Park County, Wyoming

Natural Resource Management Plan for State and Federal Lands in Park County, Wyoming

Prepared for:
the Park County Board of County Commissioners

Prepared by:
DJ&A, P.C.

August 20, 2021

[This page was intentionally left blank.]

Contents

Figures

Tables

Photos

Acronyms

Acronym or Abbreviation	Expanded Text
ACEC	Area of Critical Environmental Concern
AIS	Aquatic Invasive Species
AML	Appropriate Management Level
AQD	Air Quality Division
AUM	Animal Unit Month
BLM	Bureau of Land Management
BOR	Bureau of Reclamation
CA	Cooperating Agency
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO_2	Carbon Dioxide
DEQ	Department of Environmental Quality
DOI	Department of Interior
EA	Environmental Assessment
EIS	Environmental Impact Statement
E-bike	Electric Bicycle
EPA	Environmental Protection Agency
ERMA	Extensive Recreation Management Area
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FLPMA	Federal Land Policy and Management Act
FOAL	Friends of a Legacy
FSH	Forest Service Handbook
FSM	Forest Service Manual
GHMA	General Habitat Management Area
GLO	General Lands Office
HMA	Herd Management Area
IM	Instruction Memorandum
LUP	Land Use Plan
LWC	Lands with Wilderness Characteristics
MIS	Management Indicator Species
MOU	Memorandums of Understanding
MUSYA	Multiple-Use Sustained-Yield Act of 1960
NEPA	National Environmental Policy Act
NFMA	National Forest Management Act
NFS	National Forest System
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRMP	Natural Resource Management Plan
OHV	Off-Highway Vehicle
OMB	Office of Management and Budget
PETM	Paleocene, Eocene Thermal Maximum
PHMA	Priority Habitat Management Area
PILT	Payments in Lieu of Taxes
RMP	Resource Management Plan
ROS	Recreational Opportunity Spectrum
SFHA	Special Flood Hazard Area
SOC	Species of Concern
SOLC	Species of Local Concern
SRMA	Special Recreation Management Area
SWAP	State Wildlife Action Plan
TMDL	Total Maximum Daily Load
USC	United States Code
USDA	United States Department of Agriculture
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WGFD	Wyoming Game and Fish Department
WPCI	Wyoming Pipeline Corridor Initiative
WSA	Wilderness Study Area
WWDO	Wyoming Water Development Office
WYNDD	Wyoming Natural Diversity Database

[This page was intentionally left blank.]

Introduction

A Natural Resource Management Plan (NRMP) is a form of land use planning that serves as the basis for communicating and coordinating with the federal and state government entities and their agencies on land and natural resource management issues that influence the local area and economy. While local governments do not have jurisdiction over the federal or state government or the lands they manage, various statutes dictate the requirements and parameters for agency engagement with local entities during decision-making processes. This can include local governments serving as a cooperating agency (CA) during federal project planning as an Interdisciplinary team member or providing local expertise and information for areas of statutory responsibility. Understanding that rural counties can be strongly impacted by federal and state land management decisions on lands located within or adjacent to their borders, local governments can ensure that local policies and concerns are meaningfully considered by federal and state agencies through formally adopting an NRMP.

Counties are particularly well-suited to understand the impacts that federal land management decisions may have on the local economy, custom, and culture. Under Wyoming Statute § 18-5-208(a), a county is "deemed to have special expertise on all subject matters for which it has statutory responsibility, including but not limited to, all subject matters directly or indirectly related to the health, safety, welfare, custom, culture, and socio-economic viability of a county." Wyoming counties have a fundamental interest in federal and state lands within and adjacent to their boundaries. Many aspects of the environmental and socioeconomic health and well-being of the local government and citizens are related to goods and services provided by federal and state lands. To this end, local governments request the same degree of participation as that afforded the state of Wyoming as described in Instruction Memorandum (IM) WY 2015-013[1].

