percent of
38 the VOC emissions).
 - 39
 - 40 • Methanol was measured at concentrations that could significantly enhance ozone
41 formation.
 - 42
 - 43 • There is very high year-to-year variation in ozone levels due to variation in
44 meteorological conditions.

- Analysis of historical climatology for meteorological conditions conducive to ozone formation suggests about one in two winters would produce ozone levels higher than the federal standard.

In the winter of 2012/13 ozone concentrations in excess of the current NAAQS were measured in the Uinta Basin during winter inversion periods when the ground was covered by snow. The Uinta Basin Winter Ozone Study 2013 (UBWOS 2013) was conducted and involved the same researchers as the prior year’s study, and it concluded the following:

- Maximum 8-hour average ozone concentrations measured at Ouray [in Uintah County] reached 142 ppb during the study, exceeding the NAAQS (75 ppb) by 89%. Monitored values in the major population centers were greater than the NAAQS on a total of 22 days at Vernal, and 29 days at Roosevelt. These observations are in sharp contrast to the 2012 winter study, when 8-hour average ozone levels did not exceed 63 ppb.
- Elevated ozone coincided with elevated levels of VOCs and NO_x, which are the primary chemical precursors of ozone formation.
- Reflection of sunlight from the snow surface significantly increases the total solar radiation in the atmosphere and thus, the rate of ozone formation.
- Complex patterns of light winds within the Basin appear to produce an east-west “sloshing” of air that contributes to intra-basin mixing of ozone and ozone precursors.
- Chemical reactions during these winter episodes differ greatly from summer ozone formation in urban areas.
- Aromatic VOCs such as toluene and xylene contribute in secondary formation of wintertime ozone pollution in the Basin; therefore, VOC control measures focused on these types of VOCs will be particularly effective.

In the winter of 2013/14, the DAQ coordinated the Uinta Basin Winter Ozone Study 2014 (UBWOS 2014). The study focused on quantifying the contribution of nitrous acid (HONO) and formaldehyde (HCHO) to the chemical reactions responsible for ozone formation. Prior studies in the basin showed that HONO and HCHO dominate the radical chemistry that drives ozone production. HONO and HCHO are unconventional sources for ozone formation compared to the conventional sources (ozone photolysis) in typical summer urban ozone episodes.

The study confirmed the following:

- HONO, based on an improved suite of measurements, does not appear to be a major source of the chemical radicals needed to form ozone during the winter episodes, as previously suspected.

- 1 • HCHO and other aldehydes are the dominant radical sources needed for ozone formation.
 2 These compounds are both directly released from various emission sources and form in
 3 the atmosphere from directly emitted VOCs such as those contained in oil and raw natural
 4 gas. Aromatic VOCs, including toluene and xylene, while less abundant than other VOC
 5 species in the basin, are also particularly important sources of radicals.
 6
- 7 • New “box model” simulations of ozone formation chemistry, based on data collected at
 8 the Horsepool study site [in Uintah County], confirmed earlier analysis indicating that
 9 ozone formation at this location is sensitive to VOC reductions (i.e., VOC reductions
 10 would result in ozone reductions). The modeling results also suggest that NOx reductions
 11 would lead to ozone reductions at Horsepool. These modeling results are pertinent to the
 12 Horsepool location and may not be applicable across the basin as a whole.
 13

14 The winter of 2013-2014 produced the following 8-Hour Average Ozone concentrations in the
 15 Uintah Basin (see Table A2).

**Table A2. 8-Hour Average Ozone Concentrations in the
 Uintah Basin, Winter 2013–2014**

Uintah Basin Air Monitoring Station	Overall Daily Maximum* (parts per billion)	Overall Exceedances of the NAAQS O₃ Standard of 75 Parts per Billion[†]
Dinosaur National Monument	80.6	5
Fruitland	58.4	0
Horsepool	96.8	13
Myton	89.3	6
Ouray	92.8	17
Red Wash	89.0	7
Roosevelt	65.5	2
Vernal	73.4	3
Whiterocks	67.3	3

Source: ENVIRON International Corporation (2015).

* Fourth highest daily maximum.

[†] The NAAQS O₃ standard is now 70 ppb (the final rule became effective on December 28, 2015).

16
 17 The Fruitland, Myton and Roosevelt stations are within Duchesne County.
 18

1 The UBWOS work is broadly supported financially by numerous agencies, including the
2 UBIMSSD, Western Energy Alliance, Bureau of Land Management - Utah Office, and NOAA.
3 All of the research organizations have also made significant in-kind equipment contributions to
4 this study.

5
6 Further information on the UBWOS and wintertime ozone in the Uinta Basin can be found on the
7 DAQ web site at: <http://www.deq.utah.gov/locations/U/uintahbasin/index.htm>.

8
9 Work on Uinta Basin air quality during 2015 focused on the development of an improved
10 emissions inventory for oil and gas production. A series of stakeholder meetings were conducted
11 with the Western Energy Alliance, oil and gas operators, Ute Tribe, the EPA, and the BLM to
12 agree on an inventory process. The goal is an emissions inventory that is spatially, temporally,
13 and chemically characterized for the entire Basin. This inventory is needed to develop
14 appropriate and effective mitigation strategies for ozone and other air pollutants that can form as
15 a result of the Basin's unique wintertime chemistry. The oil and gas emissions data requests were
16 due by the end of 2015 and the initial inventory compilation was expected in the first quarter of
17 2016.

18
19 In December 2015, EPA lowered the primary and secondary O₃ standard from 0.075 to 0.070
20 parts per million. According to EPA and DAQ (based on 2012–2014 data), Duchesne and Uintah
21 Counties do not meet the updated standard. Utah submitted the Governor's recommendation for
22 area designation on September 30, 2016. Two areas are recommended for ozone nonattainment
23 designation: the Wasatch Front Area (Salt Lake and Davis counties, and portions of Weber,
24 Tooele, and Utah counties) and the Uinta Basin Area (portions of Uintah and Duchesne counties
25 at and below 6,000 feet of elevation). The Uintah Basin Area excludes a large portion of tribal
26 land; the Ute Indian Tribe will make a separate recommendation to the EPA for area designation
27 on tribal lands. Final ozone area designations would be promulgated by the EPA no later than
28 October 1, 2017. States are required to develop federally-enforceable State Implementation Plans
29 (SIPs) to identify how the primary and secondary NAAQS would be attained in nonattainment
30 areas. The Ute Tribe and EPA would also be required to develop a plan covering Indian Country.
31 Through these plans, the state and the Ute Tribe would design control measures and strategies to
32 reduce pollutant levels in the area, and if appropriate, any emissions of precursor pollutants.

33
34 The time period for ozone nonattainment areas to achieve attainment depends on the area's
35 classification as marginal, moderate, serious, severe, or extreme. A higher classification would
36 mean more stringent requirements, but allow for a longer time to reach attainment. Although the
37 classification of the Utah-recommended nonattainment areas is unknown at this time, they are
38 expected to be either marginal (3 years to attainment from date of classification) or moderate (6
39 years to attainment from date of classification). An attainment SIP is not required for marginal
40 nonattainment areas, but states must implement control mandates such as new source review and
41 emission limitations for major sources. Clean Air Act permitting in Utah is the responsibility of
42 UDEQ. In Indian Country, the permitting authority is EPA. Economic development could be
43 impacted by a nonattainment designation. Consequences of a nonattainment designation could
44 include requiring new facilities wanting to locate in the nonattainment area to install pollution

1 controls or take stringent operational limits, requiring emission offsets, or requiring the
2 implementation of voluntary measures to reduce emissions. Emissions reductions from existing
3 sources are also likely to be required.
4

5 In May 2016, EPA finalized the federal implementation plan to implement the Minor New
6 Source Review Program for oil and gas production and processing segments (EPA 2016). Permit
7 options include the general permit, permit-by-rule, and true minor source registration. The final
8 rule also incorporates emission limits and other requirements from eight federal standards and
9 applies limits for a range of equipment and processes used in oil and natural gas production and
10 natural gas processing (New Source Performance Standards [NSPS] subparts D, Kb, IIII, JJJJ,
11 KKKK, and OOOOa and National Emission Standards for Hazardous Air Pollutants subparts
12 HH, ZZZZ, and DDDDD). NSPS subpart OOOO is the first set of federal air standards to limit
13 VOC emissions at natural gas wells that are hydraulically fractured and to establish requirements
14 for several other oil and gas industry sources of air pollution (e.g., storage tanks, pneumatic
15 controllers, and glycol dehydrators) that were constructed, modified, or reconstructed after
16 August 23, 2011. NSPS subpart OOOOa is an addition to subpart OOOO that limits VOC and
17 methane emissions from affected equipment and processes in the oil and gas industry that were
18 constructed, modified, or reconstructed after September 18, 2015. These new regulations will
19 affect multiple emission sources in Daggett, Duchesne, and Uintah Counties.
20

21 UDEQ finalized rules (Utah Administrative Code R307-504) in 2014 that established
22 requirements to ensure that existing oil and gas equipment is maintained and operated as
23 designed, that bottom filling or submerged filling is used when loading a product into tanker
24 trucks, that high-bleed pneumatic controllers are replaced with low-bleed controllers, and that
25 self-igniters are installed on flares. UDEQ also inspects, audits, and enforces actions to ensure
26 facilities are meeting applicable regulatory requirements. In addition, UDEQ compares Utah
27 Division of Oil, Gas and Mining production data with their air permits database to verify that oil
28 and gas facilities have obtained the necessary air permits. These regulations also affect multiple
29 emission sources in Daggett, Duchesne, and Uintah Counties.
30

31 O₃ is present in the atmosphere even in the absence of significant, local, human-caused emissions
32 of NO_x and VOC. This background O₃ is a result of natural emissions and of human-caused
33 emissions transported from outside the Uintah Basin or outside the United States. Background O₃
34 is O₃ that is beyond the ability of local regulators to control (Lyman 2016). Background O₃ is
35 often higher in areas of higher elevation (such as the Uintah Basin) because natural stratospheric
36 O₃ impacts and international transport impacts increase with altitude, whereas O₃ lifetimes are
37 longer (EPA 2014). Some research suggests that increased transport of O₃ and precursors from
38 outside the United States are counteracting domestic emissions reductions in the west (Cooper et.
39 al. 2012 and Lin et. al. 2017). O₃ and precursors from outside the Uintah Basin, combined with
40 wildfires and intrusions of O₃-rich air from the stratosphere, have occasionally led to
41 exceedances of the O₃ NAAQS during the summer in the Uintah Basin. Understanding the
42 mechanics of the Uintah Basin airshed in the winter and summer, including O₃ transport within
43 and from outside the basin, will be important before policies are developed.
44

1 A state may request that EPA exclude data showing exceedances or violations of the NAAQS
2 that are related directly to an exceptional event (40 Code of Federal Regulations [CFR] 50.14(a)
3 (1)). An *exceptional event* is defined in 40 CFR 50.1(j) as “an event that affects air quality, is not
4 reasonably controllable or preventable, is an event caused by human activity that is unlikely to
5 recur at a particular location or a natural event, and is determined by the Administrator in
6 accordance with 40 CFR 50.14 to be an exceptional event. It does not include stagnation of air
7 masses or meteorological inversions, a meteorological event involving high temperatures or lack
8 of precipitation, or air pollution relating to source noncompliance.” Examples of exceptional
9 events include fireworks and prescribed fire. Daggett, Duchesne, and Uintah Counties support
10 this regulation and agree that exceptional events should not count toward nonattainment status.

11
12 Senate Bill 2072 would require EPA to establish a program (Early Action Compact program)
13 under which the EPA administrator would defer the designation of an area as a nonattainment
14 area for purposes of the 8-hour O₃ NAAQS if the area achieves and maintains certain standards
15 under a voluntary early action plan. The bill was introduced in September 2015, and a hearing
16 was held in June 2016. The county supports the passage of this bill because it allows the use of
17 locally crafted solutions to improve air quality and achieve compliance with the NAAQS.

18
19 A promising pilot program is being started by the Air Quality Division of the Utah Department of
20 Environmental Quality (DAQ), called the Storage Tank Emissions Pilot Project (STEPP). This
21 project, using a \$150,000 appropriation from the 2016 Utah Legislative Session, will establish a
22 partnership between the DAQ, the TriCounty Health Department, the energy companies and the
23 Bingham Entrepreneurship and Research Center to use infrared cameras to assess VOC
24 emissions from “thief hatches” on oil and gas condensate tanks in the Uintah Basin.

25
26 The STEPP project notes that there are 14,222 producing and shut-in oil and gas wells in the
27 state, of which 11,400 are in the Uintah Basin. Approximately 2,350 of those wells are regulated
28 by the State (the remaining wells are under the jurisdiction of the Ute Tribe and the EPA).
29 Rather than inspect all 2,350 wells, the STEPP project will focus on 474 facilities that have VOC
30 combustors installed on their storage tanks. It is anticipated that, if significant leaks are found,
31 that these leaks will be relatively easy to remedy. This project will greatly improve emissions
32 estimates that are currently available and should improve local air quality as tank emissions are
33 reduced.

34 35 **Objectives**

- 36
37 1. Maintain or improve air quality to protect the health and well-being of county residents,
38 and maintain or improve the desirability of the county as a place to visit and recreate.
- 39
40 2. Promote economic development without sacrificing local air quality. Air quality should
41 be protected to prevent potential restrictions on future development.
- 42
43 3. Work cooperatively as full partners with other agencies and entities to identify baseline
44 air quality for the Uintah Basin.

- 1 4. Assess the extent to which Uintah Basin air is degraded by natural phenomena and by
2 sources outside the Uintah Basin. Work cooperatively as full partners with other agencies
3 to establish an understanding of contributions from non-area emission sources.
4
- 5 5. Promote mass transit options to reduce air pollution associated with commuter traffic.
6
- 7 6. Improve air quality by promoting efforts by the Seven County Infrastructure Coalition,
8 Moon Lake Electric Cooperative and others to extend electric power facilities to
9 underserved oilfield areas.

10
11 **Policies**

- 12
- 13 1. Comply with all federal, state, and local air quality rules, regulations, and directives.
14
- 15 2. Cooperate with air regulatory authorities to prevent significant adverse effects from air
16 pollution.
17
- 18 3. Participate with regulatory authorities in determining air monitoring needs.
19
- 20 4. Cooperate with the Ute Tribe, EPA, and the State of Utah to create workable agreements
21 to address air quality issues.
22
- 23 5. Continue to encourage and support research and studies to inform the decision-making
24 process for better air quality.
25
- 26 6. Support research and improve knowledge of the wintertime O3 problem in the Uintah
27 Basin, including understanding non-area emission sources.
28
- 29 7. Work cooperatively with other agencies to develop solutions to reduce the O3 problem
30 based on research outcomes.
31
- 32 8. Support the implementation of developed solutions for O3 reductions.
33
- 34 9. Encourage industry to reduce VOCs and NOx to help address the O3 problem.
35
- 36 10. When possible, consider sponsoring air quality forecasting for winter months and sending
37 alerts to companies when impaired air quality is likely to help reduce emissions.
38
- 39 11. Collect and disseminate information about low-emission technologies that could be used
40 by industry, and encourage voluntary adoption of those technologies.
41
- 42 12. Consider offering incentives to industry for the adoption of emission reduction
43 technologies (e.g., awards, an unofficial certification program).
44

- 1 13. Evaluate whether it is possible or economically feasible to restrict non-essential industry
2 activities during winter inversion episodes.
3
- 4 14. Implement county policies to maintain good air quality and to avoid nonattainment
5 (hazardous days).
6
- 7 15. Publish county requirements online for local burning. Encourage all residents to follow
8 the requirements (e.g., the clearing index), especially during winter inversions.
9
- 10 16. Only allow agricultural burning during times of low fire danger and when atmospheric
11 conditions will disperse smoke efficiently.
12
- 13 17. Assist local health departments in enforcing Utah Administrative Code R307-202
14 (Emission Standards: General Burning), which prohibits open burning at sites used for
15 the disposal of community garbage and other waste, and prohibits a person from burning
16 petroleum wastes, demolition or construction debris, residential rubbish, garbage,
17 vegetation, wood, and other types of waste.
18
- 19 18. Educate county communities about air quality issues and what they can do to help (e.g.,
20 reduce idling).
21
- 22 19. Consider implementing incentives to reduce the use of wood-burning stoves.
23
- 24 20. Work with natural gas providers and developers to encourage the wider availability of
25 natural gas so that it can be used to replace more polluting fuels.
26
- 27 21. Work with the local health department to address fugitive dust issues. Implement
28 measures to reduce fugitive dust from roads, gravel pits, etc. Such measures could include
29 water applications, chemical applications such as magnesium chloride, and covering truck
30 loads.
31
- 32 22. Cooperate with regulators to require adequate dust-control measures at mining, mineral
33 resource, and energy resource locations, such as speed limits, watering, and ceasing
34 operations during high winds.
35
- 36 23. Educate the public about fugitive dust and about ways to reduce fugitive dust emissions.
37 Work to prevent degradation from non-area sources, after the sources are better
38 understood.
39
- 40 24. Investigate incentives to encourage industry to reduce greenhouse gas emissions such as
41 methane, carbon dioxide, and NOx (e.g., the use of carbon credits). Reduction of
42 greenhouse gas emissions such as NOx would also help with the O3 problem.
43
44

1 25. Support continued funding of the Basin Transit Association bus system operated by the
2 Utah Basin Association of Governments.

3
4 26. Support efforts to extend electrical power facilities to underserved oilfield areas.

5
6 **Air Quality and Energy**

7
8 **Findings:** The production of energy resources can have impacts on air quality.

9
10 **Policy:** It is the policy of Duchesne County that particulate matter shall be kept within state and
11 federal standards at energy resource locations through adequate dust control measures. It is the
12 policy of Duchesne County that energy development shall be conducted in a manner that
13 minimizes the release of volatile organic compounds and other pollutants that may adversely
14 affect air quality and public health, in accordance with state and federal standards. Energy
15 resources locations are expected to meet federal and state permitting requirements as needed.

16
17 **Air Quality and Mining**

18
19 **Findings:** The production of mining and mineral resources can have impacts on air quality.

20
21 **Policy:** It is the policy of Duchesne County that particulate matter be kept within state and
22 federal standards at mining and mineral resource locations through adequate dust control
23 measures. Mining and mineral resources locations are expected to meet federal and state
24 permitting requirements as needed.

25
26 **Air Quality and Agriculture**

27
28 **Findings:** Agricultural activity can create dust which elevates the level of particulate matter in
29 the air. Tilled croplands have the potential to generate more dust than areas used for pasture. In
30 Duchesne County, of the 1,088,559 acres in farms in 2012, only 78,172 acres was in cropland
31 and only 59,206 of those acres were harvested cropland. The data shows that much of the
32 agricultural land in Duchesne County is less likely to generate dust that would impact particulate
33 matter levels in the air.

34
35 **Air Quality and Wildlife**

36
37 **Findings:** Air Quality issues generally are not a major consideration in wildlife management,
38 although dust deposition may affect vegetation which animals use for food, cover, or shelter. It
39 is reasonable to assume that air pollution affects other higher order animals in the same ways that
40 it affects humans, although effects on wildlife are not well documented. Compliance with
41 federal and state air quality standards is expected to provide some level of protection for wildlife.
42 The effects of dust and other particulate forms of air pollution on animal ecology are becoming a
43 more widely recognized subject of interest.

1 **Air Quality and Forest Management**

2
3 **Findings:**

4
5 Proper forest management techniques, such as selective harvest and thinning projects, create
6 more healthy forests that are more resistant to insect damage and less likely to contain fuel loads
7 that can result in catastrophic wildfire.

8
9 Air quality conditions deteriorate unnecessarily when inactive forest management results in
10 wildfire. According to the interagency report *Utah Forest Health Report, A Baseline Assessment*
11 *1999 - 2001* (Keyes et al. 2003), deteriorated air quality (e.g., increase in ozone) can damage
12 vegetation and predispose plants to other disturbance. Some effects can include a decrease in
13 lichen richness, tree crown thinning, and discolored foliage.

14
15 **Air Quality and Recreation**

16
17 **Policy:** Duchesne County supports efforts to maintain clean air so that the County maintains its
18 position as a desirable place to visit and recreate.

19
20 **Air Quality and Fire Management**

21
22 **Findings:** Proper and effective fire management can reduce the amount of smoke produced by
23 fires and have reduce the negative impacts of fires on air quality.

24
25 **Policies:**

- 26
27 1. It is the policy of Duchesne County that fires, except those deemed by the County to have
28 a beneficial purpose (such as managed wildland fire, prescribed burns or training burns)
29 shall be extinguished as soon as possible to reduce negative impacts on air quality.
30
31 2. It is the policy of Duchesne County that solid waste shall not be burned.
32
33 3. It is the policy of Duchesne County that agricultural burning shall be allowed only during
34 times of low fire danger and during times when atmospheric conditions will disperse
35 smoke efficiently.
36
37 4. It is the policy of Duchesne County that proscribed fires slated for completion should be
38 coordinated with the State Smoke Coordinator prior to ignition and follow the
39 requirements of the State's Enhanced Smoke Management Plan
40 ([http://www.deq.utah.gov/Pollutants/R/regionalhaze/rhsip/docs/2006/05May/ESMP0811](http://www.deq.utah.gov/Pollutants/R/regionalhaze/rhsip/docs/2006/05May/ESMP081103.pdf)
41 [03.pdf](http://www.deq.utah.gov/Pollutants/R/regionalhaze/rhsip/docs/2006/05May/ESMP081103.pdf)).
42
43
44

1 **Land Access and Air Quality**

2
3 **Findings:** Duchesne County finds that there are no air considerations associated with Land
4 Access other than dust control.

5
6 **Policy:** It is the policy of Duchesne County to require dust control or dustless surfaces on roads
7 under County jurisdiction where sensitive dust receptors exist nearby.

8
9 **Air Quality and Threatened or Endangered Species**

10
11 **Findings:** Air Quality issues generally are not a major consideration in the management of
12 Threatened, Endangered, or Sensitive Species, although dust deposition may affect vegetation
13 which species use for food, cover, or shelter. It is reasonable to assume that air pollution affects
14 other higher order animals in the same ways that it affects humans, although effects on wildlife
15 are not well documented. The effects of dust and other particulate forms of air pollution on
16 animal ecology are only now becoming a more widely recognized subject of interest.

17
18 **Air Quality and Wilderness**

19
20 **Findings:** Duchesne County finds that there are positive and negative impacts on air quality
21 from wilderness designations. Designating land for wilderness will make it impossible to use
22 motorized recreation or develop natural resources, which would tend to improve air quality.
23 However, designating land for wilderness also means that active land management does not take
24 place and natural systems, such as wildland fire, are not suppressed. Failure to suppress wildfire
25 generates air pollutants that can easily rival or exceed the tonnage of pollutants produced by
26 multiple uses in undesignated areas.

27
28 **Air Quality and the Economy**

29
30 **Policy:** It is the policy of Duchesne County that economic development is promoted without
31 sacrificing local air quality.

32

1 **Section 27. Vegetation Management**

2
3
4
5
6
7
8

Findings:

National Land Cover Database (NLCD) geospatial data use a 16-class land cover classification scheme at a spatial resolution of 30 meters (Homer et al. 2015). Acres of NLCD land cover types, which are consolidated into more general cover types, predicted to occur in Duchesne County are listed in Table VEG1 and shown on Map #51.

Table VEG1. Acres of National Land Cover Database Land Cover Types Predicted to Occur in Duchesne County

NLCD Land Cover Types	Duchesne County
Barren Land (Rock/Sand/Clay)	154,206.5
Cultivated Crops	1,306.3
Deciduous Forest	77,634.5
Developed, High Intensity	96.0
Developed, Low Intensity	6,221.7
Developed, Medium Intensity	477.0
Developed, Open Space	20,087.9
Emergent Herbaceous Wetlands	1,248.1
Evergreen Forest	764,078.8
Grassland/Herbaceous	50,192.8
Mixed Forest	13,229.6
Open Water	9,678.4
Pasture/Hay	137,543.1
Perennial Ice/Snow	19.7
Shrub/Scrub	826,194.3
Woody Wetlands	14,802.8
Total	2,077,017.5

Source: USGS (2011).

9
10
11
12
13

LANDFIRE is a vegetation, fire, and fuel characteristic mapping program managed by the U.S. Department of Agriculture Forest Service and the U.S. Department of the Interior. The program represents a nationally consistent collection of spatial resource datasets with an ecological foundation designed to use at a landscape scale. Greater than 65% of the vegetation in Duchesne

1 County is represented by seven vegetation types (LANDFIRE 2014). Table VEG2 describes the
2 acres of LANDFIRE vegetation types predicted to occur in Duchesne County.

3
4 Colorado Plateau Pinyon-Juniper Woodland – 21.2% – This vegetation type occurs in the dry
5 mountains and foothills of the Colorado Plateau region, from the western slope of Colorado to
6 the Wasatch Range in Utah. It is typically found at lower elevations ranging from 1,500 to 2,440
7 meters (m). This vegetation type occurs on warm, dry sites on mountain slopes, mesas, plateaus,
8 and ridges. *Pinus edulis* and/or *Juniperus osteosperma* dominate the tree canopy.

9
10 Inter-Mountain Basins Big Sagebrush Shrubland – 11.4% – This vegetation type occurs
11 throughout much of the western United States typically in broad basins between mountain
12 ranges, plains, and foothills between 1,500 and 2,300 m in elevation. Soils are typically deep,
13 well-drained, and non-saline. This vegetation type is dominated by *Artemisia tridentata* ssp.
14 *tridentata* and/or *Artemisia tridentata* ssp. *wyomingensis*.

15
16 Rocky Mountain Subalpine Dry-Mesic Spruce-Fir Forest and Woodland – 8.2% – Engelmann
17 spruce and subalpine fir forests comprise a substantial part of the subalpine forests of the
18 Cascades and Rocky Mountains from southern British Columbia east into Alberta, and south into
19 New Mexico and the Intermountain West region, with elevations ranging from 1,275 m in its
20 northern distribution to 3,355 m in the south. These forests often represent the highest elevation
21 forests in an area. Sites within this vegetation type are cold year-round, and precipitation is
22 predominantly in the form of snow, which may persist until late summer. Despite their wide
23 distribution, the tree canopy characteristics are remarkably similar, with *Picea engelmannii* and
24 *Abies lasiocarpa* dominating either mixed or alone.

25
26 Barren – 7.5% – This “vegetation type” comprises barren areas of bedrock, desert pavement,
27 scarps, talus, slides, volcanic material, glacial debris, sand dunes, strip mines, gravel pits, and
28 other accumulations of earthen material. Generally, vegetation accounts for less than 15% of the
29 total cover.

30
31 Colorado Plateau Mixed Low Sagebrush Shrubland – 6.6% – This vegetation type occurs in the
32 Colorado Plateau, Tavaputs Plateau, and Uinta Basin in canyons, gravelly draws, hilltops, and
33 dry flats at elevations generally below 1,800 m. Soils are often rocky, shallow, and alkaline. This
34 vegetation type includes open shrublands and steppe dominated by *Artemisia nova* or *Artemisia*
35 *bigelovii* sometimes with *Artemisia tridentata* ssp. *wyomingensis* codominant. Semi-arid grasses
36 such as *Achnatherum hymenoides*, *Aristida purpurea*, *Bouteloua gracilis*, *Hesperostipa comata*,
37 *Pleuraphis jamesii*, or *Poa fendleriana* are often present and may form a graminoid layer with
38 over 25% cover.

39
40 Rocky Mountain Lodgepole Pine Forest – 6.3% – This vegetation type is widespread in upper
41 montane to subalpine elevations of the Rocky Mountains, Intermountain West region, These are
42 subalpine forests where, following stand-replacing fires, *Pinus contorta* will rapidly colonize and
43 develop into dense, even-aged stands. Most forests in this ecological system occur as early- to
44 mid-successional forests, which developed following fires. These forests are dominated by *Pinus*

1 *contorta* with shrub, grass, or barren understories.

2
 3 Inter-Mountain Basins Mixed Salt Desert Scrub – 5.0% – This extensive vegetation type includes
 4 open-canopied shrublands of typically saline basins, alluvial slopes, and plains across the
 5 Intermountain West. The vegetation is characterized by a typically open to moderately dense
 6 shrubland composed of one or more *Atriplex* species, such as *Atriplex confertifolia*, *Atriplex*
 7 *canescens*, *Atriplex polycarpa*, or *Atriplex spinifera*.

8
Table VEG2. LANDFIRE Vegetation Types Predicted to Occur (Duchesne County – Acres)

LANDFIRE Vegetation Type	Duchesne County (Acres)
<i>Abies concolor</i> Forest Alliance	924.6
<i>Arctostaphylos patula</i> Shrubland Alliance	530.6
<i>Artemisia tridentata</i> ssp. <i>vaseyana</i> Shrubland Alliance	44,469.7
Barren	155,780.2
<i>Coleogyne ramosissima</i> Shrubland Alliance	659.1
Colorado Plateau Mixed Low Sagebrush Shrubland	136,326.5
Colorado Plateau Pinyon-Juniper Woodland	439,565.5
Developed-High Intensity	66.5
Developed-Low Intensity	2,060.3
Developed-Medium Intensity	506.5
Developed-Roads	18,272.9
<i>Grayia spinosa</i> Shrubland Alliance	735.8
Great Basin Pinyon-Juniper Woodland	24.2
Great Basin Semi-Desert Chaparral	3,547.3
Inter-Mountain Basins Aspen-Mixed Conifer Forest and Woodland	63,440.2
Inter-Mountain Basins Big Sagebrush Shrubland	235,701.8
Inter-Mountain Basins Big Sagebrush Steppe	1,483.0
Inter-Mountain Basins Curl-leaf Mountain Mahogany Woodland	2,231.6
Inter-Mountain Basins Greasewood Flat	9,059.2
Inter-Mountain Basins Mat Saltbush Shrubland	6,318.6
Inter-Mountain Basins Mixed Salt Desert Scrub	102,982.6
Inter-Mountain Basins Montane Riparian Forest and Woodland	6.0
Inter-Mountain Basins Montane Riparian Shrubland	0.2
Inter-Mountain Basins Montane Sagebrush Steppe	28,856.9
Inter-Mountain Basins Semi-Desert Grassland	2,306.4
Inter-Mountain Basins Semi-Desert Shrub-Steppe	1,942.8

Table VEG2. LANDFIRE Vegetation Types Predicted to Occur (Duchesne County – Acres)

LANDFIRE Vegetation Type	Duchesne County (Acres)
Inter-Mountain Basins Sparsely Vegetated Systems	4,383.5
Inter-Mountain Basins Sparsely Vegetated Systems II	10,504.6
Introduced Riparian Forest and Woodland	199.8
Introduced Riparian Shrubland	1,399.3
Introduced Upland Vegetation-Annual Grassland	25,699.6
Mogollon Chaparral	16.4
Mojave Mid-Elevation Mixed Desert Scrub	12.9
North American Warm Desert Sparsely Vegetated Systems II	86.2
Open Water	12,080.0
Quarries-Strip Mines-Gravel Pits	148.2
<i>Quercus gambelii</i> Shrubland Alliance	3,805.8
Rocky Mountain Alpine Dwarf-Shrubland	2,289.3
Rocky Mountain Alpine Turf	647.1
Rocky Mountain Alpine/Montane Sparsely Vegetated Systems	1,157.5
Rocky Mountain Alpine/Montane Sparsely Vegetated Systems II	73,626.1
Rocky Mountain Aspen Forest and Woodland	82,675.3
Rocky Mountain Bigtooth Maple Ravine Woodland	566.9
Rocky Mountain Foothill Limber Pine-Juniper Woodland	45.4
Rocky Mountain Gambel Oak-Mixed Montane Shrubland	14,426.3
Rocky Mountain Lodgepole Pine Forest	130,903.4
Rocky Mountain Lower Montane-Foothill Shrubland	12,706.4
Rocky Mountain Montane Riparian Forest and Woodland	14,900.7
Rocky Mountain Montane Riparian Shrubland	1,504.3
Rocky Mountain Subalpine Dry-Mesic Spruce-Fir Forest and Woodland	171,223.4
Rocky Mountain Subalpine Mesic-Wet Spruce-Fir Forest and Woodland	76.7
Rocky Mountain Subalpine/Upper Montane Riparian Forest and Woodland	22.9
Rocky Mountain Subalpine/Upper Montane Riparian Shrubland	2,368.1
Rocky Mountain Subalpine-Montane Limber-Bristlecone Pine Woodland	31.6
Rocky Mountain Subalpine-Montane Mesic Meadow	25,372.9

Table VEG2. LANDFIRE Vegetation Types Predicted to Occur (Duchesne County – Acres)

LANDFIRE Vegetation Type	Duchesne County (Acres)
Rocky Mountain Wetland-Herbaceous	3,648.9
Snow-Ice	40.4
Southern Colorado Plateau Sand Shrubland	416.9
Southern Rocky Mountain Dry-Mesic Montane Mixed Conifer Forest and Woodland	22,805.2
Southern Rocky Mountain Mesic Montane Mixed Conifer Forest and Woodland	29,300.4
Southern Rocky Mountain Montane-Subalpine Grassland	2,094.8
Southern Rocky Mountain Ponderosa Pine Savanna	4.7
Southern Rocky Mountain Ponderosa Pine Woodland	6,956.0
Western Cool Temperate Close Grown Crop	33,296.9
Western Cool Temperate Developed Ruderal Deciduous Forest	1,239.1
Western Cool Temperate Developed Ruderal Evergreen Forest	3,549.0
Western Cool Temperate Developed Ruderal Grassland	464.4
Western Cool Temperate Developed Ruderal Mixed Forest	0.4
Western Cool Temperate Developed Ruderal Shrubland	18,670.0
Western Cool Temperate Fallow/Idle Cropland	776.8
Western Cool Temperate Orchard	2.0
Western Cool Temperate Pasture and Hayland	91,340.8
Western Cool Temperate Row Crop	3,926.1
Western Cool Temperate Row Crop - Close Grown Crop	0.2
Western Cool Temperate Undeveloped Ruderal Deciduous Forest	11.3
Western Cool Temperate Undeveloped Ruderal Evergreen Forest	30.9
Western Cool Temperate Undeveloped Ruderal Grassland	0.7
Western Cool Temperate Undeveloped Ruderal Shrubland	38.2
Western Cool Temperate Urban Deciduous Forest	303.0
Western Cool Temperate Urban Evergreen Forest	745.4
Western Cool Temperate Urban Herbaceous	2,337.3
Western Cool Temperate Urban Mixed Forest	112.9
Western Cool Temperate Urban Shrubland	3,945.9
Western Cool Temperate Wheat	138.6
Western Warm Temperate Close Grown Crop	6.2
Western Warm Temperate Developed Ruderal Deciduous	0.4

Table VEG2. LANDFIRE Vegetation Types Predicted to Occur (Duchesne County – Acres)

LANDFIRE Vegetation Type	Duchesne County (Acres)
Forest	
Western Warm Temperate Developed Ruderal Evergreen Forest	1.8
Western Warm Temperate Developed Ruderal Grassland	0.2
Western Warm Temperate Developed Ruderal Shrubland	12.9
Western Warm Temperate Fallow/Idle Cropland	0.7
Western Warm Temperate Pasture and Hayland	116.7
Western Warm Temperate Row Crop	2.0
Total	2,077,017.5

Source: LANDFIRE database

1
 2 According to the 1986 Land and Resource Management Plan for the Ashley National Forest,
 3 there are 512,578 acres of commercial timber stands in the Ashley National Forest that are
 4 composed of Lodgepole pine, ponderosa pine, Douglas-fir, subalpine fir, Engelmann spruce, and
 5 aspen (U.S. Department of Agriculture 1986). Of the 512,578 acres, Lodgepole pine accounts for
 6 approximately 240,263 acres. Lodgepole pines and ponderosa pines are highly susceptible to
 7 infestation by the mountain pine beetle, which have killed the majority of these two tree species
 8 across the forest.

9
 10 Successful vegetation reclamation following disturbance is difficult in the Uintah Basin because
 11 of the presence of noxious and invasive weed species, prolonged drought conditions, and a high
 12 percentage of soils with restoration limiting characteristics (BLM 2010).

13
 14 Vegetation in the Uintah Basin has been affected by surface disturbance from oil and gas
 15 development. In 2011, the total estimated existing surface disturbance associated with oil and gas
 16 development in the Uintah Basin was 23,811 acres. Estimated foreseeable surface disturbance
 17 associated with oil and gas development is 44,219 acres (BLM 2012). Information on
 18 reclamation efforts is not available.

19
 20 **Objectives**

- 21
 22 1. Manage vegetation, specifically forage, to benefit livestock and wildlife and to contribute to
 23 the recreation and tourism industry.
 24
 25 2. Reduce or eliminate noxious weed infestations and minimize the establishment of new
 26 weed species across jurisdictional boundaries using adaptive management and integrated
 27 weed management approaches.
 28
 29

- 1 3. Manage the spread of invasive species and the encroachment of native species like
2 sagebrush and juniper, to benefit wildlife, recreation, grazing, and water quality.
3
- 4 4. Revegetate and restore areas where weeds have been controlled by seeding desirable
5 native plant species.
6
- 7 5. Reduce the spread of the mountain pine beetle through forest management practices.
8
- 9 6. Enhance forest health through active forest management (vegetation treatments) to benefit
10 grazing, recreation, water quality, and optimal yield.
11

12 **Policies**

- 13
- 14 1. Comply with existing state, county, and federal rules, regulations, ordinances, and
15 directives pertaining to noxious weeds.
16
- 17 2. Comply with existing state, county, and federal rules, regulations, and directives
18 pertaining to reclamation and revegetation following surface disturbance.
19
- 20 3. Work cooperatively with other agencies and entities to restore natural vegetation
21 composition to enhance ecosystem function.
22

1 **Section 28. Resource Management Plan for the Twin Knolls -**
2 **Wrinkles Road Region of Duchesne County**

3
4 **Subject Lands**

5
6 This section of the Duchesne County Resource Management Plan applies to those certain areas of
7 land in southeastern Duchesne County, which the United States Bureau of Land Management
8 (“BLM”) in its 1999 Wilderness Inventory Report labeled as follows:
9

10 Desolation Canyon Unit 1, located in:

11 Sections 23-27 and 33-36 of Township 11S Range 15E,

12 Sections 15-16 and 19-36 of Township 11S Range 16E

13 Sections 2-5, 8-16, 19-23 and 26-35 of Township 11S Range 17E
14

15 This plan also applies to all other areas of land located in any townships and ranges of
16 southeastern Duchesne County, which an organization by the name of the Utah Wilderness
17 Coalition (“UWC”) has included in its “Citizen’s Proposal for Wilderness in Utah” for the Book
18 Cliffs Region, according to the map thereof set forth in the UWC internet web site, address
19 <http://www.protectwildutah.org/proposal/index>, as it existed on April 15, 2007, including the
20 following areas labeled as follows in the Book Cliffs Region portion of the said UWC internet
21 web site:
22

23 Desbrough Canyon, aka Desolation Canyon, located in parts of:

24 Township 10S Range 17 E

25 Township 11S Range 15E

26 Township 11S Range 16E

27 Township 11S range 17E
28

29 For purposes of this plan, all of the above-described lands are collectively referred to herein as
30 the “Twin Knolls/Wrinkles Road Region, and are illustrated more fully in the official map
31 attached to Duchesne County Resolution #07-15 (also attached hereto as Map #52). Any
32 reference hereafter to the term “Twin Knolls/Wrinkles Road Region” shall refer to any and all of
33 the above-described land areas.
34

35 **Clarification of Ongoing Plans, Policies and Position**

36
37 It is Duchesne County’s intent and purpose to clarify the public land use policies within the
38 Duchesne County General Plan to include this supplement pertaining to the Twin
39 Knolls/Wrinkles Road Region. These policies are intended to supplement the general plan and
40 resource management plan policies that apply countywide. Duchesne County declares its plan
41 for the subject region to be as follows:
42
43

1 **Achieve and Maintain a Continuing Yield of Mineral Resources in the Twin**
2 **Knolls/Wrinkles Road Region at the Highest Reasonably Sustainable Levels**

3
4 Development of the solid, fluid and gaseous mineral resources in the Twin Knolls/Wrinkles
5 Road Region is an important part of the economy of Duchesne County.

6
7 Duchesne County recognizes that it is technically feasible to access mineral and energy resources
8 while preserving non-mineral and non-energy resources.

9
10 All solid, fluid and gaseous mineral resources in the Twin Knolls/Wrinkles Road Region that
11 exist in economic quantities and are recoverable with foreseeable technology should be made
12 available for development.

13
14 Physical and administrative access to mineral resources must be maintained while providing
15 appropriate protection to other resources and uses. Lands shown to have reasonable mineral
16 potential in the Twin Knolls/Wrinkles Road Region should be open to oil and gas leasing with
17 economically and technically viable stipulations and conditions that will protect the lands against
18 unreasonable and irreparable harm to significant resource values. This should include reasonable
19 and effective mitigation and reclamation measures and bonding for such where necessary.

20
21 Fluid and gaseous minerals should be protected against waste and drainage.

22
23 Any previous lease restrictions in the Twin Knolls/Wrinkles Road Region that are no longer
24 necessary or effective should be modified, waived or removed.

25
26 Restrictions against surface occupancy should be modified, waived or if necessary removed
27 where it is shown that directional drilling is not ecologically necessary, where directional drilling
28 is not feasible from an economic or engineering standpoint, or where it is shown that directional
29 drilling will in effect sterilize the mineral and energy resources beneath the area.

30
31 Applications for permission to drill that meet standard qualifications, including (where
32 appropriate) reasonable and effective mitigation and reclamation requirements, should be
33 expeditiously processed and granted.

34
35 Any moratorium or withdrawals that may exist against the issuance of additional mining patents
36 and oil and gas leases in the Twin Knolls/Wrinkles Road Region should be carefully evaluated
37 for removal.

38
39 **Achieve and Maintain Livestock Grazing in the Twin Knolls/Wrinkles Road Region at the**
40 **Highest Reasonably Sustainable Levels**

41
42 Domestic livestock and wildlife forage in the Twin Knolls/Wrinkles Road Region are expressed
43 in animal unit months (AUMs), and are allocated as such in the current RMP. Forage allocated to
44 livestock should be no less than the maximum number of animal unit months sustainable by

1 range conditions in grazing districts and allotments in the Twin Knolls/Wrinkles Road Region,
2 based on an on-the-ground and scientific analysis.

3
4 Where once-available grazing forage in the Twin Knolls/Wrinkles Road Region has succeeded to
5 pinion, juniper and other woody vegetation and associated biomass, or where rangeland health in
6 the Twin Knolls/Wrinkles Road Region has suffered for any other reason, a vigorous program of
7 chemical or mechanical treatments such as chaining, logging, seeding, lopping, thinning,
8 burning, range improvements and/or other vegetative treatments should be applied to remove this
9 woody vegetation and biomass and stimulate the return of the grazing forage to its historic levels
10 for the mutual benefit of livestock, wildlife and other agricultural industries in the Twin
11 Knolls/Wrinkles Road Region.

12
13 Duchesne County regards the land which comprises the grazing districts and allotments in the
14 Twin Knolls/Wrinkles Road Region, including the Devil’s Canyon, Water Canyon No. 2, Bull
15 Canyon, Little Desert and Twin Knolls allotments, as still more valuable for grazing than for any
16 other use which excludes livestock grazing, such as conversion of AUMs to wildlife, wild horses,
17 watersheds or wilderness values. Accordingly, it is Duchesne County’s plan that animal unit
18 months in the Twin Knolls/Wrinkles Road Region not be relinquished or retired in favor of
19 conservation, wildlife and other uses.

20
21 Duchesne County recognizes that from time to time a bona fide livestock permittee in the Twin
22 Knolls/Wrinkles Road Region, acting in good faith and not to circumvent the intent of the
23 BLM’s grazing regulations, may temporarily cease grazing operations without losing his or her
24 permitted AUMs.

25
26 BLM imposed suspensions of use or other reductions in domestic livestock animal unit months
27 in the Twin Knolls/Wrinkles Road Region should be temporary and scientifically based on
28 rangeland conditions.

29
30 The transfer of grazing animal unit months (“AUMs”) to wildlife, wild horses or watersheds for
31 reasons of rangeland health or any other purpose is opposed by Duchesne County as illogical.
32 There is already imputed in each AUM a reasonable amount of forage for the wildlife
33 component.

34
35 Any grazing animal unit months that may have been reduced in the Twin Knolls/Wrinkles Road
36 Region due to rangeland health concerns should be restored to livestock when rangeland
37 conditions improve and not converted to wildlife use.

38
39 **Manage the Watershed in the Twin Knolls/Wrinkles Road Region to Achieve and Maintain**
40 **Water Resources at the Highest Reasonably Sustainable Levels**

41
42 All water resources that derive in the Twin Knolls/Wrinkles Road Region are the property of the
43 State of Utah. They are owned exclusively by the State in trust for its citizens.
44

1 As a political subdivision of the State, Duchesne County has a legitimate interest in seeing that
2 all reasonable steps are taken to preserve, maintain, enhance and where reasonable develop those
3 water resources.

4
5 With increased demands on water resources brought on by population increases in the Colorado
6 River drainage area, and with recent drier precipitation trends which call into question in the
7 minds of some whether the climate of the Colorado River drainage area is changing, it is
8 important now more than ever that management practices be employed in the Twin
9 Knolls/Wrinkles Road Region to restore, maintain and maximize water resources there. This
10 includes restoration, maintenance and enhancement of the watershed in the Twin
11 Knolls/Wrinkles Road Region.

12
13 Where water resources in the Twin Knolls/Wrinkles Road Region have diminished because
14 once-existing grasses have succeeded to pinion, juniper and other woody vegetation and
15 associated biomass, a vigorous program of chemical or mechanical treatments should be applied
16 to promptly remove this woody vegetation and biomass, stimulate the return of the grasses to
17 historic levels, and thereby provide a watershed that maximizes water yield and water quality for
18 livestock, wildlife, and human uses.

19
20 Duchesne County's strategy and plan for protecting the Twin Knolls/Wrinkles Road Region
21 watershed is to deter unauthorized cross-country OHV use in the Twin Knolls/Wrinkles Road
22 Region. The best way to achieve this is to give OHV users a reasonable system of trails in the
23 Twin Knolls/Wrinkles Road Region on which to legitimately operate their OHVs. Closing the
24 Twin Knolls/Wrinkles Road Region to all OHV use will only spur increased unauthorized cross-
25 country OHV use to the detriment of the Twin Knolls/Wrinkles Road Region watershed.

26
27 **Achieve and Maintain Traditional Access to Outdoor Recreational Opportunities Available**
28 **on Public Lands in the Twin Knolls/Wrinkles Road Region**

29
30 Traditionally, citizens of Duchesne County and visitors have enjoyed many forms of outdoor
31 recreation in the Twin Knolls/Wrinkles Road Region, such as hunting, fishing, hiking, family and
32 group parties, family and group campouts and campfires, rock hounding, OHV travel, geological
33 exploring, pioneering, parking their RV, or sightseeing in their personal vehicles. Accordingly,
34 all trails in the Twin Knolls/Wrinkles Road Region, which historically have been open to OHV
35 use, should remain open.

36
37 Public land outdoor recreational access in the Twin Knolls/Wrinkles Road Region should not
38 discriminate in favor of one particular mode of recreation to the exclusion of others.

39
40 Traditionally, outdoor recreational opportunities in the Twin Knolls/Wrinkles Road Region have
41 been open and accessible to working class families, to families with small children, to the
42 physically impaired or disabled, to the middle aged and elderly, to persons of different cultures
43 for whom a "primitive solitary hike" or "back-country experience" may not be the preferred form
44 of recreating, and to the economically disadvantaged and underprivileged who lack the money

1 and ability to take the time off work necessary to get outfitted for a multi-day “primitive hike” to
2 reach those destinations. All of society should not be forced to participate in a “solitude
3 experience” or a “primitive experience” as the one and only mode of outdoor recreation in the
4 Twin Knolls/Wrinkles Road Region.

5
6 Any segment of society, for that matter, who want to recreate in the Twin Knolls/Wrinkles Road
7 Region are entitled to motorized access to that recreation if they desire it, and are entitled to all
8 traditional forms of outdoor recreation if they desire it. They should not have to hike into the
9 outdoor recreational destinations in the Twin Knolls/Wrinkles Road Region if they do not want
10 to or are physically unable or cannot afford such an activity.

11
12 Hence Duchesne County’s plan calls for continued public motorized access to all traditional
13 outdoor recreational destinations in all areas of the Twin Knolls/Wrinkles Road Region for all
14 such segments of the public. Duchesne County specifically opposes restricting outdoor
15 recreation in the Twin Knolls/Wrinkles Road Region to just one form - available for those who
16 have enough time, money and athletic ability to hike into the destinations of the Twin
17 Knolls/Wrinkles Road Region for a “solitude wilderness experience” or the like.

18
19 Accordingly, all roads in the Twin Knolls/Wrinkles Road Region that are part of Duchesne
20 County’s duly adopted transportation plan should remain open to motorized travel. None of
21 them should be closed, and Duchesne County should have the continued ability to maintain and
22 repair those roads, and where reasonably necessary make improvements thereon. All trails in the
23 Twin Knolls/Wrinkles Road Region that have been open to OHV use should continue to remain
24 open. Traditional levels of wildlife hunting and fishing should continue. Traditional levels of
25 group camping, group day use and all other traditional forms of outdoor recreation (motorized
26 and non-motorized) should continue.

27
28 **Maintain and Keep Open All Roads on Public Lands in the Twin Knolls/Wrinkles Road**
29 **Region That Appear on Duchesne County’s Most Recent Transportation Map, and Provide**
30 **for Such Additional Roads, Trails, Easements and Rights of Way as may be Necessary**
31 **from Time to Time**

32
33 Duchesne County’s transportation plan includes an official countywide transportation map,
34 available to the public for viewing and copying, showing all County B and D roads.

35
36 That portion of Duchesne County’s official transportation map, which shows all County B and D
37 roads in the Twin Knolls/Wrinkles Road Region, is considered to be part of Duchesne County’s
38 plan specifically applicable to the Twin Knolls/Wrinkles Road Region. All such public roads are
39 shown on the map attached to Resolution #07-15 and on Map #43.

40
41 Duchesne County plans to keep all such roads in the Twin Knolls/Wrinkles Road Region open to
42 public use, reasonably maintained and in good repair. Duchesne County will consult with the
43 BLM about any required improvements to such roads, reserving the right to request court
44 intervention and relief in the event Duchesne County and BLM cannot reach an agreement on

1 such proposed improvements after reasonable efforts at consultation.

2
3 Additional roads, trails and transportation corridors may be needed in the Twin Knolls/Wrinkles
4 Road Region from time to time to facilitate reasonable access to a broad range of resources and
5 opportunities throughout the Twin Knolls/Wrinkles Road Region, including livestock operations
6 and improvements, solid, fluid and gaseous mineral operations, energy transportation,
7 recreational opportunities and operations, search and rescue needs, other public safety needs,
8 access to public lands for people with disabilities and the elderly, and access to Utah school and
9 institutional trust lands in the Twin Knolls/Wrinkles Road Region to accomplish the purposes of
10 those lands.

11
12 **Manage the Twin Knolls/Wrinkles Road Region so as to Protect Prehistoric Rock Art,**
13 **Three Dimensional Structures and Other Artifacts and Sites Recognized as Culturally**
14 **Important and Significant by the State Historic Preservation Officer**

15
16 Reasonable mineral development in the Twin Knolls/Wrinkles Road Region can occur while at
17 the same time protecting prehistoric rock art, three-dimensional structures and other artifacts and
18 sites recognized as culturally important and significant by the state historic preservation officer.
19 Existing federal and state regulations adequately protect these resources.

20
21 Reasonable and effective stipulations and conditions to protect against damage to the above
22 described cultural resources should accompany decisions to issue mineral leases, permit drilling
23 or permit seismic activities in the Twin Knolls/Wrinkles Road Region. Such drilling and seismic
24 activities should not be disallowed merely because they are in the immediate vicinity of the
25 above-described cultural resources if it is shown to the satisfaction of BLM and Duchesne
26 County that such activities will not damage those resources.

27
28 **Manage the Twin Knolls/Wrinkles Road Region So As to Not Interfere With the Property**
29 **Rights of Private Landowners Located in That Region**

30
31 There are parcels of private fee land located in the Twin Knolls/Wrinkles Road Region, including
32 several in the Nine Mile Canyon area.

33
34 Land management policies and standards on BLM land in the Twin Knolls/Wrinkles Road
35 Region should not interfere with the property rights of private landowners in the region to enjoy
36 and engage in traditional uses and activities on their private property, consistent with controlling
37 County zoning and land use laws.

38
39 Nor should those landowners and their guests be denied the right of motorized access to their
40 private property consistent with past uses of those private land parcels.

41
42 **Manage the Twin Knolls/Wrinkles Road Region So As to Not Interfere With the Fiduciary**
43 **Responsibility of the State School and Institutional Trust Lands Administration (“SITLA”)**
44 **With Respect to Trust Lands Located in That Region**

1 Scattered throughout the Twin Knolls/Wrinkles Road Region are sections of school and
2 institutional trust land owned by the State of Utah and administered by SITLA in trust for the
3 benefit of public schools and other institutions (“school trust lands”), as mandated in Utah’s
4 Enabling Act and State Constitution.

5
6 As trustee, SITLA has a fiduciary responsibility to manage those school trust lands to generate
7 maximum revenue therefrom, by making them available for sale and private development, and
8 for other multiple use consumptive activities such as mineral development, grazing, recreation,
9 timber, agriculture and the like, all for the financial benefit of Utah’s public schools and other
10 institutional beneficiaries.

11
12 The BLM Vernal RMP states that the BLM will “grant the State of Utah reasonable access to
13 state lands for economic purposes, on a case-by-case basis, as per the State of Utah v. Andrus
14 October 1, 1979 (Cotter Decision).” Land management policies and standards on BLM land in
15 the Twin Knolls/Wrinkles Road Region should not interfere with SITLA’s ability to carry out its
16 fiduciary responsibilities. Nor should SITLA be denied the right of motorized access to those
17 school trust sections to enable SITLA to put those sections to use in order to carry out SITLA’s
18 fiduciary responsibilities.

19
20 **Managing Part or All of the Twin Knolls/Wrinkles Road Region for Wilderness**
21 **Characteristics Would Violate FLPMA, Contradict the State’s Public Land Policy and**
22 **Contradict the Foregoing Plans of Duchesne County for Managing the Twin**
23 **Knolls/Wrinkles Road Region**

24
25 As Utah Code § 63-38d-401(6)(b) indicates, managing the Twin Knolls/Wrinkles Road Region
26 under a “wilderness characteristics” management standard is not the State of Utah’s policy for
27 multiple use-sustained yield management on public lands that are not wilderness or wilderness
28 study areas. Nor is it Duchesne County’s. A “wilderness characteristics” management standard
29 for the Twin Knolls/Wrinkles Road Region is de facto wilderness management by another name.
30 It is incompatible with and would therefore frustrate and defeat the foregoing plans of Duchesne
31 County for managing the Twin Knolls/Wrinkles Road Region. The Duchesne County plan for
32 public lands as well as written communications by Duchesne County to BLM, specify that
33 additional wilderness designation shall be opposed.

34
35 A “wilderness characteristics” management standard for the Twin Knolls/Wrinkles Road Region
36 also would violate FLPMA and the 2003 Utah v. Norton Settlement Agreement (“Agreement”)
37 between Utah and Department of Interior.

38
39 Managing Post-603 Lands¹ pursuant to the Interim Management Policy of 1979 (“IMP”) is
40 inconsistent with BLM authority. (Agreement p. 6 & 13.a.)
41

¹ As that term is defined in the *Utah v. Norton* settlement agreement of April 11, 2003.

1 Managing Post-603 Lands to preserve their alleged wilderness character strays from the multiple
2 use mandate in a manner inconsistent with FLPMA § Section 603 limited delegation of authority.
3 (Agreement p. 9 & 17)
4

5 The 1999 Utah Wilderness Re-inventory shall not be used to manage public lands “as if” they are
6 or may become Wilderness Study Areas (WSA). (Agreement p. 13 & 4)
7

8 DOI/BLM will not establish, manage “or otherwise treat” Post-603 Lands as WSAs or as
9 wilderness pursuant to the Section 202 process absent congressional authorization (Agreement p.
10 14 & 7).
11

12 DOI/BLM will remove from the proposed revised resource management plans in the Vernal,
13 Price, Richfield, Monticello and Moab Districts, any and all references or plans to classify or
14 manage Post-603 BLM lands “as if” they are or may become WSAs. (Agreement p. 14 & 7)
15

16 The 2008 Vernal RMP did not designate any WSAs in the Twin Knolls/Wrinkles Road Region
17 and existing management is consistent with this policy.
18

19 **Imposing Area of Critical Environmental Concern (“ACEC”) Designation Would**
20 **Contradict Duchesne County’s Plan for Managing the Twin Knolls/Wrinkles Road Region**
21

22 It is Duchesne County’s policy that no part of the Twin Knolls/Wrinkles Road Region should be
23 designated an (“ACEC”) unless it is clearly demonstrated to the satisfaction of the Duchesne
24 County Commission that:
25

- 26 1. The proposed ACEC satisfies all the definitional requirements of the Federal Land Policy
27 and Management Act of 1976, 43 U.S.C. § 1702(a).
28
- 29 2. The proposed ACEC is limited in geographic size and that the proposed management
30 prescriptions are limited in scope to the minimum necessary to specifically protect and
31 prevent irreparable damage to values that are objectively shown to be relevant and
32 important or to protect human life or ensure safety from natural hazards.
33
- 34 3. The proposed ACEC is limited only to areas that are already developed or used or to areas
35 where no development is required.
36
- 37 4. The proposed ACEC designation and protection is necessary to protect not just a change
38 in ground conditions or visual resources that can be reclaimed or reversed eventually (like
39 reclaiming a natural gas well site after pumping operations are complete). Rather, the
40 damage must be shown in all respects to be truly irreparable and justified on short-term
41 and long-term horizons.
42
- 43 5. The proposed ACEC designation and protection will not be applied redundantly over
44 existing protections available under FLPMA multiple use sustained yield management.

- 1 6. The proposed ACEC designation is not a substitute for a wilderness suitability
2 determination, nor is it offered as a means to manage a non-WSA for wilderness
3 characteristics.
4

5 The foregoing summarizes the ACEC criteria of the State of Utah as well as Duchesne County.
6 See Utah Code § 63-38d-401(8) (c). And the foregoing summarizes the criteria of FLPMA.
7

8 Duchesne County is supportive of an ACEC in the Nine Mile Canyon area of the subject region,
9 located in Sections 31, 33, 34 and 35, Township 11 South, Range 17 East, provided that the
10 boundaries do not extend beyond the rims of the canyon visible from the canyon bottom.

11 Extension of an ACEC beyond the rims defined above would be incompatible with and would
12 therefore frustrate and defeat the foregoing plans of Duchesne County for managing the Twin
13 Knolls/Wrinkles Road Region. The 2008 Vernal RMP did not extend ACEC designation beyond
14 the canyon rim as specified above.
15

16 **Including any River Segment in the Twin Knolls/Wrinkles Road Region in the National**
17 **Wild and Scenic River System Would Violate the National Wild and Scenic Rivers Act and**
18 **Related Regulations, Contradict the State’s Public Land Policy, and Contradict the**
19 **Foregoing Plans of Duchesne County for Managing the Twin Knolls/Wrinkles Road Region**
20

21 It is Duchesne County’s policy that no river segment should be included in the National Wild and
22 Scenic River System unless:
23

- 24 1. Water is present and flowing at all times.
25
26 2. The water-related value is considered outstandingly remarkable within a region of
27 comparison consisting of one of three physiographic provinces of the state, and that the
28 rationale and justification for the conclusion are disclosed.
29
30 3. BLM fully disclaims in writing any interest in water rights with respect to the subject
31 segment.
32
33 4. It is clearly demonstrated that including the segment in the NWSR system will not
34 prevent, reduce, impair, or otherwise interfere with the state and its citizen’s enjoyment of
35 complete and exclusive water rights in and to rivers of the state as determined by the laws
36 of the state, nor interfere with or impair local, state, regional, or interstate water compacts
37 to which the State or Duchesne County is a party.
38
39 5. The rationale and justification for the proposed addition, including a comparison with
40 protections offered by other management tools, is clearly analyzed within the multiple-
41 use mandate, and the results disclosed.
42
43 6. It is clearly demonstrated that BLM does not intend to use such a designation to
44 improperly impose Class I or II Visual Resource Management prescriptions.

1 7. It is clearly demonstrated that the proposed addition will not adversely impact the local
2 economy agricultural and industrial operations, outdoor recreation, water rights, water
3 quality, water resource planning, and access to and across river corridors in both upstream
4 and downstream directions from the proposed river segment.

5
6 The foregoing also summarizes the wild and scenic river criteria of the State of Utah, Utah Code
7 § 63-38d-401(8) (a), as well as the criteria of Duchesne County.

8
9 There is no part of Nine Mile Creek or any other river segment in the Twin Knolls/Wrinkles
10 Road Region that meets the above criteria. Hence, no river segment in the Twin Knolls/Wrinkles
11 Road Region should be included in the National Wild and Scenic River system. The 2008
12 Vernal RMP designated no Wild and Scenic Rivers in this area, in compliance with this policy.

13
14 **A Visual Resource Management Class I or II Rating for Any Part of the Twin**
15 **Knolls/Wrinkles Road Region Would Contradict the State’s Public Land Policy and**
16 **Contradict Duchesne County’s Plan for Managing the Twin Knolls/Wrinkles Road Region**

17
18 The objectives of BLM Class I and II Visual Resource Management (VRM) are not compatible
19 with, and would therefore frustrate and interfere with, Duchesne County’s foregoing plan
20 clarification for the Twin Knolls/Wrinkles Road Region. VRM Class I and II designations may
21 adversely affect existing rights such as mineral leases, livestock grazing, and the ability to
22 develop public lands. VRM inventories must be modified to permit full enjoyment and
23 development of underlying land use authorizations and use potential. VRM classifications shall
24 not be enforced if in conflict with underlying land use or existing oil and gas leases.

25
26 Duchesne County’s foregoing plan clarification for the Twin Knolls/Wrinkles Road Region is
27 generally consistent with either Class III or Class IV VRM, depending on the precise area. The
28 2008 Vernal RMP did not designate any Class I or Class II VRM areas in the subject region,
29 except in the Nine Mile Canyon ACEC, below the rim of the canyon, which is in compliance
30 with county policy.

31
32

Section 29. Utility Corridors

Utility Corridors

Introduction

Utility corridors are linear tracts of land set aside for the placement of the 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, and telecommunications conduit.

A utility corridor (also known as a “right-of-way” or “easement”) may be located on private, state, tribal or 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 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 Duchesne County, they are most often on land administered by the US Bureau of Land Management (BLM) or US Forest Service (USFS), 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 government.

Legal context

The primary federal laws regulating utility corridor placement on BLM and USFS 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. 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](#)

1 [Environmental Policy Act of 1969](#) (NEPA), which stipulates that all projects with the potential
2 to impact the environment must be evaluated via an environmental assessment, environmental
3 impact statement, and other documentation. Regulatory laws that require avoidance,
4 minimization, and possibly mitigation include but are not limited to:

- 5 • The Antiquities Protection Act of 1993, which protects significant cultural
6 resources, historic properties, and paleontological resources from negative
7 impacts.
- 8 • The [Clean Water Act of 1972](#) , which, among other requirements, regulates the
9 discharge of pollutants and fill material into certain jurisdictional waters (also
10 known as “waters of the United States”).
- 11 • The [Endangered Species Act](#) , which is administered by USFWS, regulates
12 potential project impacts to threatened and endangered species.

13
14 Section 368 of the [Energy Policy Act of 2005](#) directs federal agencies to designate energy
15 corridors on federal lands in the western United States. This set of regulations was enacted with
16 the goal to “improve reliability, relieve congestion, and enhance the capability of the national
17 grid to deliver electricity” (Westwide Energy Corridor Guidebook). In compliance with this
18 directive, both the BLM and USFS in Utah have identified utility corridor locations and amended
19 their resource management plans to accommodate the placement and construction of the
20 designated corridors.

21 **Findings**

22
23
24 Corridors for utility infrastructure are commonplace in Duchesne County, crossing private, state,
25 tribal, and federal lands. On BLM lands, existing utility corridors are usually identified in land-
26 use plans for each BLM field office (the Vernal Field Office for Duchesne County). The plans
27 that are pertinent to Duchesne County can be found on the BLM’s planning website. For Forest
28 Service lands in Duchesne County, existing utility corridors are identified in the Ashley National
29 Forest plan. For lands owned by state entities, such as Utah School and Institutional Trust Lands
30 Administration (SITLA), Utah Division of Wildlife Resources, or private landowners, utility
31 corridors are typically identified as easements on land-title documents. This information can be
32 found at the Duchesne County Recorder’s office.

33
34 To establish new utility corridors on state lands, such as those owned by SITLA, the office may
35 issue easements for up to 30-year terms, which can be acquired through the SITLA application
36 process. Utility corridors on tribal lands require compliance with rules administered by the
37 Bureau of Indian Affairs. Utility corridors on private lands require negotiation with individual
38 landowners to establish specific conditions, recordable easement deeds and financial
39 compensation.

40
41 Establishing a new utility corridor on or through federal land for electrical transmission,
42 pipelines, and other utility infrastructure is a major undertaking that may require years to
43 complete. The design, analysis, public involvement, and documentation required by federal
44 regulations are very complicated. Consider also that regulations and compliance can vary

1 between jurisdictions, regions, and even within agencies. Navigating these processes and
2 protocols can be extremely challenging.

3
4 Recognizing the complex nature of placing utility corridors on public lands, and in light of the
5 growing need for energy grid improvements, Congress passed the Energy Policy Act of 2005.
6 Section 368 of the act directs federal agencies to: (1) designate energy corridors on federal lands
7 in 11 western states; (2) establish procedures to ensure that additional corridors are identified and
8 designated as necessary; and (3) expedite applications to construct or modify oil, gas, and
9 hydrogen pipelines and electricity transmission and distribution facilities. These corridors are
10 referred to in this document as “ [Section 368](#)” energy corridors . There are no Section 368
11 corridors within Duchesne County.

12
13 Section 368 energy corridors may facilitate some utility transmission needs in Utah, however,
14 there are other considerations for utility corridor planning. Even though an environmental impact
15 statement was completed for the Section 368 energy corridor designation, standard NEPA
16 analysis procedures must occur again before any utility infrastructure is permitted for
17 construction. The new round of analyses will use specific information about structure types,
18 placement, and disturbance limits to determine potential impacts from the proposed project.

19
20 Other concerns for Section 368 energy corridors include the challenges of siting transmission
21 infrastructure on private and state land inholdings embedded along designated Section 368
22 energy corridors, as well as where corridors cross out of federal lands (Fisher 2021).
23 Furthermore, designated Section 368 energy corridors traverse only a portion of Utah, leaving the
24 majority of the state too far from the corridors to be useful, especially for smaller transmission
25 and distribution systems.

26
27 Utah’s utility corridors and their capacity to accommodate existing and future utility needs was
28 identified as a concern by Utah’s Public Lands Policy Coordination Office and is also a concern
29 of Duchesne County. The issue of electrical transmission was examined in the [2021 Utah
30 Transmission Study](#) , which concluded that (under scenarios of high renewable energy buildout
31 in southern Utah) transmission needs might exceed transmission capacity (Utah Transmission
32 Study). However, the study did not address the specific placement of new infrastructure or
33 whether Section 368 energy corridors would be used. Another study by the National Renewable
34 Energy Laboratory (NREL) looked at proposed pipeline construction within Section 368 energy
35 corridors and found that new pipeline construction in Utah is unlikely (Energy Futures Synthesis
36 for West-wide Section 368 Energy Corridor).

37
38 Currently, the only major natural gas transmission pipelines planned for construction in Utah are
39 a 24-mile pipeline from Central Gate Station (on the Kern River pipeline) to St. George and to
40 the Intermountain Power Plant (which will not utilize Section 368 energy corridors) (Dominion
41 Energy 2020), and a new lateral connection from the Kern River Pipeline near Holden, Utah, to
42 the Intermountain Power Plant near Delta (Delta Lateral Project). The major natural gas
43 pipelines in Duchesne County are shown on the Natural Gas Pipeline Map (see Appendix B) and
44 in Table 1 below. Additional natural gas pipeline capacity is needed in Duchesne County to

1 reduce the need to flare natural gas at local well sites and gas plants.

2
 3 **Table 1: Duchesne County’s existing natural gas pipeline length, by operator.**

4

<u>Natural Gas Pipeline length</u>	
<u>Operator</u>	<u>Total (miles)</u>
<u>Questar</u>	<u>76.6</u>
<u>Grand Total</u>	<u>76.6</u>

5 **Source: U.S. Energy Information Administration), U.S. Natural Gas Interstate and Intrastate**
 6 **Pipelines (EIA 2020a.)**

7
 8 Duchesne County is also traversed by the Chevron crude oil pipeline, which extends from the
 9 Rangely, Colorado area to refineries in the Salt Lake City area (see Table 2 below and the Crude
 10 Oil Pipeline Map in Appendix B.

11
 12 **Table 2: Duchesne County existing oil pipeline length by product type & operator.**

13

<u>Oil Pipeline</u>			
<u>Type</u>	<u>Operator</u>	<u>Pipeline</u>	<u>Total (miles)</u>
<u>Crude Oil Pipeline</u>	<u>CHEVRON</u>	<u>Salt Lake Crude</u>	<u>54.5</u>
<u>Grand Total</u>			<u>54.5</u>

14 **Source: U.S. Energy Information Administration, U.S. Crude Oil Pipelines, HGL Pipelines,**
 15 **and Petroleum Pipelines (EIA 2020b).**

16
 17 According to a regional transmission capacity study completed by the NREL, electrical
 18 transmission projects under development will largely meet projected future transmission
 19 demands according to their most-likely future demand scenario. However, under some scenarios,
 20 future need for new electricity transmission in Utah might exceed the capacity of Section 368
 21 energy corridors, especially when considering the future demand for renewable energy
 22 development and transmission (Energy Futures Synthesis for West-wide Section 368 Energy
 23 Corridor). Furthermore, when considering co-location within corridors, the issues of siting
 24 electric transmission and pipeline projects within the same corridor can require significant
 25 separation distances, which may lead to congested corridors with only a few projects. For
 26 example, according to NREL, “The location of steel pipelines in the vicinity of AC transmission
 27 facilities results in mutual electrical interference problems that can produce damaging effects on
 28 both facilities and potentially the public,” (Westwide Energy Corridor Guidebook).

29
 30 PacifiCorp (Rocky Mountain Power) operates the majority of electricity-transmission capacity in
 31 Utah. Their 2021 Integrated Resource Plan (IRP) describes several future transmission projects,

1 including the Energy Gateway South project, (a portion of which is located within Duchesne
 2 County- see the Electrical Facilities Infrastructure Map in Appendix B) which will increase
 3 power grid capacity, add resilience to the system, and increase access to renewable power
 4 generation in the region (PacifiCorp 2021). Some of these projects may utilize portions of
 5 Section 368 corridors. To improve electrical supply resilience, PacifiCorp participates in the
 6 Western Energy Imbalance Market (EIM), which provides opportunities to increase efficiency
 7 and reliability via shared reliance upon all of its contributors (Energy Strategies). To ensure
 8 reliable access to the distributed electrical power sources provided by EIM membership,
 9 PacifiCorp has reinforced existing high-voltage transmission lines in Utah Valley, northern Utah,
 10 southern Utah, and Yakima, Washington.

11
 12 The Transwest Express transmission line, which would transmit DC power from south-central
 13 Wyoming wind turbines to the desert southwest, is also planned to traverse Duchesne County
 14 (see the Electrical Facilities Infrastructure Map in Appendix B).

15
 16 The Moon Lake Electric Cooperative provides electrical power service in Duchesne County
 17 through the transmission and distribution system depicted on the Electrical Facilities
 18 Infrastructure Map in Appendix B and Table 3 below:

19
 20 **Table 3: Duchesne County’s existing electrical transmission line length by voltage class.**

<u>Alternating Current (AC) Transmission Lines</u>		<u>Substations</u>
<u>Kilovolt Category</u>	<u>Miles</u>	<u>Total (Count)</u>
<u>Under 100</u>	<u>55.3</u>	<u>16</u>
<u>100-200</u>	<u>139.4</u>	<u>12</u>
<u>200-287</u>	<u>0.0</u>	<u>0</u>
<u>345</u>	<u>51.8</u>	<u>0</u>
<u>500</u>	<u>0.0</u>	<u>0</u>
<u>Unknown</u>	<u>0.0</u>	<u>1</u>
<u>Grand Total</u>	<u>246.5</u>	<u>29</u>

22 **Source: Homeland Infrastructure Foundation-Level Data, Electric Power Transmission**
 23 **Lines & Electrical Substations (HIFLD 2021).**

24
 25 **Economic Considerations**

26 Power generation in the western United States is transitioning from carbon-based fossil fuels to
 27 renewable energy. And while power plants in Utah still use coal and natural gas to supply a
 28 significant portion of energy generation, the amount of wind and solar power generated is
 29 increasing every year. Additionally, policies to increase the component of renewable energy
 30 coming from the federal, state, and local governments as well as consumer demands, are likely to

1 increase the demand of renewable energy over the coming decade.

2
3 Utah has abundant potential for renewable energy generation, as identified in the Utah
4 [Renewable Energy Zone](#) study (with Duchesne County having fewer opportunities as set forth
5 in the Renewable Energy subsection of the Energy, Mining & Mineral Resources chapter of this
6 plan). However, renewable energy resources are not always near existing transmission
7 infrastructure. As power generators move to develop these resources, there is a need to
8 simultaneously develop the transmission infrastructure required to convey power to the electric
9 grid. PacifiCorp has plans to invest over \$1 billion to build additional transmission lines to
10 strengthen the high-capacity transmission backbone across their service area (Jon Cox, 2021).
11 However, additional corridors for lower-voltage transmission will still be needed to connect local
12 renewable projects to the primary electric grid.

13
14 Primary economic consideration for utility corridors is the lengthy time periods and high costs
15 required to navigate the federal permitting and compliance processes to place utilities on federal
16 lands. The recent experience of PacifiCorps' development of the Gateway South transmission
17 project (which crossed federal lands both within and outside of Section 368 energy corridors)
18 took over 10 years to complete (Cox 2021). Such long time periods reduce the ability of utility
19 companies to respond to rapidly changing energy policies, such as carbon reduction goals and
20 development of Utah's renewable energy.

21
22 The challenging nature of placing utilities across federal lands has economic implications for
23 Utah and local governments. For communities that have only one supply line for utilities (e.g.,
24 electricity, natural gas, fiber optic), increasing the capacity within an existing utility corridor to
25 provide for growing communities is problematic. Also, attempts to provide redundant utilities to
26 increase robustness and reliability of a given service can be hampered by the lack of multiple
27 utility corridors to connect infrastructure.

28 29 **Goals**

30
31 Maintenance of existing utility corridors and plan for the future development of new utility
32 corridors across federal and state lands to meet projected state and county growth and demand.

33 34 **Objectives**

- 35
- 36 • Encourage utility companies, cooperatives, the Utah Division of Public Utilities and other
37 applicable state and federal agencies to coordinate efforts with the County related to
38 existing and future utility corridors.
 - 39 • Protect access for utility companies to maintain and improve infrastructure and utility
40 corridors.
 - 41 • Expedited federal approval processes and policies for the maintenance of utility corridors
42 and new construction projects.
 - 43 • Support Bureau of Land Management instruction memorandums (e.g. Utah IM-2021-004)
44 that allows utility companies to have additional flexibility to access infrastructure and

1 utility corridors for maintenance purposes and to reduce the risk of wildfire impacts on
2 the utility.

- 3 • Maintain and update wildland fire protection plans to reduce the risk of wildfire in utility
4 corridors.
- 5 • Partner with other entities to avoid, minimize, and mitigate challenges that utility
6 corridors may present to cultural resources and threatened, endangered, and sensitive
7 species.
- 8 • Encourage redundancy and physical separation for utility facilities needed to serve local
9 and regional consumers.
- 10 • Work with federal and state agencies to identify utility corridors needed to access and
11 deliver to foreign or domestic markets, all forms of traditional mineral resources, critical
12 minerals, and renewable energy resources.
- 13 • Continue participating in the Section 368 (Westwide) corridor planning process and
14 development.
- 15 • Ensure that sufficient utility corridors are available to provide essential utilities to local
16 and regional consumers, including in areas with current or future federal special
17 designations.
- 18 • Encourage feasibility studies for different types of utility transmission, distribution, and
19 collection infrastructure.
- 20 • Support innovation to make existing and future utility corridor infrastructure more
21 efficient, reliable, safe, climate-resilient, and sustainable.
- 22 • Support a network of utility corridors for the distribution of crude and refined petroleum
23 products to foreign and domestic markets.
- 24 • Support the development of the Uinta Basin railway corridor.
- 25 • Encourage the provision of fiber optic resources to underserved areas of the county.
- 26 • Ensure that needed water resources are capable of being delivered through existing and
27 future utility corridors in order to meet the needs of the county's citizens.
- 28 • Support the provision of a supply of hydrogen to state highway corridors; potentially via
29 natural gas pipelines.

30
31 **Policies**

- 32
- 33 • The State of Utah is an “any-of-the-above” energy state and Duchesne County supports
34 that approach. Utility corridors must be preserved and developed to transport the
35 complete range of energy resources.
- 36 • Duchesne County supports the State Office of Energy Development’s recommendations
37 provided in the State Energy Plan, the Utah Transmission Study and other reports.
- 38 • Duchesne County supports expedited corridor planning and approvals to address critical
39 infrastructure needs (refer to Executive Order 13807, Section 5(g)).
- 40 • Duchesne County supports development of utility corridors to accommodate pipelines
41 from the natural gas and crude oil producing areas to refineries, export facilities or to
42 other transportation networks.
- 43 • Federal agencies shall recognize and aid utilities in implementing wildland fire protection
44 plans required of qualified utilities under Title 54-24-201 of the Utah Code.

- 1 • Interstate transmission lines should provide access for utilization of energy by citizens of
2 Duchesne County, the state of Utah, or supply significant and continual incentives that
3 benefit the citizens of the county and state.
- 4 • Utility corridors are needed in Duchesne County and the state of Utah to maintain
5 affordable, reliable, abundant, and dispatchable energy at all times.
- 6 • Duchesne County will support minimizing impacts to prime and unique soils and
7 irrigable acres to the maximum extent possible when new utility corridors are being
8 considered.
- 9 • Duchesne County discourages natural gas vent lines (e.g. pig lines) in close proximity to
10 electrical transmission and distribution lines, or other non-compatible operations.
- 11 • Every effort should be made to ensure that wildland fires are not caused by utility
12 providers.
- 13 • Support the development and maintenance of an effective rail system corridor in
14 Duchesne County to support efficient commercial material and energy distribution to
15 markets and diversify the economy.
- 16 • Duchesne County recognizes the economic and educational importance of internet access.
- 17 • Duchesne County recognizes that utility infrastructure within established corridors and
18 along major highways is congested and new areas need to be analyzed and established as
19 corridors to facilitate future growth and demand.
- 20
- 21

Section 30. Pipelines and Infrastructure

Pipelines and Infrastructure

Introduction

Electrical Transmission

Electrical transmission infrastructure is used 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.

Electrical transmission systems from individual utility companies (including those in Duchesne County) are interconnected to the entire electrical network of generation facilities and transmission grids across the western United States. The state of Utah is part of the Western Electricity Coordinating Council 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 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 (EIA 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). Section 54-14-201 of the Utah Code provides that; if otherwise authorized by law, a local government may require or condition the construction of an electrical transmission facility in any manner if (1) the requirements or conditions do not impair the ability of the public utility to provide safe, reliable, and adequate service to its customers; and (2) the local government pays for the actual excess cost resulting from the requirements or conditions, except: (a) any actual excess costs that the public utility collects from its customers pursuant to an order, rule, or regulation of the commission; or (b) any portion of the actual excess costs that the state Public Utilities Board requires to be borne by the public utility.

For further information on the process of identifying and permitting the construction of electricity transmission infrastructure on federal land, refer to the Utility Corridor section of this plan.

Legal context

The Federal Powers Act of 1921 ([16 U.S.C. § 12](#)), as amended, provides for federal oversight of

1 the bulk electrical transmission system by the Federal Energy Regulatory Commission (FERC).
2 The [Energy Policy Act of 2005](#) (among other items) enables FERC to facilitate transmission
3 planning to meet the needs of utilities serving retail customers. In 1996, FERC issued [Order No.](#)
4 [888](#), which opened all interstate transmission lines for use by any power generator to transmit
5 power across the bulk transmission grid, provided the power generator pays tariffs to the
6 transmission line utility owners. This is known as the Open Access Transmission Tariff (OATT).
7 The FERC's [Order No. 889](#), sets standards of conduct for power generators utilizing OATT
8 transmissions ([Utah Code § 54-17-901](#)).

9 10 **Natural Gas Pipelines**

11
12 Natural gas pipelines are constructed by private utility companies to move natural gas from
13 production areas to end users ([54 Utah Code § 13](#)). Gathering pipelines move extracted raw
14 materials from wellheads to processing plants, where natural gas is separated from other gases,
15 hydrocarbon gas liquids, and water. The refined natural gas is then pressurized and added to the
16 mainline transmission system, which consists of large-diameter, high-pressure pipelines.
17 Compressor stations along the network maintain pressure and move product down the line to
18 storage areas, major industrial consumers, power plants, shipping ports, and distribution
19 companies. From there, distribution transmission systems operate with smaller-diameter lines
20 and lower pressure. Finally, service lines transport natural gas to the end users.

21
22 This planning document focuses on pipeline infrastructure located within designated utility
23 corridors (typically major transmission lines), but may also include some gathering and
24 distribution lines. More information on natural-gas production and distribution from the US
25 Energy Information Administration (EIA) can be found on their website.

26 For information on the process of identifying and permitting the construction of natural gas
27 pipeline infrastructure on federal land, refer to the Utility Corridor section of this plan.

28 29 **Legal context**

30
31 The State of Utah grants local governments the authority to supplement the state and federal laws
32 with its own regulations for oil and gas development. Utah authorizes counties to enact any
33 ordinances necessary to carry out its duties, so long as they are not repugnant to state or federal
34 law (BMP 2021).

35
36 The Pipeline and Hazardous Materials Safety Administration (PHMSA) exercises authority
37 under the Pipeline Safety Act ([49 U.S.C. § 60101](#)) to prescribe minimum safety standards
38 governing the location, design, construction, operation, and maintenance of liquefied natural gas
39 facilities in or affecting interstate and foreign commerce. Whereas FERC serves as the lead
40 federal agency for satisfying compliance with the National Environmental Policy Act (NEPA)
41 ([42 U.S.C. § 4321](#)) for liquefied natural gas facilities subject to its jurisdiction (McIntyre &
42 Elliot, 2018).

43
44 The Natural Gas Act ([15 U.S.C 15B § 717](#)) enabled the federal regulation of companies

1 transporting and distributing natural gas both intrastate and interstate. The [Public Law 109–468](#)
2 [\(2006\)](#), an amendment to the 49 U.S.C § 60101, provides enhanced environmental and safety
3 protection in the transportation and handling of national energy products. This includes the
4 construction and demolition of pipelines for the purpose of transporting oil and gas products.

5 6 **Oil Pipelines**

7
8 Oil pipelines are very similar to natural gas pipelines in that the products are transported through
9 networks of pipes and pump stations from production areas to consumers. First, the raw material
10 (in this case, crude oil) is gathered from wellheads and moved downstream through trunkline
11 pipelines to refineries, which separate the oil into numerous petroleum products. From the
12 refinery, pipelines are used to transport petroleum products to various destinations for local use
13 or export to other markets. A third product, called hydrocarbon gas liquid (HGL) is a secondary
14 product created during the processing of natural gas. Because HGL is a liquid petroleum product,
15 pumped through pipelines in a manner similar to oil, it is included in this section. More
16 information on oil production and distribution can be found at the US Energy Information
17 Administration (EIA) website.

18
19 For information on the process of identifying and permitting the construction of oil and gas
20 pipeline infrastructure on federal land, refer to the Utility Corridor section of this plan.

21 22 **Legal context**

23
24 Similar to the natural gas pipelines, the State of Utah grants local governments the authority to
25 supplement the state and federal laws with its own regulations for oil and gas development. The
26 State of Utah authorizes counties to enact any ordinances necessary to carry out their duties, so
27 long as they are not repugnant to state or federal law (BMP 2021). The PHMSA exercises
28 authority under the Pipeline Safety Act ([49 U.S.C. § 60101](#)) to prescribe minimum safety
29 standards governing the location, design, construction, operation, and maintenance of liquefied
30 natural gas facilities in or affecting interstate or foreign commerce. Whereas FERC serves as the
31 lead federal agency for satisfying compliance with NEPA ([42 U.S.C. § 4321](#)) for liquefied
32 natural gas facilities subject to its jurisdiction (McIntyre & Elliot, 2018).

33 34 **Hydrogen Pipelines**

35
36 In contrast to oil and natural gas, which are extracted from the earth, hydrogen is a manufactured
37 product. Hydrogen gas can be manufactured from fossil fuels such as natural gas (“grey
38 hydrogen”) or coal (“brown hydrogen”), or it can be created from water using electrolysis. When
39 the electricity used in the electrolysis process is derived from a renewable energy source, the
40 resulting hydrogen is known as “green hydrogen.” Hydrogen can also be produced from biomass.

41
42 Pipelines and other infrastructure used to transport hydrogen are similar to those used to transport
43 natural gas. Large-diameter pipes are first used in the transmission of high-pressure hydrogen
44 gas. When blended with natural gas (at up to 15 percent hydrogen), existing natural gas pipelines

1 can be used instead of installing separate hydrogen pipelines.

2
3 For information on the process of identifying and permitting the construction of hydrogen gas
4 pipeline infrastructure on federal land, refer to the Utility Corridor section of this plan.

5
6 **Legal context**

7
8 The State of Utah grants local governments the authority to supplement the state and federal laws
9 with its own regulations for oil and gas development. Utah authorizes counties to enact any
10 ordinances necessary to carry out its duties, so long as they are not repugnant to state or federal
11 law (BMP 2021). The PHMSA exercises authority under the Pipeline Safety Act ([49 U.S.C. §](#)
12 [60101](#)) to prescribe minimum safety standards governing the location, design, construction,
13 operation, and maintenance of liquefied natural gas facilities in or affecting interstate or foreign
14 commerce. Whereas FERC serves as the lead federal agency for satisfying compliance with
15 NEPA ([42 U.S.C. § 4321](#)) for liquefied natural gas facilities subject to its jurisdiction (McIntyre
16 & Elliot, 2018). The US Department of Transportation (DOT), through PHMSA, has regulated
17 hydrogen pipelines since 1970 via [49 CFR § 192](#). This code of regulation stipulates that a
18 minimal level of safety standard needs to be met when transporting natural and other gasses.
19 Regulations apply to pipeline construction, material standards, operations, and maintenance of
20 pipeline structures.

21
22 **Water Pipelines**

23
24 For the purposes of this planning document, water pipelines consist of substantial infrastructure
25 projects used to transport large quantities of water over long distances through varying terrain
26 and elevations from reservoirs and rivers to major population centers and agricultural users.

27
28 **Legal context**

29
30 The Colorado River Compact created the Upper and Lower Colorado River Basin. In the Upper
31 Colorado River Basin Compact of 1948, Utah is allocated 23 percent of the upper basin water
32 allotment, which totals 1.73 million acre-feet. The Colorado River Storage Project Act (Public
33 Law 485, 70 Stat. 105) was enacted to authorize the Central Utah Project (CUP) among many
34 other such development projects within the Colorado River Basin. Congress enacted the Central
35 Utah Project Completion Act (CUPCA) (P.L. 102-575) on October 30, 1992, providing policy
36 guidance and direction for completing the CUP, including transferring all construction
37 responsibilities from the BOR to the Central Utah Water Conservancy District, while retaining
38 federal oversight. The Ute Indian Unit was de-authorized by the 1992 CUPCA (DOI 2021a).

39
40 All water use within the State of Utah is governed by Utah Code, Title 73.

41
42 For information on the process of identifying and permitting the construction of water pipelines
43 on federal land, refer to the Utility Corridor section of this plan.

44

1 **Telecommunications**

2
3 Telecommunications refer to the infrastructure used to transmit and distribute electronic
4 information. For this study, the discussion of telecommunications will focus on broadband
5 infrastructure, typically transmitted through fiber optic cable, used by service providers to
6 connect consumers to the Internet, which allows large quantities of digital information to be
7 transmitted at high speeds.

8
9 **Legal context**

10
11 Coordination of highway and broadband information is regulated by [Utah Code § 63N-3-501](#)
12 [\(2020\)](#), which dictates the collection and maintenance of broadband data from providers and
13 private or public entities.

14
15 For the purposes of telecommunication installation, utility access to the US interstate highway
16 system, including the right-of-way areas, is regulated by [Utah Code § 72-7-108 \(2018\)](#) and [Utah](#)
17 [Administrative Rule § 907-64](#). These regulations facilitate longitudinal access to or use of any
18 part of the right-of-way of a highway on the interstate system.

19
20 The placement and relocation of utility facilities that conflict with the construction or
21 maintenance of highways (which applies to any and every facility, utility, or other structure not
22 owned by the State of Utah) falls under the Utility Accommodation Rule ([Utah Administrative](#)
23 [Rule § 930-7](#)).

24
25 For information on the process of identifying and permitting the construction of
26 telecommunication infrastructure on federal land, refer to the Utility Corridor section of this plan.

27
28 **Other Infrastructure**

29 Other infrastructure includes mechanical wastewater treatment facilities, sewer collection
30 systems, sewage lagoons, and stormwater systems. The vast majority of these systems in Utah are
31 owned and operated by local municipalities and service districts. The use of state or federal
32 lands for such facilities is not common.

33
34 **Legal context**

35
36 The Federal Water Pollution Control Act of 1972, commonly referred to as The Clean Water Act
37 [40 CFR § 1, Subchapters D, N, and O \(Parts 100-140, 401-471, and 501-503\)](#), gives the
38 Environmental Protection Agency (EPA) the federal authority to set standards for allowable
39 pollutants for point and nonpoint source discharge into waterways. The [Utah Water Quality Act](#)
40 as amended establishes framework for State oversight of water quality.

41
42 **Transportation Infrastructure**

43
44 Transportation infrastructure is the backbone network of major roads, highways, railroads, and

1 other infrastructure used to transport goods and services within and across Utah. For the purposes
2 of this planning document, the roads and highways managed by the Utah Department of
3 Transportation (UDOT) and major railroads are considered.

4 **Legal context**

5
6
7 The UDOT was established to have the authority and responsibility for planning, research,
8 design, construction, maintenance, security, and safety of state transportation systems ([Utah Code](#)
9 [§ 72](#)). This includes the preparation and adoption of standard plans and specifications for the
10 construction and maintenance of state highways.

11 **Findings**

12 **Electrical Transmission**

13
14
15
16 The majority of electricity generation and bulk energy transmission capacity in Utah is owned by
17 PacifiCorp (note: Rocky Mountain Power is owned by PacifiCorp). According to company
18 statistics, PacifiCorp serves 948,000 customers in Utah across 26 counties (Cox 2021).

19
20 Other power generators and distributors in Utah include the Utah Rural Electric Cooperative
21 Association ([URECA](#)), Utah Municipal Power Agency ([UMPA](#)), and Intermountain Power
22 Agency ([IPA](#)).

23
24 The URECA is a collective of nine local power generators and transmission companies from six
25 states. Utah members of the cooperative include Deseret Power Electric Cooperative, Dixie
26 Power, Garkane Energy, and Moon Lake Electric Association (which serves Duchesne County).
27 Combined, they service about 70,000 utility meters and 250,000 consumers in Utah (J. Peterson,
28 URECA, personal communication, 10/28/2021).

29
30 These power co-ops and associations make use of the OATT, provided by FERC Order numbers
31 888 and 889, to purchase transmission capacity on PacifiCorp's transmission infrastructure to
32 provide power to their customers without having to install their own transmission lines.

33
34 Within and across Utah, PacifiCorp's infrastructure provides the majority of electrical
35 transmission capacity. Other transmission infrastructure owners include the IPP, which owns a
36 500kC DC transmission line that services its California customers.

37 The majority of future planned utility transmission infrastructure in Utah will be owned by
38 PacifiCorp. Their 2021 [Integrated Resource Plan](#) describes new transmission projects intended to
39 (1) strengthen the backbone of Utah's energy grid for future energy loads, (2) improve interstate
40 energy market connections through the Western EIM, and (3) change generation sources to
41 include greater renewable contingents. PacifiCorp's future projects are listed below:

- 42 • Gateway South, 416 miles of 500 kV transmission line from Aeolus, Wyoming to
43 Delta, Utah (crosses portions of Duchesne County). Estimated completion date:
44 October 2024.

- 1 ● Emery to Clover, 75 miles of 345 kV transmission line
- 2 ● Clover to Sigurd, 70 miles of 345 kV transmission line
- 3 ● Spanish Fork to Mercer, 50 miles of 345 kV transmission line
- 4 ● Cross-Tie Transmission Project, 214 miles of 500 kV transmission line from
- 5 Clover, Utah to Thirty Mile substation in eastern Nevada. 2026.

6
7 Transmission projects from other companies include the TransWest Express Transmission
8 Project, a 732-mile 500 kV DC transmission system connecting Sinclair, Wyoming, to Las
9 Vegas, Nevada, with a terminal connection in Delta, Utah. This transmission line, which closely
10 parallels the Bonanza transmission line through Duchesne County, will eventually provide 3,000
11 megawatts of transmission capacity, which will be generated by wind power in Wyoming
12 (TransWest Express 2021).

13
14 The URECA has indicated they have no new transmission projects planned in the near future
15 (Peterson 2021).

16
17 When planning for new [utility-scale solar](#) developments, considerations should be made for the
18 inversion of DC power generated from solar array prior to connection to the AC bulk power grid.

19
20 Another consideration for the planning of electrical transmission in Utah includes future
21 chokepoints or bottlenecks in transmission-line capacity. This issue has been studied with respect
22 to electrical transmission in the [2021 Utah Transmission Study](#), which determined that (under
23 scenarios of high renewable energy buildout in southern Utah) electrical transmission needs
24 might exceed capacity (Energy Strategies).

25
26 Resilience and redundancy of electrical transmission are issues that have been identified by
27 stakeholders. Many rural locations in Utah are served by single transmission lines, referred to as
28 “radial transmission lines.” Radial transmission lines are the least costly option for providing
29 some remote locations with electrical power, but they also leave those areas vulnerable to utility
30 disruptions because of their lack of redundancy. Additional transmission connections are costly
31 not only because of their construction costs, but also due to the expense and time required to
32 place utility corridors on federal lands. Refer to the Utility Corridor section of this plan for more
33 information.