County governments are given special consideration with regard to planning on federal and state lands under this framework. As duly elected representatives, locally elected county commissions represent a range of interests. The National Environmental Policy Act (NEPA), Federal Land Policy Management Act (FLPMA), National Forest Management Act (NFMA), and the United States Department of Interior (DOI) Bureau of Land Management (BLM) CA policies all encourage and provide for public processes, with special attention given to local governments. Additionally, both NEPA and FLPMA require a federal "consistency review" of a planning effort or project with the local policies, plans, or laws adopted by the local government (Budd-Falen Law Office 2018). The approval of an NRMP represents public input on natural resource planning. Participation in a federal planning process does not negate the right for objection under NEPA.

This NRMP compliments and enhances the Park County Land Use Plan (LUP) and incorporates objectives and policies that relate to public land use and management in Chapter 6.2 of the Park County LUP. Vision statements in the Park County LUP and history of the area are relevant to this NRMP as well. Current information and data related to federal and state lands and associated values in Park County have been used and provide additional context when used in conjunction with past recorded data in the Park County LUP, regarding trends and historic snapshots of the County. While some resource areas are addressed in the existing LUP, this NRMP reinforces the objectives and priorities and enhances resource

[1] IM WY 2015-013, describes the BLM's commitment to the NEPA process with specifics regarding types of NEPA and communication protocols.

assessment by focusing on how each resource is relevant to federal and state land management.

Public Land Impacts on the Economy of Park County

Federal and state lands are considered an economic asset within Park County. Public land amenities attract and retain people and their businesses, as well as attracting retirees, tourists, and vacation home buyers. The County has seen significant increases in population, employment, and income since the 1970s. In part, this increase is due to the influence of Yellowstone National Park and the abundance of easily accessible state and federal lands within the County. These resources encourage government presence and a healthy number of government jobs in the area. Government employment within Park County has been consistent, with total employment growing from 18 percent to 25 percent between 1970 and 2018 (Headwaters Economics 2020). Government employment has been stable during recession years and has provided a source of stability to the local economy.

Within the private sector, natural resource-related industries (e.g., agriculture and mining) contributed 5.3 percent to total employment within Park County in 2018. The agriculture industry, while declining since 1970, has been a consistent and stable source of employment for the last 10 years, contributing about 2.5 percent of total employment in 2018. Mineral extraction (including fossil fuels) employment has shown greater variability over that same timeframe with significant changes in job availability year to year. County revenue is greatly impacted by the oil and gas industry, more so than other industries; over 36 percent of the County's property taxes came from the oil and gas industry in 2019 (Headwaters Economics 2020). Access to and continued use of these resources is critical to the economic stability of the County.

The recreation and tourism industry is the dominant economic influence within Park County, contributing the greatest number of service industry jobs. The service industry is continuing to grow at the highest rate compared to other industries. Although earnings per job sector can vary significantly, industries that contain recreation and tourism often pay relatively low wages, and many jobs are seasonal and/or part-time. Park County faces the ongoing challenge of preventing income inequality as its economy continues to grow (Headwaters Economics 2020).

Purpose and Intent of this Plan

The purpose of this NRMP is to acknowledge the custom and culture of the local area, identify resources or land uses that are economically or culturally important to the stability and character of Park County, and recognize the importance of local involvement in federal and state decision-making.

In adopting this NRMP, the Park County Board of County Commissioners ("the Board") intends to:

- Maintain or expand upon the culture, customs, heritage, and economic diversity of resource-based industries within the local economy, while balancing the integrity of local natural resources, wildlife, and environmental quality;
- Promote the understanding of the history, dynamics, and benefits of multiple use on federal and state lands within the County (i.e., agriculture, recreation, etc.) with the understanding that 1) the "multiple use" mandate on public lands does not imply that all uses can take place simultaneously on the same land, 2) the protection of wilderness qualities and roadless qualities are legally recognized uses within the spectrum of multiple use, and 3) certain other compatible uses take priority over incompatible uses;

- Recognize and protect privacy rights and interests in federal and state land resources including, but not limited to, rights-of-way, grazing permits, water rights, special use permits, leases, contracts, and recreation permits and licenses;
- Identify and justify areas of need facing Park County specific to the current conditions of natural resources within the County, understanding that ecological conditions will be changing in unpredictable ways, and review and update this occasionally to adapt to these changes;
- Minimize conflicts between land uses; and
- Promote a robust, diverse, and sustainable local economy.