34 35 Natural Gas Pipelines

36
37 Natural gas production in Utah is located primarily in Uintah, Duchesne, Carbon and Grand
38 counties (Vanden Berg 2020). Multiple interstate pipelines cross through Utah to transport
39 natural gas from principal producing basins in Colorado, Utah, and Wyoming, to consumer
40 markets in other states, and for export to foreign markets around the world.

41
42 The majority of local natural gas transmission infrastructure in Utah is provided by Dominion
43 Energy. The company owns 20,189 miles of transmission and distribution lines and has
44 1,090,000 customers (Dominion Energy 2020). Dominion Energy produces a large portion of the

1 gas it sells to customers, but it also purchases natural gas from other interstate pipeline
2 companies for delivery to residential, commercial, and industrial customers. Major natural gas
3 pipelines in Duchesne County are shown on the Natural Gas Pipeline Map in Appendix B.
4

5 **Oil Pipelines**

6
7 According to the Utah Geologic Survey (UGS), Utah is consistently one of the top 15 oil-
8 producing states in the United States (Chidsey 2021). In their recent circular, [Utah's Energy](#)
9 [Landscape](#), the UGS reported the majority of oil production in Utah is occurring in Duchesne,
10 Uintah, and San Juan Counties. Oil produced from wells in the Uinta Basin and further east in
11 Colorado is transported in oil pipelines and trucks to refineries in Salt Lake City. Additional oil
12 pipelines have been proposed to transport crude oil from the Uinta Basin to refineries in Salt
13 Lake City and to the rail line in Carbon County. However, the basin's waxy crude makes
14 pipeline conveyance difficult.
15

16 **Hydrogen Pipelines**

17
18 Presently, Duchesne County and the state of Utah have no pipelines designated for transporting
19 compressed hydrogen because the demand for hydrogen as a fuel source is limited.
20

21 Broader use of hydrogen, such as for motor vehicles and freight transport, is uncertain at this
22 time. Wide-spread adoption of hydrogen as a transportation fuel would require a distribution
23 network, either through pipelines or by tanker trucks, to fueling stations throughout the state to
24 alleviate drivers' "range anxiety."
25

26 **Water Pipelines**

27
28 Major water pipelines in Duchesne County are associated with the Central Utah Project (CUP).
29

30 The CUP is a complex, trans-basin water development and delivery infrastructure project that
31 provides water storage and conveyance from the Uintah Basin to the Wasatch Front. The CUP
32 consists of four units--water projects that, when combined, comprise the entirety of the CUP. The
33 Bonneville Unit is the primary unit. It enables transport of water from the Uinta Basin to the
34 Wasatch Front. Within the Bonneville Unit is the Diamond Fork system. This system comprises
35 the Diamond Fork Pipeline, which delivers 101,900 acre-feet of water to the Wasatch Front (DOI
36 2021b).
37

38 Other large water pipelines serving Duchesne County are the Victory Pipeline, which delivers
39 culinary water from the water treatment plant at Starvation Reservoir and the Sand Wash
40 pipeline, which delivers secondary (irrigation) water from the Big Sand Wash Reservoir to the
41 Roosevelt area.
42

43 For additional discussion about water and the Central Utah Project, see the Water Quality and
44 Hydrology section of this plan.

Telecommunications

Duchesne County supports the state of Utah’s commitment to deploying and expanding broadband and making it accessible across the entire state. To this end, the [2020 Utah Broadband Plan](#) identifies a series of goals to meet that goal. As of June 2021, 94 percent of Utah has access to broadband Internet service with speeds of 100 mbps or faster.

Approximately 68 percent of Utahns have access to fiber-optic services with a State Broadband Access Ranking of 29th in the United States (BroadbandNow 2021).

The widespread access to high-speed Internet service across rural Utah is due in large part to the UDOT Fiber Program. For the last 20 years, UDOT has been working to install a robust fiber optic network along state highways to connect traffic cameras, digital road signs, weather stations, and other sensors to provide real-time traffic updates (UDOT Fiber Program). This fiber-optic backbone also provides access for private companies to connect to broadband Internet networks and provide high-speed Internet to their customers. UDOT established a Public Private Partnership with private telecom companies to connect communities while expanding UDOT’s Intelligent Transportation System.

Utah’s current fiber-optic network consists of approximately 2,564 miles of single mode fiber (SMF or SMFO), 1.6 miles of multimode fiber (MMF or MMFO), and 24 miles of SMF and MMF (UDOT 2021a). A fiber-optic priority assessment revealed that 309 miles of fiber-optic network has been proposed with an additional 317 miles to meet existing needs (UDOT 2021b). Approximately 105 miles of fiber-optic network is in progress, with another 146 miles scheduled for installation (as of November 2021).

Fiber-optic networks and services are provided in Duchesne County by Strata Networks, with 4,524 locations passed or connected by fiber-optics. Strata supports its fiber-optic network with redundant routes to Salt Lake City and Denver. Present active fiber-optic connects include 3,091 residences, 571 businesses, and 55 government locations. For additional information regarding this fiber-optic network, see the Utility Corridor section of this plan, Table 4 below and the associated fiber-optics maps in Appendix B. For additional information regarding the importance of fiber-optic facilities, see the Economic Considerations section of this plan.

Table 4: Existing fiber optic availability.

Strata Networks Approximate Coverage Area				
Status	Title	Total (sq. mi.)	Total (linear miles)	Active Fiber-optic Connections
Existing	Fiber-optic Coverage	37.5	600	
Residential Connections	Fiber-to-the-home			3,091
Business Connections	Fiber-to-the premises			571

Government Connections	Fiber-to-the premises			55
Grand Total		37.5	600	3,717

1 *Source: Current fiber availability (STRATA Networks, 2022)*

2
 3 **Other Infrastructure**

4
 5 There are 41 mechanical water-treatment plants in Utah. These range in capacity from 0.25
 6 million gallons per day (mgd) in Oakley City to 75 mgd at the Central Valley Water Reclamation
 7 Facility in Salt Lake City. Statewide, wastewater treatment plants are operating at 65 percent of
 8 capacity (WFWQC 2019). None of these are located in Duchesne County.

9
 10 A total of 24 sewer lagoons, which discharge treated effluent into waters of the State of Utah,
 11 serve a population of 73,500 people. Another 49 sewer lagoons are non-discharging treatment
 12 facilities that use evaporation and percolation to handle wastewater and serve a population of
 13 132,500 people (Krauth 2019). In Duchesne County, sewer lagoons are utilized by the cities of
 14 Roosevelt, Duchesne and Myton; the towns of Tabiona and Altamont and the Neola Water &
 15 Sewer District (see Table 5 and the Wastewater Treatment map in Appendix B).

16
 17 **Table 5: Active municipal sewer wastewater treatment facilities.**

Facilities			
Facility Name	NPDES/UDWQ Permit	Type	Discharge Location
Altamont Town	UTOP00101	Non-Discharging Lagoon	N/A
Duchesne City WWTP	UT0020095	Discharging Lagoon	Duchesne River
Neola Town Water & Sewer Assoc.	UT0023001	Discharging Lagoon	Class E Ditch & Water of Crescent
Roosevelt City	UTOP00137	Land Disposal	N/A
Tabiona Town	UTOP00204	Non-Discharging Lagoon	N/A

18 *Source: Utah Department of Environmental Quality, Division Water Quality, UPDES*
 19 *Dischargers, public-owned wastewater treatment facility discharge. (DWQ, 2021) & non-*
 20 *discharging wastewater lagoons or land disposal of municipal wastewater (DWQ, 2015).*

21
 22 A 2019 [study](#) of existing sewer pipelines across Utah estimated there are 12,202 miles of sewer
 23 pipeline in the state with an average age of 35 years. The same study estimates that 7,320 miles
 24 of pipeline will need to be relined or replaced by 2060, and an additional 2,567 miles of new
 25 pipeline will need to be installed in the same timeframe (Forsgren 2019). In Duchesne County,
 26 very few sewer pipelines extend outside of city or town boundaries.

1 A 2019 [study](#) of stormwater pipes across Utah estimated there are 4,673 miles of existing
2 stormwater pipes in the state with an average age of 29 years. The study estimates that 2,395
3 miles of this pipeline will need to be replaced by 2060, and another 956 miles will need to be
4 installed in the same time period to accommodate new population growth (Forsgren 2019). In
5 Duchesne County, very few stormwater pipelines extend outside of city or town boundaries.

6
7 Water discharged into state waterways from mechanical wastewater treatment plants, sewage
8 lagoons, and stormwater systems are subject to clean-water standards established by the EPA and
9 the Utah Division of Water Quality. Those standards are defined [here](#).

10 **Transportation Infrastructure**

11
12
13 The planning, construction, and maintenance of US interstate highways, state highways, and
14 some local roads in Utah are completed through collaboration with UDOT. Roadway planning
15 occurs during the compilation of the [Unified Transportation Plan](#). The planning process is a
16 unification of multiple transportation plans across the state including local governments, rural
17 planning organizations metropolitan planning organizations, transit districts/authorities, and
18 UDOT. Construction of new federal and state roadways and bridges as well as upgrades to
19 existing infrastructure is prioritized during the planning process and ultimately approved by the
20 Utah Transportation Commission appointed by the Governor. Maintenance of roadways within
21 UDOT's jurisdiction is carried out through a system of maintenance facilities placed strategically
22 across the state. Federal oversight of Utah's highway infrastructure is provided by the Federal
23 Highway Administration.

24
25 Duchesne County adopted a Transportation Master Plan on September 25, 2017. This plan
26 established the functional classification of existing and future roads needed to serve the county,
27 which is depicted on the Highway Functional Class Map in Appendix B.

28
29 The [Utah Freight Plan](#) addresses issues and needs specific to the statewide highway and
30 multimodal freight networks. The UDOT, in conjunction with the Utah Transit Authority, also
31 compiled the Utah State Rail Plan, a plan for freight and passenger rail transportation in Utah.
32 Finally, Utah is in the planning process to site and construct a new rail connection between the
33 Uinta Basin and the existing interstate railroad network. The preferred route would travel from
34 Kyune, Utah, to Myton, Utah, passing south of Duchesne along US Highway 191 through Indian
35 Canyon (see the Rail Line Permitted Map in Appendix B). About 12 miles of the route would be
36 through USFS land, which required preparation of an environmental impact statement. The
37 USFS issued a draft [Record of Decision](#) on October 26, 2021, to allow the project to proceed on
38 forest land. A decision to approve the project was made by the federal Surface Transportation
39 Board (STB) on December 15, 2021. However, the STB decision was appealed and is pending in
40 a Washington, D.C. court.

41 **Economic Considerations**

42 **Electrical Transmission**

1 Duchesne County is served by Moon Lake Electric, which is a major employer in the county.
2 Moon Lake employs 91 full-time employees, 5 part-time employees, and furnishes power to over
3 19,000 accounts in Northeastern Utah and Western Colorado
4 (<https://www.mleainc.com/History.html>).

5
6 **Natural Gas Pipelines**

7
8 Natural-gas distribution companies employ as many as 700 employees in Utah (DWS 2021) with
9 Questar Gas (now Dominion Energy) being the largest natural gas company in the state.
10 Dominion has a major economic impact in Duchesne County and the Uinta Basin and they
11 maintain offices in Roosevelt and Vernal.

12
13 **Oil Pipelines**

14
15 The Chevron pipeline has pumping stations in the Myton and Hanna areas of Duchesne County,
16 which generates jobs, income and tax revenue for the county.

17
18 **Hydrogen Pipelines**

19
20 Hydrogen has only limited use within Utah. This may change in the future if hydrogen is adopted
21 as a transportation fuel or as a large-scale component of utility-scale electricity generation.

22
23 **Water Pipelines**

24
25 According to the 2020 [Statewide Water Infrastructure Plan](#), over the next 50 years, the State of
26 Utah and municipal water providers will need to spend \$20.6 billion to repair and replace
27 existing infrastructure and another \$17.6 billion for new infrastructure and to develop new water
28 supplies for future growth (BRWCD et al. 2020). The five river basins with the highest estimated
29 costs are Bear River Basin, Kanab Creek/Virgin River Basin, Weber River Basin, Utah Lake
30 Basin, and the Jordan River Basin. For additional information regarding future water pipeline
31 needs in Duchesne County, see the Water Quality and Hydrology section of this plan.

32
33 **Telecommunications**

34
35 The Utah Broadband Advisory Council considers broadband essential to economic success
36 (UBAC 2020). Broadband is essential for Utah businesses because it allows them to be nationally
37 and internationally competitive. The technology also promotes entrepreneurship, attracts
38 investments, and supports state and municipal governments. The partnerships developed through
39 the UDOT Fiber Program have saved the state an estimated \$105.8 million while connecting
40 many parts of Utah to high-speed Internet service. For additional information regarding the
41 economic impacts of broadband facilities, see the Economic Considerations section of this plan.

42
43 **Other Infrastructure**

44

1 According to a [recent study](#) by the Utah Department of Environmental Quality, the present value
2 of existing wastewater treatment facilities in Utah is estimated to be \$4 billion (Reclaim 60).
3 However, wastewater conveyance and treatment facilities must be maintained to operate
4 effectively. Utah faces an additional cost of \$5.3 billion for infrastructure renewal and
5 replacement, and another \$1.3 billion for upgrades to meet future regulatory requirements. New
6 infrastructure required to meet the needs of population growth across Utah is expected to cost
7 \$2.1 billion. Over the next 40 years, the total cost for wastewater treatment has been estimated to
8 be \$8.7 billion (Reclaim 60).

9
10 In addition to wastewater treatment facility costs, other infrastructure must be replaced or
11 upgraded over the next 40 years. Wastewater pipelines represent a cost of \$4.3 billion, sewer
12 lagoons are expected to cost \$432 million, and stormwater-collection systems are estimated to
13 cost \$1.3 billion (Reclaim 60).

14 15 **Transportation Infrastructure**

16
17 The Unified Plan determined a total of \$108.5 billion would be needed between 2019 and 2050
18 to fund the maintenance of current infrastructure, to expand capacity of existing roads, and to
19 build new roads. This estimate also includes funds for upgrading transit and railway
20 infrastructure (UDOT et al. 2021). Funding for the construction and maintenance of major
21 highway infrastructure is provided by federal and state funds, which are generated from fuel
22 taxes, vehicle registrations, and general funds.

23 24 **Goals, Objectives, and Policies**

25 26 **Goals**

27
28 In light of Utah’s arid environment and the world’s changing climate conditions, the need for
29 sufficient and reliable water, energy, and critical resources, the need for storage and related
30 infrastructure is ever increasing. Therefore, to ensure Utah’s ongoing drought resilience, energy
31 security, and to provide for current and future needs, Duchesne County supports the state’s
32 efforts to build and invest in necessary infrastructure, including additional pipelines, dams,
33 reservoirs, above and below- ground storage facilities, and other feasible infrastructure.

34 35 **Objectives**

- 36
37
- 38 • Support statewide economic opportunities and resilience for Utah communities
39 through the provision of adequate pipelines and other infrastructure.
 - 40 • Assist in the development of pipelines and sufficient infrastructure to meet Duchesne
41 County’s current and future needs.
 - 42 • Work with land managers in an attempt to ensure that project continuity issues on
43 public lands do not inhibit project implementation.
 - 44 • Explore opportunities with special service districts for above and below-ground water
storage countywide at different scales.

- 1 • Conduct feasibility studies to prioritize water storage and pipeline projects and
2 become proactive in order to capitalize on high water flows during flood years.
- 3 • Improve techniques and the utilization of aquifer storage and recovery.
- 4 • Efficient and timely delivery of water and energy resources without damaging
5 infrastructure.
- 6 • Support innovative and proven technologies to line earthen and concrete canals in
7 order to reduce water loss and increase transportation efficiency.
- 8 • Form partnerships with stakeholders and obtain funding from the Bureau of
9 Reclamation to form partnerships that benefit communities.
- 10 • Support water conservancy districts in applying for grants to improve water delivery
11 systems.
- 12 • There may be a future need to supply hydrogen along major highway arteries. There
13 are several different methods of utilizing hydrogen opportunities that need to be
14 further studied and strategically implemented. Avoid hydrogen production that
15 requires excessive water consumption.
- 16 • Investigate and strategically support and implement hydroelectric production by using
17 new technology such as in-pipe hydro systems within existing and future pipelines.
- 18 • When economically and technically feasible, and in the best interest of local
19 communities and operators, encourage efforts to avoid decommissioning
20 hydroelectric power facilities.
- 21 • Encourage the development of infrastructure projects aimed at recharging depleted
22 aquifers.
- 23 • Encourage xeriscaping policies, incentive programs, and educational campaigns to
24 reduce water usage and reliance.
- 25 • Increase watershed yields through active management of forests and other vegetated
26 areas.
- 27 • Support programs like Shared Stewardship and the Watershed Restoration Initiative
28 to enhance water yields.
- 29 • Support the implementation of the Utah State Water Plan.
- 30 • Strategically promote watershed restoration and flood abatements after wildfires to
31 improve soil retention, improve water quality, and reduce downstream impacts caused
32 by flooding, siltation and debris flows.
- 33 • Incorporate silt traps and other mechanisms to trap silt upstream and keep it from
34 entering water treatment plants and downstream reservoirs that will ultimately need to
35 be dredged when their storage capacity is reduced.
- 36 • Support innovation to make existing and future water storage and delivery systems
37 more efficient, reliable, safe and sustainable.
- 38 • Support a network for the distribution of natural gas, crude oil, and refined petroleum
39 products to domestic and foreign markets.
- 40 • Develop agreements with federal agencies to make it possible to maintain and
41 improve dams, impoundments, and other facilities on federal lands with limited
42 access in a timely and economically feasible manner. It is not economically feasible to
43 transport equipment and supplies by helicopter.
- 44 • Encourage the use of Advanced Metering Infrastructure (AMI) to quickly identify

1 water leaks reducing wasted water. The technology also allows remote monitoring
2 and manipulation (valves, flow rates, pressure, etc.) of water conveyance
3 infrastructure.
4

5 **Policies**
6

- 7 • Duchesne County supports coordinated efforts across all agencies, governments, tribal
8 nations, and other land ownerships on infrastructure projects to minimize delays.
- 9 • Duchesne County encourages and requests federal appropriations for water
10 infrastructure, including pipelines, water storage, and aquifer recharge.
- 11 • Duchesne County supports active forest management to increase water yields and
12 water quality.
- 13 • Duchesne County supports active forest management to decrease water quality issues
14 from wildfire, flooding, etc., which impacts water storage, water treatment, and water
15 delivery systems.
- 16 • Duchesne County supports the plans and strategies presented by the Shared
17 Stewardship Program, Watershed Restoration Initiative, and the Utah Division of
18 Water Resources.
- 19 • Duchesne County supports the Utah Watershed Council Act.
- 20 • Duchesne County encourages water conservation measures, education, and
21 incentives.
- 22 • Duchesne County supports maintaining access to water in the Colorado River and its
23 access to state and county owned shares that have not been fully exercised as a result
24 of access and transportation limitations.
- 25 • Duchesne County supports the development of pipelines from the natural gas and
26 crude oil producing areas to refineries, export terminals, or to other associated
27 transportation systems.
- 28 • Duchesne County discourages natural gas vent pipes (e.g. pig lines) in close proximity
29 to electrical transmission and distribution lines, or any other non-compatible
30 operations.
- 31 • Duchesne County supports the effort to conserve water by creating hydrogen through
32 natural gas, coal, and other sources.
- 33 • Duchesne County supports creating a strategy to provide consumers with hydrogen
34 access along major transportation arteries, if or when, markets support this energy
35 transference option in the future.
- 36 • Duchesne County supports and encourages the maintenance and development of
37 pipelines and infrastructure that improve the state's market share and improve the
38 quality of life for Utahns, provided such can be maintained and developed in a
39 sustainable manner.
- 40 • Duchesne County opposes the creation of pipelines and infrastructure to remove water
41 resources from the state of Utah in order to transport it to other states.
- 42 • Duchesne County expects pass-through pipelines and associated infrastructure to
43 continually benefit the citizens of Utah and local communities.
- 44 • Duchesne County desires unimpeded and timely access to water storage facilities on

- 1 federal lands to feasibly improve and maintain infrastructure in an effort to address
2 water storage needs.
- 3 • Duchesne County supports the completion of the Central Utah Project as originally
4 proposed to fulfill all promises made to Uintah Basin counties to mitigate for the
5 transfer of water to the Wasatch Front.
 - 6 • Duchesne County supports projects that conserve water by the lining of ditches and
7 canals.
 - 8 • Duchesne County supports the preservation of existing hydroelectric facilities and
9 construction of new facilities, including in-pipe hydro systems and other innovative
10 technologies, when such is cost-effective for the operator(s).
 - 11 • Duchesne County supports the construction and operation of pipelines and other
12 infrastructure to enable the production and transportation of mineral resources from
13 federal lands.
 - 14
 - 15

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Map #42:	Fire Risk Index

APPENDIX B

DUCHESNE COUNTY RESOURCE MANAGEMENT PLAN

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Map #51:	Land Cover Classifications
Map #52:	Twin Knolls - Wrinkles Road Area

Maps added by Resolution #22-04

Natural Gas Pipelines

Crude Oil Pipelines

Electrical Transmission Facilities

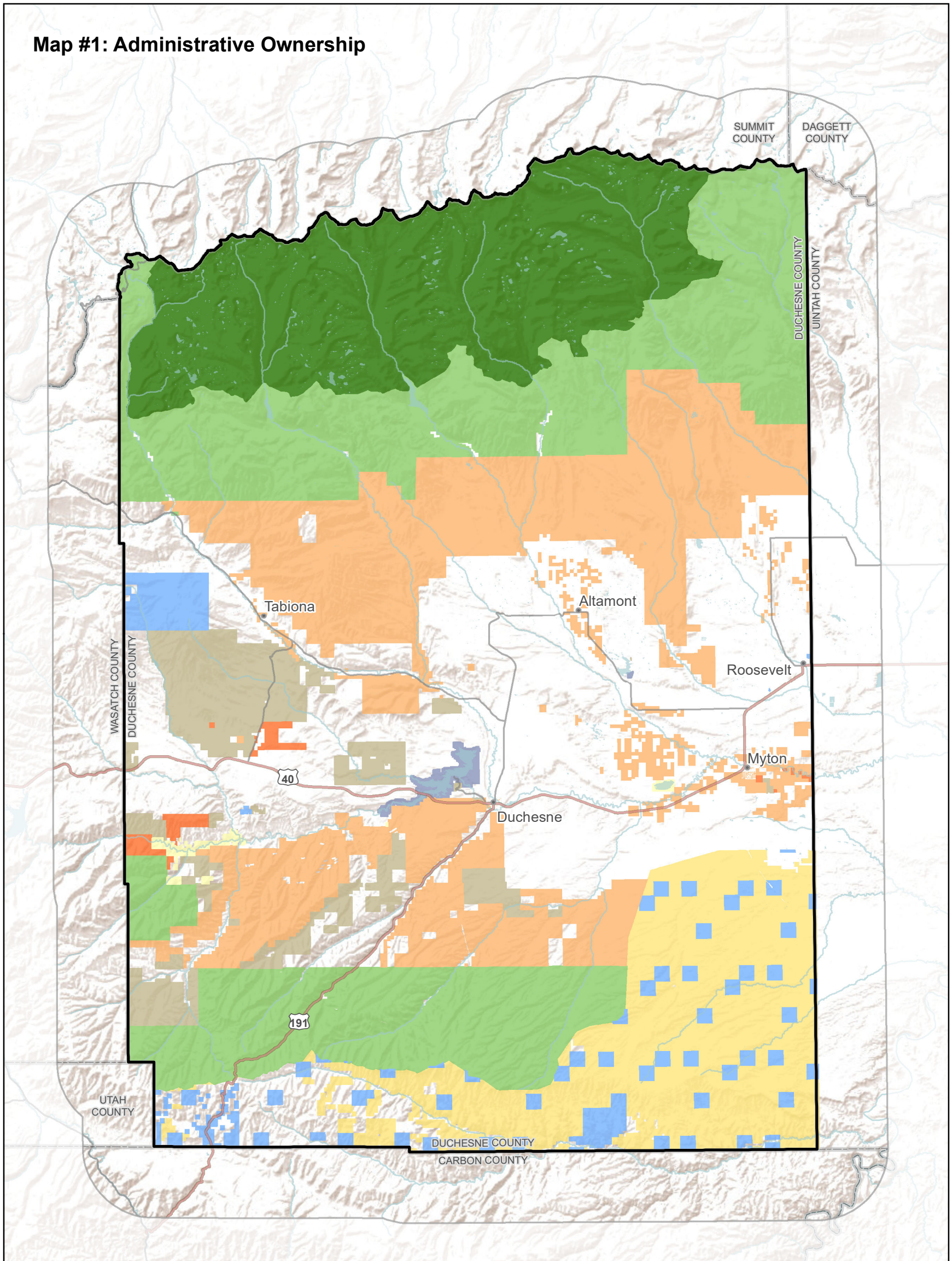
Fiber Optics Facilities











Wastewater Treatment Facilities

Highway Functional Classifications

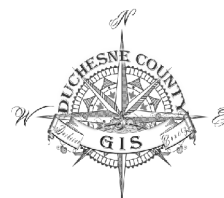
Rail Line (Permitted)

Map #1: Administrative Ownership

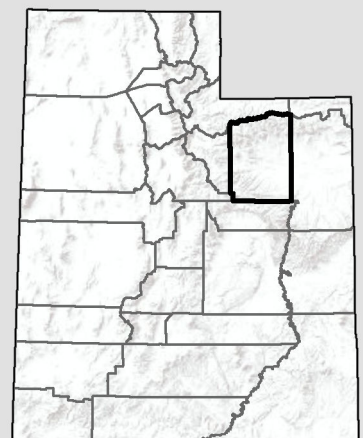
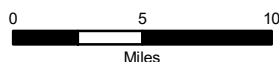


-  Duchesne County Boundary
- Land Ownership**
-  Bureau of Land Management
-  Bureau of Reclamation
-  National Forest
-  National Wilderness Area
-  State Trust Lands
-  State Parks and Recreation
-  State Wildlife Reserve/Management Area
-  Tribal Lands
-  Utah Mitigation Commission

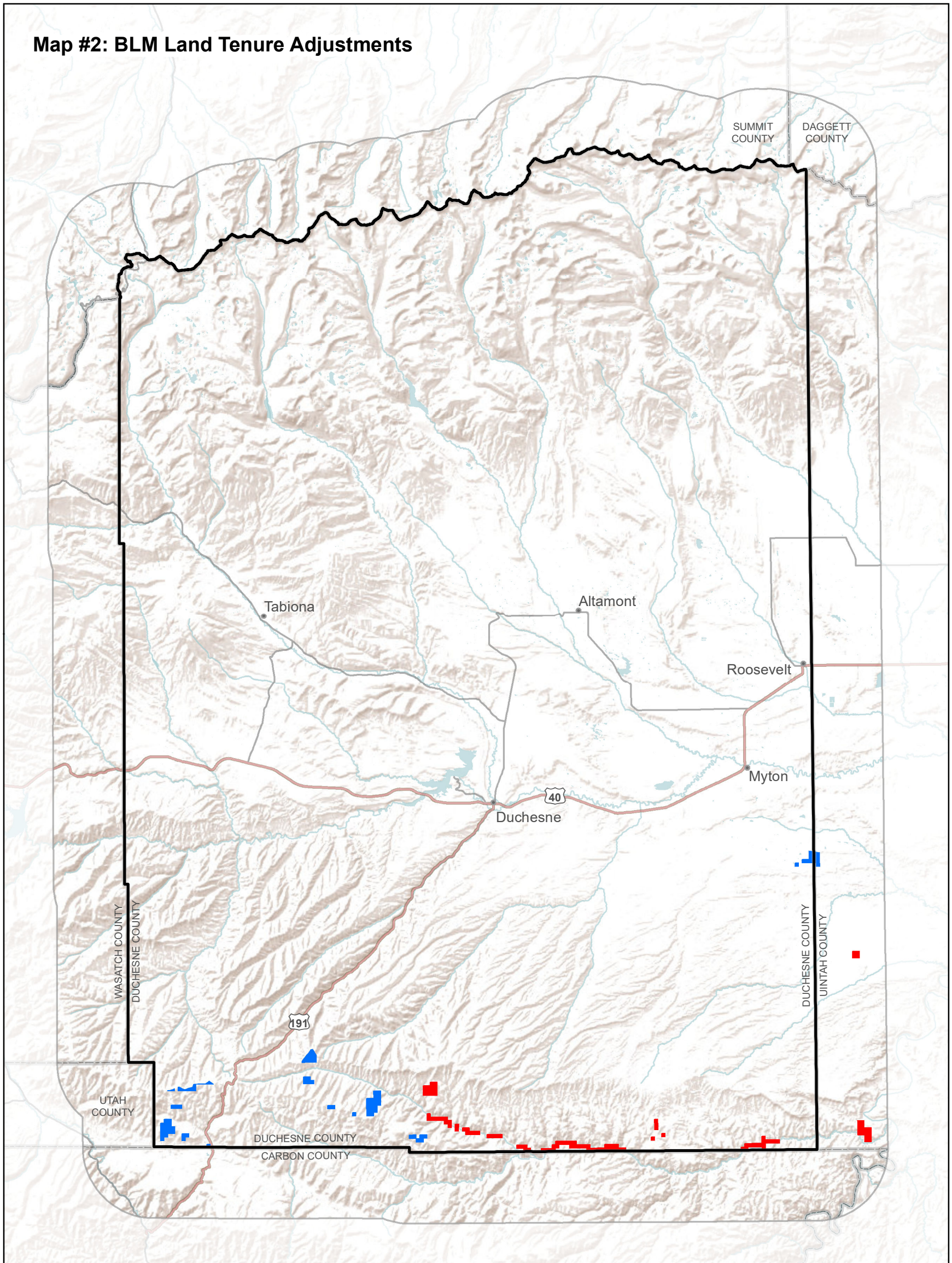
Data Source: Utah Automated Geographic Reference Center, 2017
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017



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Map #2: BLM Land Tenure Adjustments

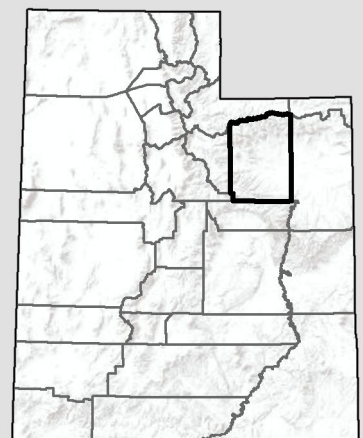
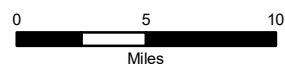


- Duchesne County Boundary
- BLM Land Tenure Adjustments**
- Acquisition
- Disposal

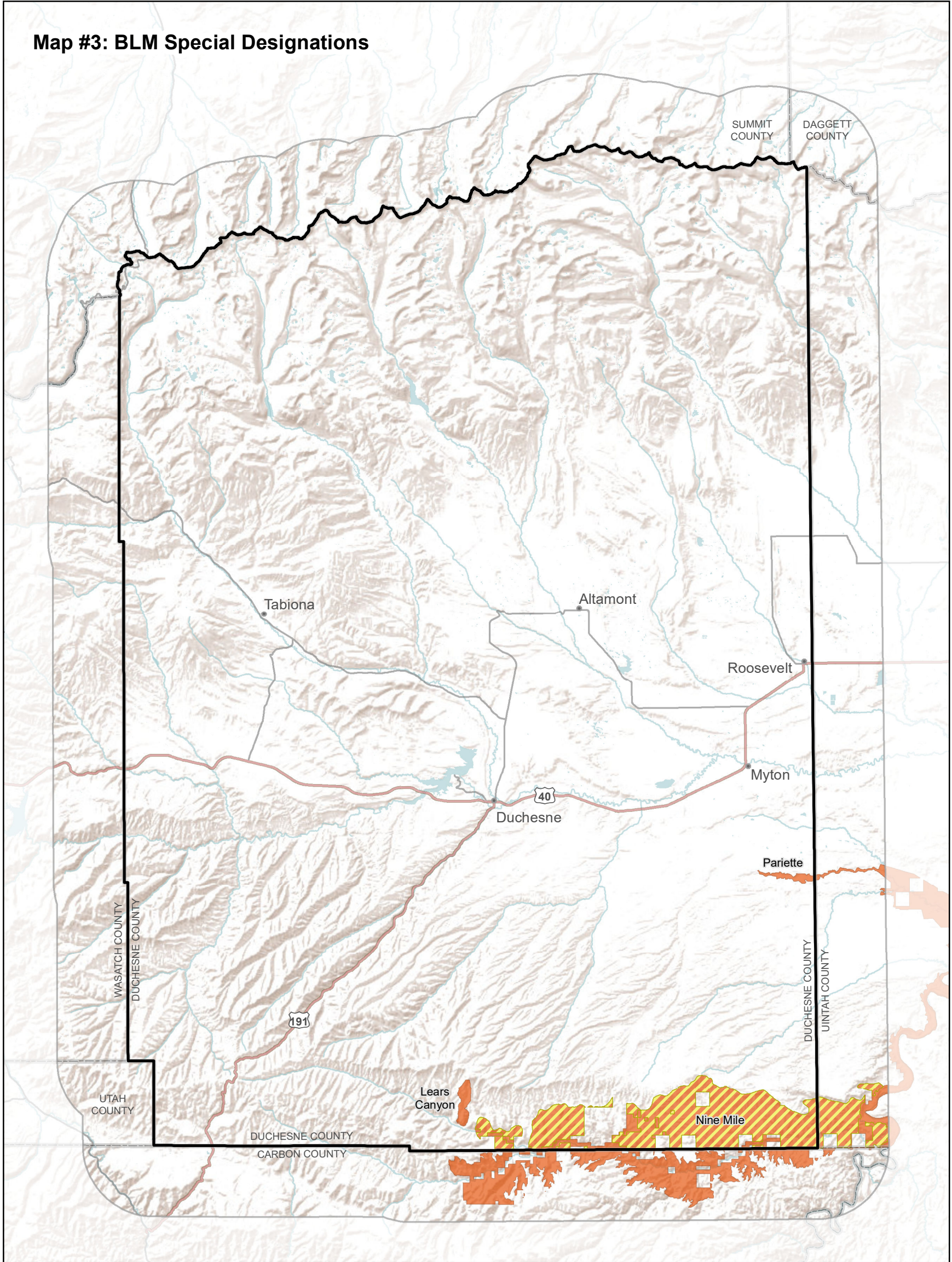
Data Source: Bureau of Land Management, 2008
Basemap from ESRI ArcGIS Online:
World Terrain Base, accessed 1/18/2017
Map Created: 1/18/2017



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Map #3: BLM Special Designations

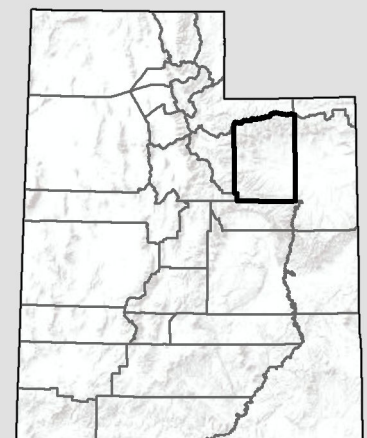
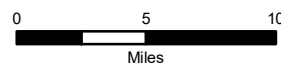


- Duchesne County Boundary
- Special Recreation Management Area (SRMA)
- Areas of Critical Environmental Concern (ACEC)

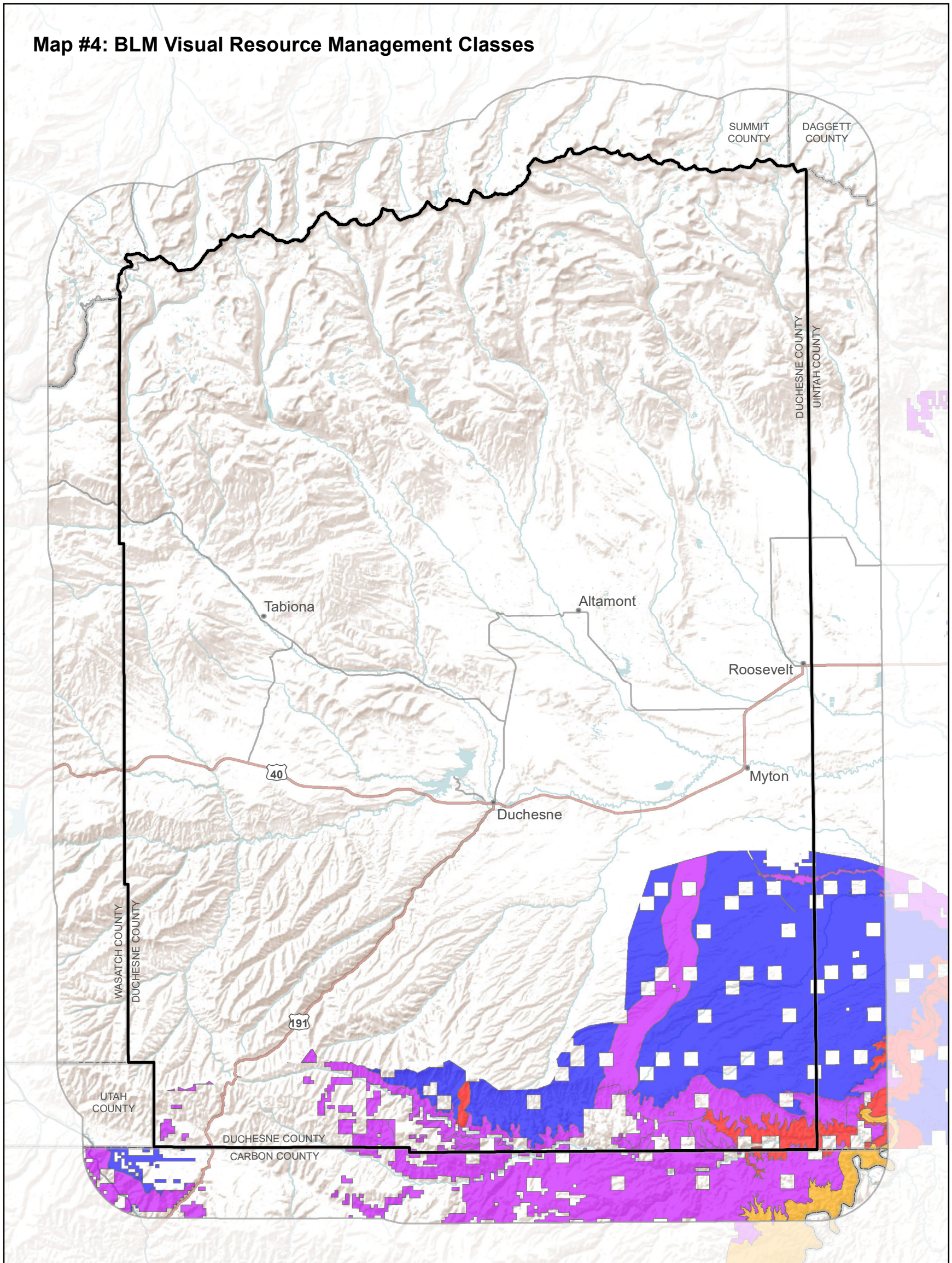
Data Source: Bureau of Land Management, 2008
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017








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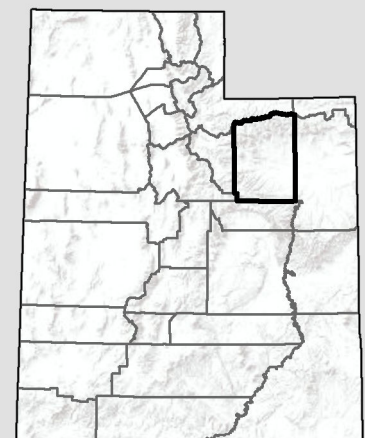


Map #4: BLM Visual Resource Management Classes

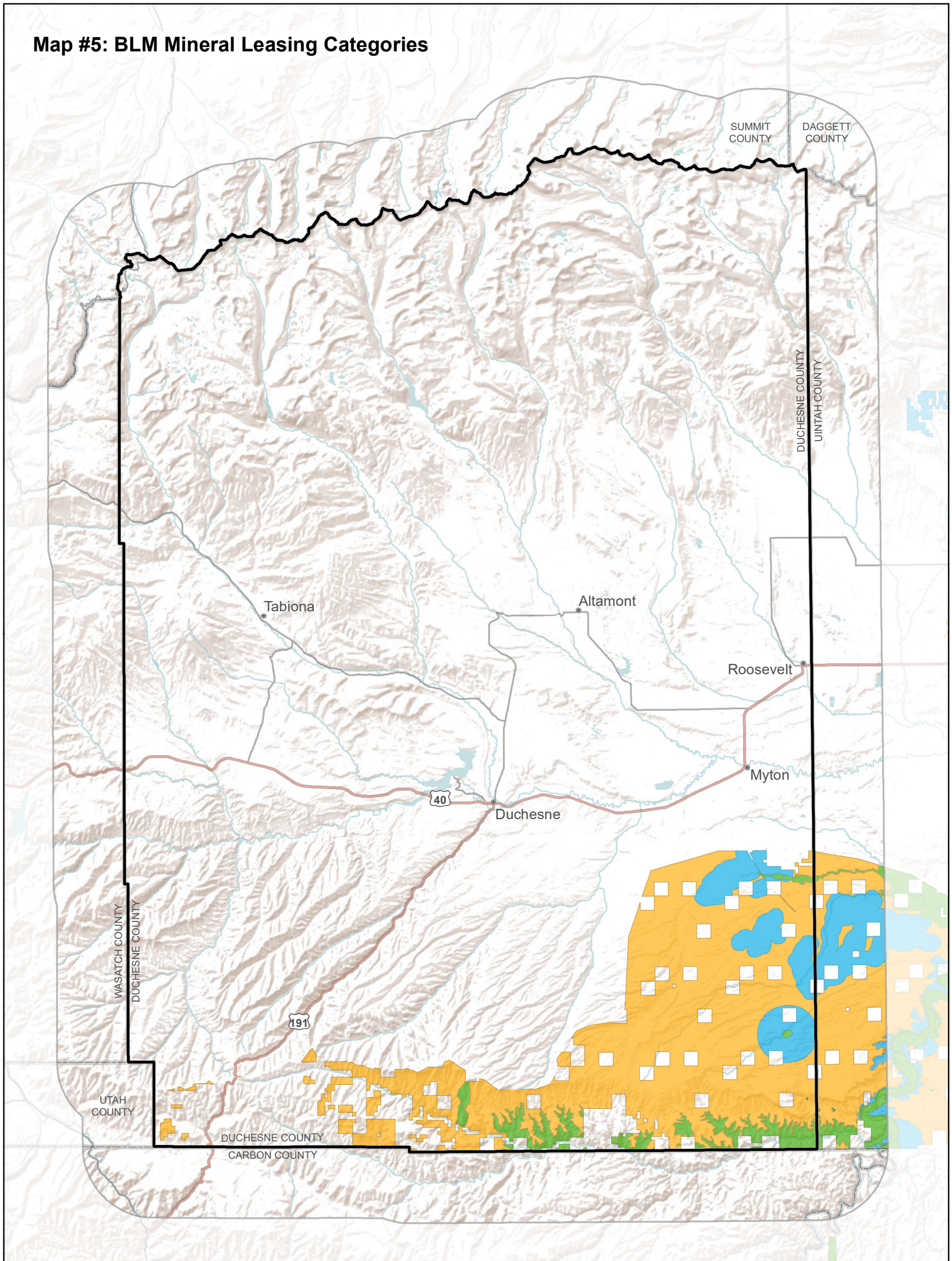






-  Duchesne County Boundary
- Visual Resource Management Classes**
-  1
-  2
-  3
-  4

Data Source: Bureau of Land Management, 2009
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017

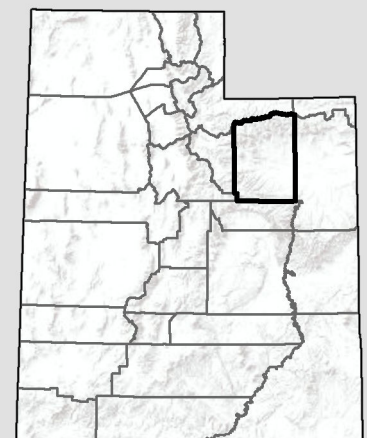


Map #5: BLM Mineral Leasing Categories

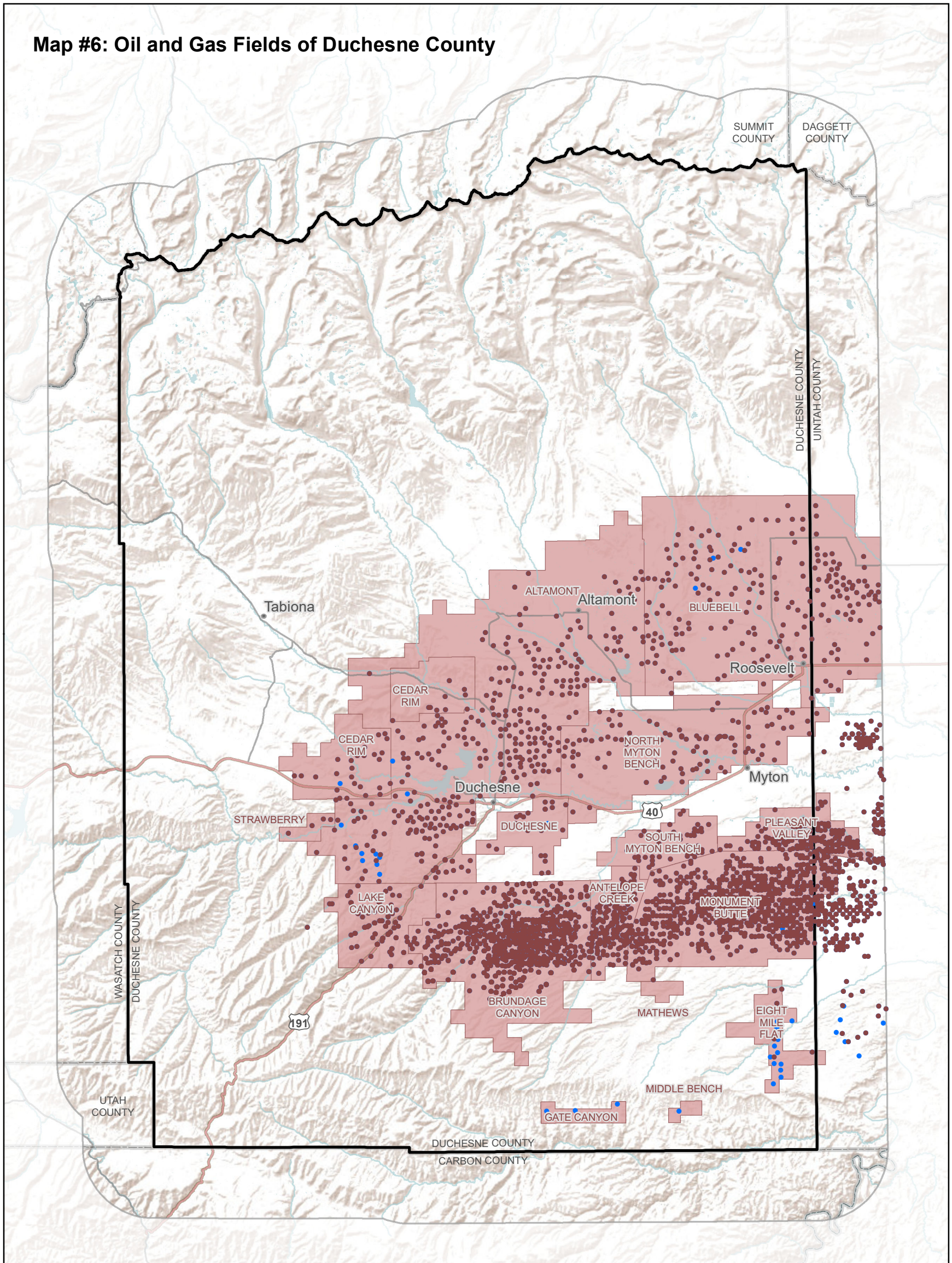






-  Duchesne County Boundary
- BLM Mineral Leasing Categories**
-  No Surface Occupancy
-  Standard Stipulations
-  Timing and Controlled Surface Use