The Board also acknowledges that comprehensive and responsible management of local natural resources requires equal effort and participation of all parties involved, including citizens as well as local, state, and federal agencies. In order to encourage meaningful and productive interactions, the Board will:

- Inform federal and state agencies of the date, time, and location of their regularly scheduled meetings with an open invitation that federal and state agency personnel should attend such meetings;
- Transmit a copy of this NRMP to local, state, and federal agency offices doing business within the County for their consideration as part of any consistency review that is required pursuant to federal statute; and
- Productively participate in NEPA projects by reviewing NEPA documents to determine if CA status is requested and consider entering into Memorandums of Understanding (MOU) or Memorandums of Agreement as appropriate.

Legal Framework

Federal statutes provide opportunities for counties to share their own special expertise with federal agencies during decision-making processes in order to protect the local custom and culture, tax base, and private property. NRMPs establish the current economic and cultural conditions and the desired future conditions of an area and illustrate how those conditions are linked with activities that occur on adjoining federal and state lands. Specifically, federal laws require federal agencies, including the BLM and United States Forest Service (USFS), to consider state and local LUPs and to explain deviations from these plans in decision documents per NEPA, FLPMA, and NFMA. While it is the policy of Park County to productively participate in NEPA projects, participation in a federal planning process does not negate the right for objection under NEPA. Legal framework is discussed in greater detail in Appendix A. The Multiple-Use Sustained-Yield Act of 1960 (MUSYA) is discussed in Chapter 2.

Organization

This plan considers the current conditions of federal and state resources, objectives for each resource, and how the County would like to see those objectives achieved. For each type of resource in the County, this plan addresses the following:

- **Resource Assessment:** Includes background and detailed information on the resource, including qualitative as well as quantitative information. The Resource Assessment also includes an

evaluation of the importance of the resource, the location, quality, and size, as well as a map of the resource, where appropriate. Maps are included in Appendix B. The Resource Assessment relies on the best data available at the time of publication. The Resource Assessment addresses the question, "What is the state of the resource now?"

- **Resource Management Objectives**: Describes general goals in the form of broad policy statements regarding the use, development, and protection for each resource. Where applicable, objectives are stated in measurable terms and include tangible metrics for which resource objectives can be met. Resource Management Objectives address the question, "What does the County want for and from this resource?"
- **Priorities**: Describes specific priorities on how to achieve the County's Resource Management Objective for each resource. Priorities tier to Resource Management Objectives for each resource and address the question, "How would the County like to see its objectives achieved?"

Process

This plan is based on criteria developed by the Office of the Wyoming Governor, in consultation with the counties, and consistent with Wyoming Statute § 9-4-218(a)(viii)(B). The County formed a steering committee to guide the development of this plan and developed this plan in public meetings in accordance with Wyoming Statute §§ 16-4-401 through 16-4-408 consistent with Wyoming Statute § 9-4-218(a)(viii)(D), allowing for participation and contribution from the public. The County invited steering committee members and federal and state agency representatives to collaborate and help guide the development of this plan. In addition, the County invited the public to participate in an online survey administered to identify important social, economic, and environmental issues associated with federal and state lands within the County. Survey results are included in Appendix C.

Credible Data

There are many factors that make a data source credible, but the underlying basis is an assurance that the source is unbiased and supported by evidence. The Information Quality Act directed the Office of Management and Budget (OMB) to require federal agencies to issue formal information quality guidelines that would ensure the quality, objectivity, utility, and integrity of information disseminated by federal agencies. To satisfy OMB's government-wide guidelines, 67 Federal Register (FR) 8452, the BLM and USFS have each adopted information quality guidelines. In creating this plan, the Board relied on credible data from federal, state, and local publicly available data sources, as well as data that meets, at a minimum, the Information Quality Act guidelines. Conversely, the Board expects that all federal agencies will also follow, as required, their respective information quality guidelines to "ensure and maximize the quality, utility, objectivity and integrity of the information that they disseminate […]." (67 Federal Register 8452). All data sources used can be found in the References Cited Section.

Consideration of Other Plans

The Park County LUP was considered during the development of this plan along with the Meeteetse Conservation District Land Use Management and Resource Conservation Plan. Other plans considered or reviewed are mentioned or cited in the relevant resource areas.