Data Source: Bureau of Land Management, 2008
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017



Map #6: Oil and Gas Fields of Duchesne County

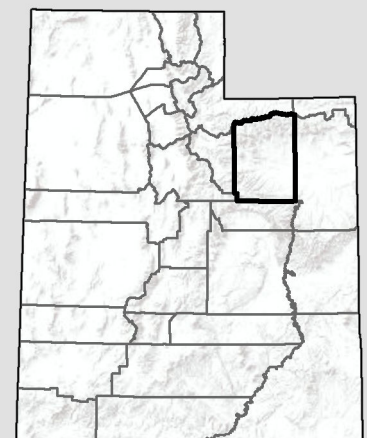
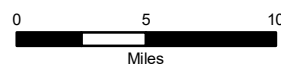


-  Duchesne County Boundary
-  Oil and Gas Fields
-  Gas Wells
-  Oil Wells

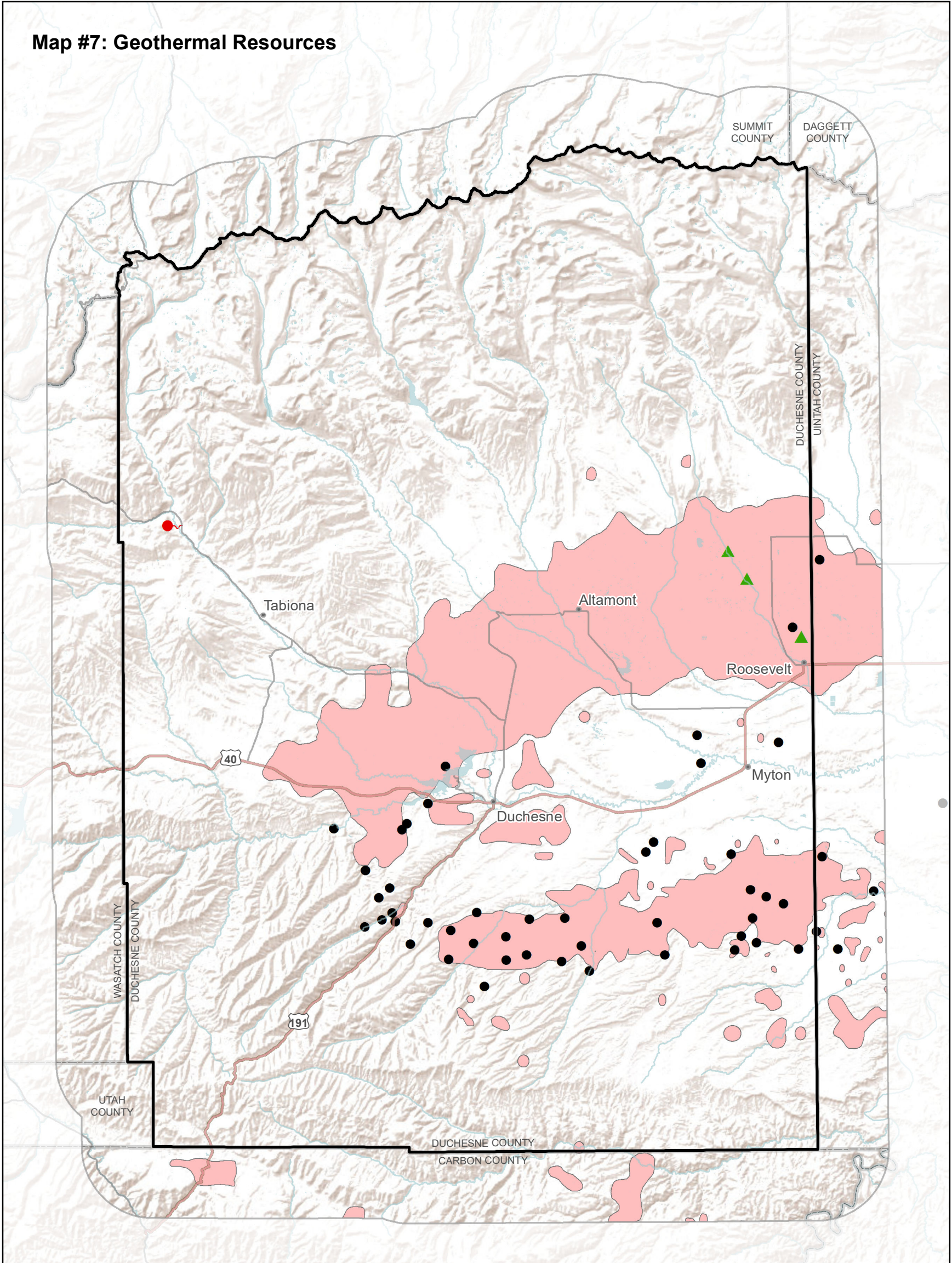
Data Source: Utah DNR-OGM Division, 2016
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017



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Map #7: Geothermal Resources

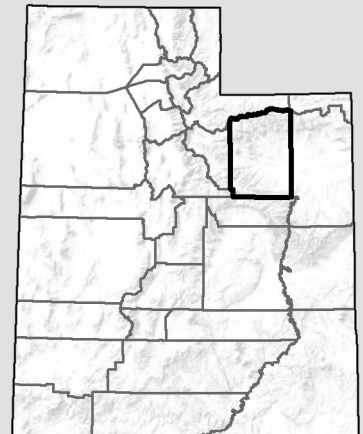
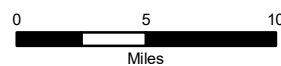


- Duchesne County Boundary
- Geothermal Zones
- Thermal Spring
- ▲ Thermal Well >50°C
- Well with elevated heat flow

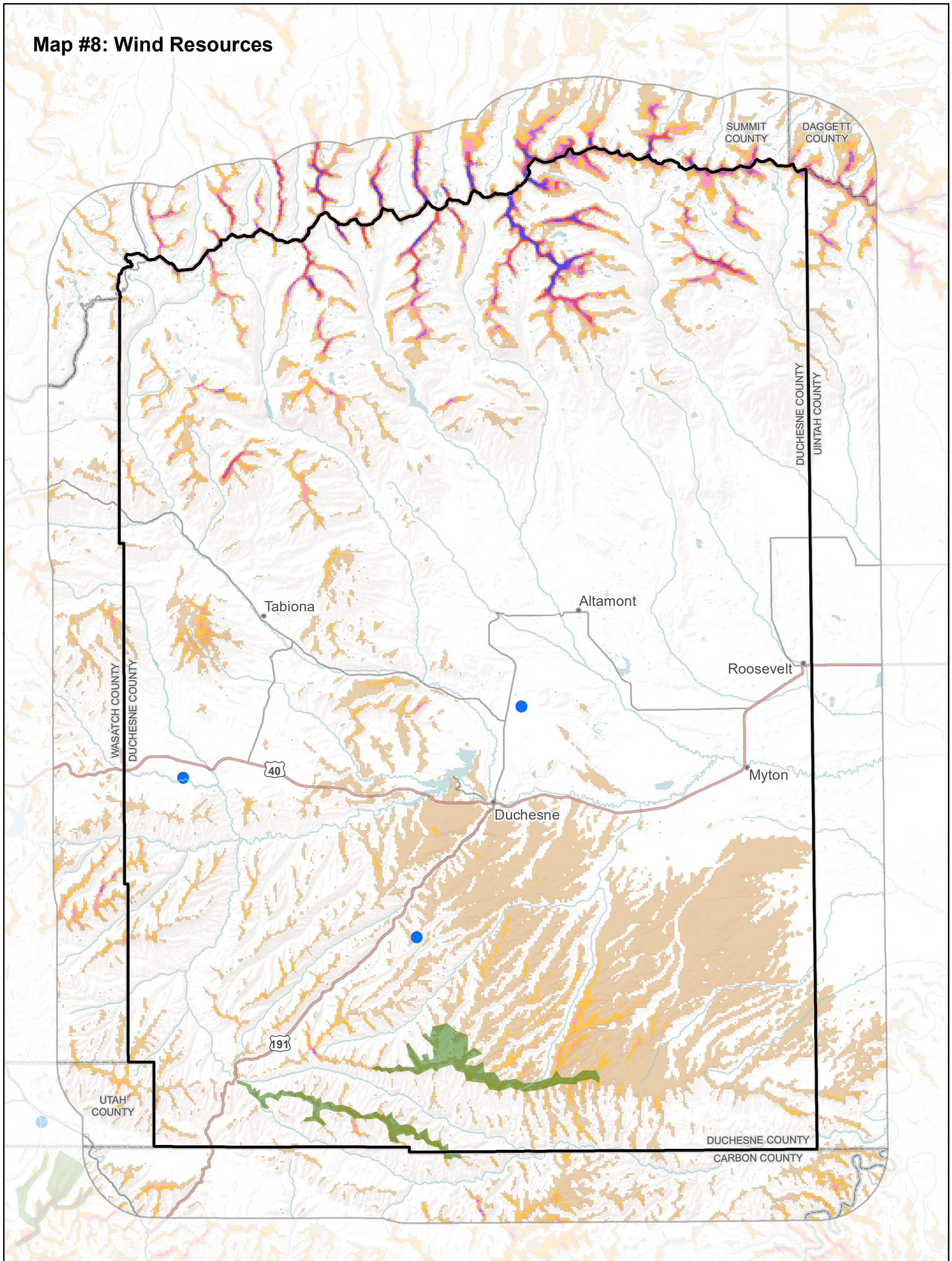
Data Source: Utah Geological Survey, 2014
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017



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Map #8: Wind Resources



Duchesne County Boundary

Wind Energy Zone

20 meter Anemometer Sites

50 meter Wind Power Resource Classifications

1 Poor

2 Marginal

3 Fair

4 Good

5 Excellent

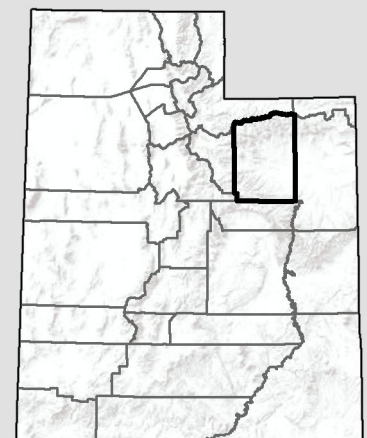
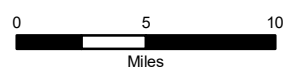
6 Outstanding

7 Superb

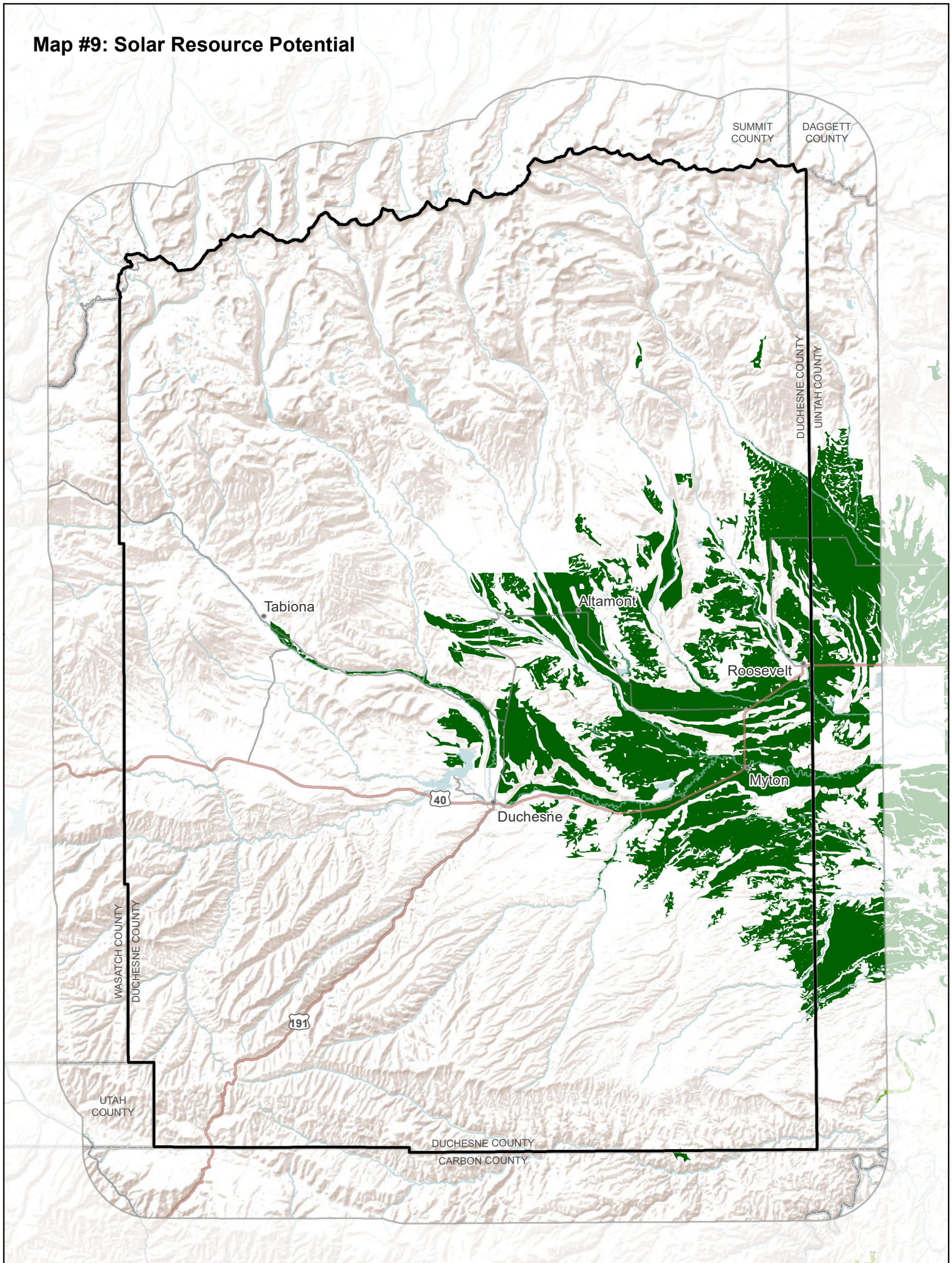
Data Source: Utah Department of Natural Resources, 2014
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017



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Map #9: Solar Resource Potential



Duchesne County Boundary

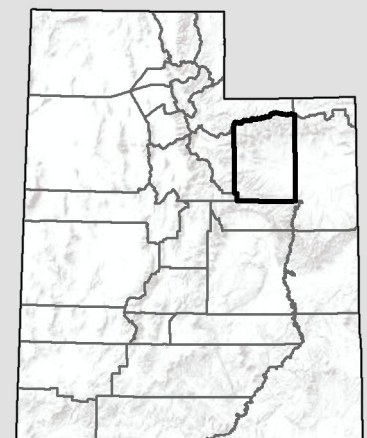
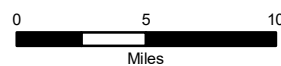
Direct Normal Irradiance

- 6.0 - 6.25 kWh/sq meter/day
- 6.25 - 6.5 kWh/sq meter/day
- 6.5 - 6.75 kWh/sq meter/day
- 6.75 - 7.0 kWh/sq meter/day
- 7.0 - 7.25 kWh/sq meter/day

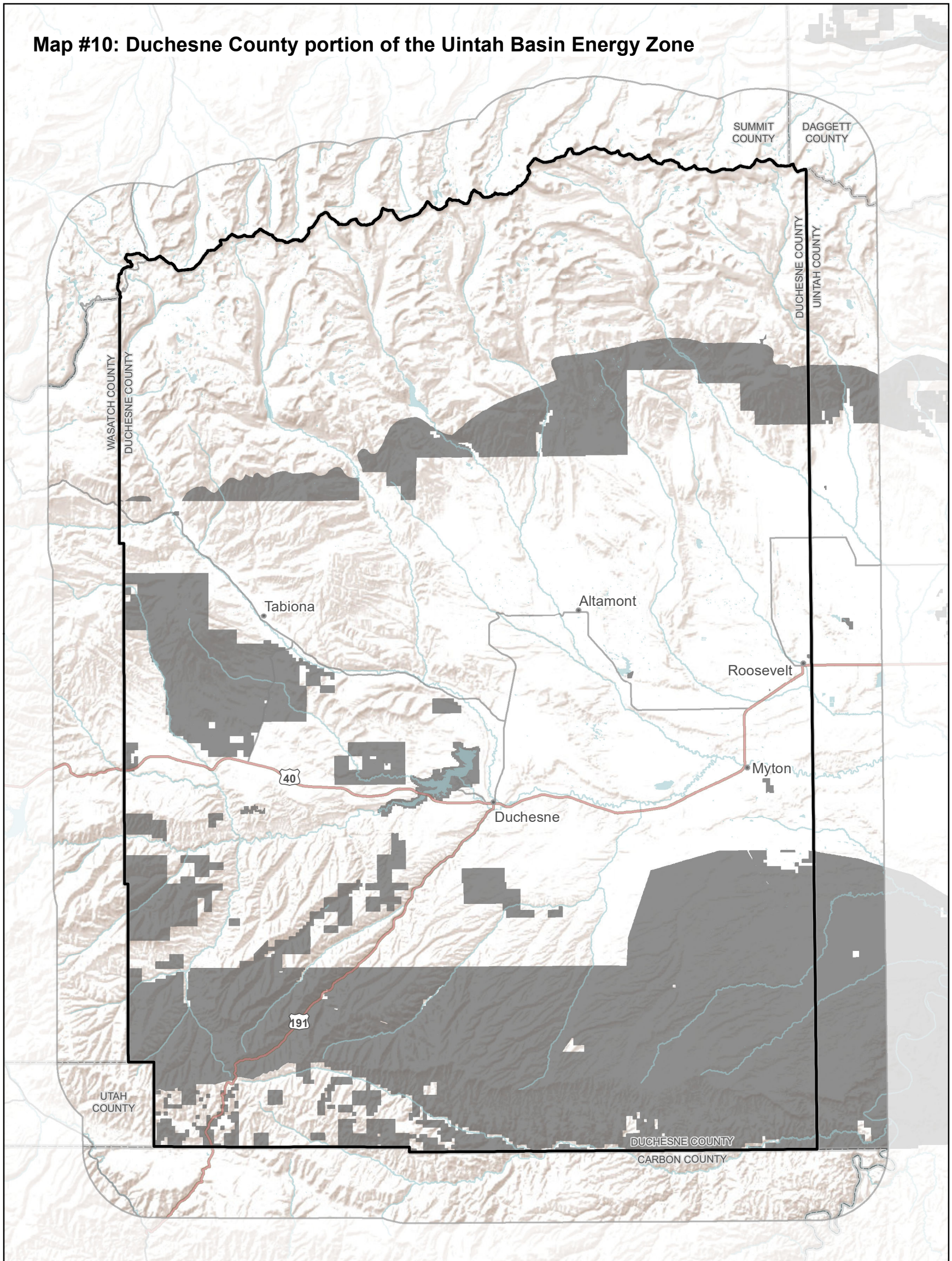
Data Source: Bureau of Land Management, 2012
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017






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Map #10: Duchesne County portion of the Uintah Basin Energy Zone

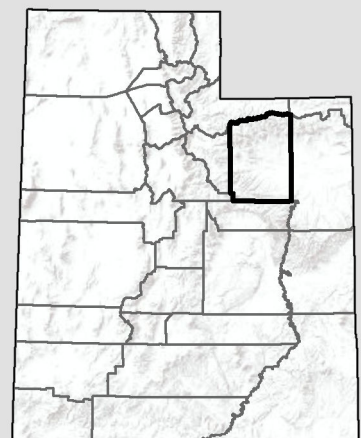
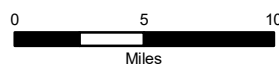


-  Duchesne County Boundary
-  Uintah Basin Energy Zone
-  All Other Lands

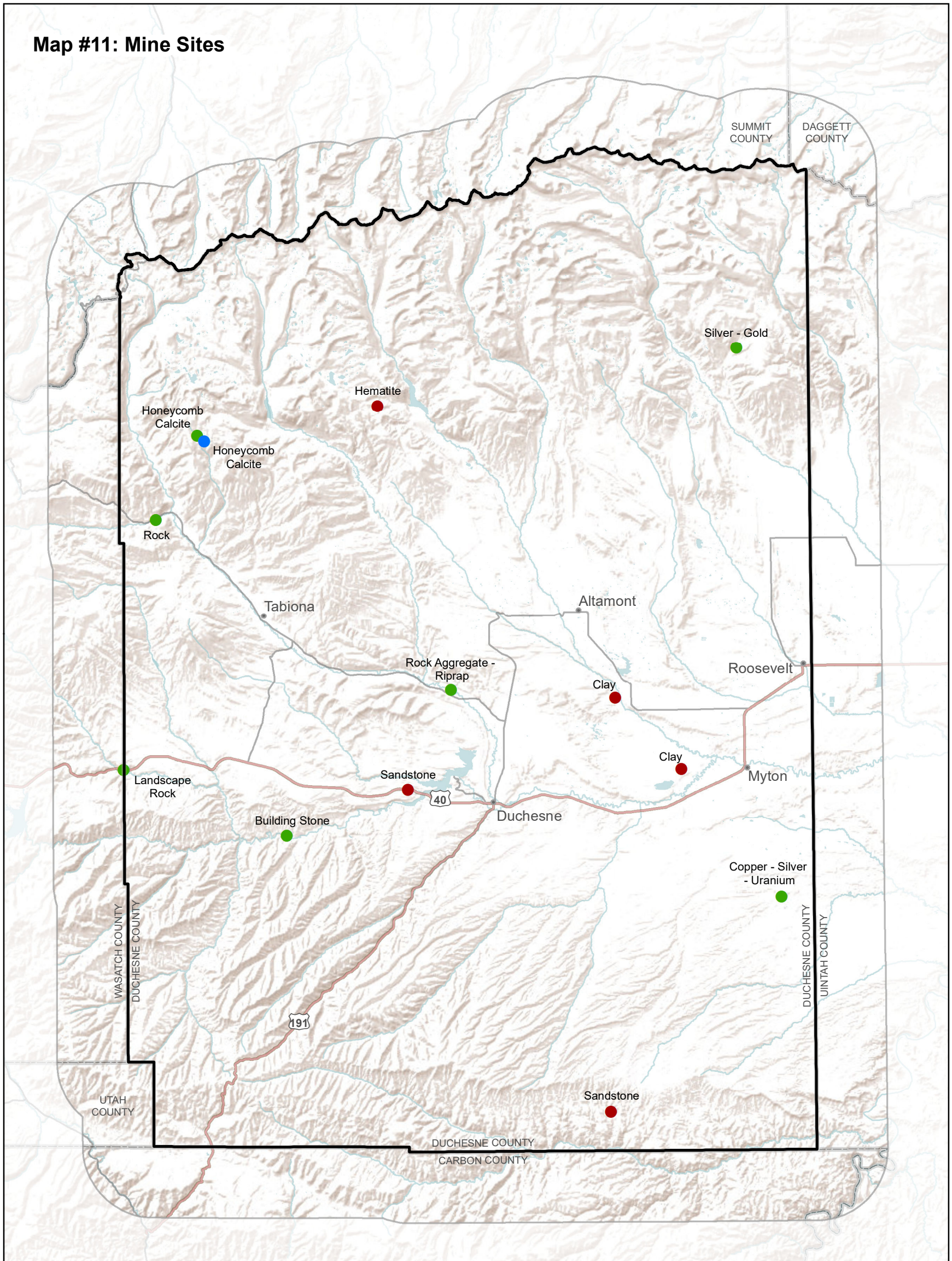
Data Source: Duchesne County GIS, 2012
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017







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Map #11: Mine Sites

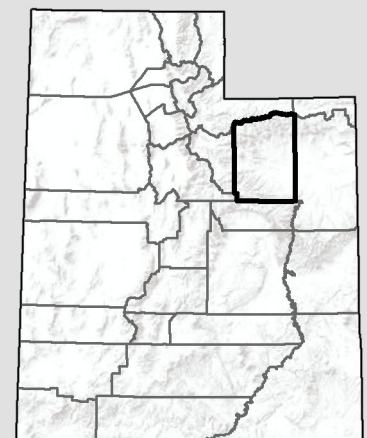


-  Duchesne County Boundary
-  Active
-  Proposed
-  Retired

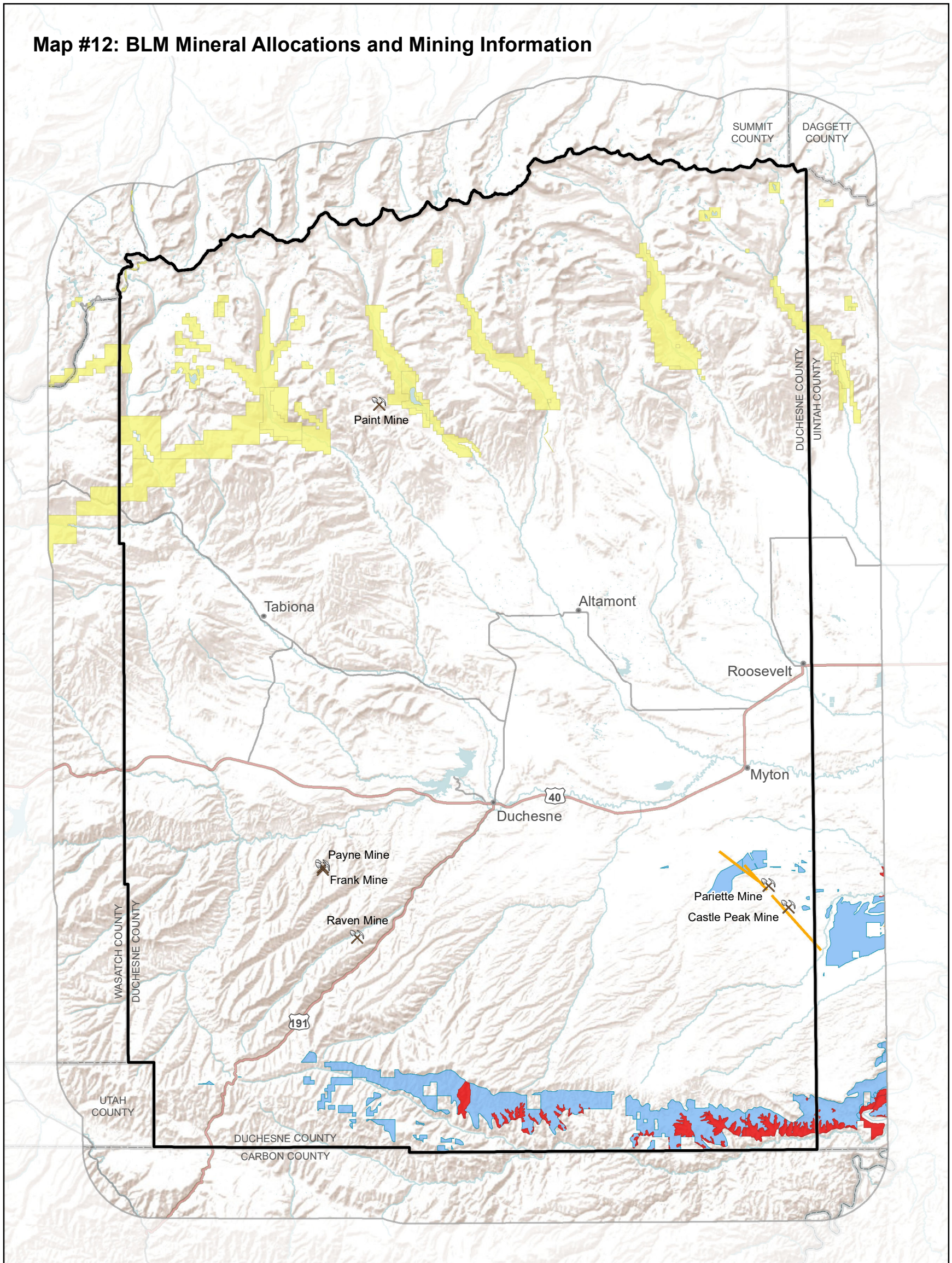
Data Source: Utah DNR-OGM, 2016
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017



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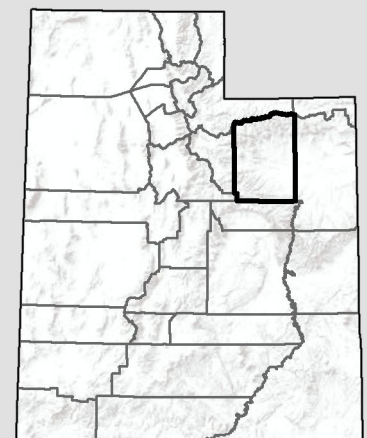


Map #12: BLM Mineral Allocations and Mining Information

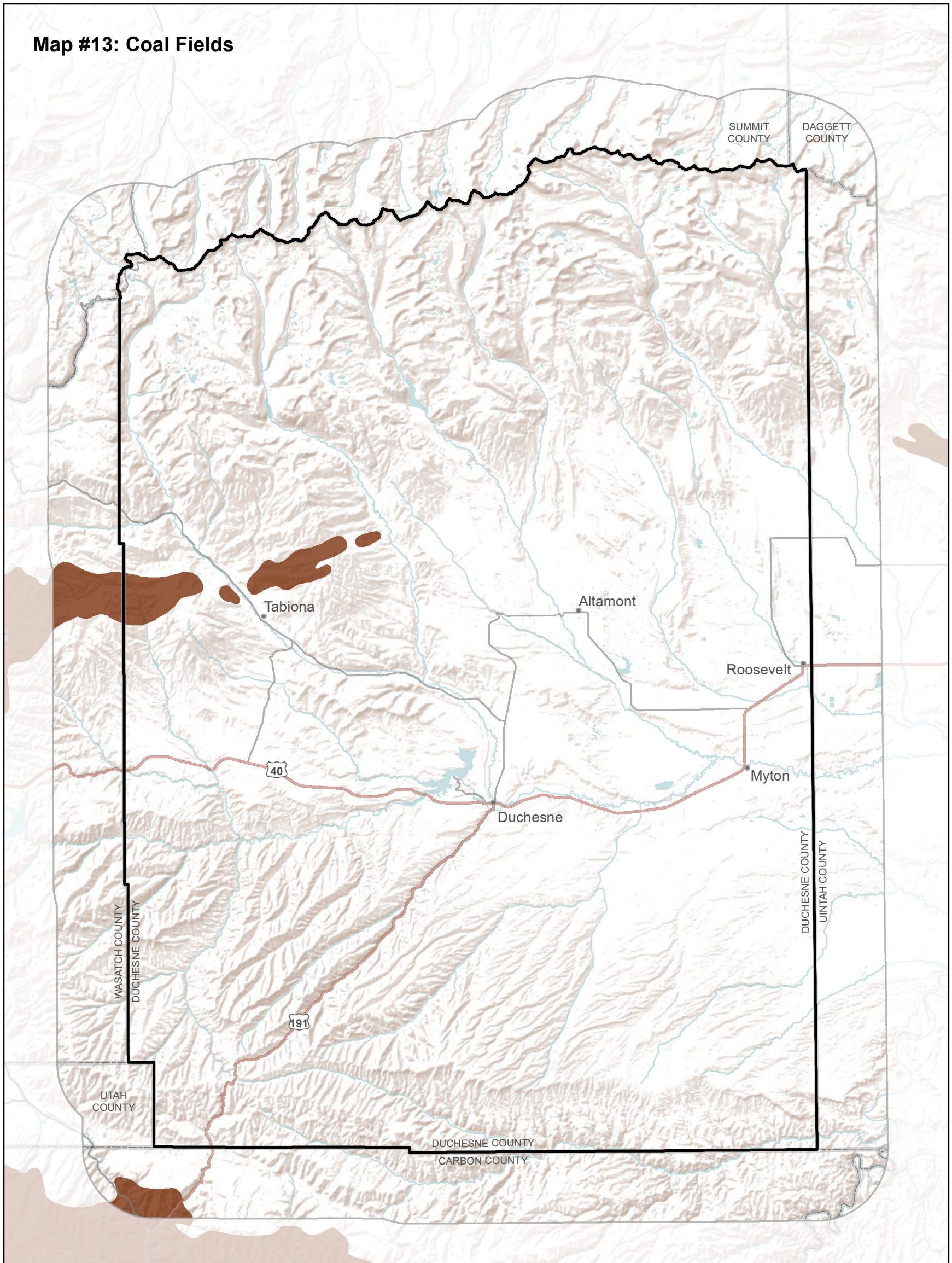


- Duchesne County Boundary
- Gilsonite Lease (BLM)
- Withdrawal (USDA)
- Mine (USGS)
- BLM Mineral Materials Allocations**
- Closed
- Open

Data Source: BLM, 2008; USDA, 2016;
 Utah DNR-OGM, 2016; USGS, 2012
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017



Map #13: Coal Fields

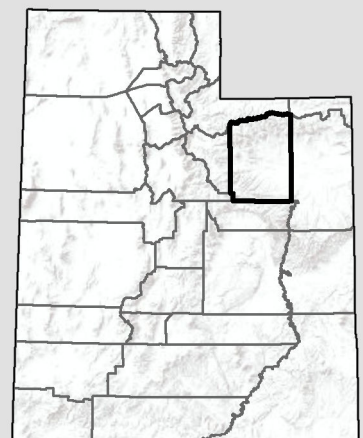
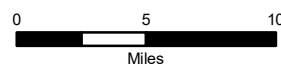


- Duchesne County Boundary
- Coal Fields

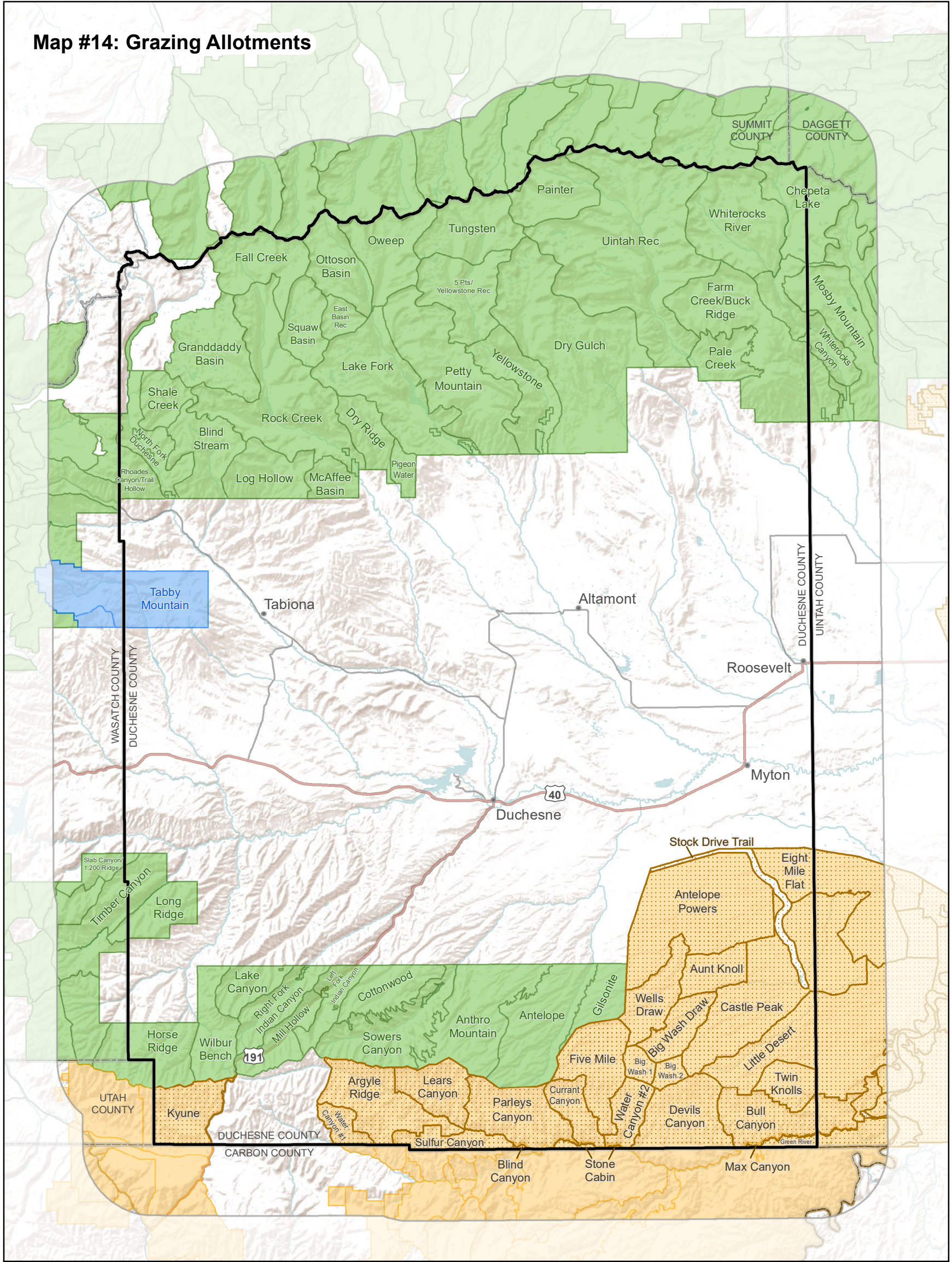
Data Source: Utah DNR-OGM, 1988
Basemap from ESRI ArcGIS Online:
World Terrain Base, accessed 1/18/2017
Map Created: 1/18/2017



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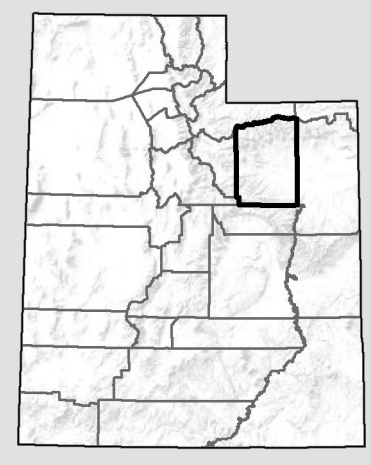
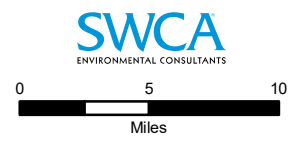


Map #14: Grazing Allotments

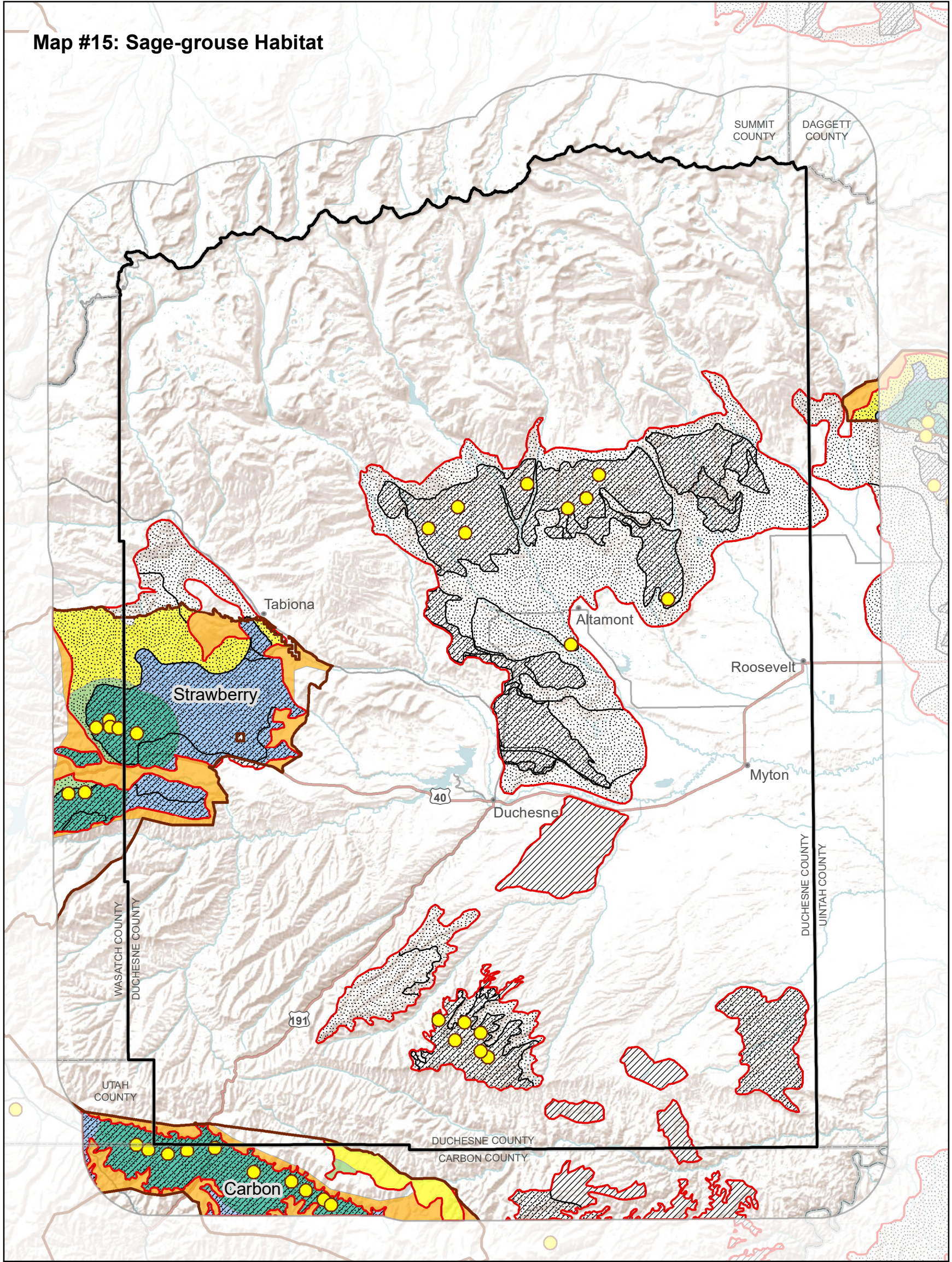


- Duchesne County Boundary
- Grazing Allocations (BLM)
- Grazing Allotments (BLM)
- Grazing Allotments (SITLA)
- Grazing Allotments (USFS)

Data Source: Bureau of Land Management, 2013
 U.S. Forest Service, 2016
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017

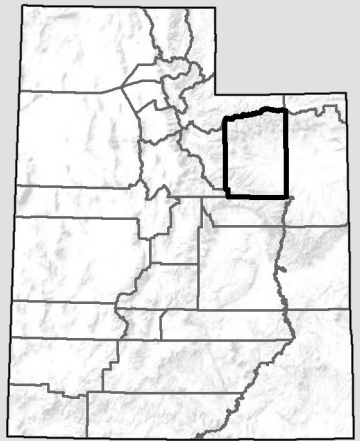


Map #15: Sage-grouse Habitat

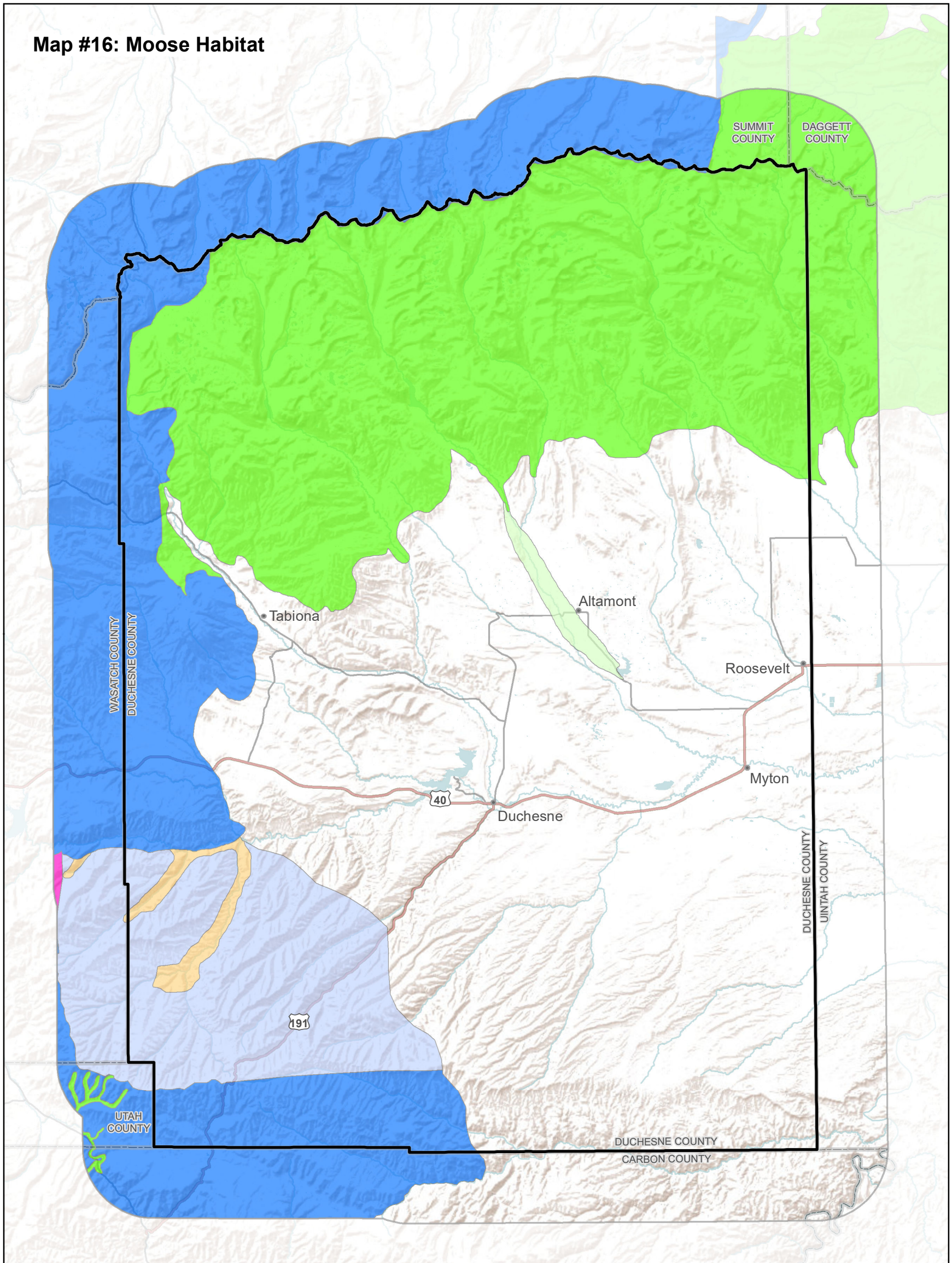


- | | |
|------------------------------|---|
| Duchesne County Boundary | Sage-grouse Management Areas |
| Occupied Sage-grouse Habitat | Nesting and Brood-Rearing, Winter Habitat |
| Sage-grouse Winter Habitat | Nesting and Brood-Rearing, Non-Winter Habitat |
| Sage-grouse Brooding Habitat | Winter Habitat |
| Lek Locations, 2016 | Non-Winter Habitat |
| | Opportunity |
| | Boundaries |

Data Source: Utah DWR, 2016
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017



Map #16: Moose Habitat



Duchesne County Boundary

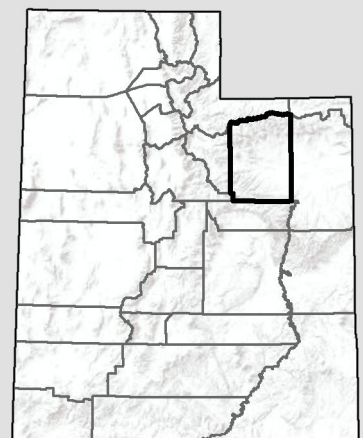
Moose Habitat

- Spring/fall, crucial
- Summer, substantial
- Winter, crucial
- Winter, substantial
- Year-long, crucial
- Year-long, substantial

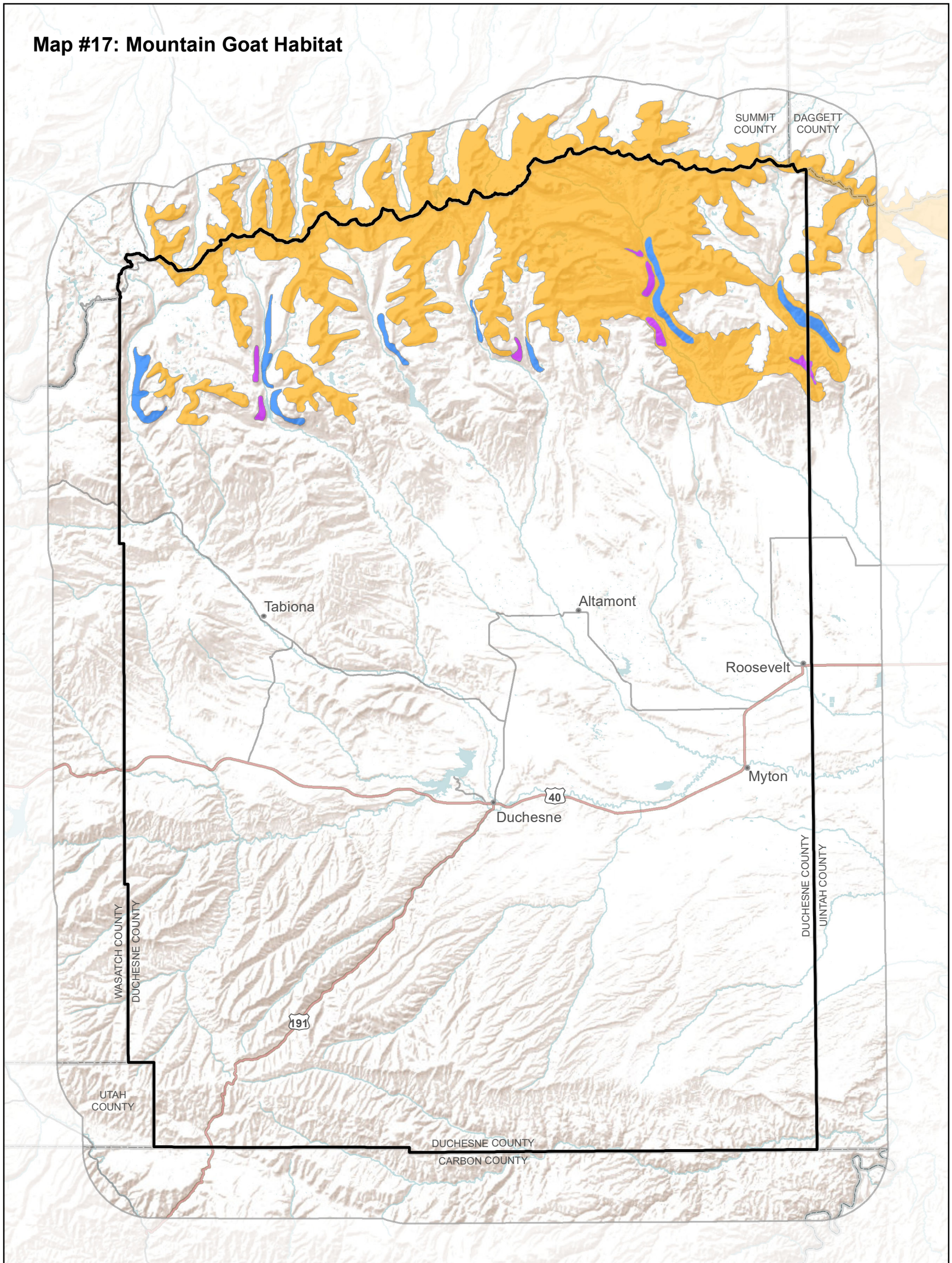
Data Source: Utah Division of Wildlife Resources, 2013
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017







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Map #17: Mountain Goat Habitat

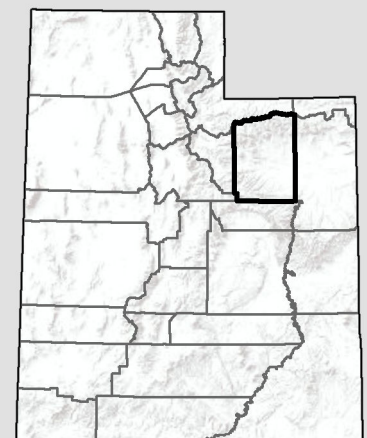
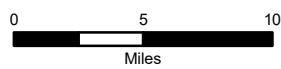


-  Duchesne County Boundary
- Mountain Goat Habitat**
-  Summer, crucial
-  Winter, crucial
-  Winter, substantial

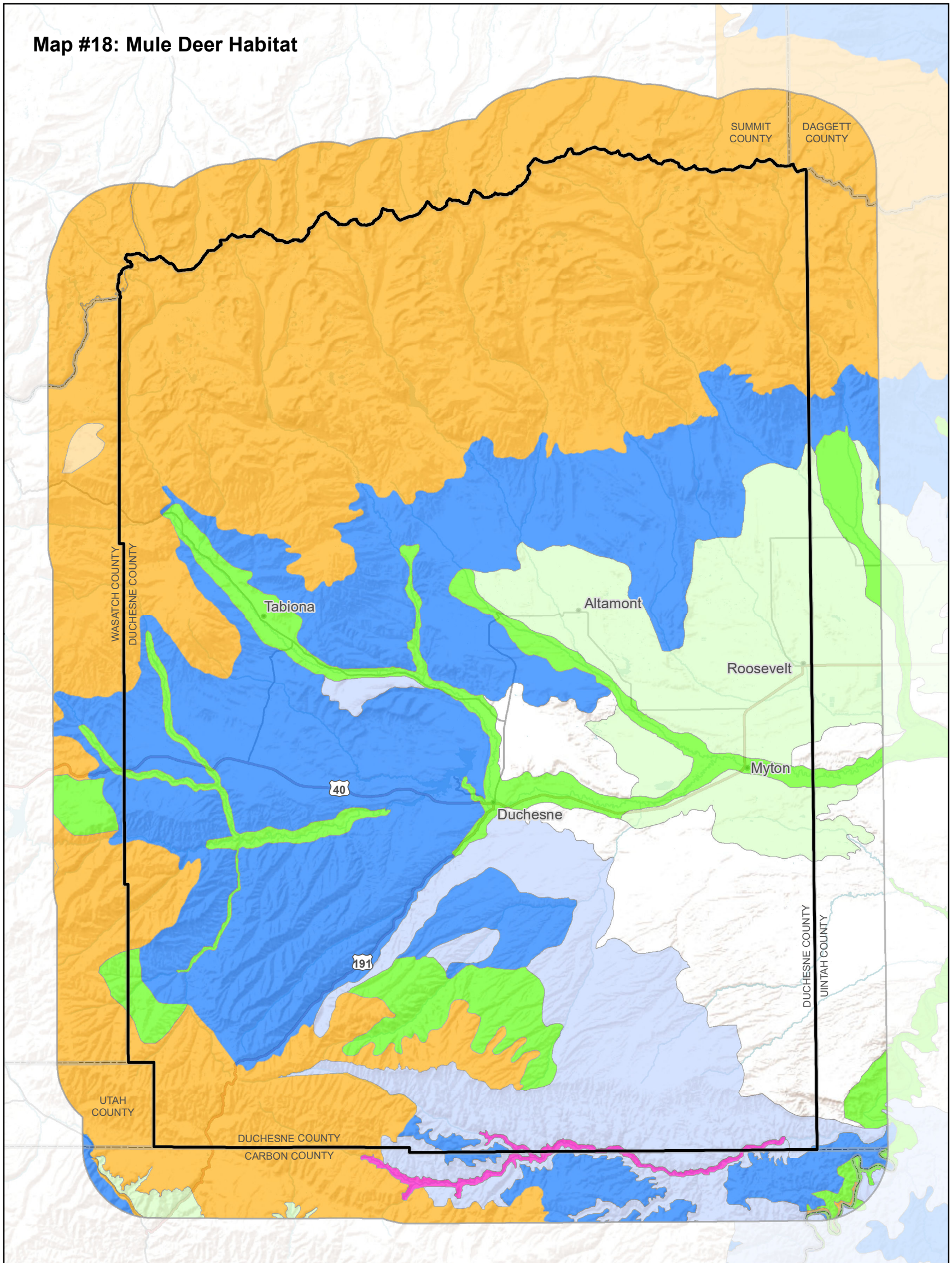
Data Source: Utah Division of Wildlife Resources, 2013
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017



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Map #18: Mule Deer Habitat



Duchesne County Boundary

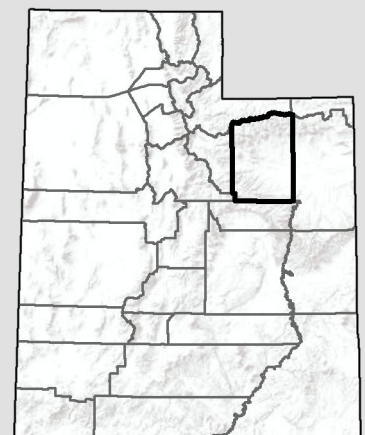
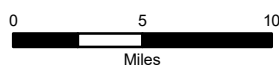
Mule Deer Habitat

- Spring/fall, crucial
- Summer, crucial
- Summer, substantial
- Winter, crucial
- Winter, substantial
- Year-long, crucial
- Year-long, substantial

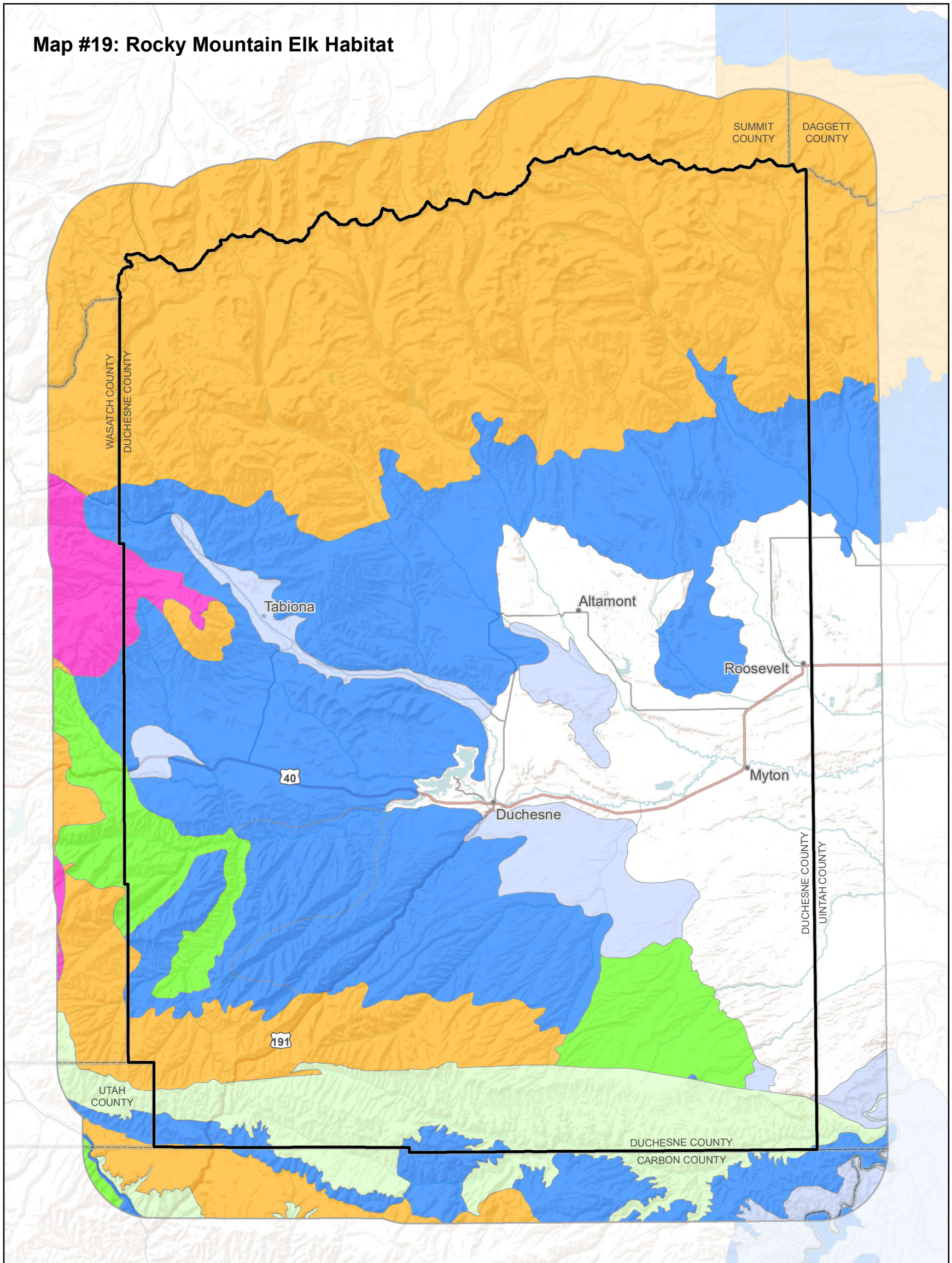
Data Source: Utah Division of Wildlife Resources, 2014
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017



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Map #19: Rocky Mountain Elk Habitat

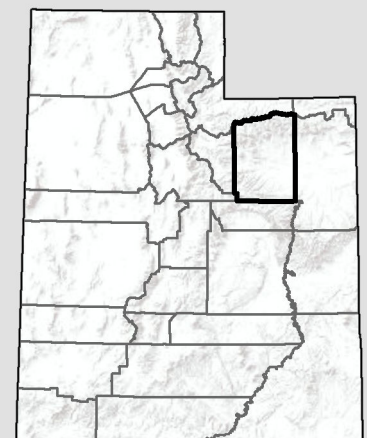


Duchesne County Boundary

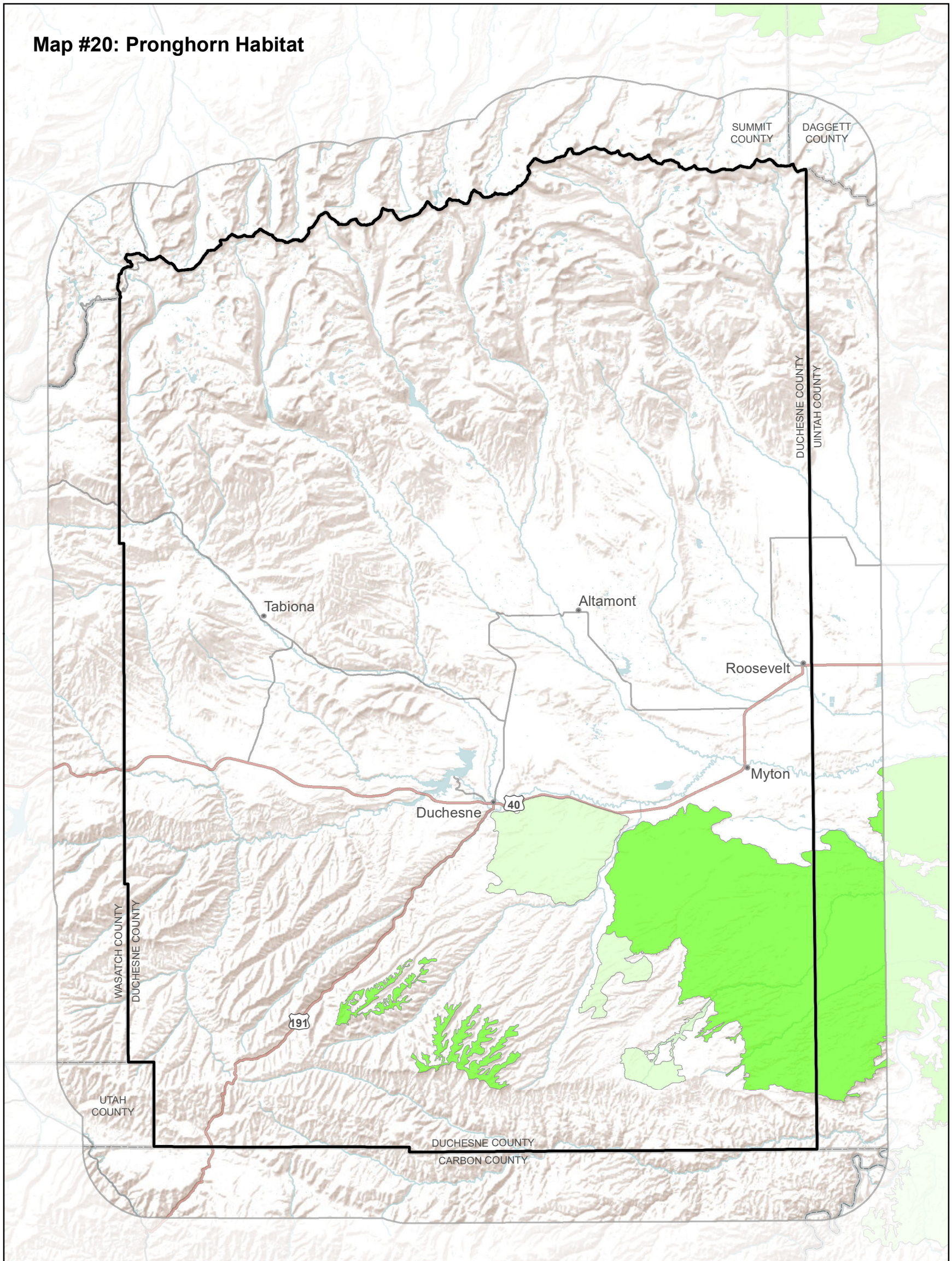
Rocky Mountain Elk Habitat

- Spring/fall, crucial
- Summer, crucial
- Winter, crucial
- Winter, substantial
- Year-long, crucial
- Year-long, substantial

Data Source: Utah Division of Wildlife Resources, 2013
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017



Map #20: Pronghorn Habitat



Duchesne County Boundary

Pronghorn Habitat

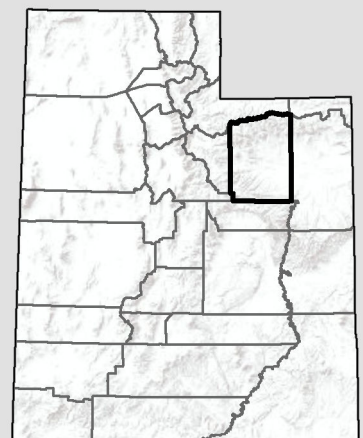
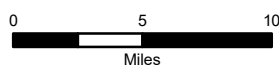
Year-long, crucial

Year-long, substantial

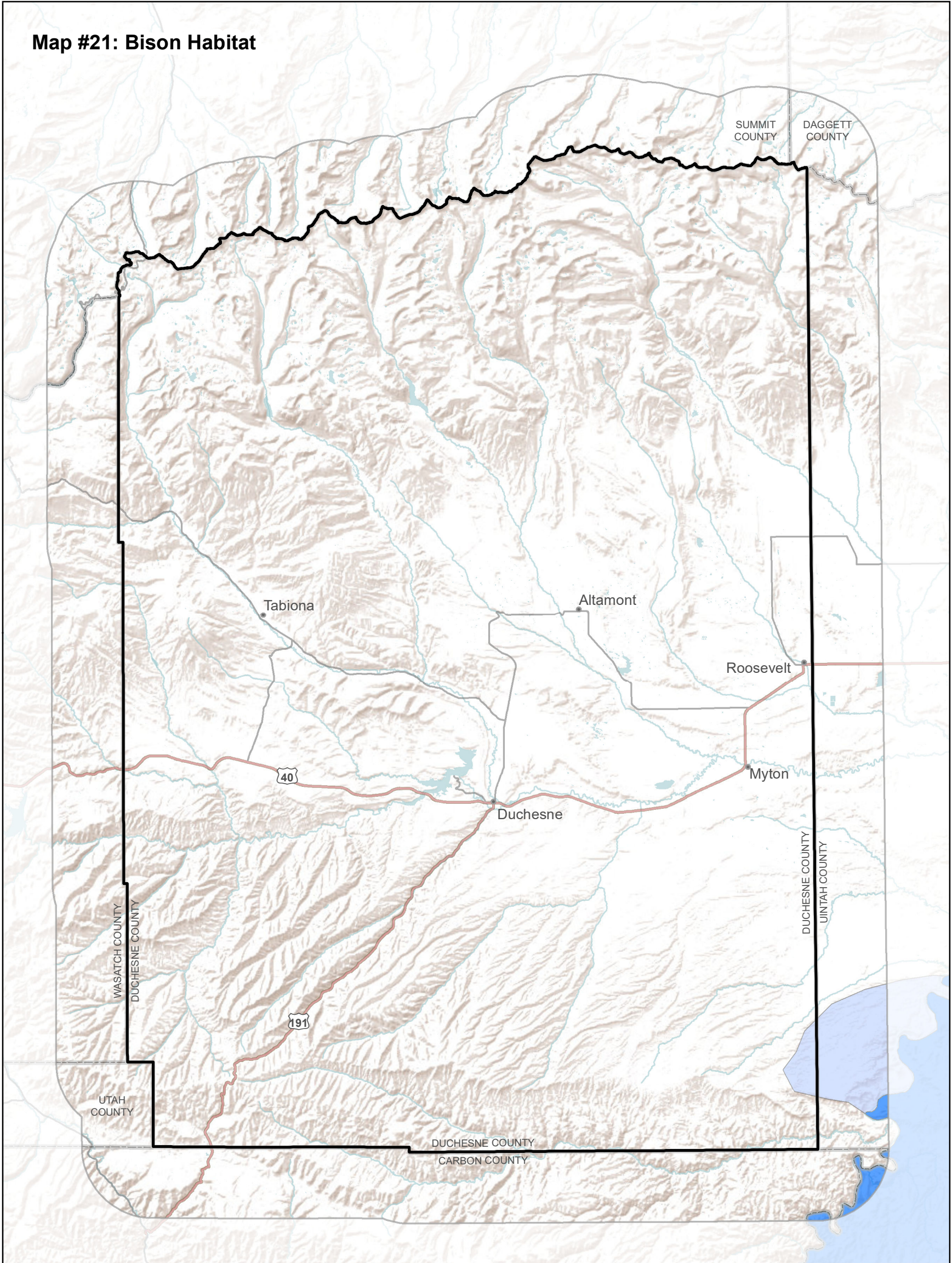
Data Source: Utah Division of Wildlife Resources, 2014
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017






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Map #21: Bison Habitat

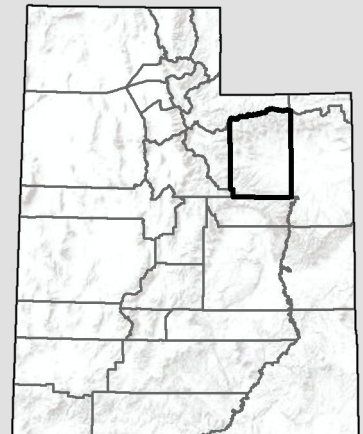
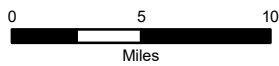


-  Duchesne County Boundary
- Bison Habitat**
-  Winter, crucial
-  Winter, substantial

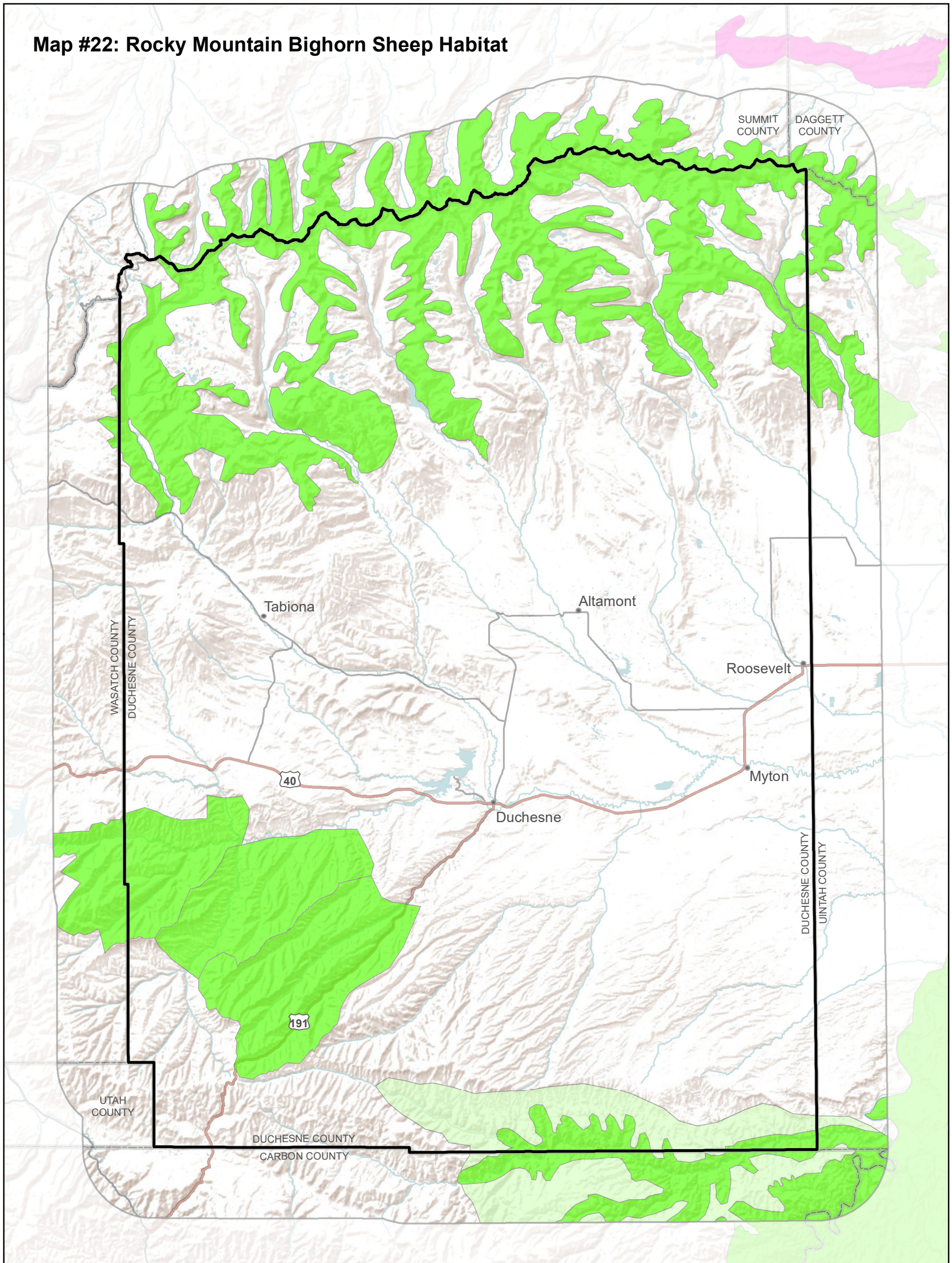
Data Source: Utah Division of Wildlife Resources, 2014
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017







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Map #22: Rocky Mountain Bighorn Sheep Habitat

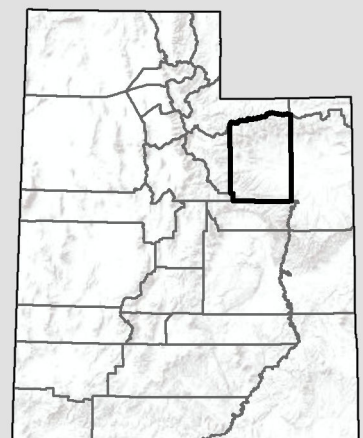
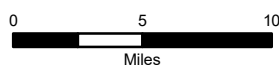


-  Duchesne County Boundary
- Rocky Mountain Bighorn Sheep Habitat**
-  Spring/fall, crucial
-  Year-long, crucial
-  Year-long, substantial

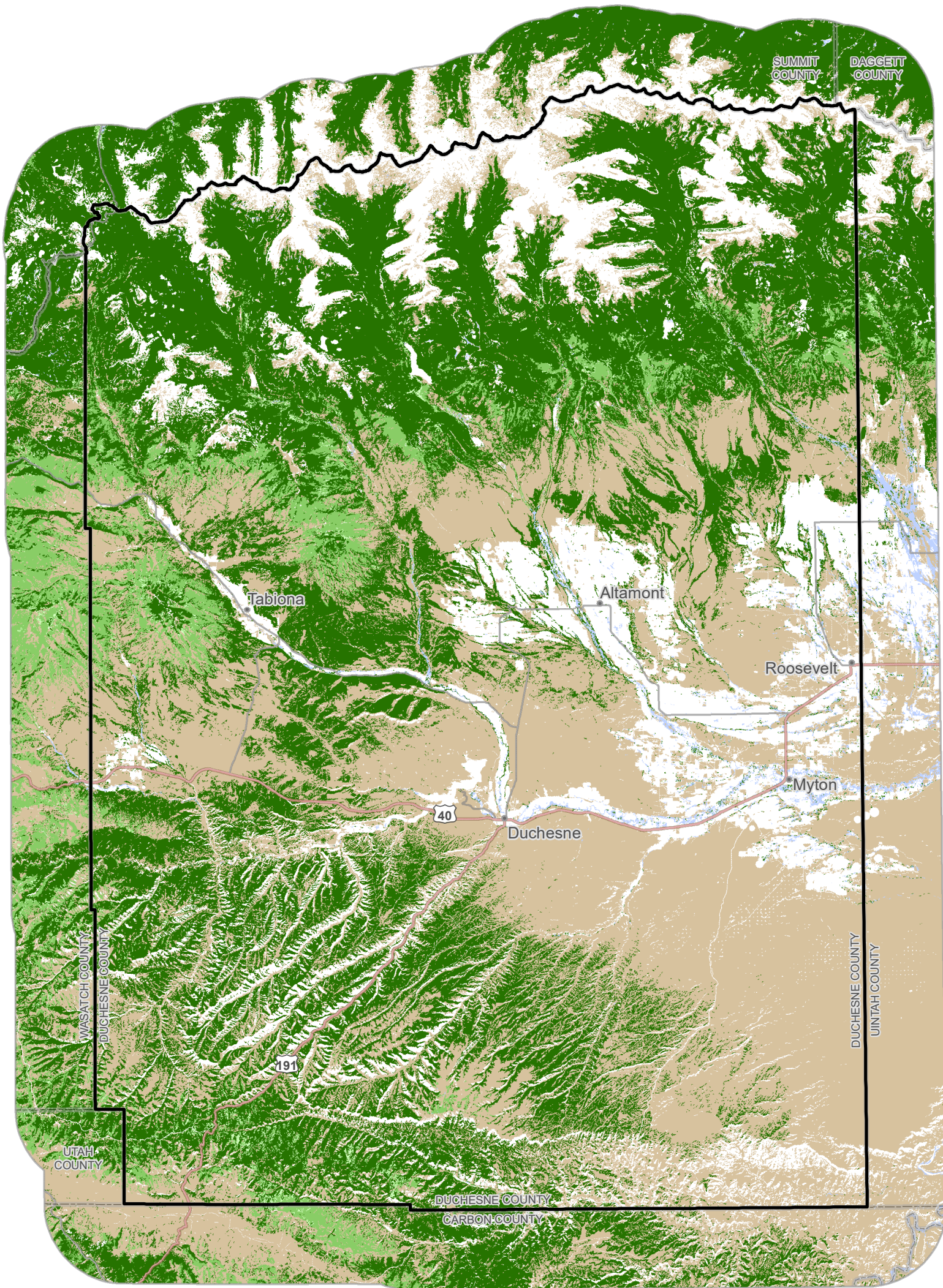
Data Source: Utah Division of Wildlife Resources, 2013
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017



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Map #23: Forested Lands and Other Land Cover



Duchesne County Boundary

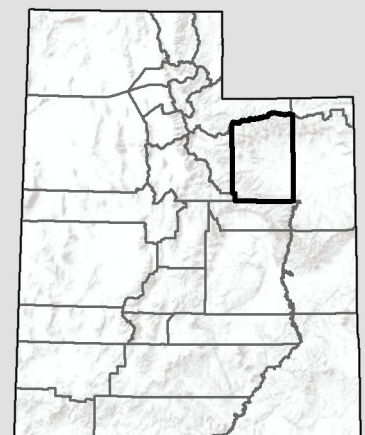
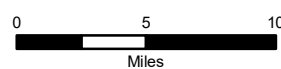
National Land Cover Database

- Evergreen Forest
- Deciduous Forest
- Mixed Forest
- Shrub/Scrub
- Woody Wetlands

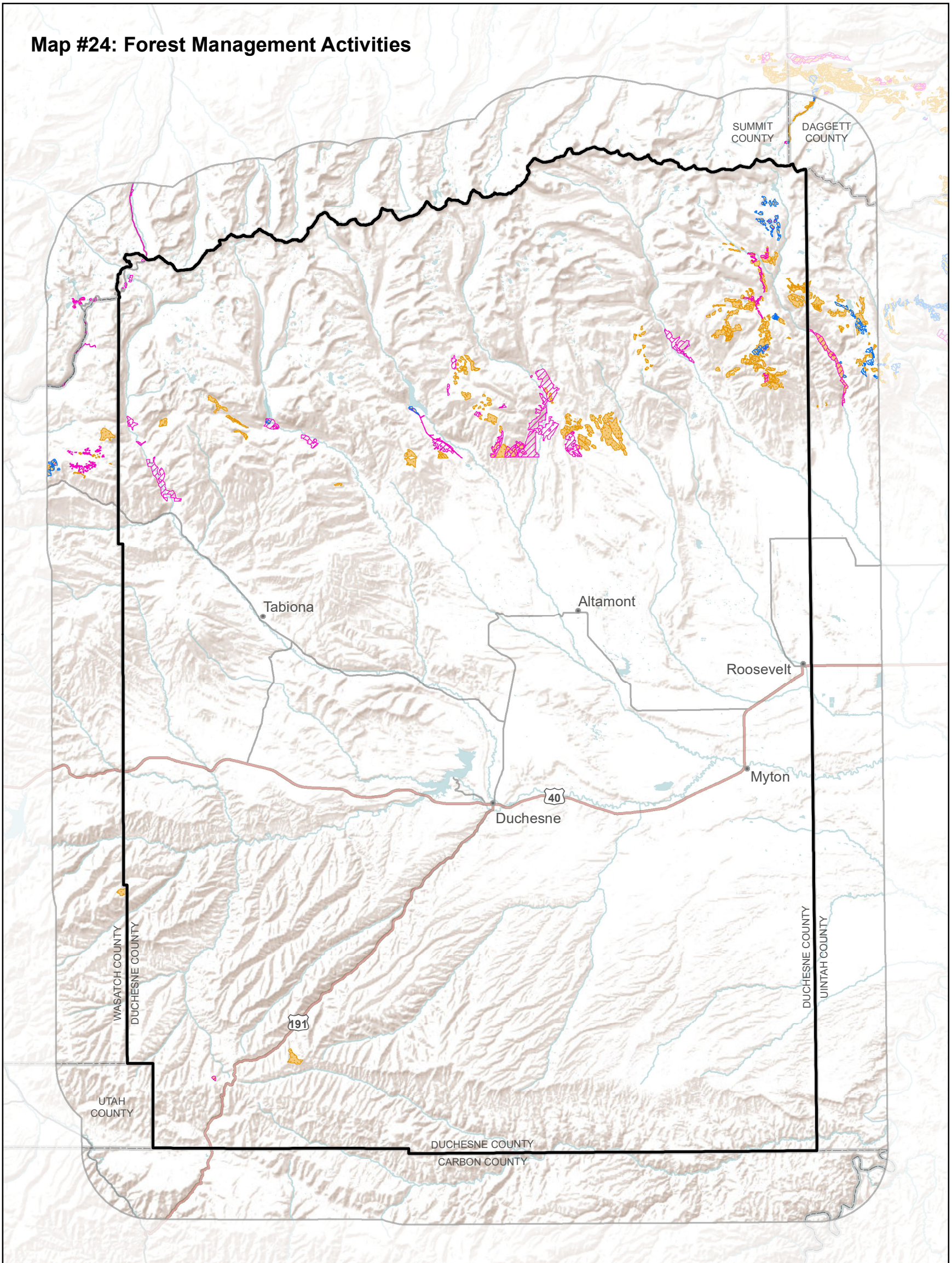
Data Source: U.S. Geological Survey, 2011
Map Created: 1/18/2017






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Map #24: Forest Management Activities

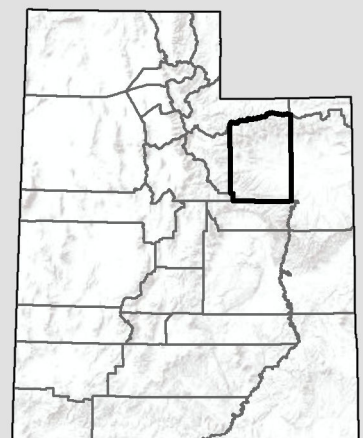
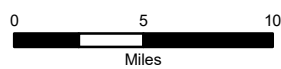


-  Duchesne County Boundary
-  Brush Disposal Funded Activities
-  Western Beetle Bark Strategy
-  Timber Harvests

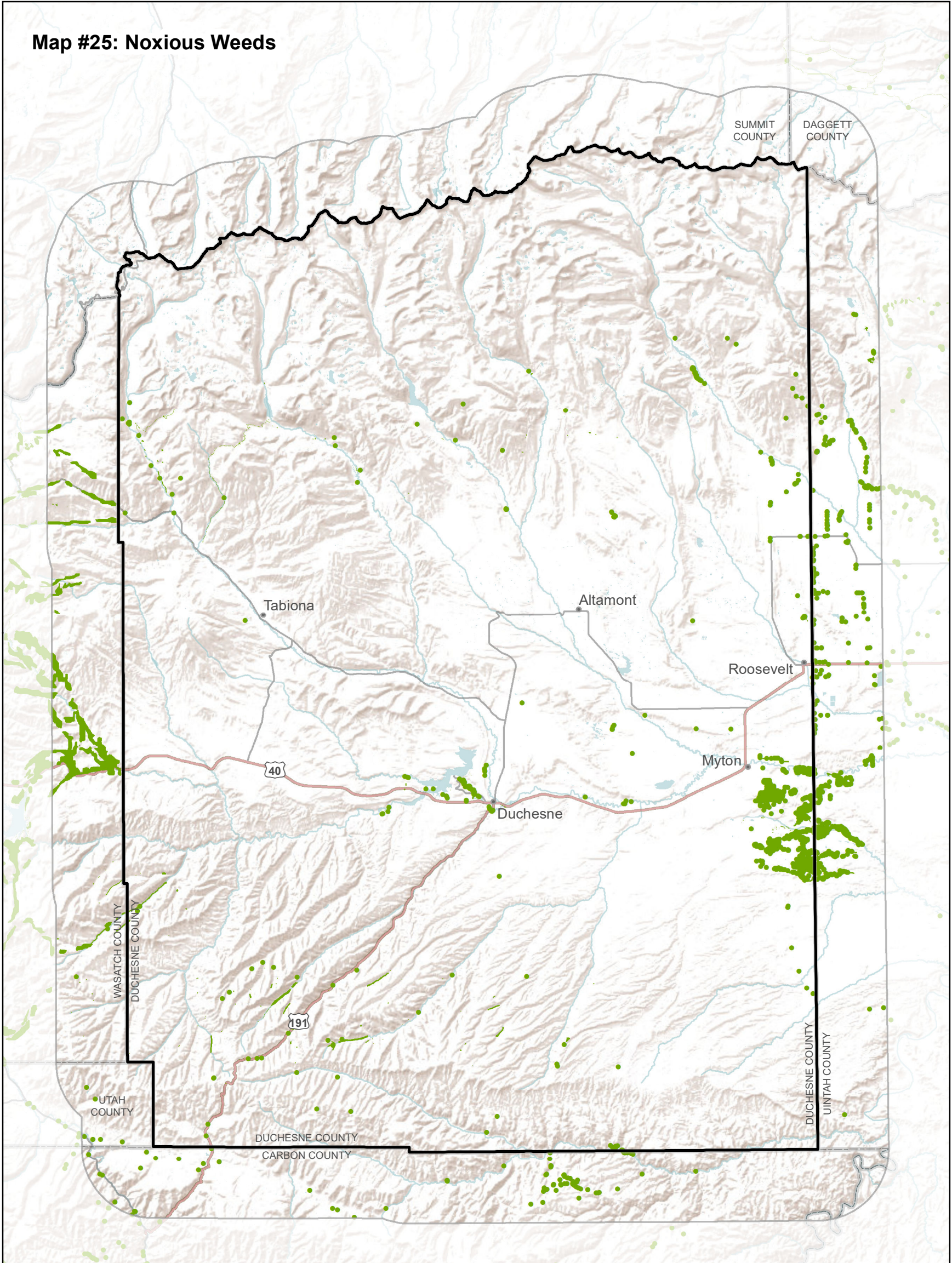
Data Source: U.S. Department of Agriculture, 2016
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017





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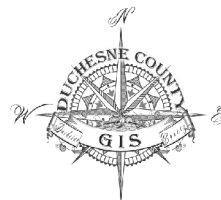


Map #25: Noxious Weeds

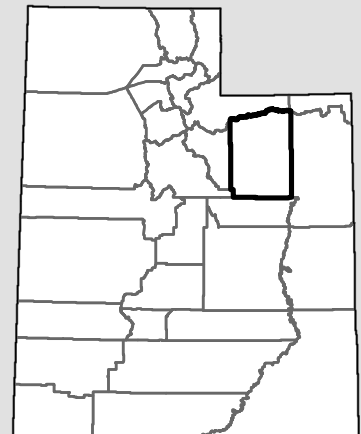
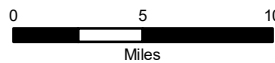


-  Duchesne County Boundary
-  Noxious Weeds

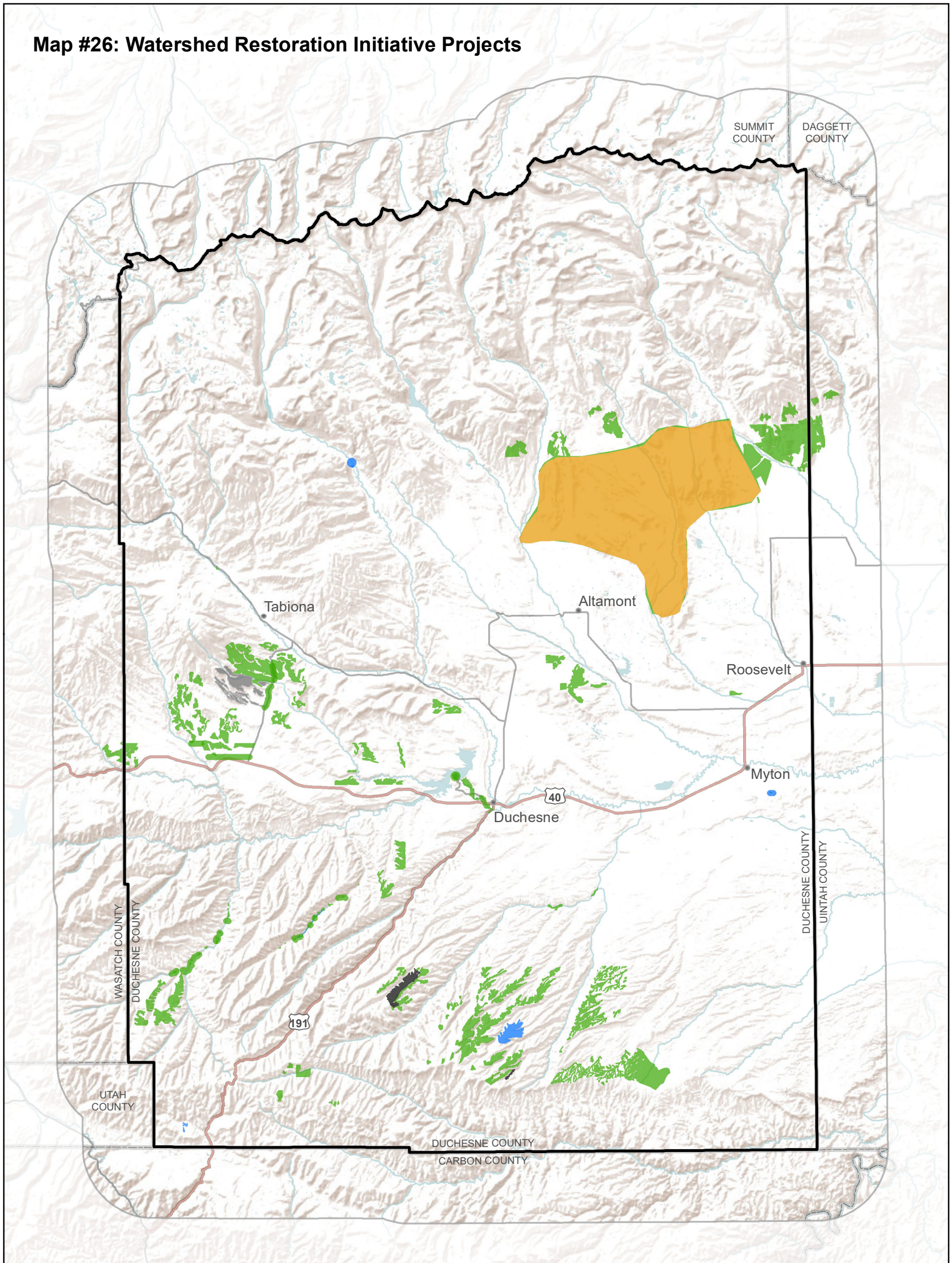
Data Source: Duchesne County Weed Department, Ashley National Forest, Utah Department of Agriculture and Food, and Utah Division of Wildlife Resources, 2016
Basemap from ESRI ArcGIS Online: World Terrain Base, accessed 1/18/2017
Map Created: 1/18/2017









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Map #26: Watershed Restoration Initiative Projects

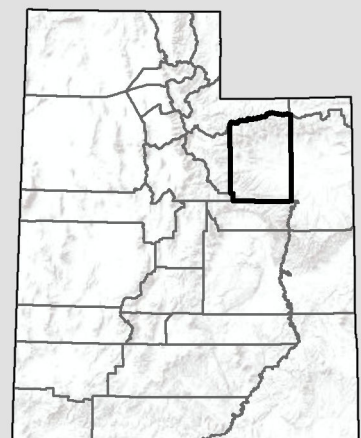
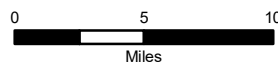


-  Duchesne County Boundary
- Watershed Restoration Initiative Projects**
-  Draft
-  Proposed
-  Current
-  Pending Completion
-  Completed