Updating the Plan

To the extent resources allow, it is recommended that this plan be reviewed and updated every five

years, following the same process for public involvement used to identify changes and priorities as described above.

Planning Objectives

1. Support federal and state land management that involves efficient, collaborative, and coordinated planning among federal, state, and local governments, private entities, and other non-governmental organizations and individuals to manage the use, protection, enhancement, and enjoyment of natural resources and associated lands.
2. Support active outreach and distribution of proposed federal and state project information and encourage active participation of the local public in federal and state land issues.

Planning Priorities

1. Facilitate and encourage effective government-to-government relations; engage in annual or bi-annual meetings with respective federal and state agency representatives in the County to review the status of past projects in which the County was a CA; review current and upcoming NEPA and planning efforts; and determine opportunities for cooperation and efficiency in the planning process.
2. Encourage federal and state land managers to include local officials in field work and field trips to increase levels of understanding and to facilitate discussion.
3. Encourage federal and state agencies to provide notification at the earliest opportunity of any proposed policy, plans, projects, or actions that may impact the local public's rights, interests, safety, or economic stability to provide for meaningful dialogue between the County and its citizens on potential implications and impacts.
4. Encourage federal and state agencies to consider non-commodity values, where applicable.
5. Make every effort to review and provide comments concerning the effects of any proposed public land exchange, acquisition, or sale of lands, or significant change in current management of federal or state land that the County deems important.
6. Encourage land management agencies to consider proposed actions and future impacts on: community resources and sustainability; maintenance of custom, culture, and economic diversity and sustainability; conservation and use of the environment and natural resources in the County; active management options, efficiencies, and flexibility; and existing varied use of lands and resources.
7. Request an invitation to participate as a CA on all federal and state project proposals that impact the County and its resources and citizens. Park County, when involved as a CA, should be allowed, if interested, to collect or assemble (if already available) resource, environmental, social, economic, and/or institutional data and information (43 Code of Federal Regulations (CFR) § 1610.4-3).
8. Support concise and efficient issue-based NEPA analysis that ties to existing assessments or utilizes authorities in place for analysis in order to conserve time and financial costs.
9. Recommend that federal and state planning efforts take into account the best available unbiased science in planning efforts and that all federal or state planning documents will:

- Disclose data and collection techniques for technical oversight to assure that rigorous scientific methodology and principles were used in consideration and interpretation and applied in the planning process within the context of the issues being considered;
- Evaluate and disclose substantial uncertainties in that science;
- Utilize data that meets the minimum criteria described in their respective handbooks, unless other criteria are agreed upon between federal and CAs involved in a project;
- Evaluate and disclose substantial risks associated with plan components based on that science;
- Include quantitative, credible data in land use planning efforts from non-federal sources. Federal and state land managers should seek out and take into full account data and information available from local sources when developing plans and/or making recommendations; and
- Use the most current approved NRMP in future federal planning efforts as a source of social, economic, and/or institutional data for land management or resource planning efforts.

10. Where appropriate, use a suitable, current economic model to assist decision makers in assessing the effects of various federal and state land management decisions on the local economy.
11. When deemed necessary, establish an advisory committee to review federal and state land management proposals and provide information to the Board concerning the effects on Park County.

Chapter 1: Custom and Culture

Resource Assessment

County Commissions in the state of Wyoming are particularly well-suited to understand the impacts that federal and state land management decisions may have on the local economy, custom, and culture, and have been recognized as having responsibilities in preserving the custom and culture of their individual counties in matters relating to the NEPA and federal land planning process. Under Wyoming Statute § 18-5-208(a), a county is "deemed to have special expertise on all subject matters for which it has statutory responsibility, including but not limited to, all subject matters directly or indirectly related to the health, safety, welfare, custom, culture and socio-economic viability of a county."

Culture is defined as the customary beliefs, social forms, and material traits of a racial, religious, or social group (Merriam-Webster 2020a). Custom is a usage or practice common to many or to a particular place or class or habitual with an individual (Merriam-Webster 2020b). Both the customs and culture of Park County have been shaped by the community's combined values and activities unique to the area. Over time, the County's customs and culture will continue to change and grow, creating a rich cultural landscape which reflects the County's past, present, and future. Protecting Park County's way of life and the quality of life of its residents is an important topic for consideration and one that is considered through conscientious land use planning (Park County Planning & Zoning Commission and Park County Board of County Commissioners 1998).