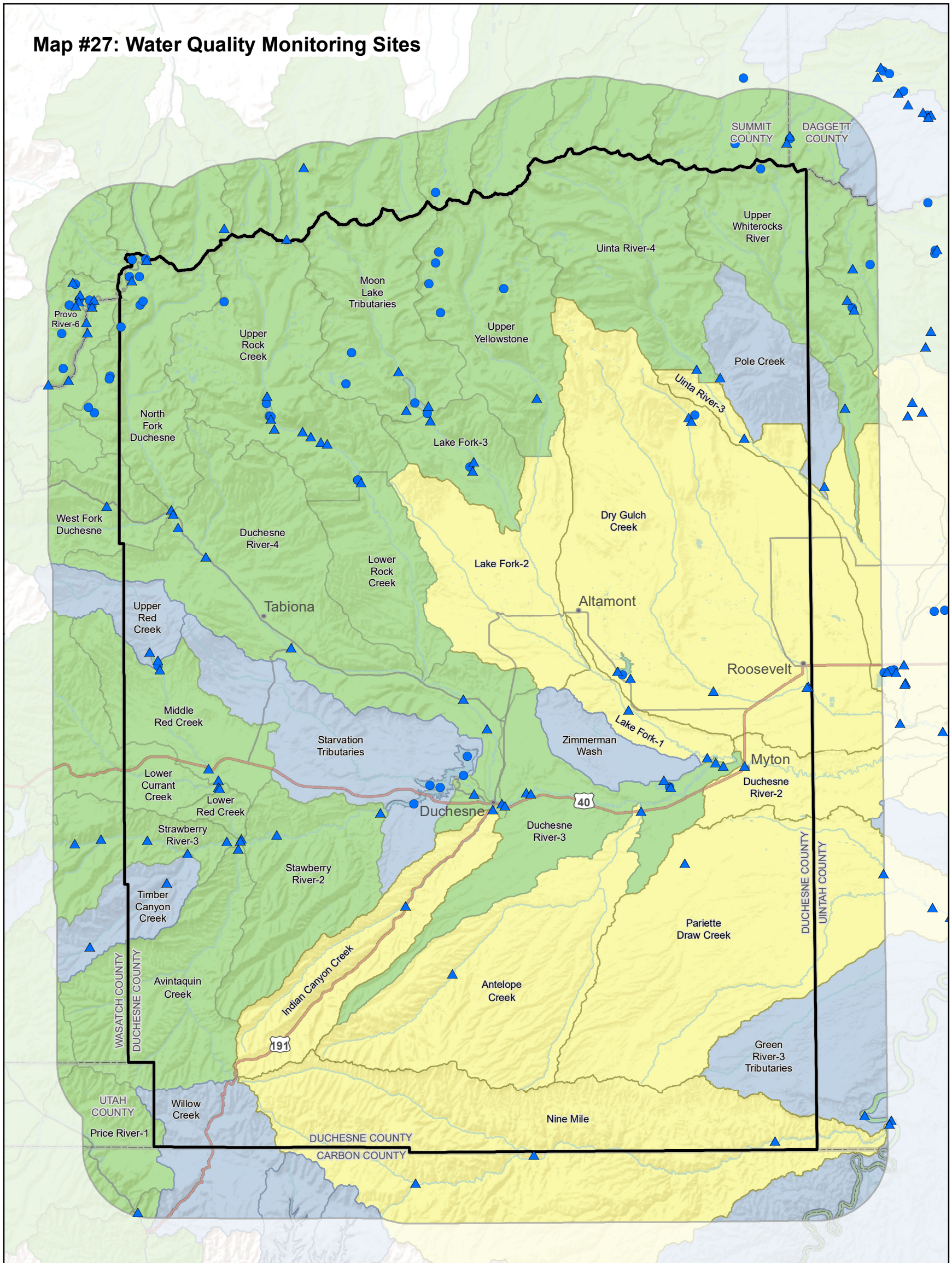
Data Source: Watershed Restoration Initiative, 2016
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017



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Map #27: Water Quality Monitoring Sites



Duchesne County Boundary

Stream Monitoring Site

Lake Monitoring Site

Division of Water Quality Assesment Units

Impaired

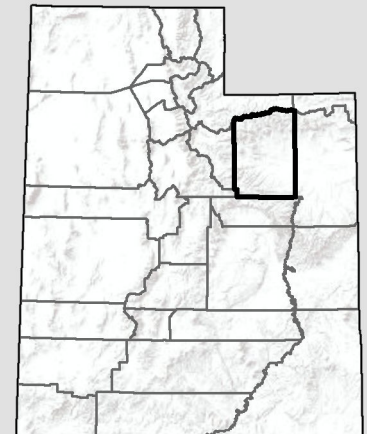
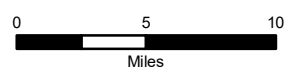
Fully Supporting

Not Assessed

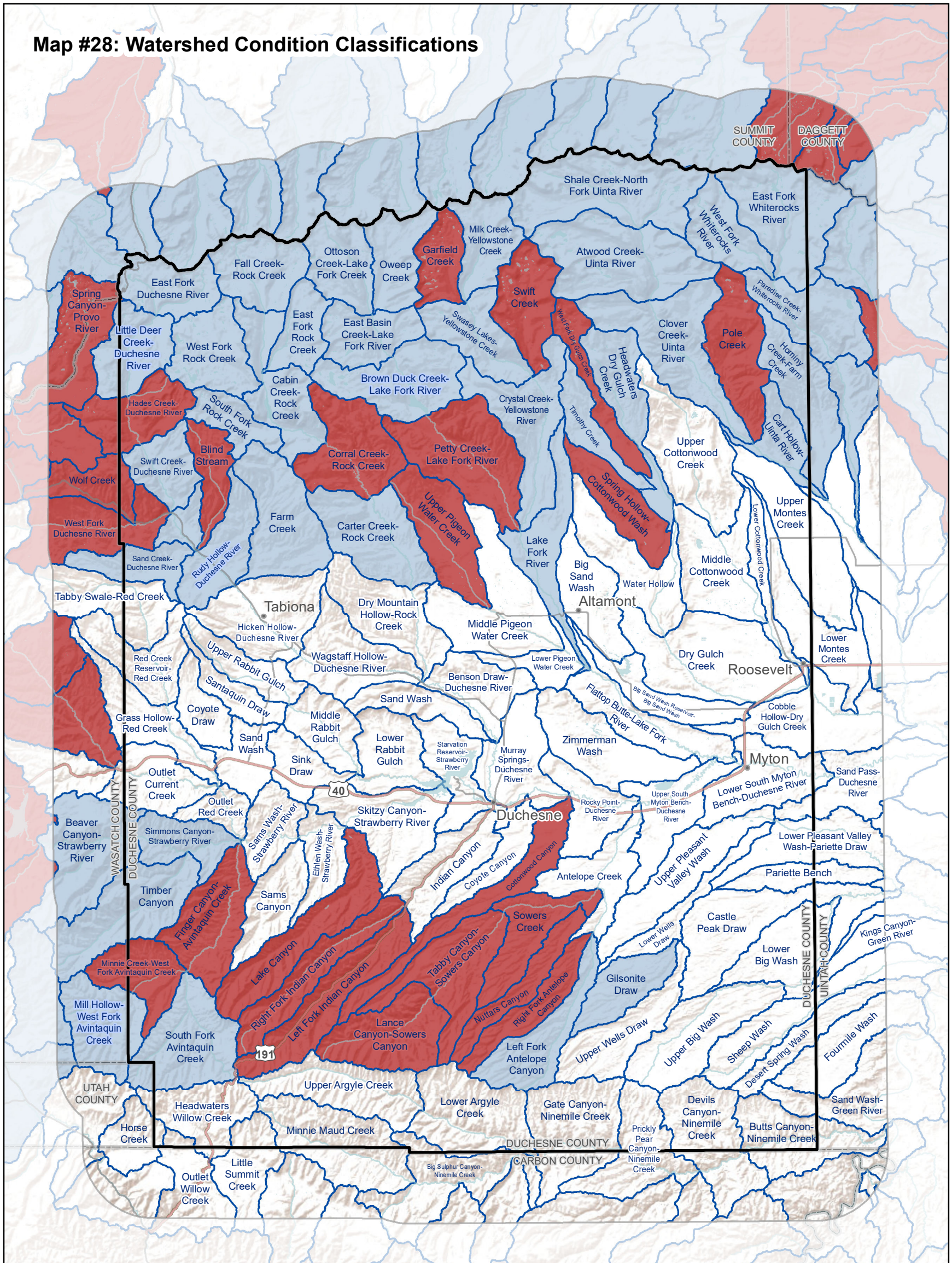
Data Source: Utah Division of Water Quality 2007 & 2010
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017



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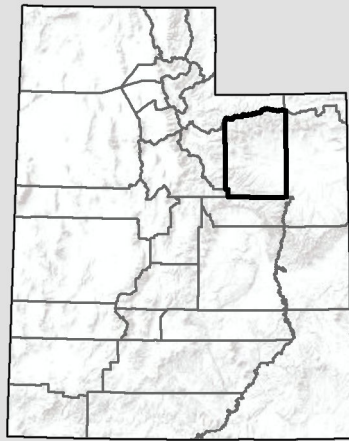
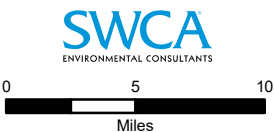


Map #28: Watershed Condition Classifications

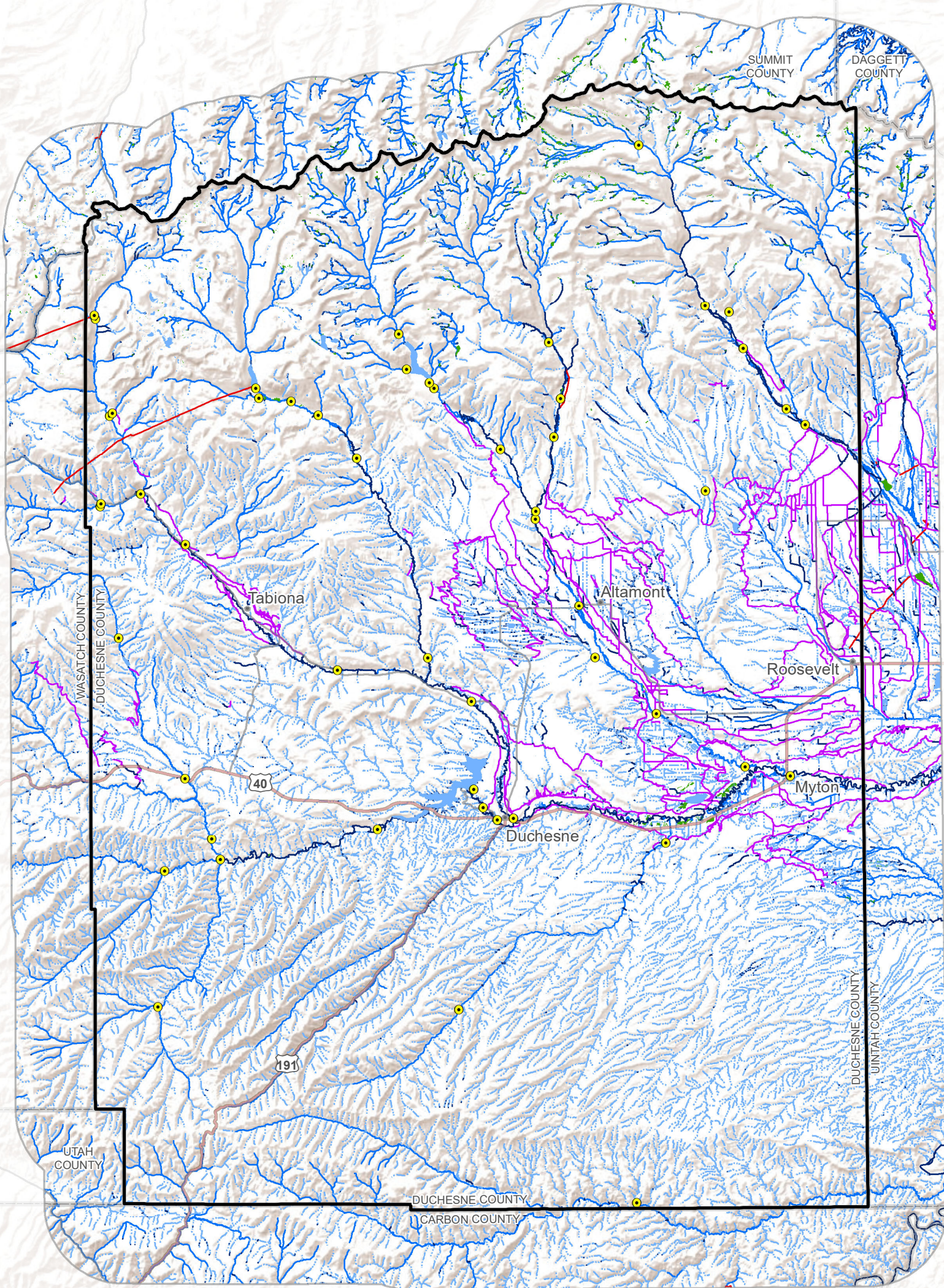


- Duchesne County Boundary
- HUC12 Watershed
- Watershed Condition Class**
- Functioning Properly
- Functioning at Risk

Data Source: U.S. Department of Agriculture, 2016
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017

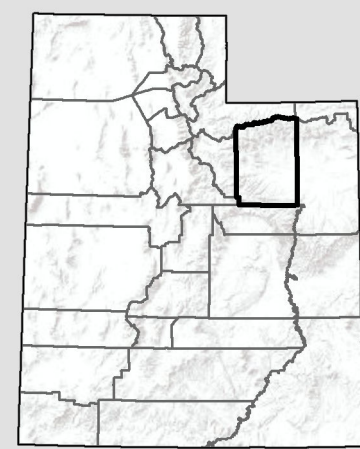


Map #29: Surface Waters

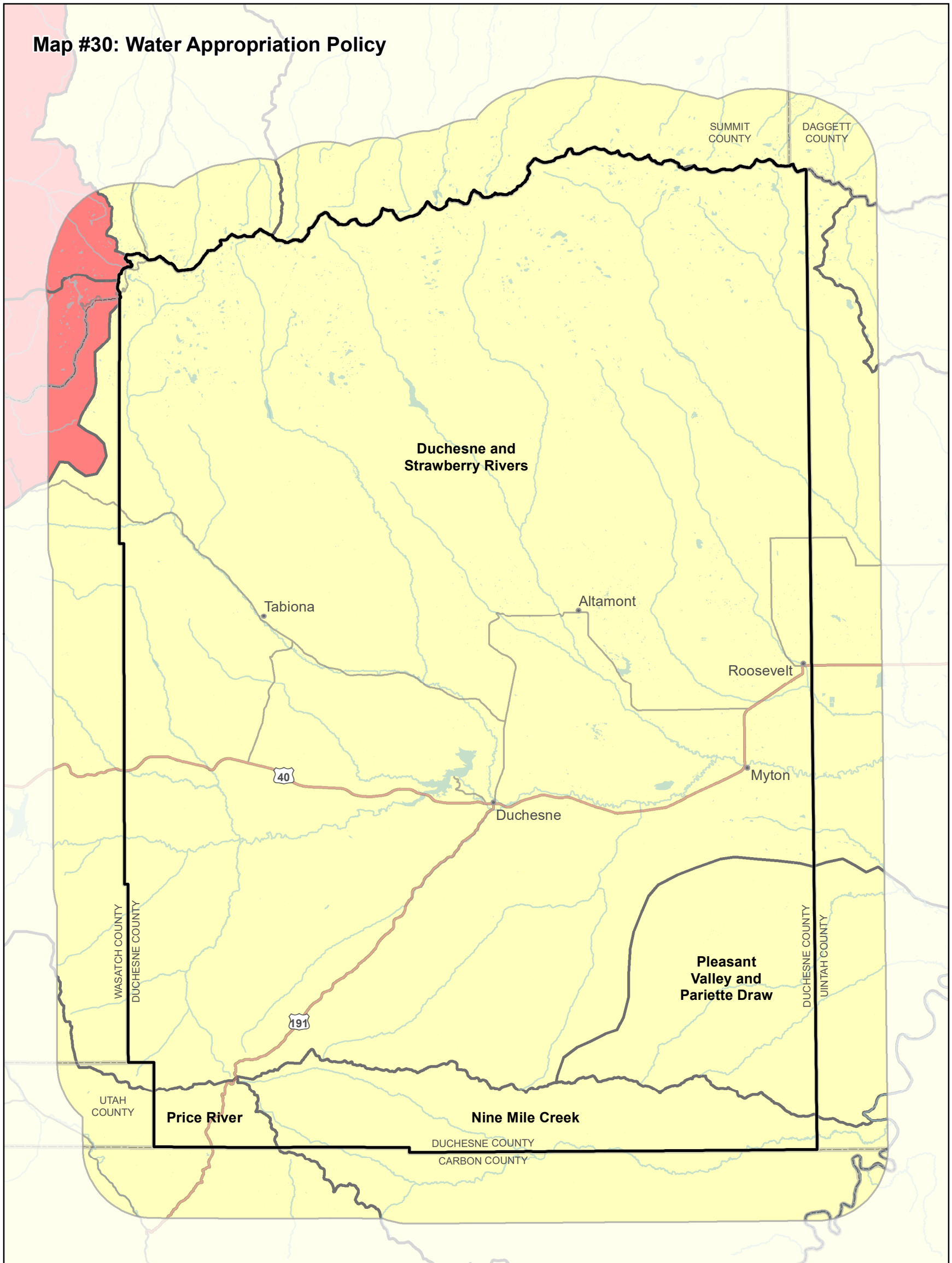


- Duchesne County Boundary
- National Hydrography Dataset**
- Intermittent Stream/River
- Perennial Stream/River
- Artificial Path/Connector
- Canal/Ditch
- Pipeline
- Playa
- Lake/Pond/Reservoir
- Swamp/Marsh
- Stream Gauge

Data Source: U.S. Geological Survey, 2015
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017



Map #30: Water Appropriation Policy

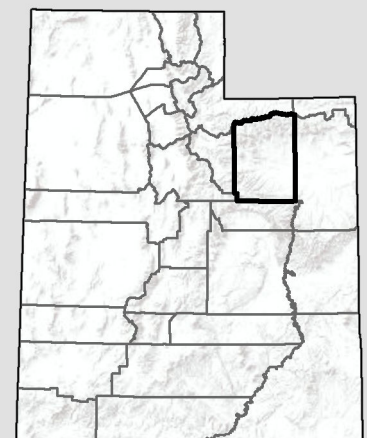
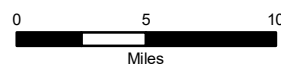


- Duchesne County Boundary
- Ground-Water Policy Status**
- Closed
- Restricted

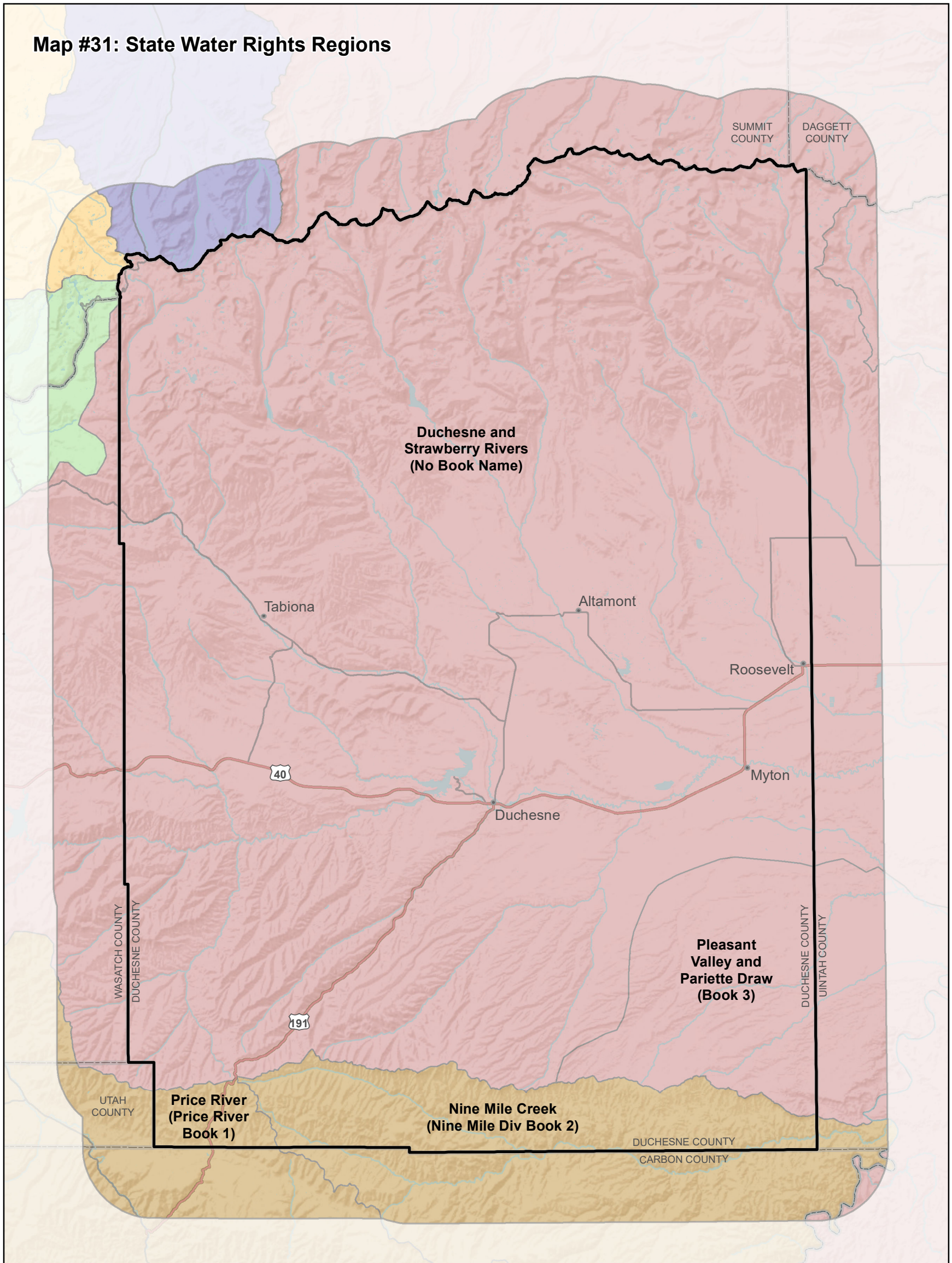
Data Source: Utah DNR, 2016
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017









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Map #31: State Water Rights Regions

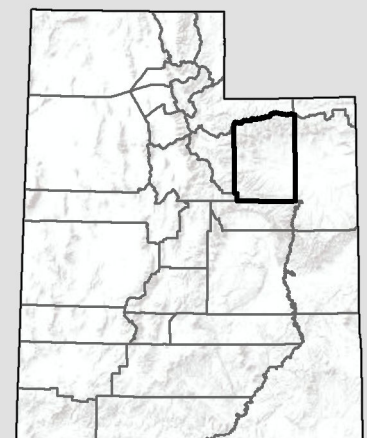
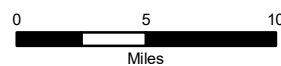


-  Duchesne County Boundary
- Administrative Regions**
-  Eastern Regional Office (VERNAL)
-  Northern Regional Office (LOGAN)
-  Southeastern Regional Office (PRICE)
-  Utah Lake/Jordan River Regional Office (SLC)
-  Weber River/Western Regional Office (SLC)

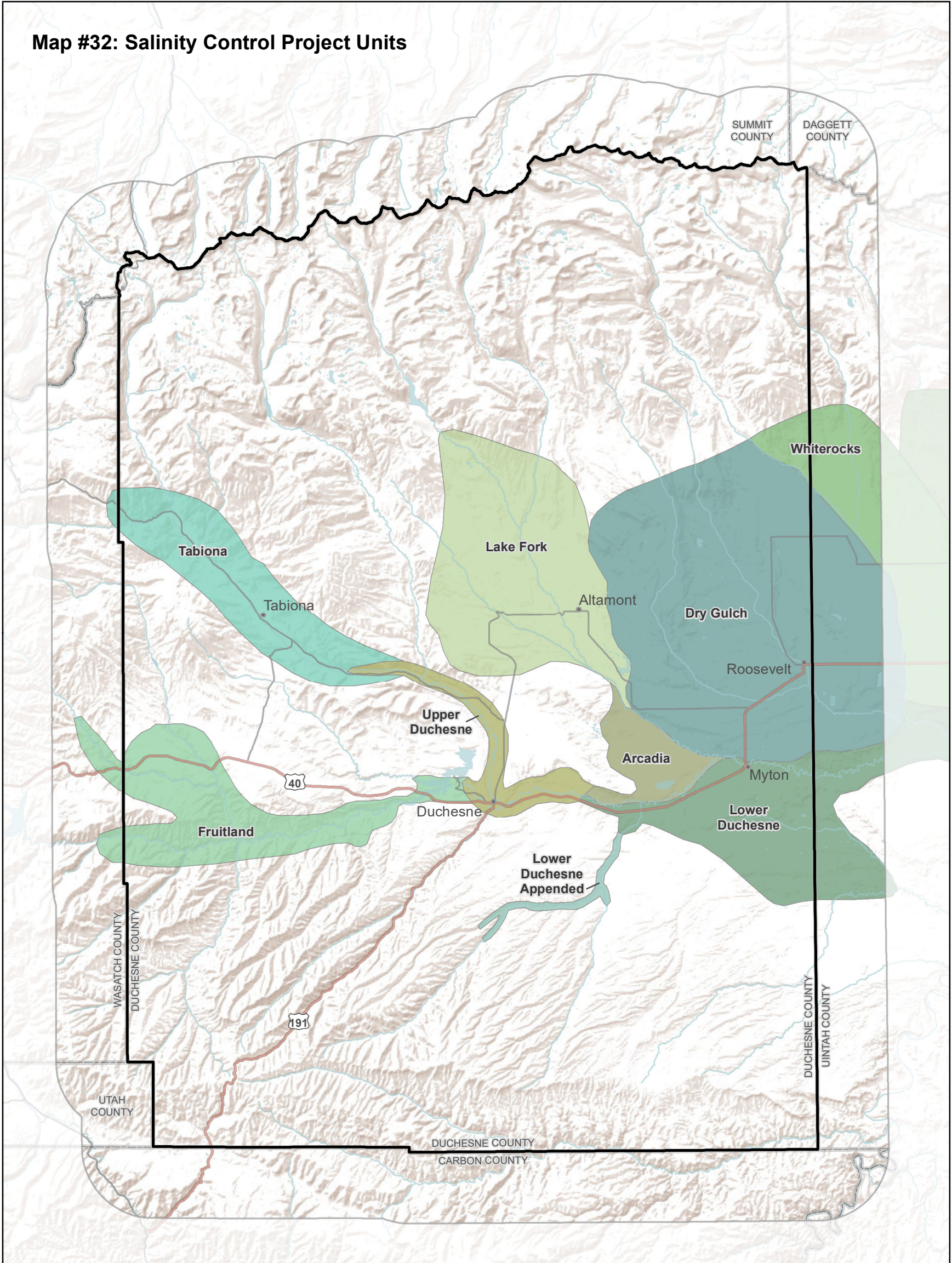
Data Source: Utah DNR, 2016
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017



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Map #32: Salinity Control Project Units



Duchesne County Boundary

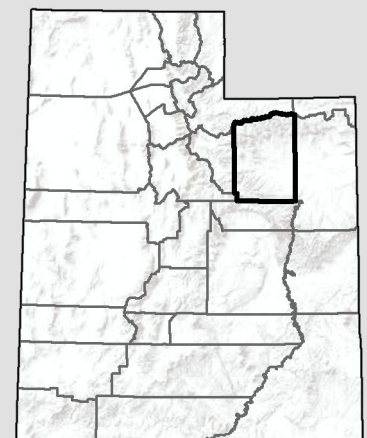
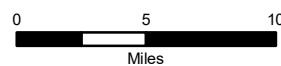
Basin

- Arcadia
- Dry Gulch
- Fruitland
- Lake Fork
- Lower Duchesne
- Lower Duchesne Appended
- Tabiona
- Upper Duchesne
- White Rocks

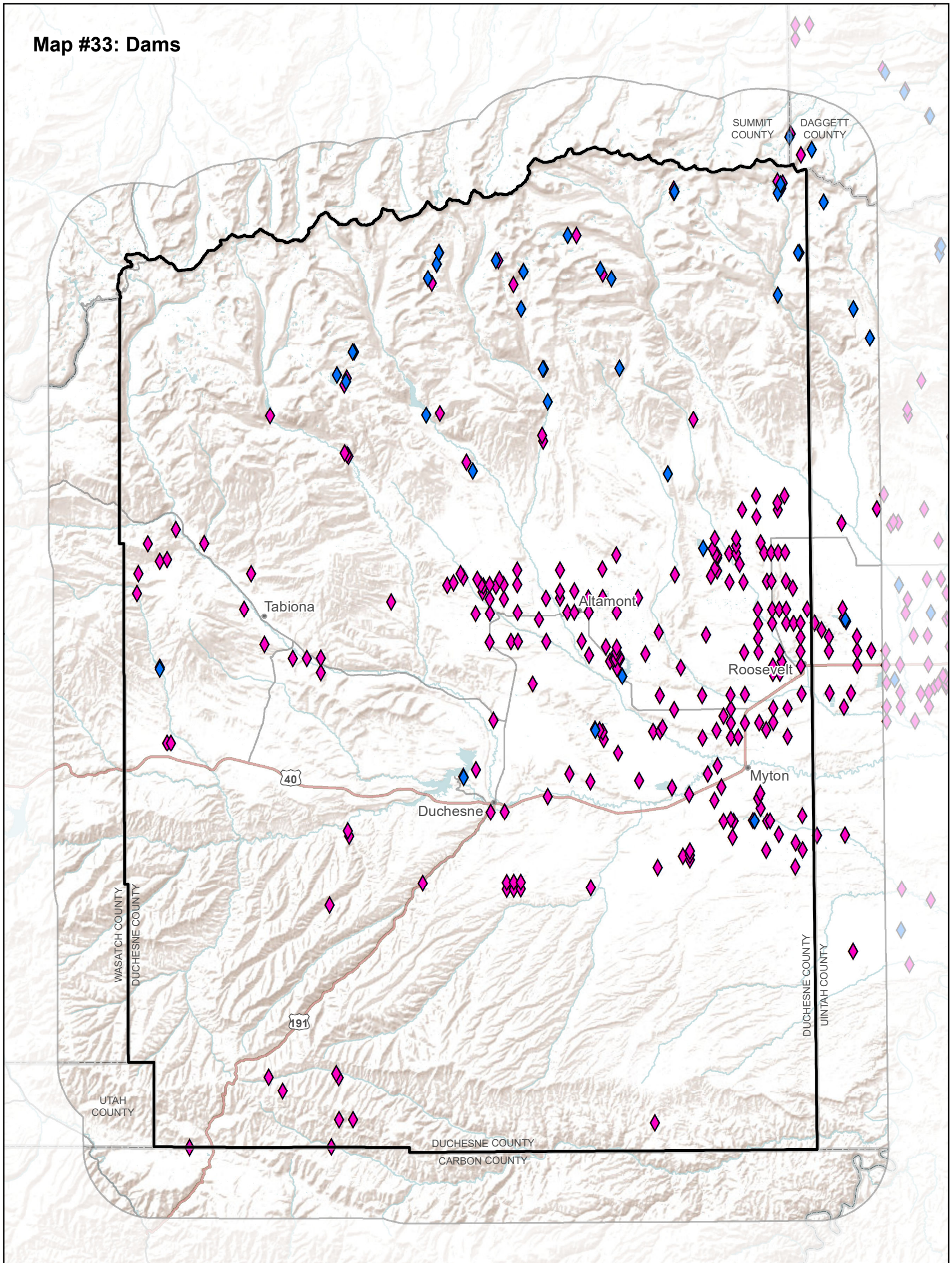
Data Source: NCRS, 2015
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017






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Map #33: Dams

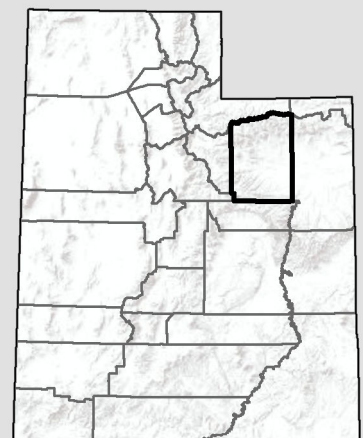
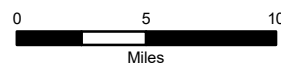


-  Duchesne County Boundary
-  Dam (USGS)
-  Dam (DWRi)

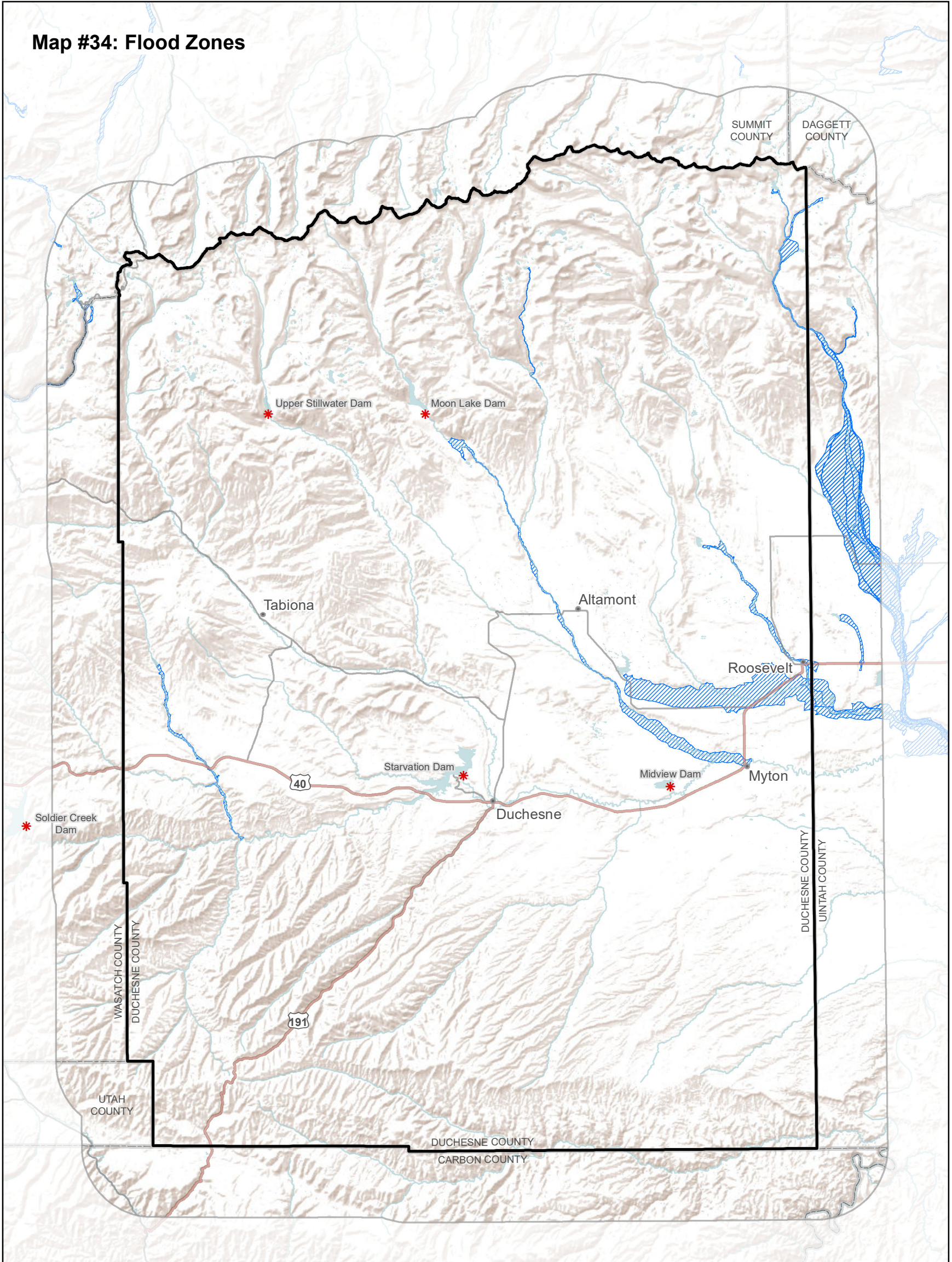
Data Source: U.S. Geological Survey, 2015
 Utah Division of Water Rights, 2015
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/24/2017
 Map Created: 1/24/2017






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Map #34: Flood Zones

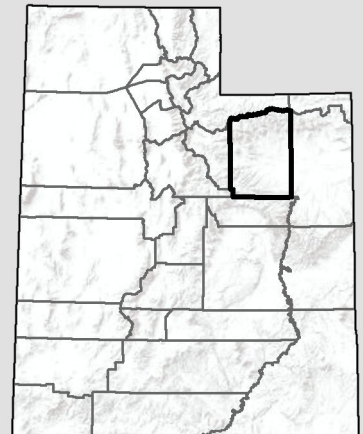
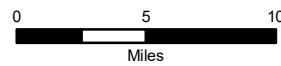


-  Duchesne County Boundary
-  Predicted Worst Case Inundation Zones
-  Inundation Zone Information Not Available

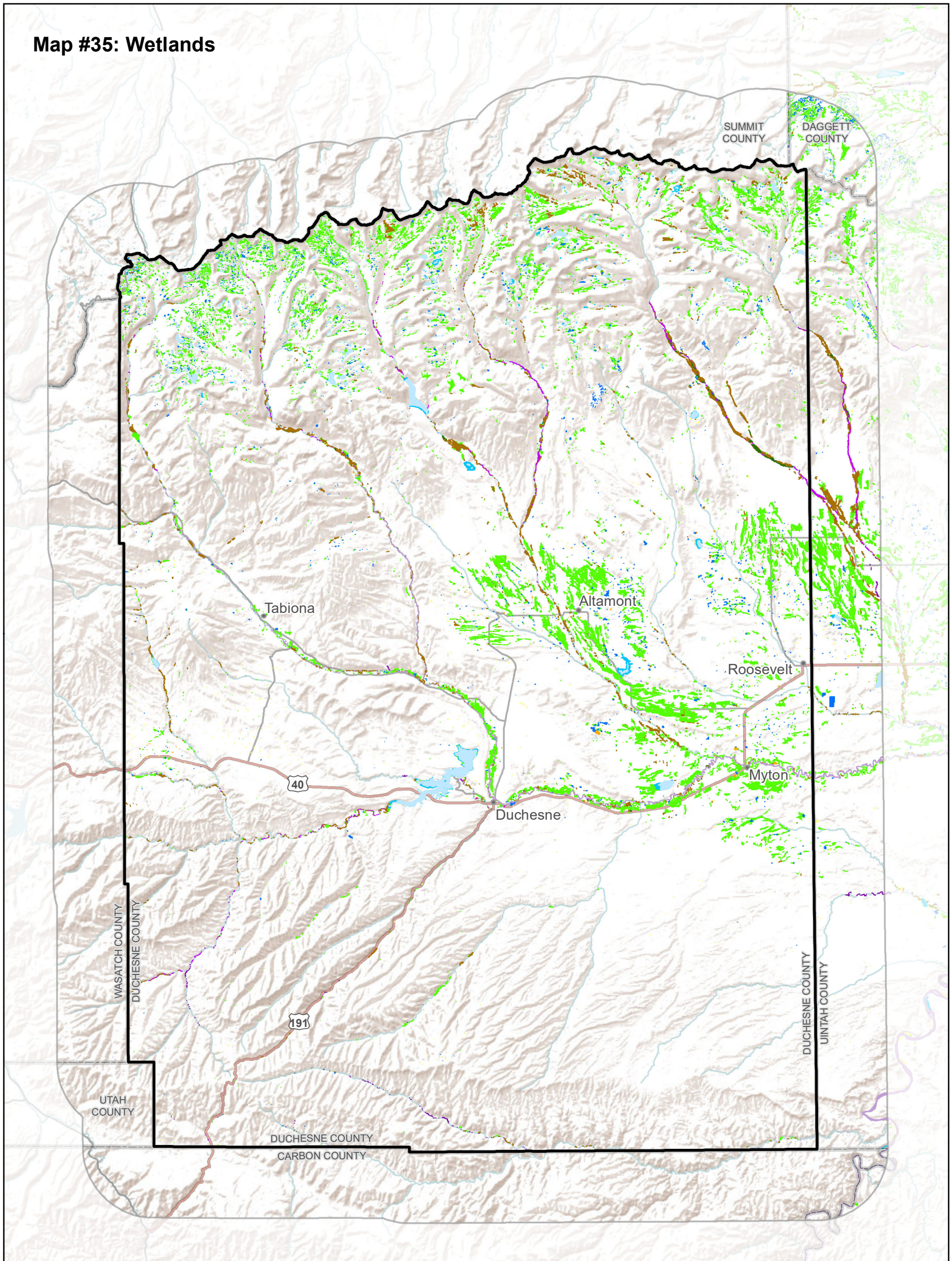
Data Source: Utah Division of Water Rights, 2015
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017



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Map #35: Wetlands



Duchesne County Boundary

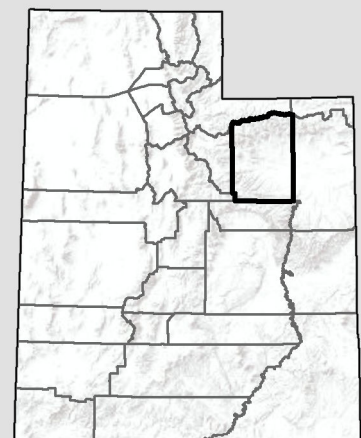
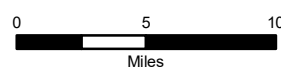
National Wetlands Inventory

- | | |
|--|----------------------|
| L1, Lake | PUB, Freshwater Pond |
| L2, Lake | PUS, Freshwater Pond |
| PAB, Freshwater Pond | R2, Riverine |
| PEM, Freshwater Emergent Wetland | R3, Riverine |
| PFO, Freshwater Forested/Shrub Wetland | R4, Riverine |
| PSS, Freshwater Forested/Shrub Wetland | |

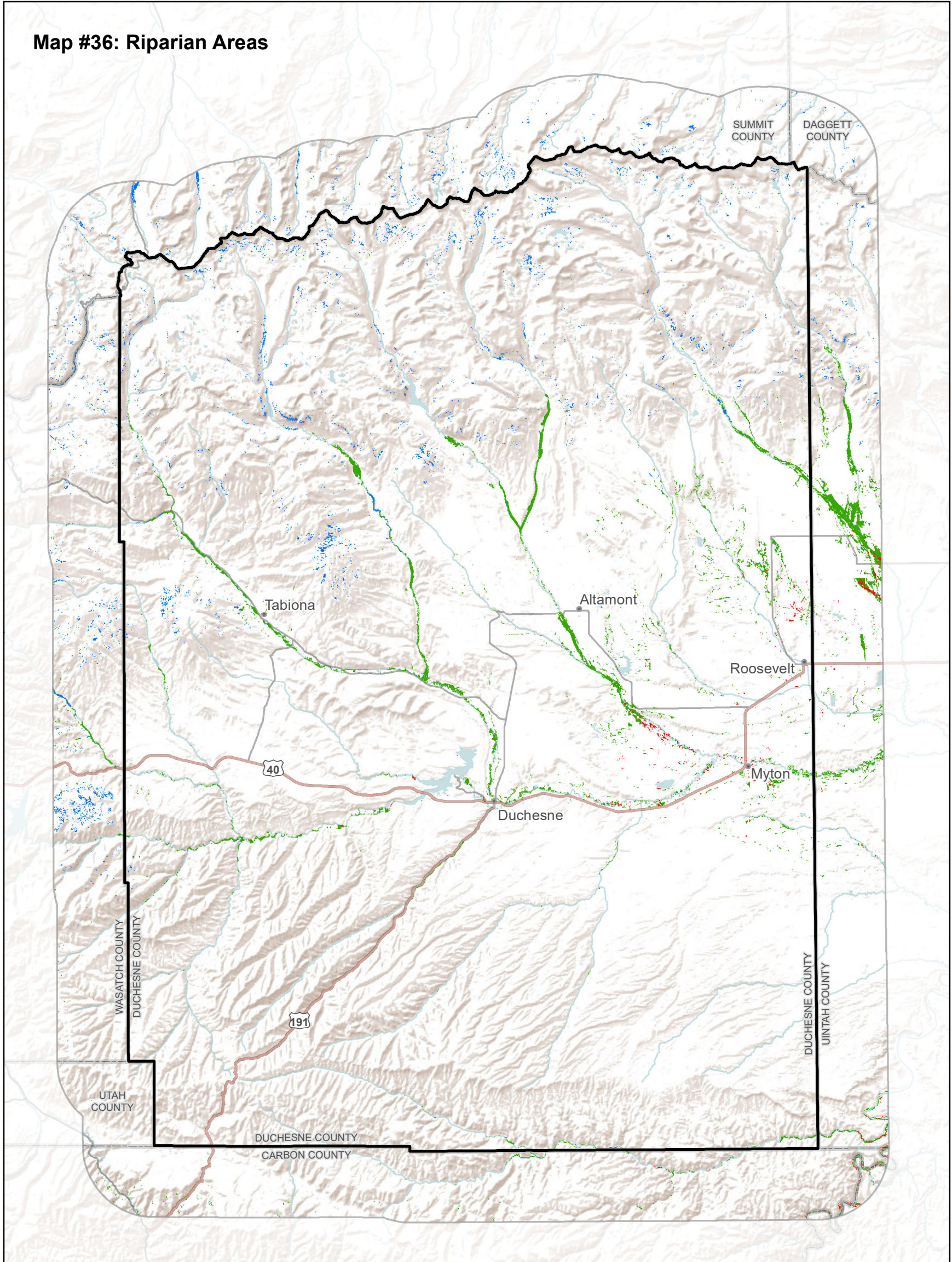
Data Source: U.S. Fish and Wildlife Service, 2015
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017



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Map #36: Riparian Areas



Duchesne County Boundary

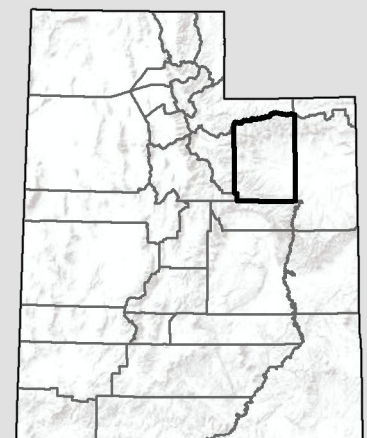
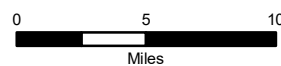
Riparian Areas

- Invasive Southwest Riparian Woodland and Shrubland
- Rocky Mountain Lower Montane Riparian Woodland and Shrubland
- Rocky Mountain Subalpine-Montane Riparian Shrubland

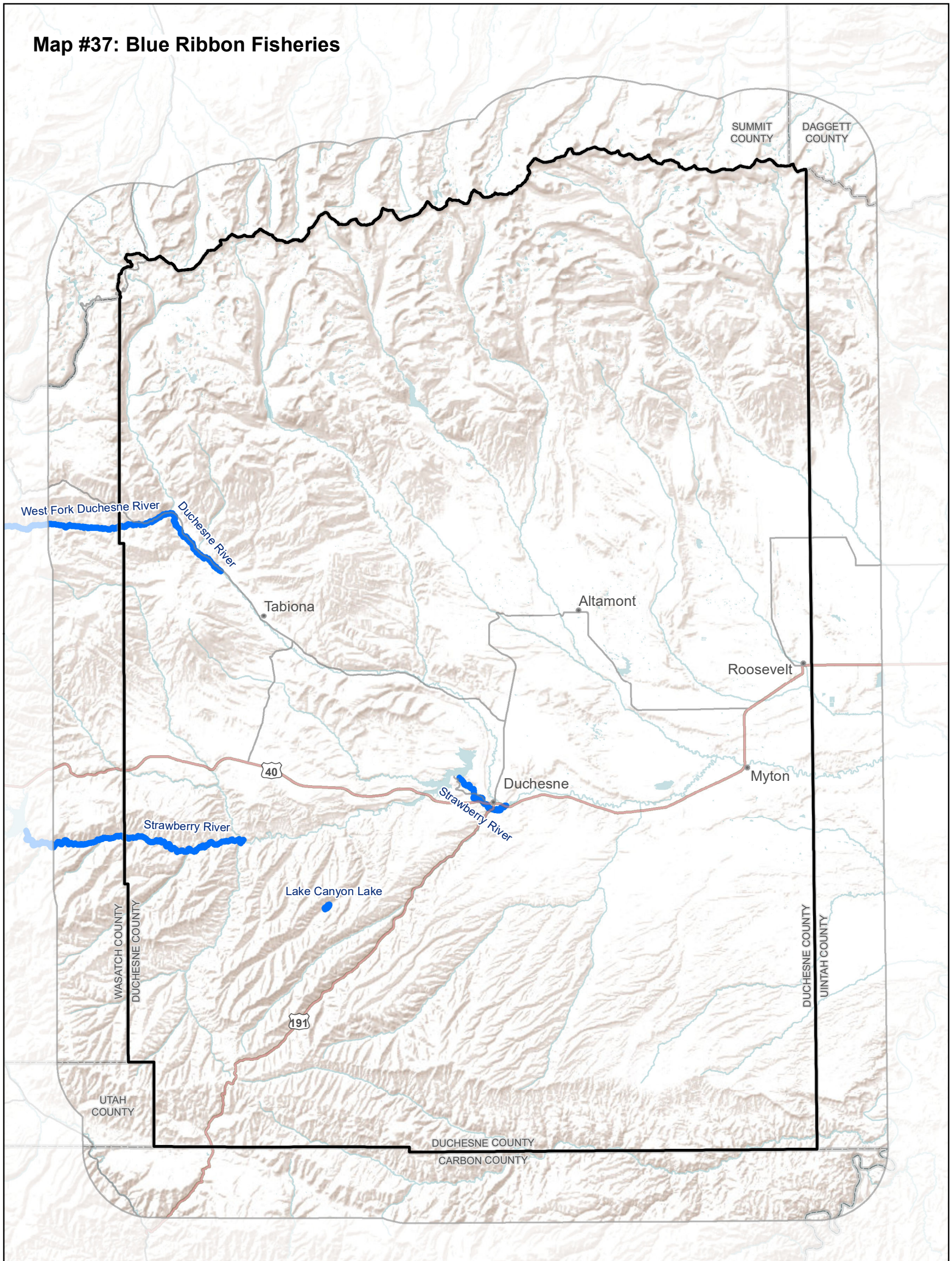
Data Source: U.S. Geological Survey, 2004
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017






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Map #37: Blue Ribbon Fisheries

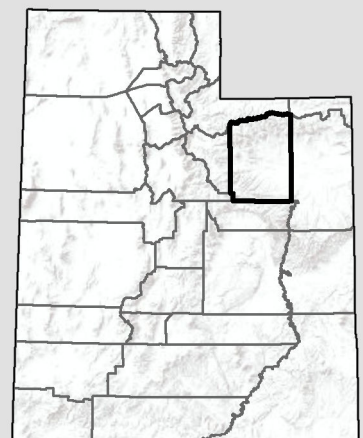
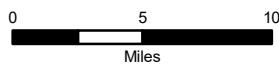


-  Duchesne County Boundary
-  Blue Ribbon Stream Fisheries
-  Blue Ribbon Lake Fisheries

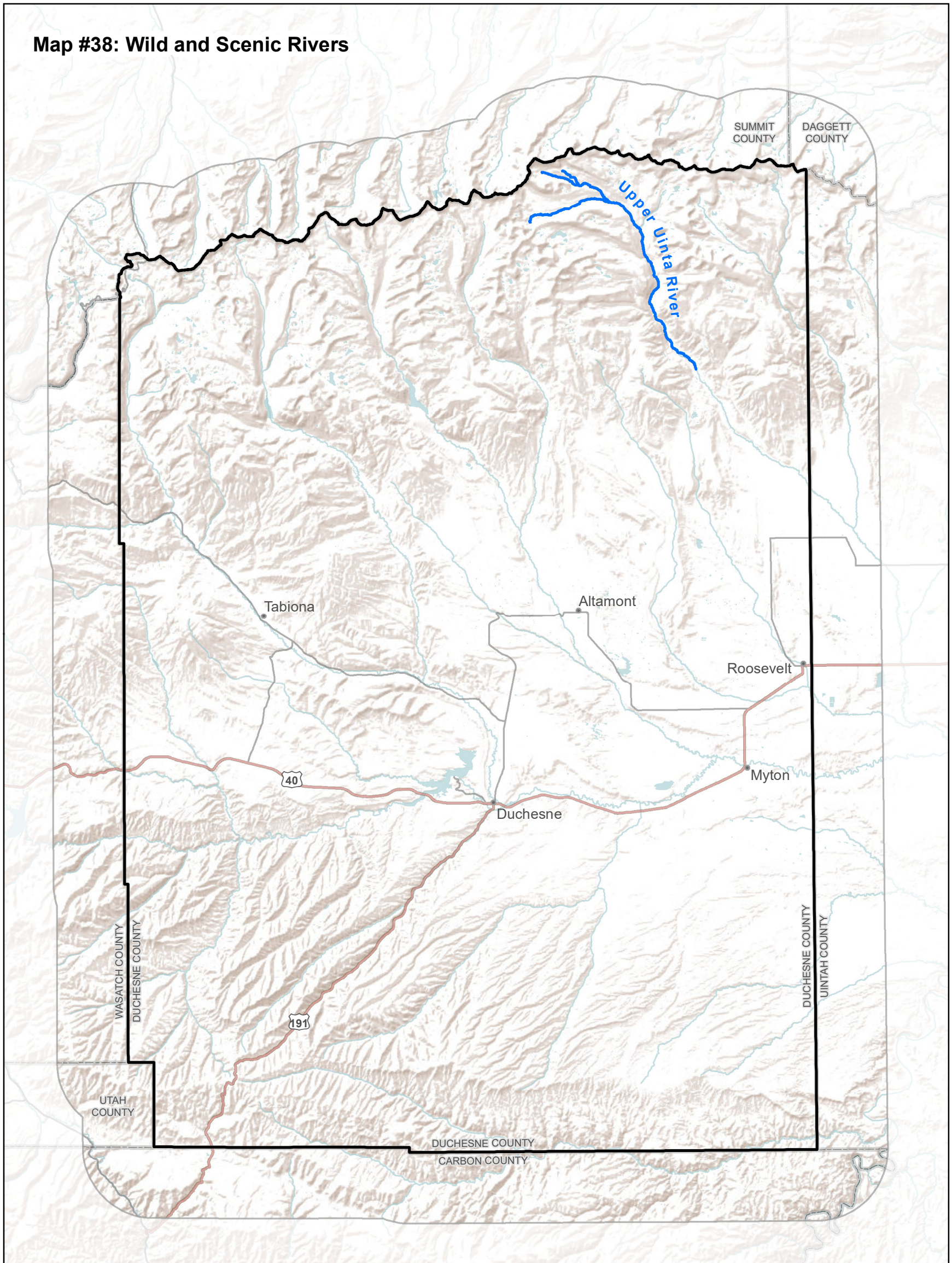
Data Source: Utah Division of Wildlife Resources, 2016
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017





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Map #38: Wild and Scenic Rivers

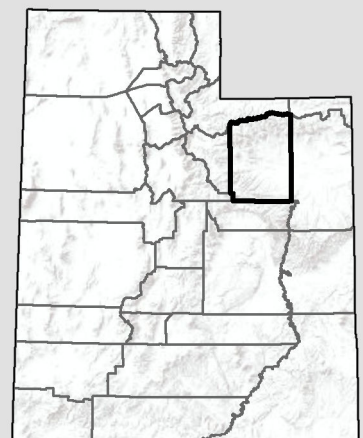
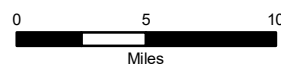


-  Duchesne County Boundary
- Recommended Wild and Scenic Rivers**
-  Suitable - Scenic

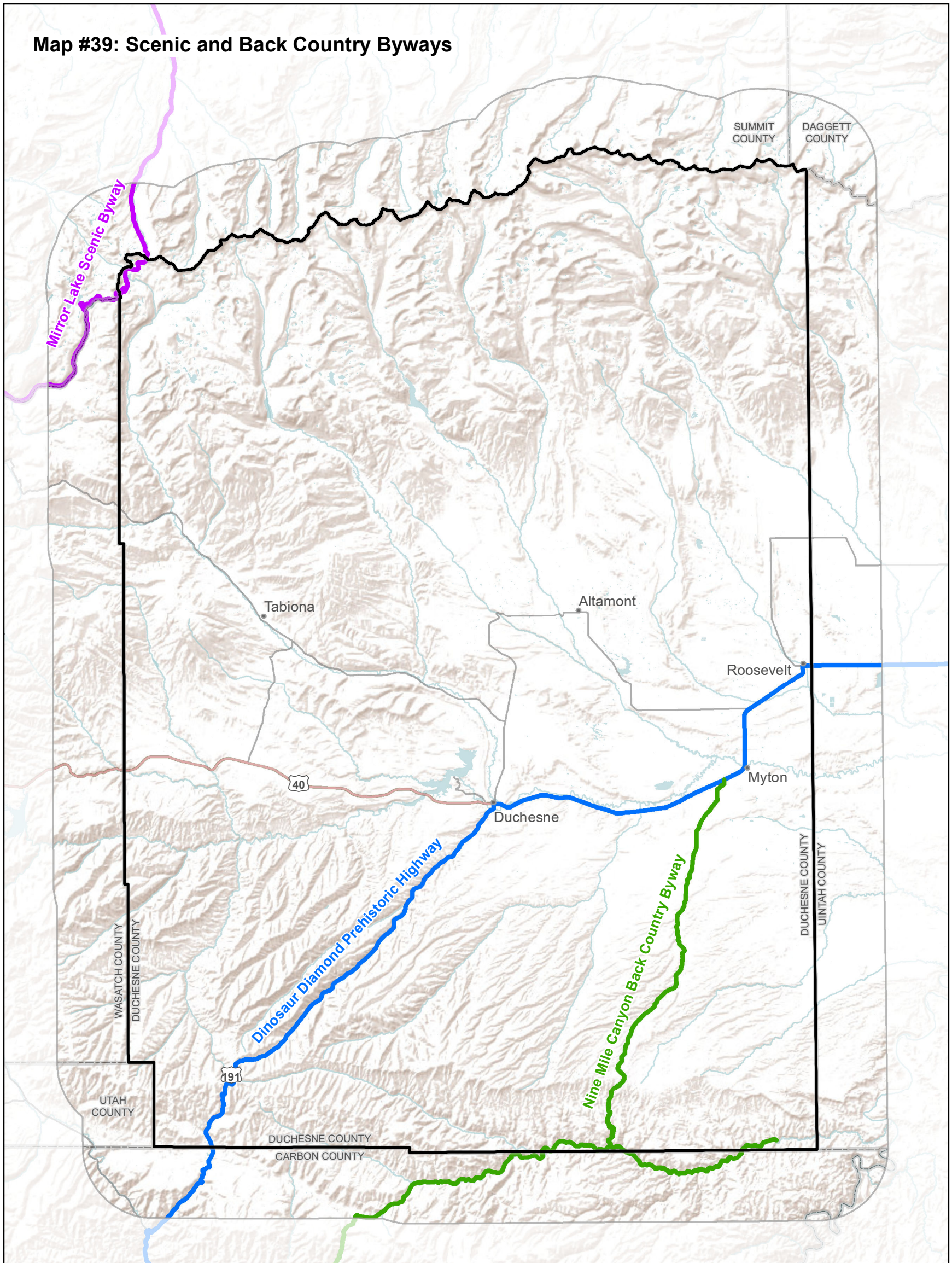
Data Source: Bureau of Land Management, 2014
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017



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Map #39: Scenic and Back Country Byways



Duchesne County Boundary

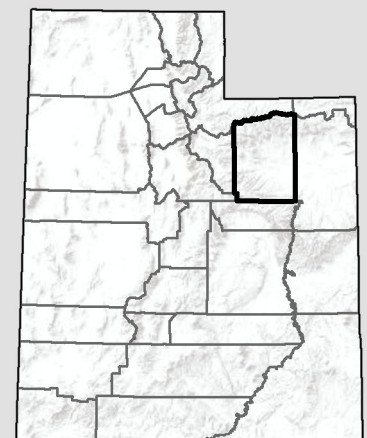
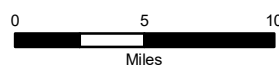
Scenic Roads

- National Scenic Byway
- Utah State Scenic Byway
- BLM Back Country Byway

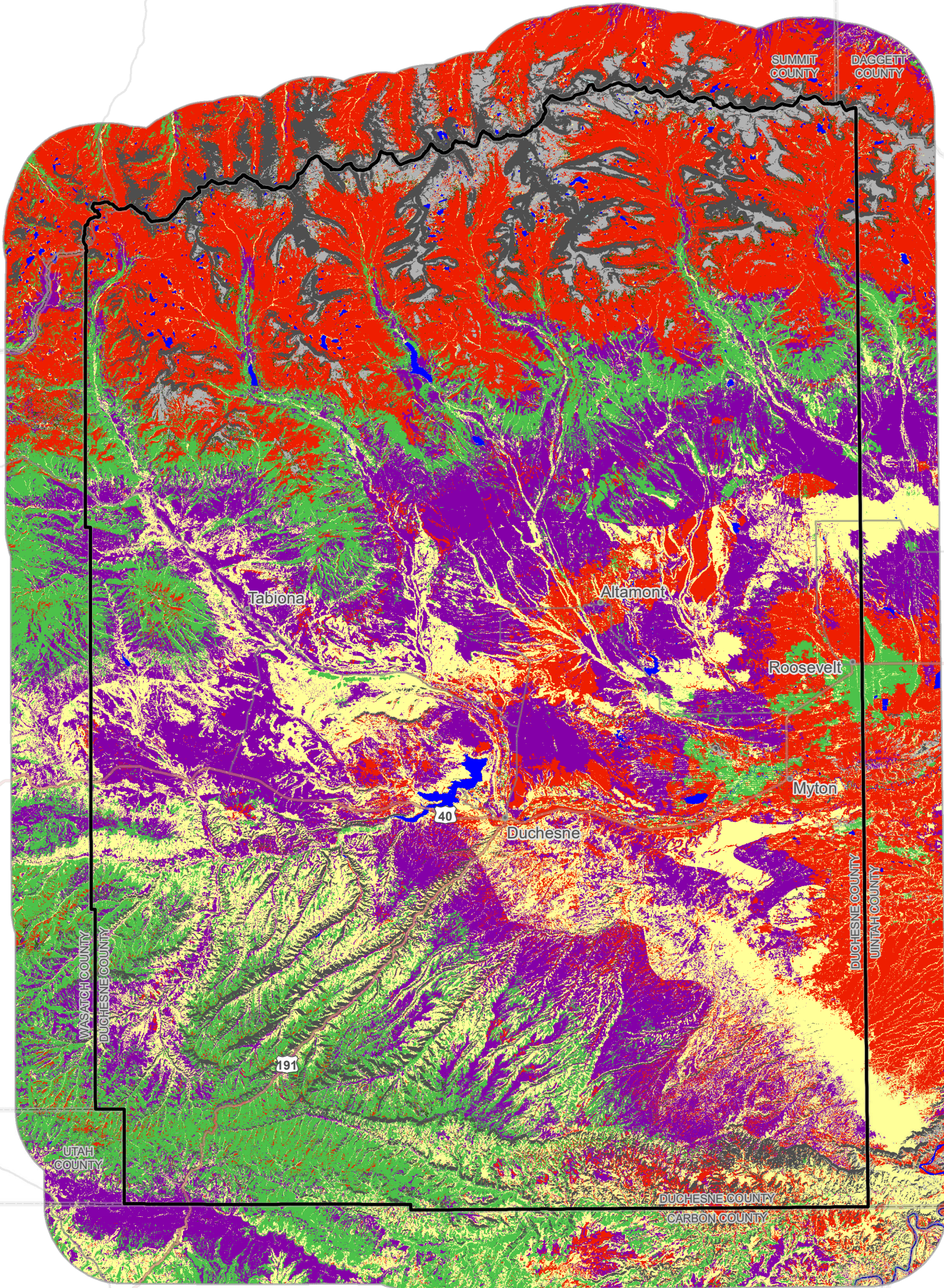
Data Source: Utah Department of Transportation, 2016
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 1/18/2017
 Map Created: 1/18/2017













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Map #40: Fire Regime Groups

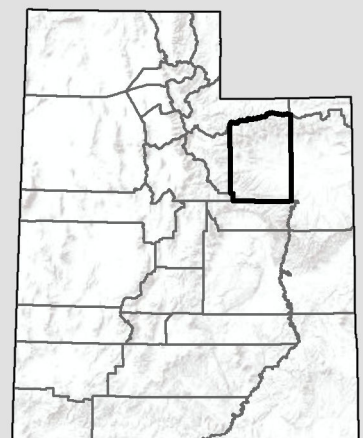
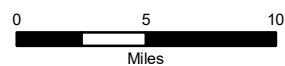


-  Duchesne County Boundary
- Fire Regime Groups (LANDFIRE)**
-  Water
-  Sparsely Vegetated
-  Snow / Ice
-  Barren
-  > 200 Year Fire Return Interval, Any Severity
-  <= 35 Year Fire Return Interval, Replacement Severity
-  <= 35 Year Fire Return Interval, Low and Mixed Severity
-  35 - 200 Year Fire Return Interval, Replacement Severity
-  35 - 200 Year Fire Return Interval, Low and Mixed Severity

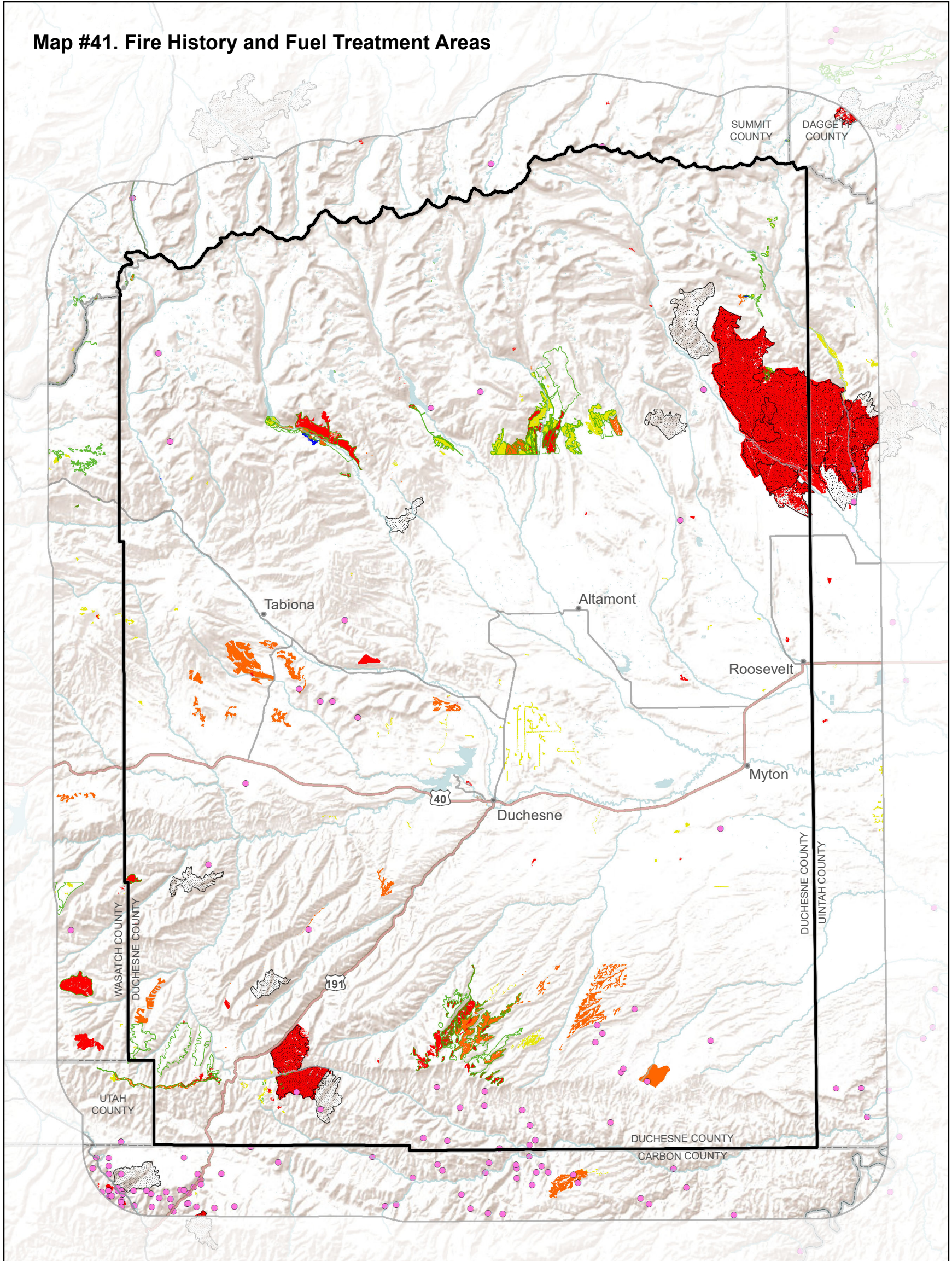
Data Source: Bureau of Land Management, 2008
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 6/1/2017
 Map Created: 6/1/2017



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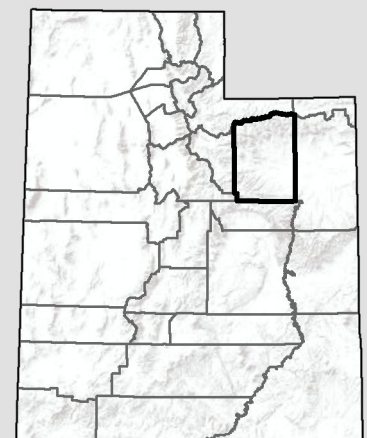
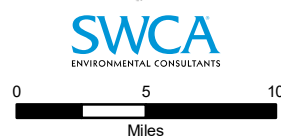


Map #41. Fire History and Fuel Treatment Areas

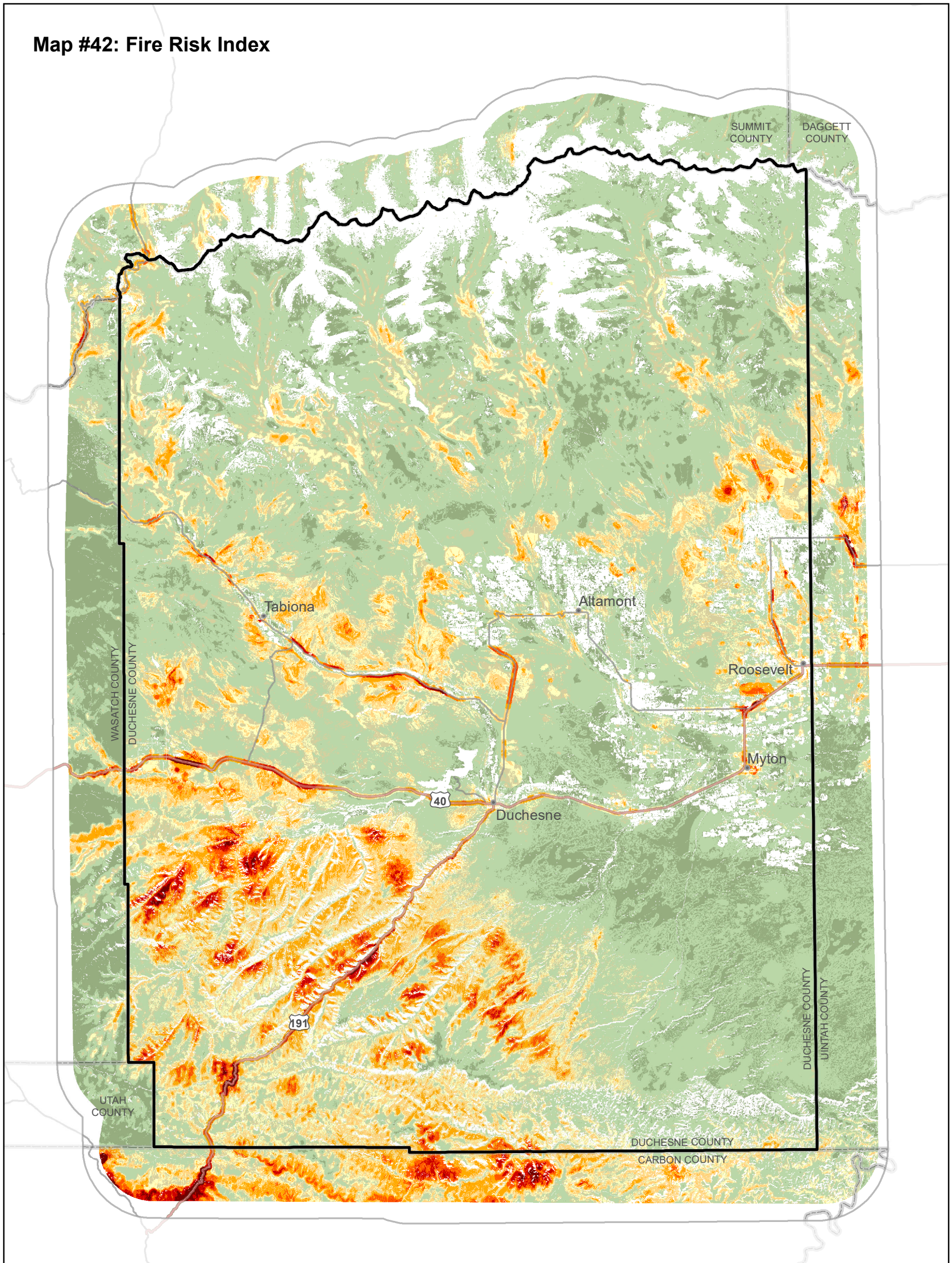


- Duchesne County Boundary
- Fire History Locations (BLM)
- Hazard Fuel Treatment Reduction (USDA)
- Burn Area Boundary (USDA)
- Fire Disturbance (LANDFIRE)**
- Fire
- Insects-Disease
- Mechanical Add (mowed or chipped)
- Mechanical Remove (cutting, felling, and gathering)

Data Source: Bureau of Land Management, 2008
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 6/1/2017
 Map Created: 6/1/2017



Map #42: Fire Risk Index



Duchesne County Boundary

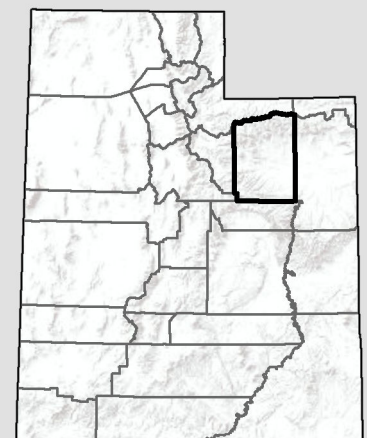
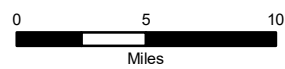
Fire Risk Index (FFSL)

- ≥ -1.1
- 1.101 to -8.82
- 8.821 to -15.2
- 15.201 to -29.87
- 29.871 to -65.1
- 65.101 to -149.41
- 149.411 to -315.72
- 315.721 to -670.33
- < -670.33

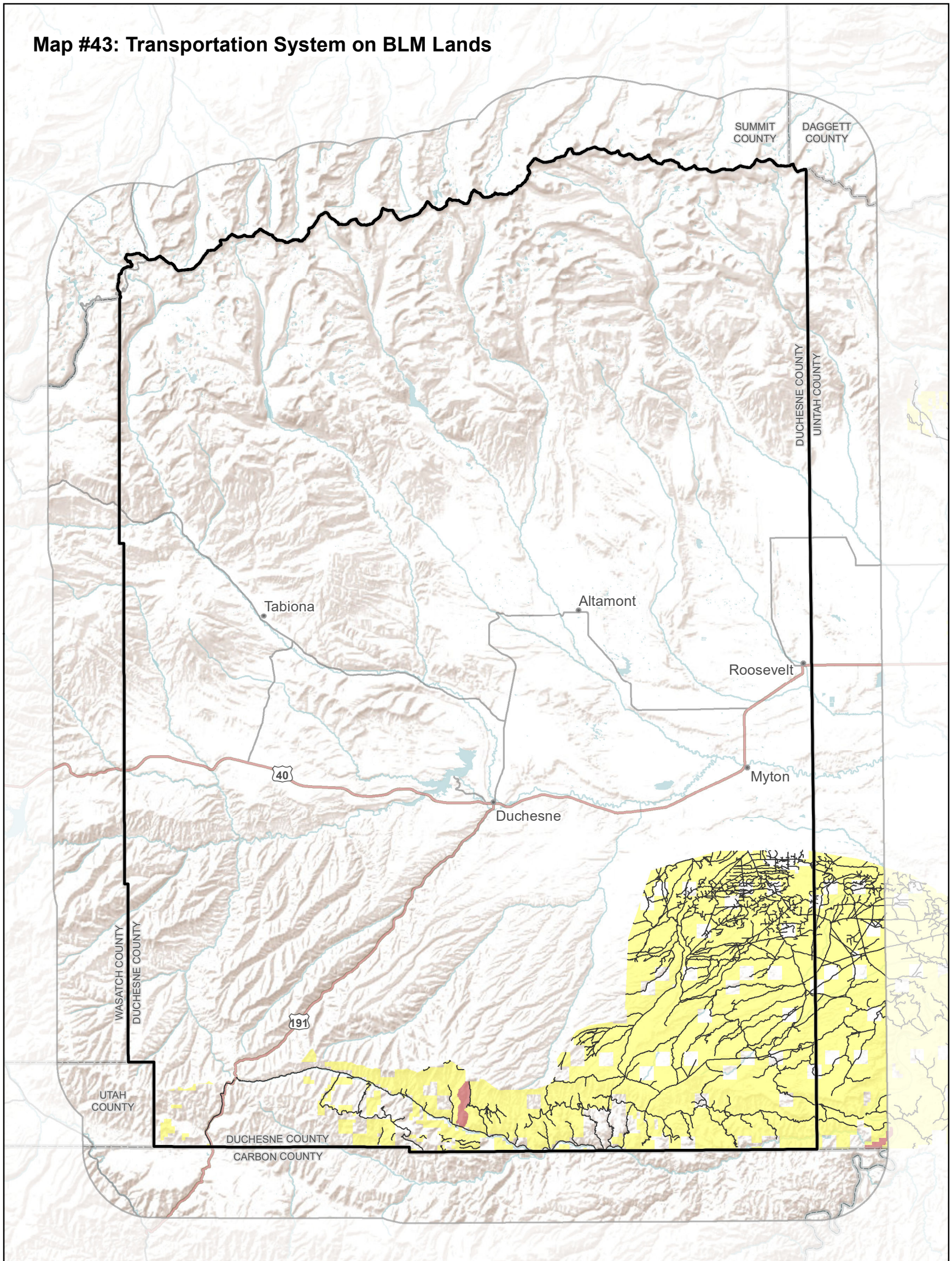
Data Source: Bureau of Land Management, 2008
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 6/1/2017
 Map Created: 6/1/2017







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Map #43: Transportation System on BLM Lands

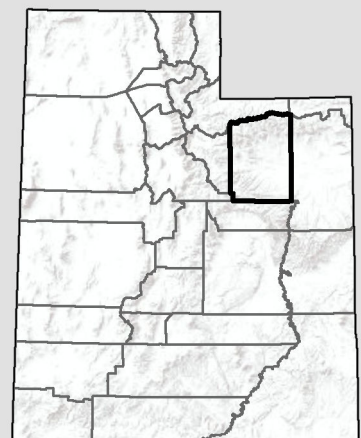
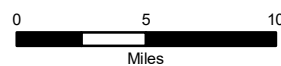


-  Duchesne County Boundary
-  Travel Route
- OHV Designations**
-  Limited
-  Closed

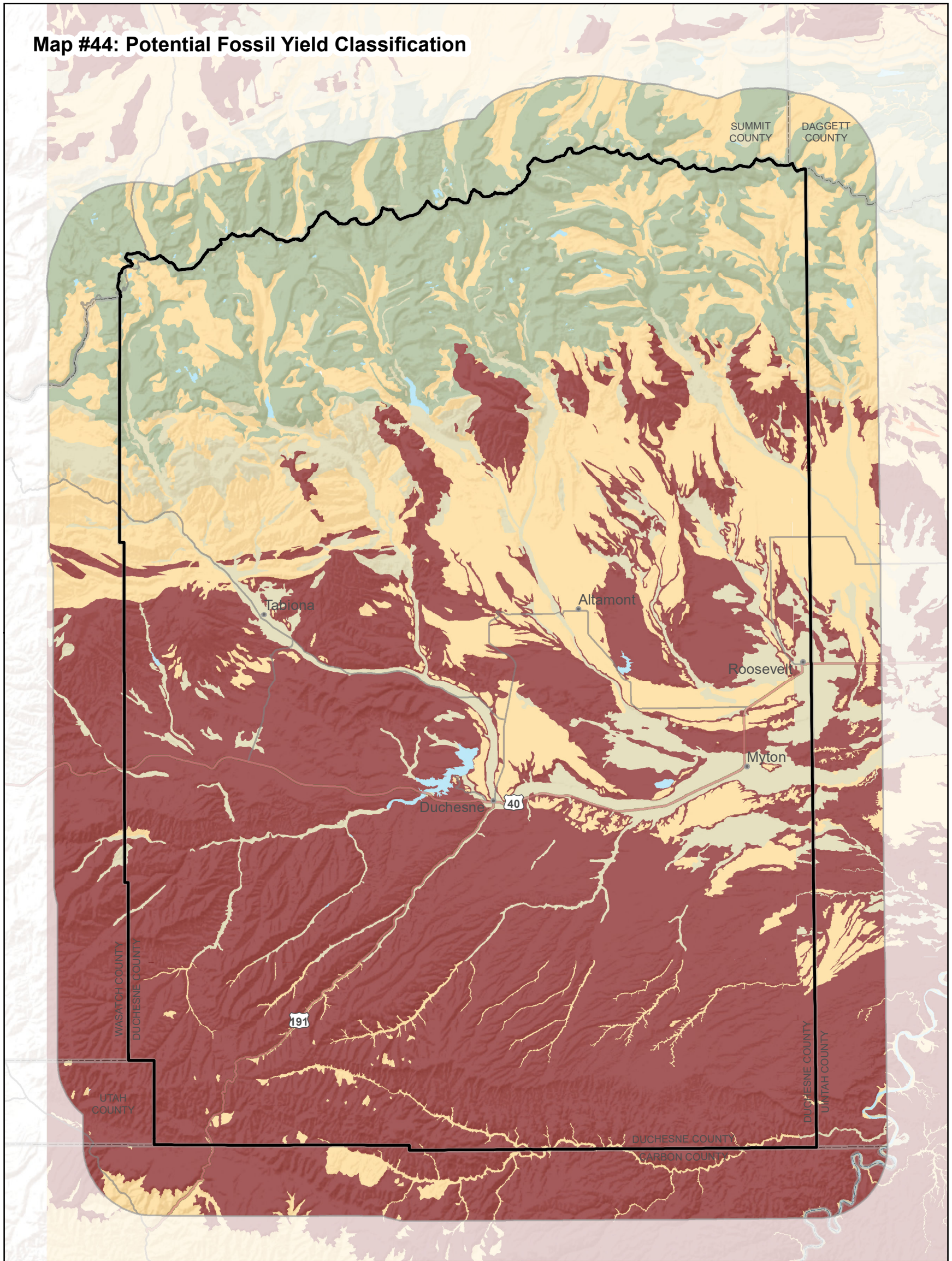
Data Source: Bureau of Land Management, 2008
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 6/1/2017
 Map Created: June 1, 2017



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Map #44: Potential Fossil Yield Classification



Duchesne County Boundary

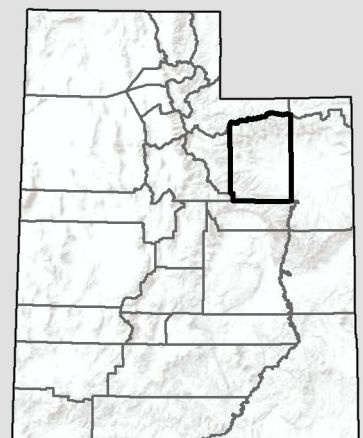
PFYC Class

- 1 - Very Low
- 2 - Low
- 3 - Moderate
- 4 - High
- 5 - Very High
- W - Water

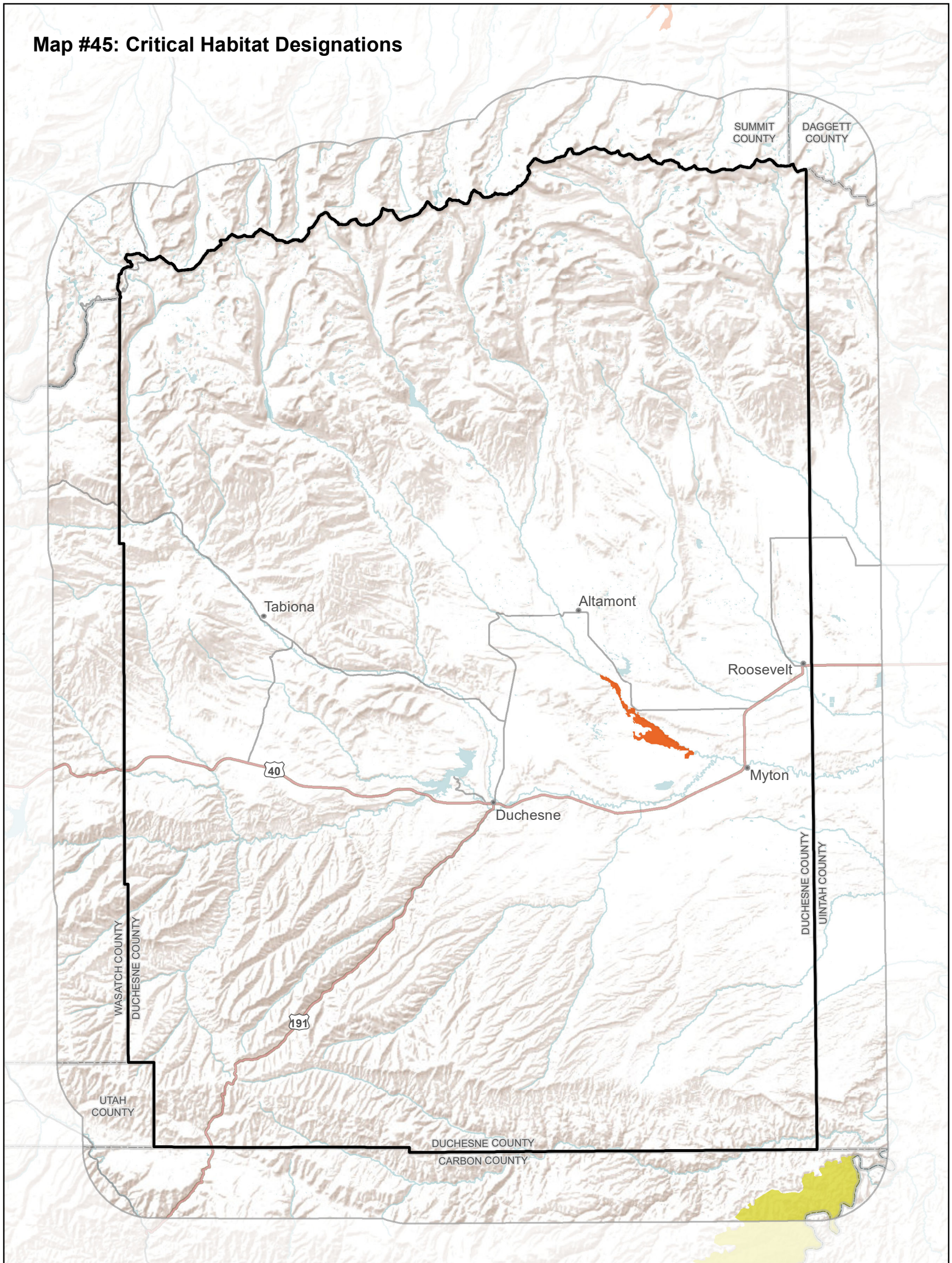
Data Source: Bureau of Land Management, 2008
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 6/1/2017
 Map Created: 6/1/2017




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Map #45: Critical Habitat Designations

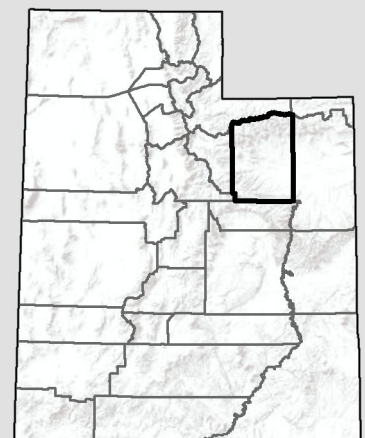
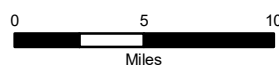


-  Duchesne County Boundary
- Critical Habitat Designations**
-  Mexican Spotted Owl
-  Yellow-billed Cuckoo (Proposed Habitat)

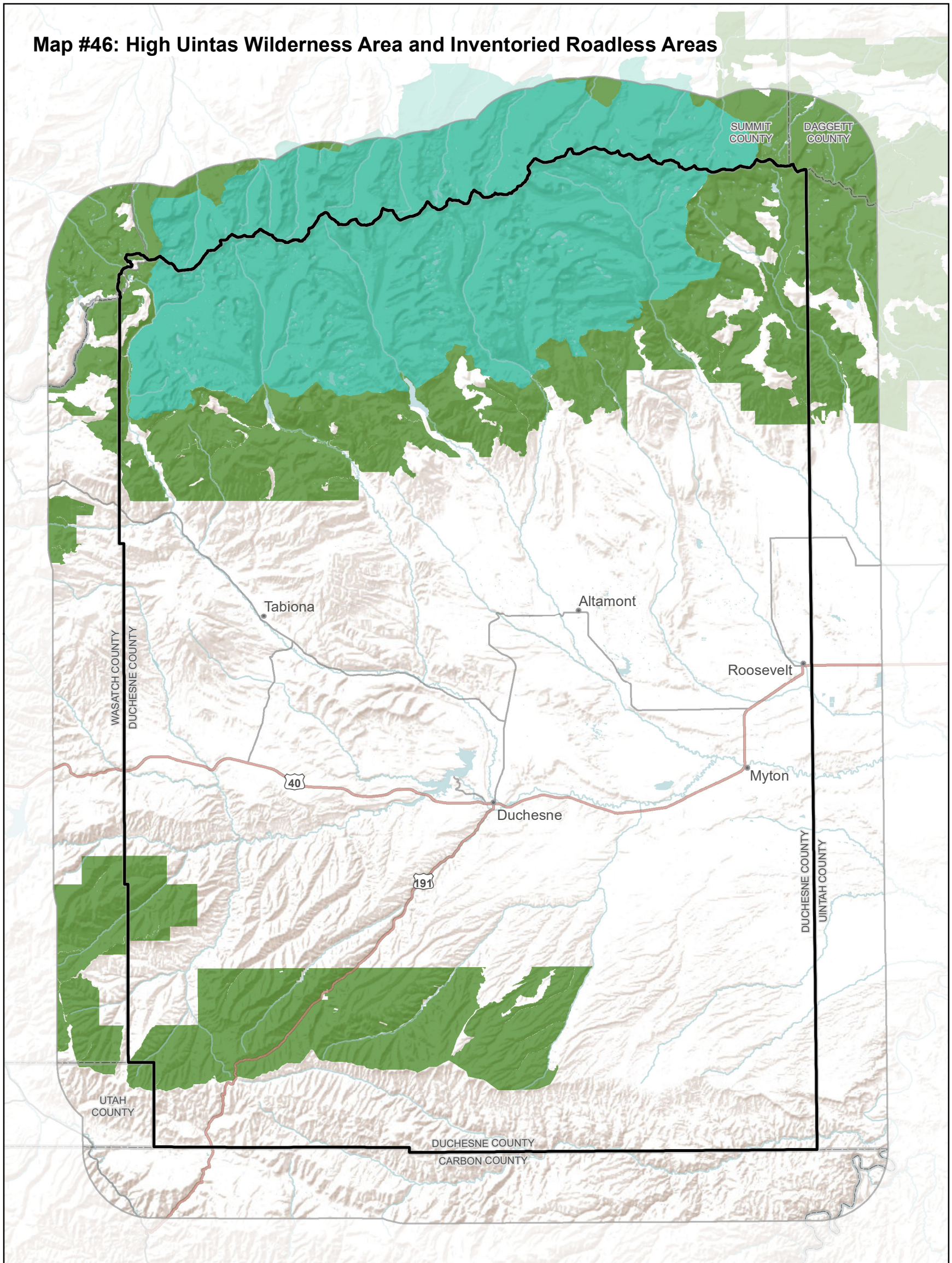
Data Source: U.S. Fish and Wildlife Service, 2004 & 2014
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 6/1/2017
 Map Created: 6/1/2017



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Map #46: High Uintas Wilderness Area and Inventoried Roadless Areas

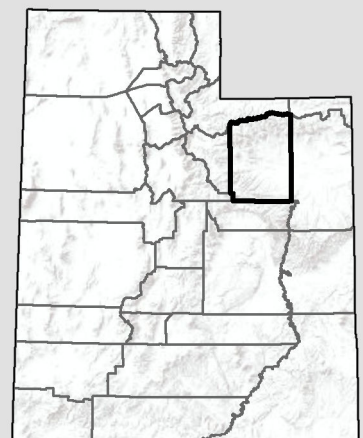
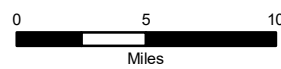