A defining component of Park County is the influential presence of Yellowstone National Park; over half the area of the park is within the County. In addition to the park, the Shoshone National Forest comprises a large portion of the County. Altogether, the majority of Park County is made up of public (primarily federal) lands. Open spaces are a defining quality of the County and are essential for the sustainability and continuity of traditional land uses and values. Important influences on customs and culture in the County include tourism, service industries, energy development and production, ranching and agriculture, and intrinsic uses such as historical and cultural sites and aesthetic values. Park County represents a traditional way of life where its residents are deeply connected to the land and have invested in its continued conservation for the good of the County as a whole. Ongoing support of these traditional multiple uses by the County is crucial to avoid potential negative social and economic impacts to the community that relies heavily upon them.

Park County sits upon lands previously occupied or hunted in by various people, including the Crow, Shoshone, Arapaho, Cheyenne, Lakota, Sioux, Blackfeet, and other tribes (Johnson Houze 2014). Today, the County is proximate to the Crow and Wind River Reservations, and the Bighorn Basin. Ranchers and settlers established a permanent presence within the area by the 1870s. Throughout the Bighorn Basin, ample open rangeland was limited by water availability and, like many arid parts of the West, irrigation served as the backbone for the expansion of ranching ventures. As a result, most ranching operations and settlements were located near three waterways: the Greybull and Shoshone Rivers, and the Clarks Fork of the Yellowstone River. Similarly, agricultural operations were primarily established near water sources throughout the County, with farming most predominant in the Powell area (Johnson Houze 2014). Cattle and sheep were the primary livestock within the area; Meeteetse even became home to one of the largest ranches within the Bighorn Basin (Johnson Houze 2014).

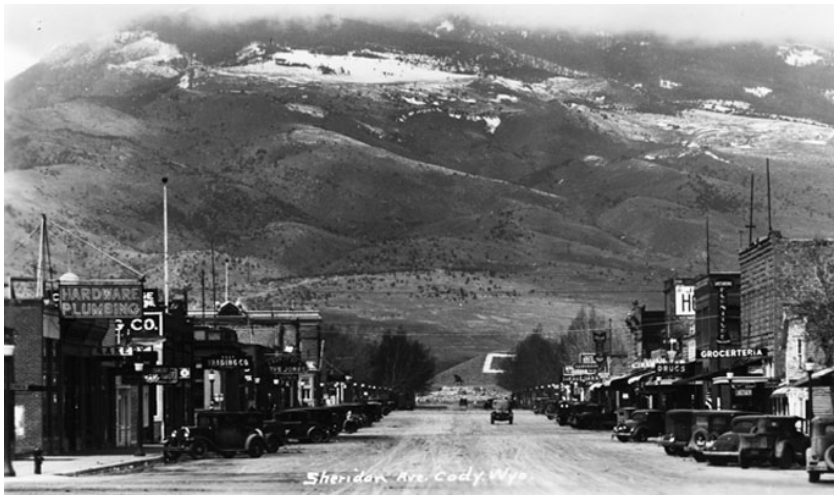


Photo 1 Sheridan Avenue, Cody, WY 1930

As infrastructure and access improved throughout the West, tourism also increased, with many flocking to the West to partake in rich hunting, fishing, and recreational opportunities. Towns such as Cody grew famous for their embodiment of the true Western lifestyle. Promoted by its namesake, "Buffalo Bill" Cody, who regularly visited the area, Cody quickly became a destination for many tourists that embodied a true Western experience. Park County's proximity to Yellowstone has stimulated the local economy since the park was created in 1872. More recently, another activity has gained a place in Park County's custom and culture. Off-Highway Vehicle (OHV) and other motorized vehicle use on federal lands supports many operations within Park County; however, its effects on recreation may be the most pronounced. The USFS and BLM have each have seen rapidly increasing recreational OHV use over the past 20 years. Using OHVs, recreationalists are now able to access public lands in ways not possible only decades ago. Public land managers are now tasked with balancing the environmental concerns posed by increased OHV use with other uses of federal lands that are also important to Park County's economy and culture.