- Duchesne County Boundary
- High Uintas Wilderness
- Inventoried Roadless Areas

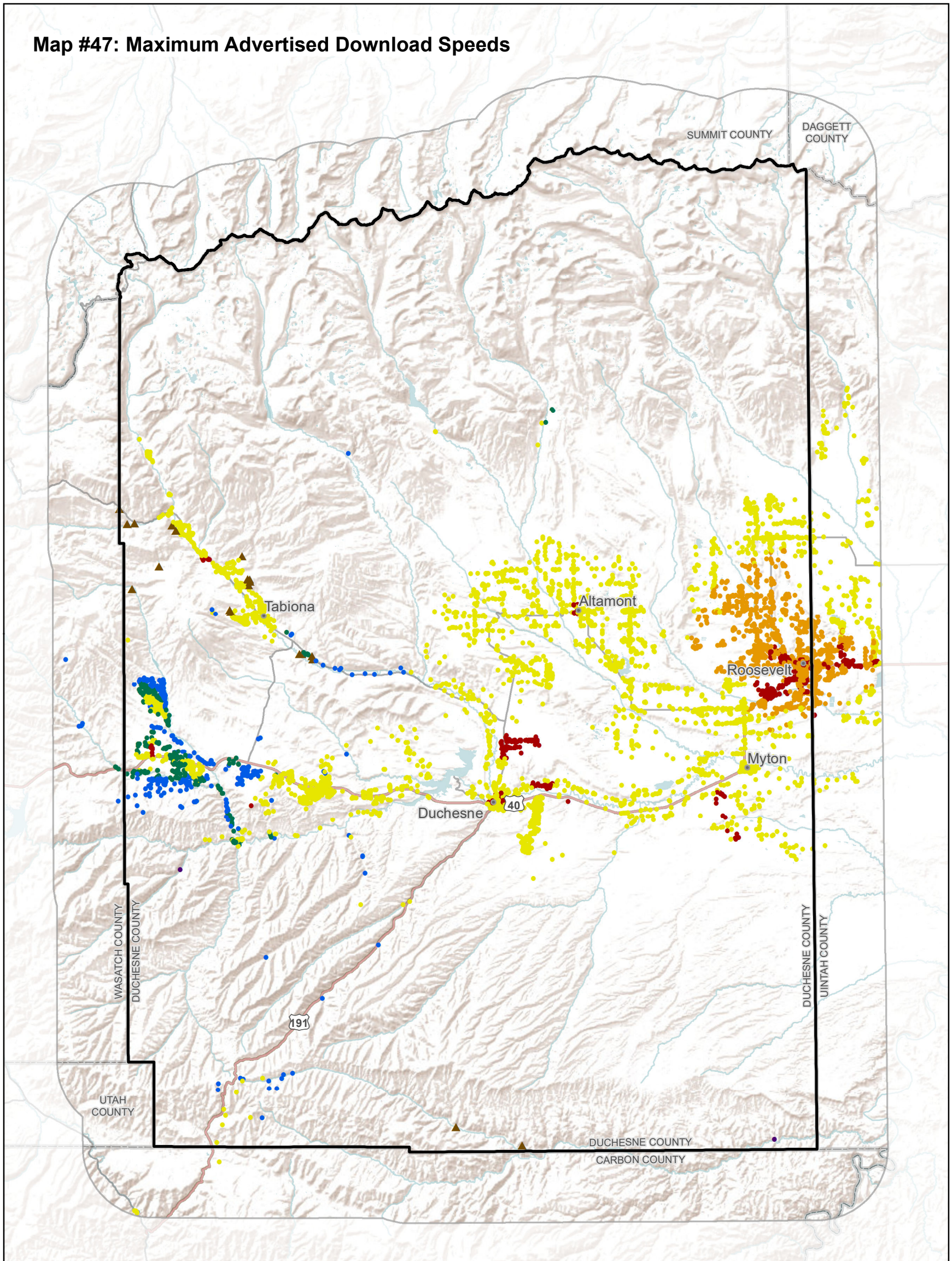
Data Source: U.S. Department of Agriculture, 2001
Basemap from ESRI ArcGIS Online:
World Terrain Base, accessed 6/1/2017
Map Created: 6/1/2017



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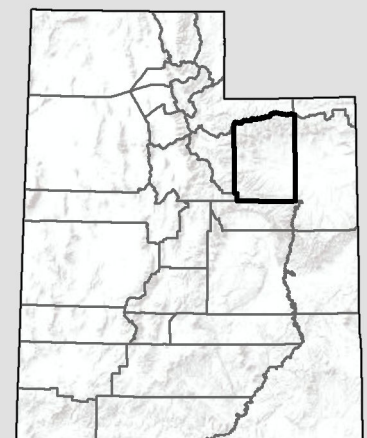


Map #47: Maximum Advertised Download Speeds

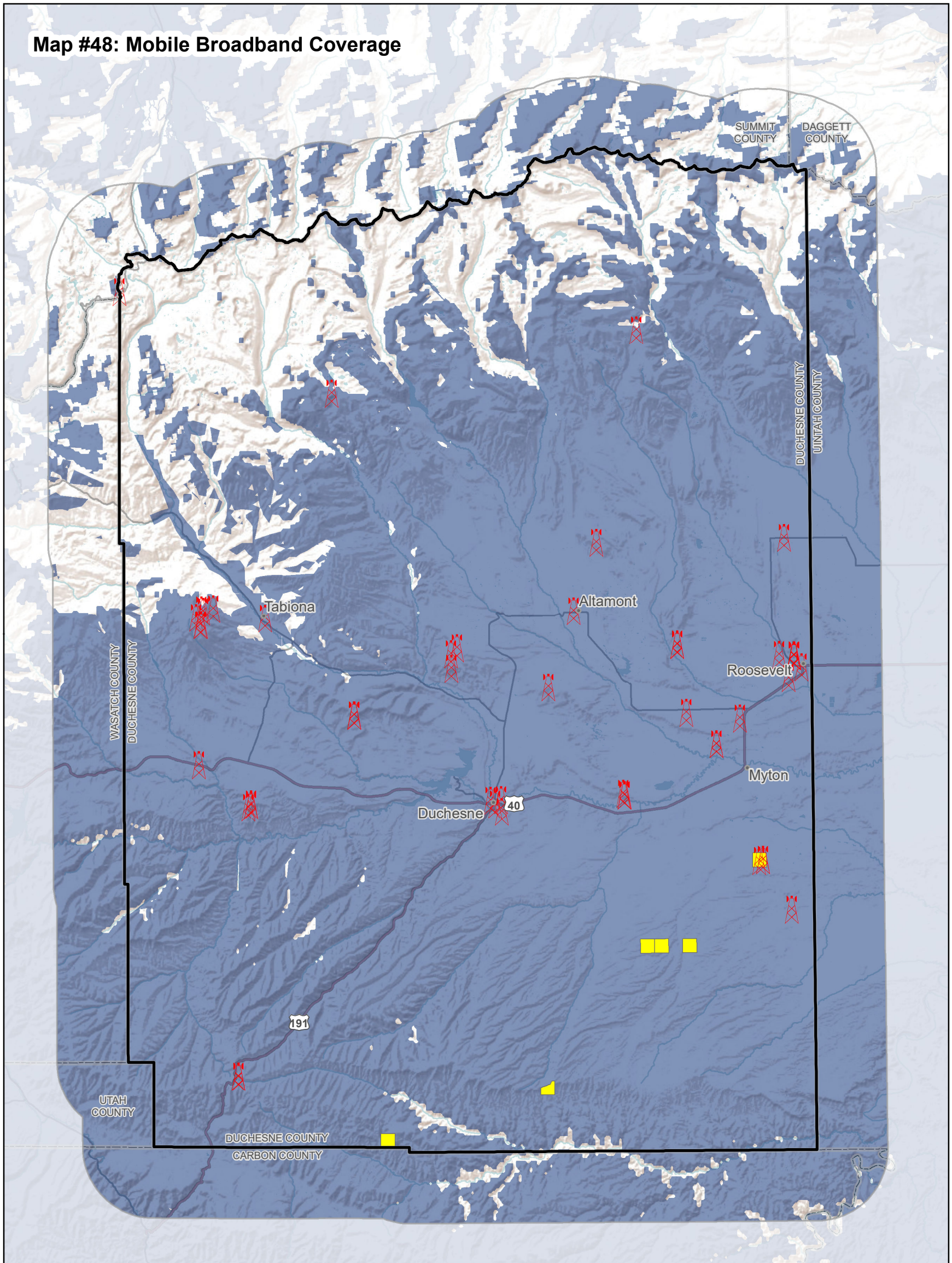






- Duchesne County Boundary
- 1000+ Mbps
- 25 - 49 Mbps
- 10 - 24 Mbps
- 6 - 9 Mbps
- 3 - 5 Mbps
- 1.5 Mbps or fewer
- Unserved Addresses

Data Source: Utah Broadband Outreach Center, 2016
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 6/1/2017
 Map Created: 6/1/2017



Map #48: Mobile Broadband Coverage

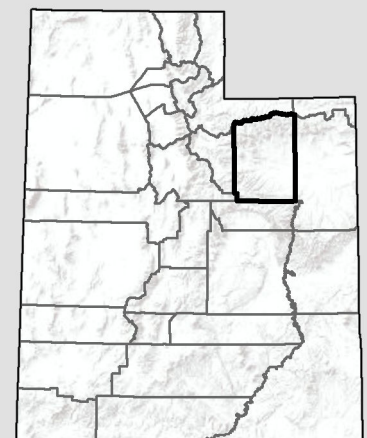
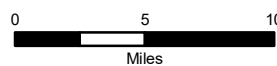


-  Duchesne County Boundary
-  BLM Communication
-  Mobile Broadband Service
-  Confirmed Tower

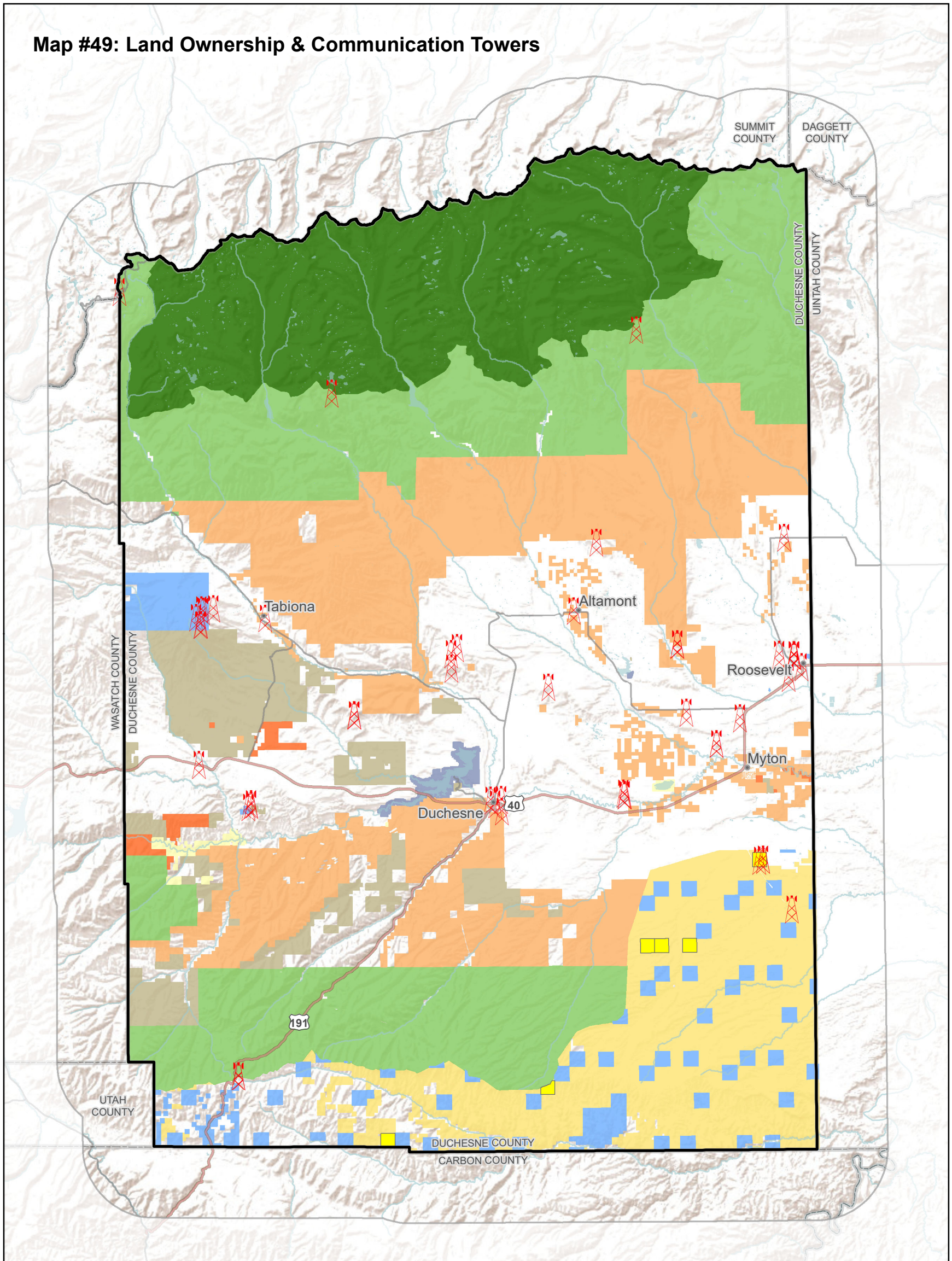
Data Source: Utah Broadband Outreach Center, 2016
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 6/1/2017
 Map Created: 6/1/2017



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Map #49: Land Ownership & Communication Towers

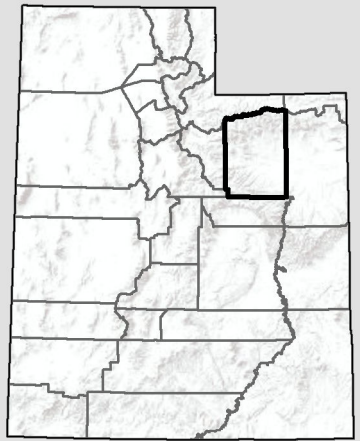
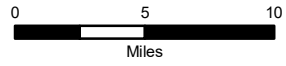


- Duchesne County Boundary
- Land Ownership**
- Bureau of Land Management
- Bureau of Reclamation
- National Forest
- National Wilderness Area
- State Trust Lands
- State Parks and Recreation
- State Wildlife Reserve/Management Area
- Tribal Lands
- Utah Mitigation Commission
- BLM Communication
- ✠ Confirmed Tower

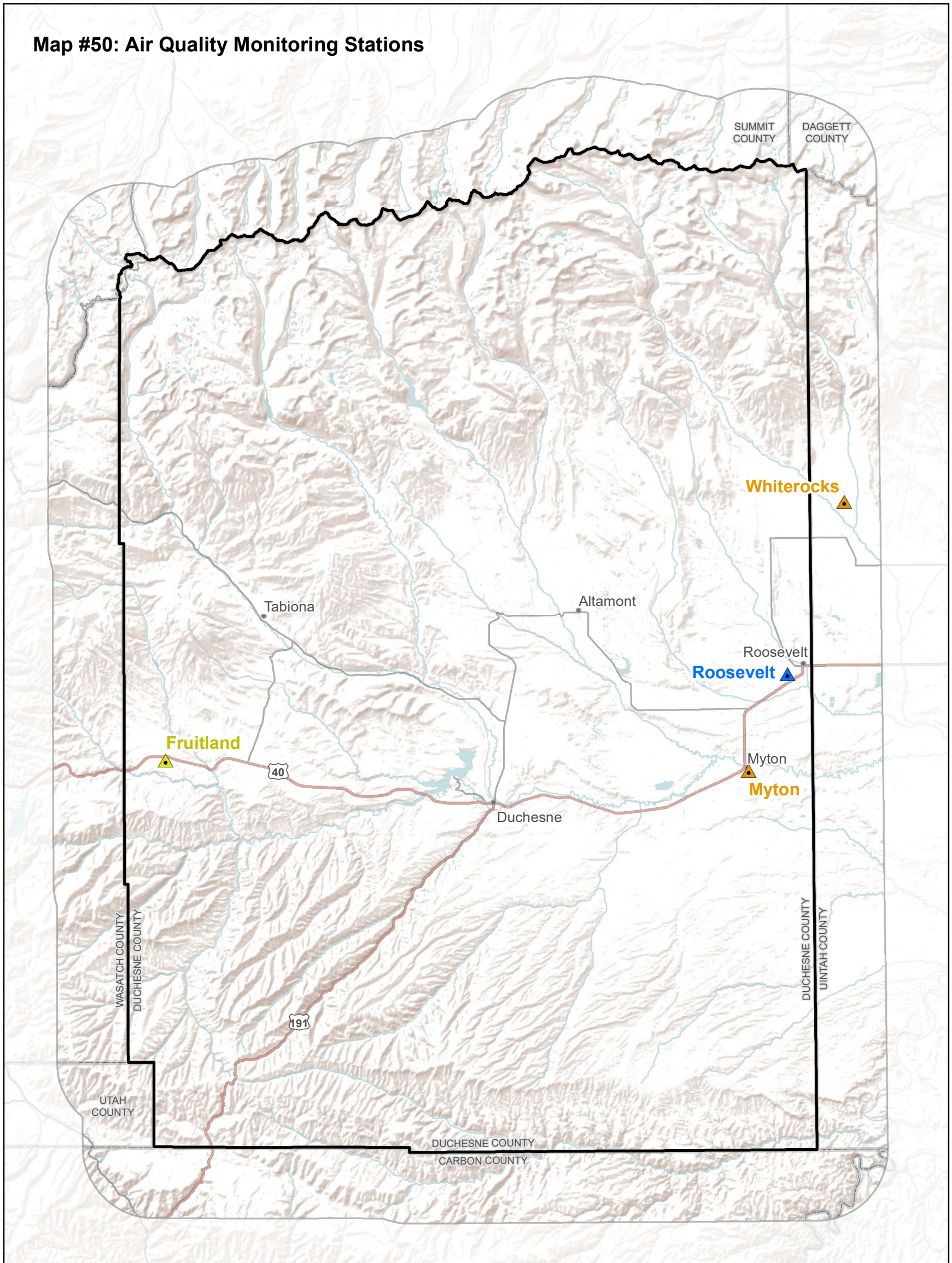
Data Source: Utah Broadband Outreach Center, 2016;
 Utah AGRC, 2016; Duchesne County, 2016
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 6/1/2017
 Map Created: 6/1/2017



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Map #50: Air Quality Monitoring Stations



Duchesne County Boundary

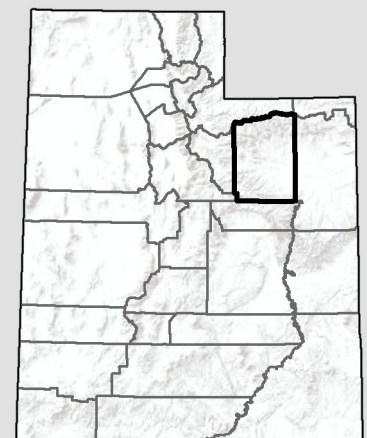
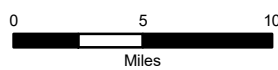
Air Quality Monitoring Stations

- U.S. Bureau of Land Management
- Utah Division of Air Quality
- Ute Tribe and U.S. Environmental Protection Agency

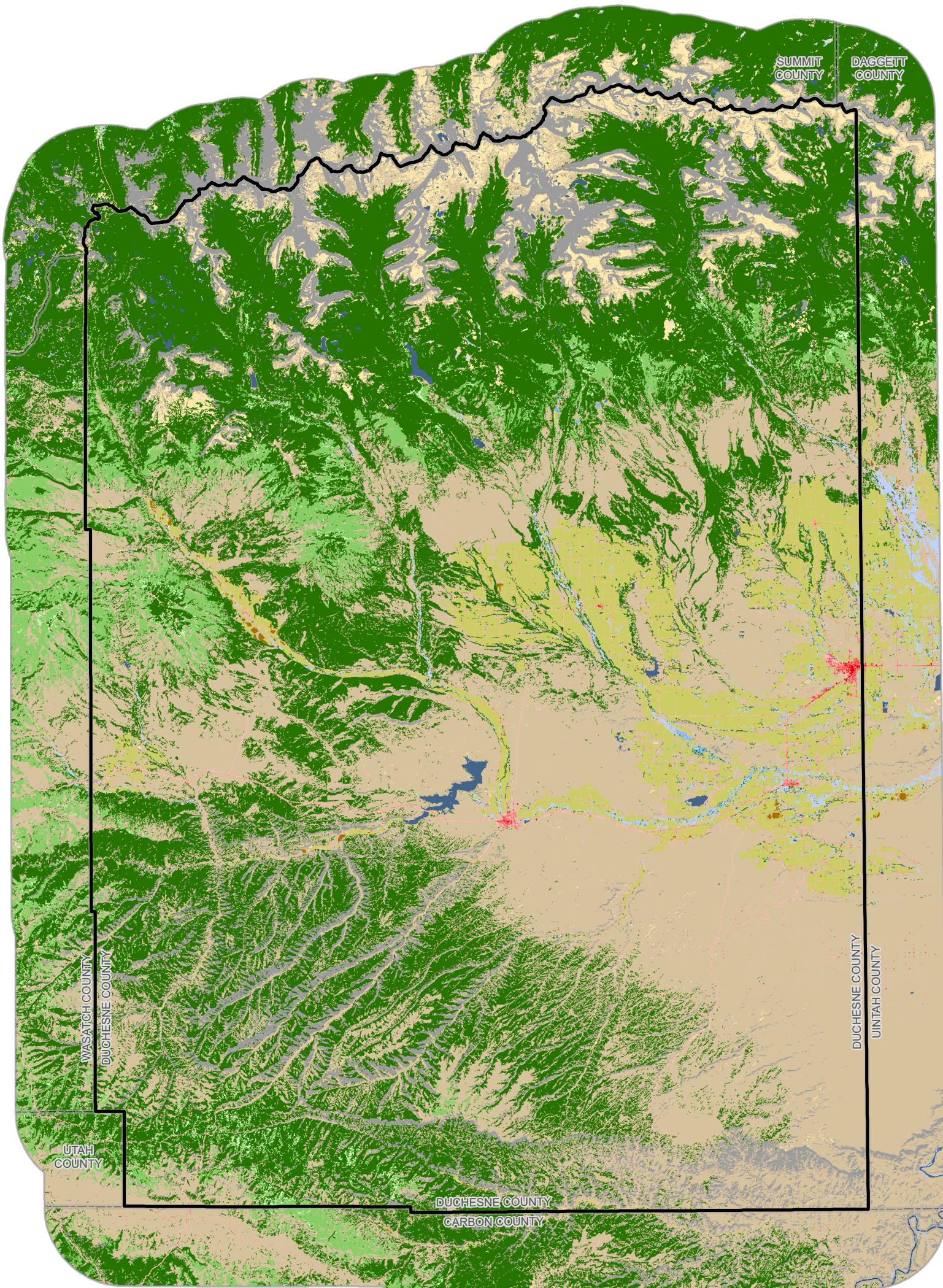
Data Source: BLM, 2016; Utah DAQ, 2016; EPA, 2016
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 6/1/2017
 Map Created: 6/1/2017



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Map #51: Land Cover Classifications



Duchesne County Boundary

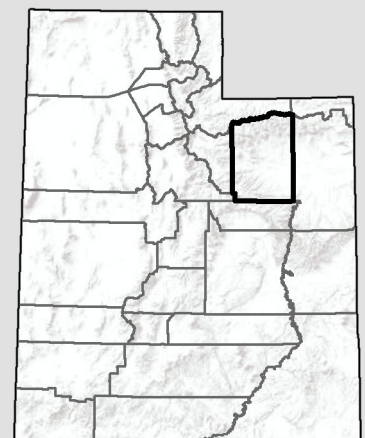
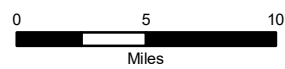
Land Cover Classifications

- | | |
|------------------------------|------------------------------|
| Open Water | Mixed Forest |
| Perennial Ice/Snow | Shrub/Scrub |
| Developed, Open Space | Grassland/Herbaceous |
| Developed, Low Intensity | Pasture/Hay |
| Developed, Medium Intensity | Cultivated Crops |
| Developed, High Intensity | Woody Wetlands |
| Barren Land (Rock/Sand/Clay) | Emergent Herbaceous Wetlands |
| Deciduous Forest | |
| Evergreen Forest | |

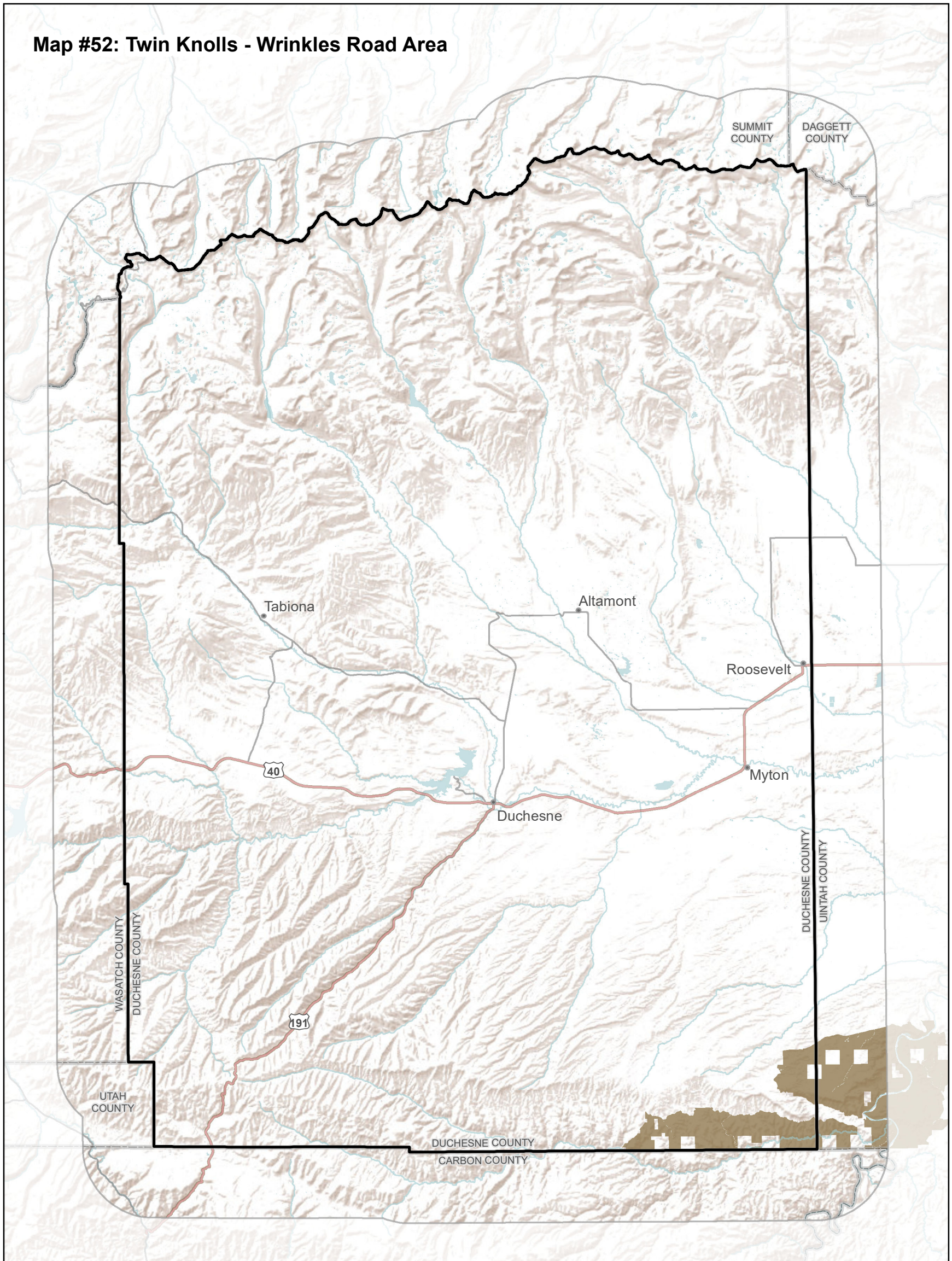
Data Source: U.S. Geological Survey, 2011
Map Created: 6/1/2017





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Map #52: Twin Knolls - Wrinkles Road Area

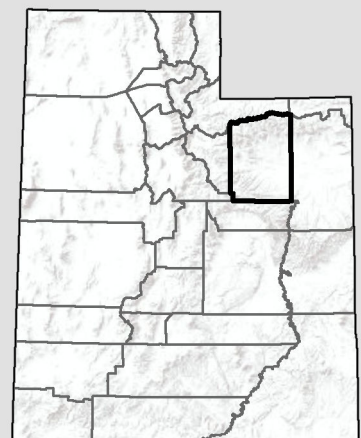
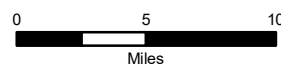


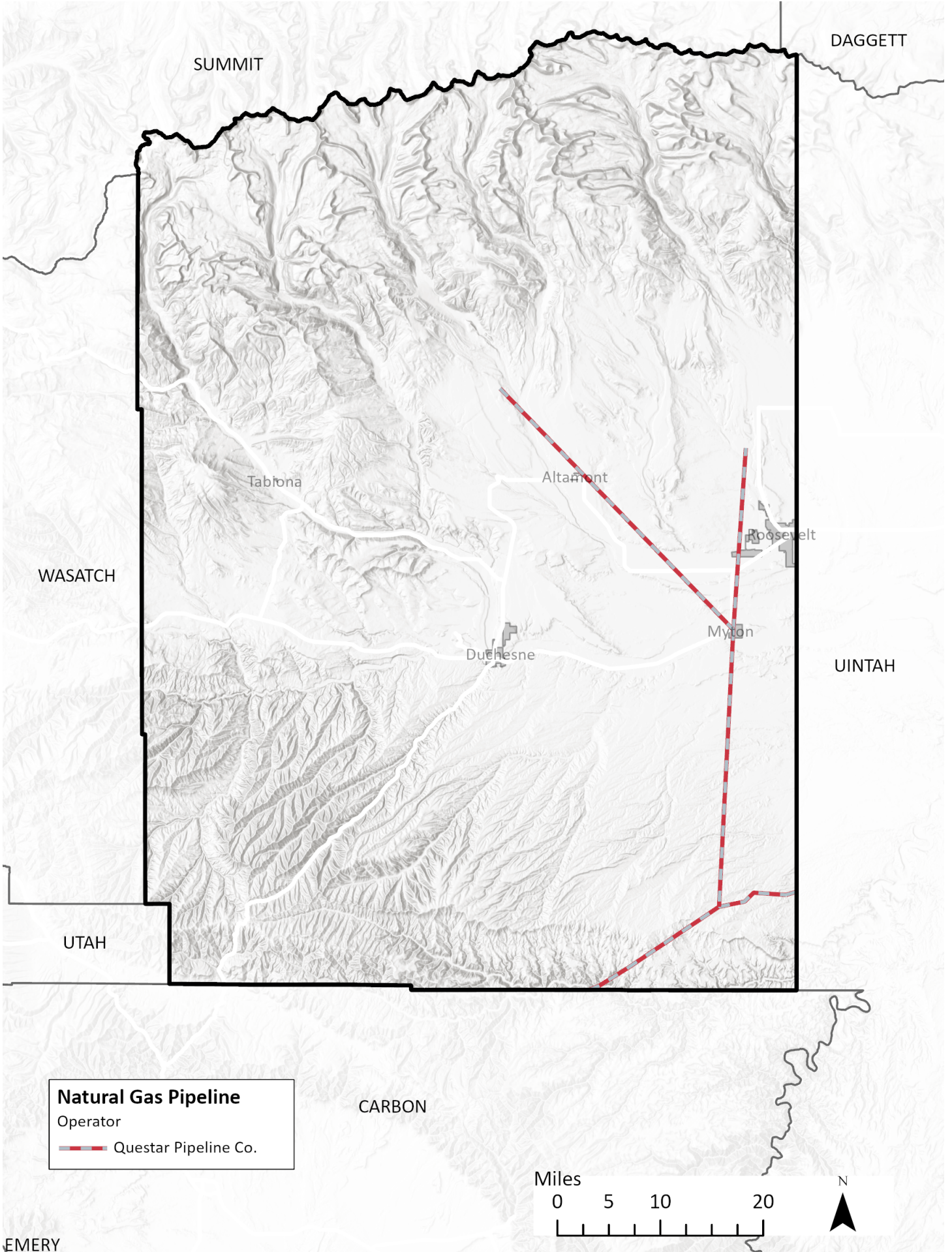
-  Duchesne County Boundary
-  Twin Knolls - Wrinkles Road Area

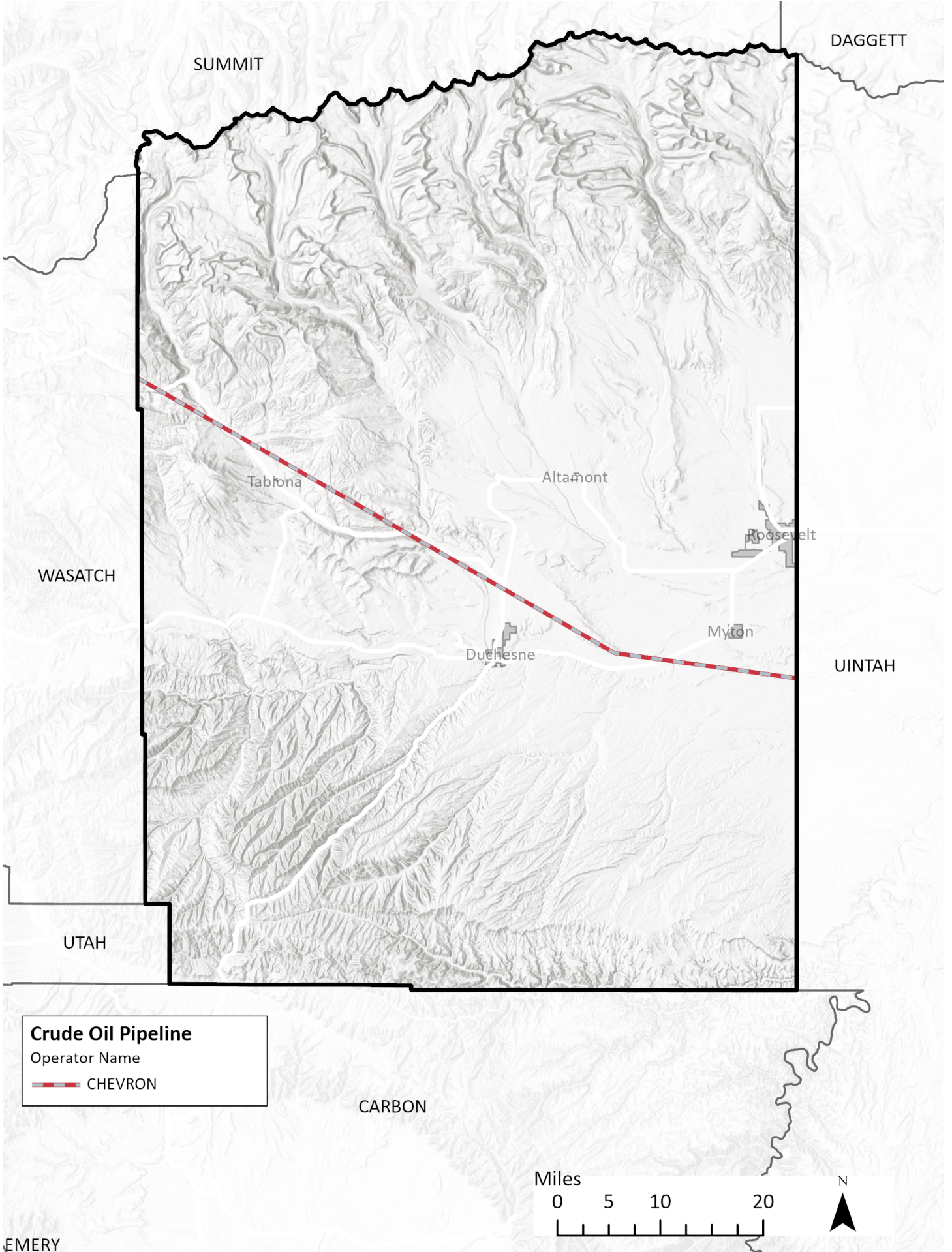
Data Source: Bureau of Land Management, 2008
 Basemap from ESRI ArcGIS Online:
 World Terrain Base, accessed 6/1/2017
 Map Created: 6/1/2017

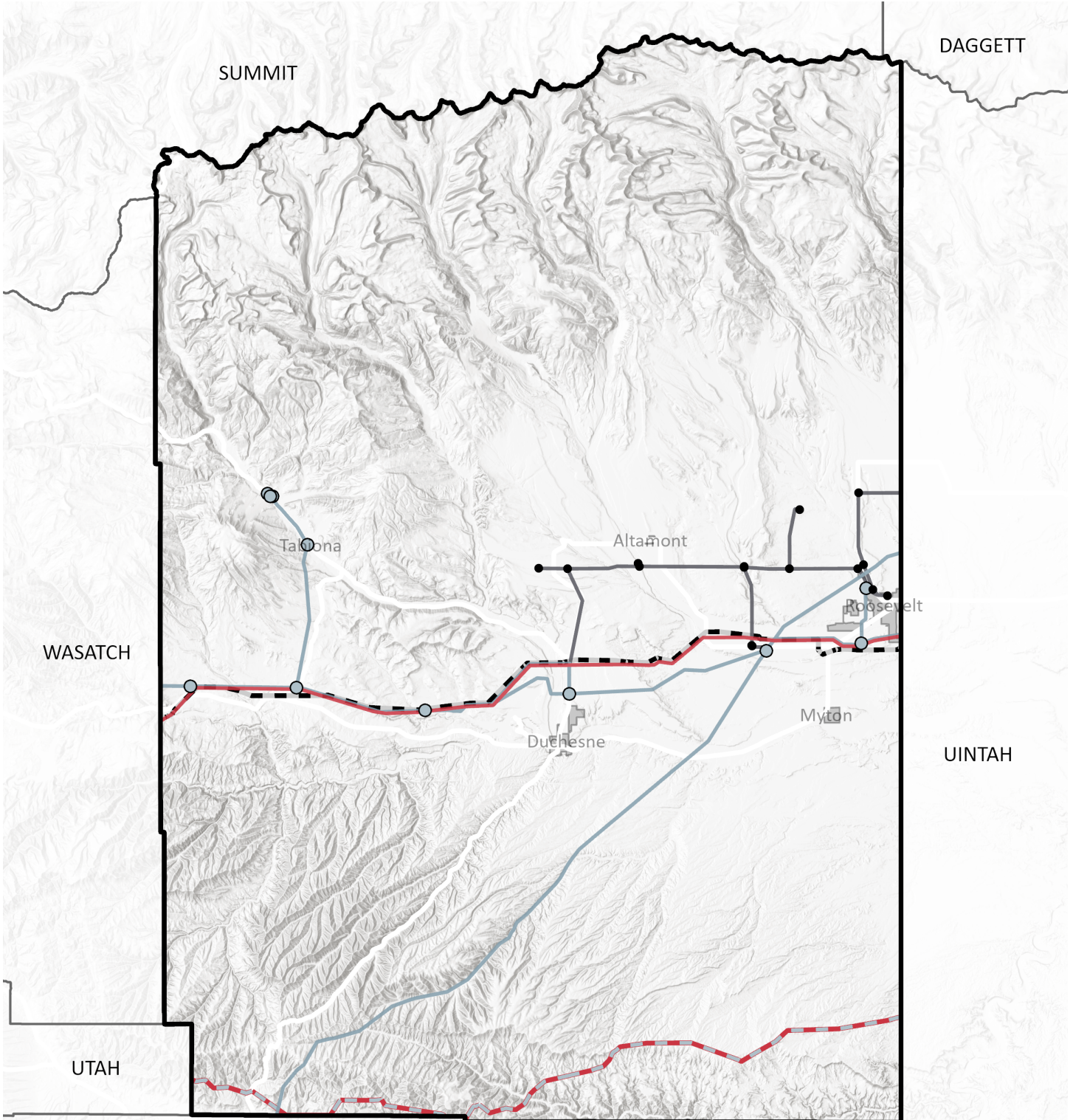


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Electrical Transmission (Existing)

- Volt Class
- Under 100kV
 - 100 -200 kV
 - 345 kV

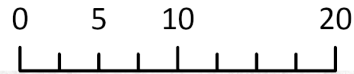
Electrical Substation

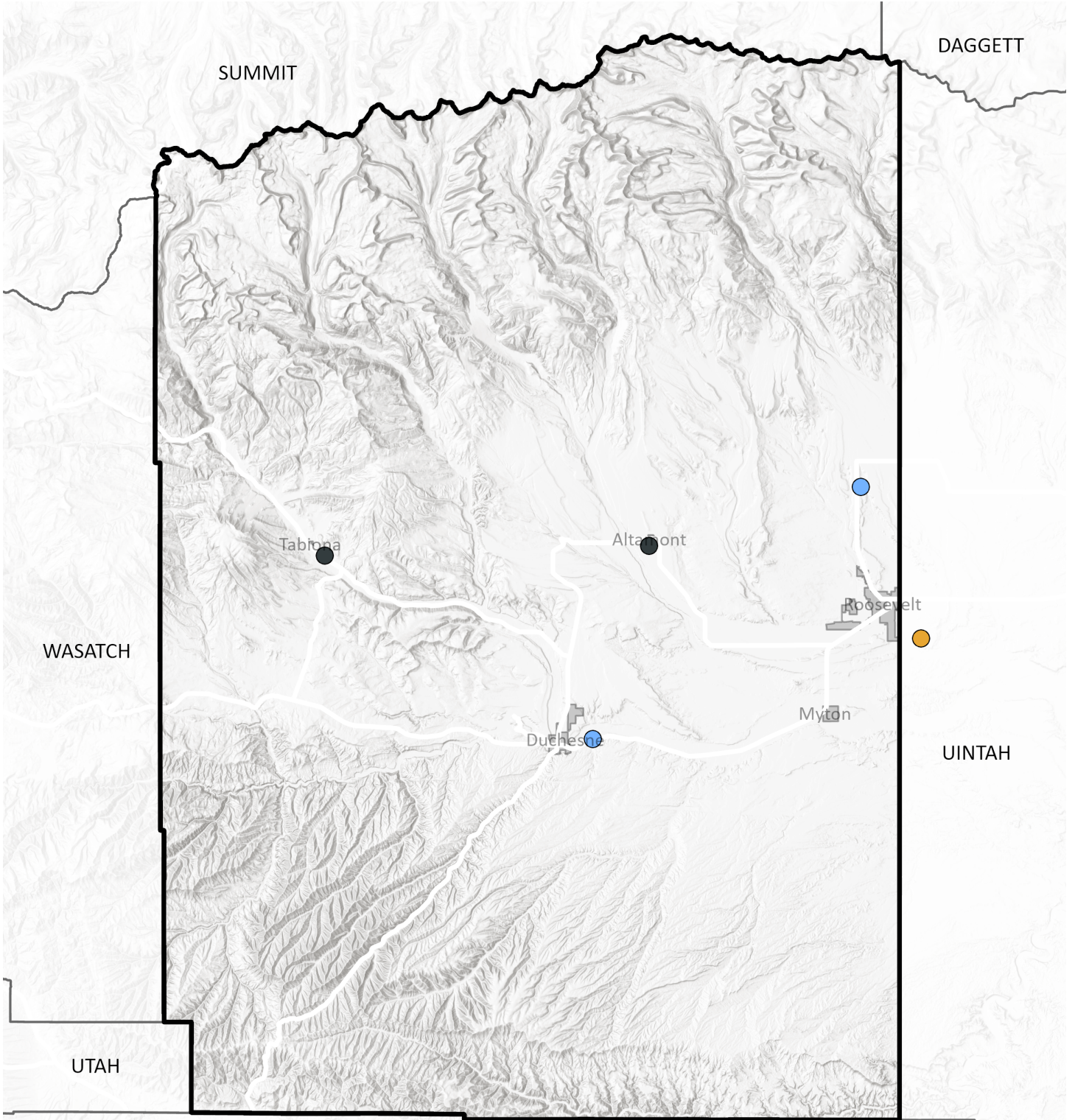
- Volt Class
- Under 100 kV
 - 100 -200 kV

Electrical Transmission (Permitted)

- TransWest Express 600 kV DC
- Energy Gateway South 500kV AC

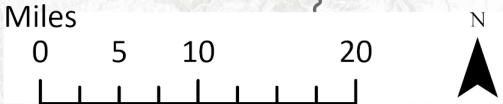
Miles



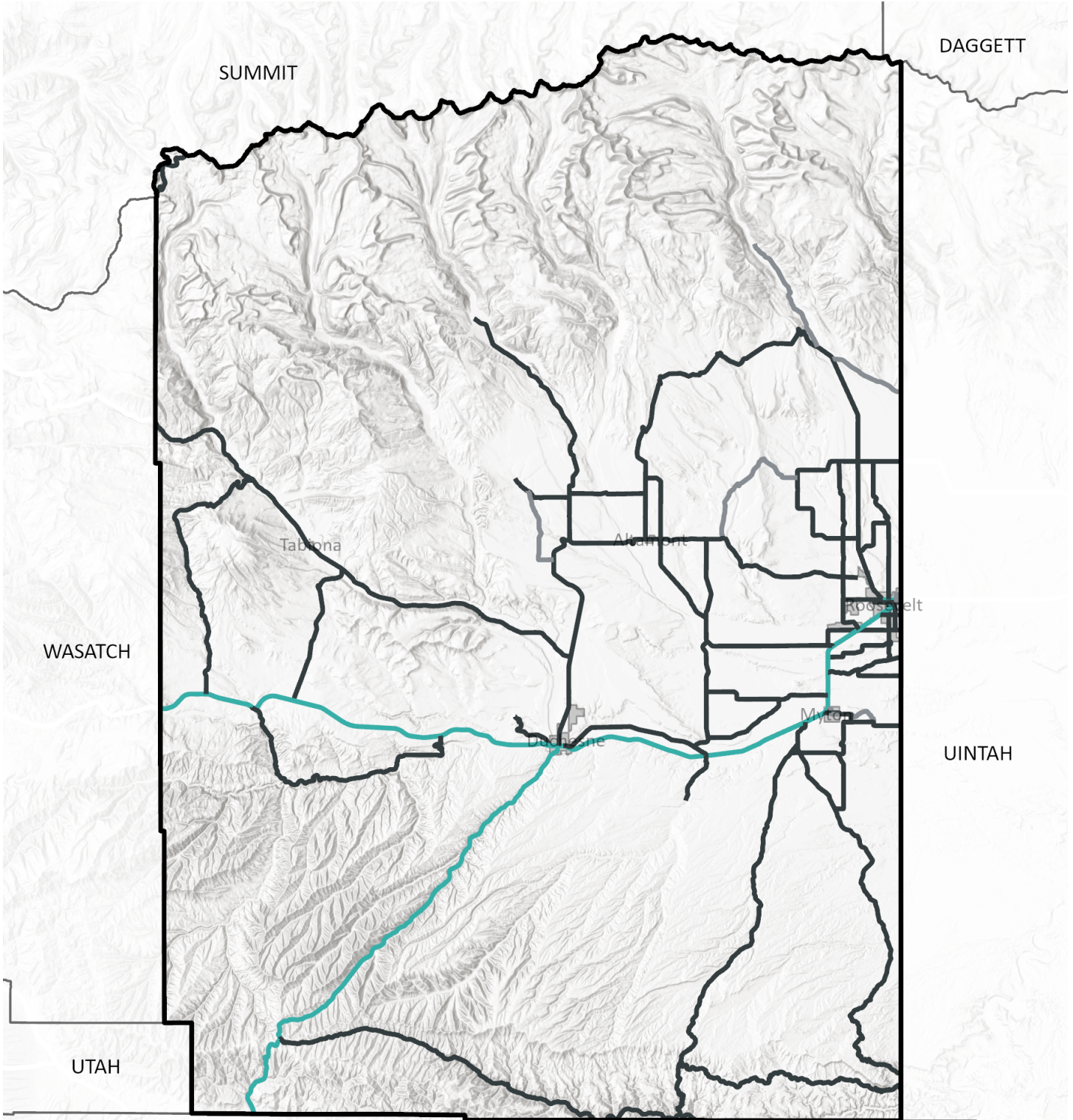


Wastewater Treatment











- Lagoon
- Non-Discharging Lagoon
- Land Discharge



EMERY



Highway Functional Class

- | | |
|--|--|
|  Interstate |  Proposed Interstate |
|  Other Freeways and Expressways |  Proposed Other Freeways and Expressways |
|  Other Principal Arterial; Minor Arterial |  Proposed Other Principal Arterial; Proposed Minor Arterial |
|  Major Collector; Minor Collector |  Proposed Major Collector; Proposed Minor Collector |
|  Local |  Proposed Local |