Tourism and outdoor recreation historically comprised the bulk of businesses within the County. Though energy production and agriculture have been present and profitable in areas east of the park since the early 1900s, oil and gas production have also been present within the County, contributing to the local economy. Today, tourism remains a dominating industry within the County, along with service industries, retail trade, government , medical facilities, and construction (Park County 2020b). Oil and gas development also continues to stimulate the economy and provide important tax revenue that contributes to the well-being of County residents (Johnson Houze 2014). Altogether, Park County is a unique place where a deep connection to the land underlies the primary customs and culture; residents' livelihoods and quality of life are inextricably linked to federal and state lands and depend on continued access and opportunities throughout such lands.

Survey Results

The responses of 120 participants in a 2020 survey conducted by DJ&A (Appendix C) revealed a fervent desire to conserve the natural beauty and ecological health of federal and state lands within Park County. Residents conveyed a strong belief in unhampered access to public lands, citing the continued use of these open spaces as an indispensable component of their local heritage. Residents described a community comprised of strong, independent people who value the land and strive to conserve and protect it for future use. Founded on traditional, Western values, Park County is a place that seeks to preserve its way of life, which is inherently rooted in continued access to its vast tracts of public lands with low impact from resource-based industries such as energy development.

The responses to the survey also show that participants value industries whose interests align with the

continued conservation of federal and state lands, namely tourism, hunting and fishing, outdoor recreation, and well-managed ranching and agriculture; however, they do acknowledge the vulnerability that comes with dependence on tourism as a dominant source of income, and see the diversification of the economy and varied uses of federal and state lands as an option for stability and sustainability.

Strong adherence to local values often hinders energy development because many residents see it as hindering their access to public lands as well as degrading the environment in the process; combined, this has resulted in a bias towards more environmentally friendly industries, while energy development has lagged behind. Residents feel that this cautious approach to development is beneficial in the long run for both the environment and the community. Respondents believe that tourism-based industry is more sustainable long-term than energy development; a sentiment that reflects core values regarding conservation. Further development is also seen as a threat to old West ideals and traditional land uses, and one that may also damage the tourism industry that many rely upon.

Currently, much of the local economy is seasonal in nature, resulting in dynamic changes in the area demographics from summer to winter. In all, custom and culture of Park County is described as one that prides itself in conserving its valuable natural resources, while also preserving the traditional values upon which the area was founded. Moving forward, the preservation of these ideals is important to many residents of the area who take great pride in the community they have built.

Resource Management Objectives

1. Park County seeks to maintain and promote a unique, Western, rural character reflective of the local customs and traditions while supporting a sustainable and diverse economy.
2. Park County seeks to maintain the County's level of independence from federal and state government while maintaining copacetic working relationships with agency land managers.
3. Park County seeks to promote and support opportunities for citizen involvement in all levels of government decision-making processes.
4. Park County seeks to achieve harmony among various land uses.

Priorities

1. Support a mix of traditional and newer land uses that promote the sustainability and appropriate growth needed in the local economy. Park County will consider other future land uses that provide additional opportunities, diversity, and economic stability or growth to the area, while assuring the sustainability of existing resource conservation, agricultural, recreational, and industrial interests. By supporting a variety of uses, the County intends that local custom and culture will be maintained, while mitigating potential social and economic impacts on the community.
2. Endeavor to forge and maintain official cooperative agreements with various agencies, bureaus, and administrations in order to assure the greatest possible communication and exchange between and among stakeholders of federal and state land.
3. Support and encourage federal and state land use planning efforts and management activities that consider local community infrastructure, current community planning, and economic efforts, along with anticipated land use trends in order to provide for long-term community and economic stability and diversity.

4. Encourage management of federal and state lands that recognizes valid existing and historical rights and interests as identified in the custom and culture resource assessment.

Chapter 2: Land Management

Land Ownership and Use

Resource Assessment

Over 80 percent of surface land within Park County is public land, which refers to property owned or controlled by either a state or federal agency (Table 1). Given that public lands, by area, make up the vast majority of Park County, the County's overall quality of life is closely tied to public land management decisions. As discussed in later chapters, agriculture, recreation, industry, and water resources are all influenced by state and federal agency decisions. Refer to Map 1 in Appendix B for a map of surface land ownership in Park County.

Table 1 Park County surface land ownership

Owner	Acres	Percent
United States Forest Service (USFS)	1,696,873	38.1%
National Park Service (NPS)	1,110,481	24.9%
Private	768,999	17.3%
Bureau of Land Management (BLM)	623,527	14.0%
State of Wyoming	158,537	3.6%
Bureau of Reclamation (BOR)	60,114	1.3%
Water	16,110	0.4%
Local Government	6,683	0.2%
State (Wyoming Game & Fish)	6,317	0.1%
State (State Parks & Hist. Sites)	5,118	0.1%
State (University of Wyoming)	216	< 0.1%
Total	**4,452,975**	**100.0%**

United States Forest Service

The USFS originated in 1876 when Congress formed the office of Special Agent in the United States Department of Agriculture (USDA), which later became the Division of Forestry in 1881. The Forest Reserve Act of 1891 authorized withdrawing land from the public domain. These reserves were originally managed by the DOI; later, management was transferred from the General Lands Office (GLO) to the Bureau of Forestry, or the USFS, through the Transfer Act of 1905. The USFS was mandated in the Organic Act of 1897 to "improve and protect the forest within the boundaries or for the purpose of securing favorable conditions of water flow, and to furnish a continuous supply of timber for the use and necessities of citizens of the United States" (USFS 2020). The MUSYA required the USFS to manage timber, range, water, recreation, and wildlife and fish resources on the national forests and grasslands in such combinations to best meet and serve human needs. The purpose of the MUSYA was to ensure that these uses be treated equally, particularly in light of high timber production following post-war development. The Act was largely driven by a growing concern that the USFS was neglecting some resources, like recreation, in favor of timber harvest. This law was amended by the Omnibus Parks and Public Lands Management Act of 1996. Management of the USFS is through NFMA, the primary statute governing the administration of national forests.

The USFS manages access to, and development of, federal oil and natural gas resources on approximately one-third of its national forests and grasslands. The Federal Onshore Oil and Gas Leasing Reform Act of 1987 established the USFS authority to decide if lands reserved from the public domain

under its jurisdiction could be leased for oil and gas and gave the agency authority to regulate surface disturbing activities on leases issued under this Act. The Mineral Leasing Act for Acquired Lands of 1947 established the USFS consent authority for leasing acquired National Forest System (NFS) lands for oil and gas resources. The USFS manages oil and gas activity according to its regulations (36 CFR § 228(e)) and participates with the BLM in managing federal oil and gas resources on NFS lands.

The USFS, under the USDA, manages the largest portion of federal land within Park County (over 38 percent). These lands are a major contributor to the County both in tourism funds, recreational opportunities, and access (see *Recreation and Tourism* Section). Two national forests lie within the County: the Shoshone and the Bridger-Teton National Forests. The Shoshone National Forest covers over 1.5 million acres within the County, lies within five Wyoming counties, and is divided into five ranger districts. Of these five districts, the Clarks Fork, Wapiti, and Greybull Districts each manage national forest lands within Park County. The Shoshone National Forest Land Management Plan was last updated in 2015 and provides guidance on all resource management activities within the forest. The Bridger-Teton National Forest covers only about 174,000 acres within Park County, and the Blackrock Ranger District manages those forest lands. Current guidance for resource management activities falls under the 1990 Bridger-Teton National Forest Land and Resource Management Plans (RMP) that was amended in 2015. The Bridger-Teton National Forest is currently seeking funding to update their land and resource management plan.

National Park Service

In an effort to unify leadership and organization of national parks, Congress passed the Organic Act in 1916, establishing the National Park Service (NPS). Since that time, numerous legislative actions have shaped the management of national parks, including the Preservation of Historic Sites Act of 1935, the Wilderness Act of 1964, the Wild and Scenic Rivers Act of 1968, the NEPA of 1969, the Endangered Species Act (ESA) of 1973, and the National Park Omnibus Management Act of 1998 (National Park Service 2020). Each Act has influenced the character of today's national parks.

Bureau of Land Management

The BLM, under the DOI, manages a smaller portion (14 percent) of the federal lands within Park County, with the Wind River/Bighorn Basin District Office overseeing the Cody and Worland Field Offices' management of these lands. The Bighorn Basin RMP was revised and approved in a record of decision signed September 21, 2015. The BLM originated from the reorganization of the GLO and the United States Grazing Service into a single agency in 1946. The GLO was originally responsible for all public land sales, patents, and entries established within the Treasury Department to oversee disposition of ceded and acquired lands. The United States Grazing Service was created to manage the Taylor Grazing Act authorization of grazing districts, regulation of grazing, and public rangeland improvements on public lands leased to farmers and ranchers for grazing (BLM 2020a).

FLPMA, as amended, the BLM's guiding statute, outlines the management mandate of the BLM to balance public access and multiple uses, and to "provide for the management, protection, development, and enhancement of the public lands" to serve present and future generations. Specific discussion regarding FLPMA and CAs can be found in Appendix A.

Wyoming State Lands

When Wyoming became a state in 1890, the federal government granted approximately 4.2 million acres of land to the State Government. This land, authorized by the Wyoming Constitution and state

law, is managed by the Board of Land Commissioners for long-term growth in value and optimum and sustainable revenue production. State lands are not managed under a multiple use mandate. In 1988, the Board of Land Commissioners adopted its Chapter 13 rules to officially allow the public the privilege of hunting, fishing, and general recreational use on state trust lands. However, the Office of State Lands and Investments is required by law to manage state trust lands to produce income to support public schools and other public institutions. Income is generated through the leasing of lands for a wide variety of surface and sub-surface purposes to return revenues to the designated state beneficiaries in the form of rentals, royalties, and fees (Office of State Lands and Investments 2018).

Bureau of Reclamation

The Bureau of Reclamation (BOR) under the DOI "manages, develops, and protects water and related resources in an environmentally and economically sound manner in the interest of the American public (BOR 2020). Established in 1902, the BOR is known for the dams, power plants, and canals it constructs and manages. The BOR Wyoming Area Office has several managing partners on BOR surface in Park County. Irrigation districts manage grazing and agricultural leases and are responsible for the operations and maintenance of irrigation features that belong to the BOR. Wyoming State Parks operates Buffalo Bill State Park on BOR land, providing enhanced recreational opportunities at Buffalo Bill Reservoir. The BOR also has management agreements with Wyoming Game and Fish Department (WGFD) in Park County, mostly pertaining to recreational matters.

Change in Land Use

The National Land Cover Database was used to assess the change in land cover across Park County between 2001 and 2016 (Map 2 in Appendix B). While developed lands county-wide remained mostly consistent in area, lands classified as "developed, high-intensity" expanded near the cities of Powell and Cody. The 2016 land cover data reveals several locations that shifted from evergreen forest to grassland/herbaceous, indicating post-fire response. The East fire (2003), Columbine fire (2007), Gunbarrel fire (2008), and Hardluck fire (2013) are examples of fires that likely contributed to this shift. While the data show a drastic decrease in herbaceous lands and an increase in shrub/scrub lands across much of the County, this is likely due to a change in classification technique as opposed to actual changes in land cover. Similarly, changes from hay/pasture to cultivated crops between Cody and Powell are also likely due to changes in classification technique.

Resource Management Objectives

1. Park County supports varied use management of federal and state lands, defined as the management of federal and state land use and their resource values (renewable and non-renewable) so that they are utilized in a balanced combination that will best meet the current and future needs of the community, ecosystem health, and economic diversification for current and future generations.
2. Park County desires to conserve open spaces.
3. Park County advocates that values, including intangible values, be considered when managing natural resources on federal and state lands.
4. Park County will look for ways to help increase opportunities for citizen involvement in decisions concerning resource utilization on federal and state lands.

Priorities

1. Balance human needs and management of natural resources.
2. Use, or encourage the use of, appropriate timber harvesting techniques as a management tool, especially to reduce the threat of wildfire and to maintain access.
3. Support opportunities to explore and produce oil and gas, minerals, and renewable energies while sustaining other surface uses and amenities.
4. Recognize the unique and varied recreational opportunities on federal and state lands. Support diverse use and opportunities and the development and maintenance of access for recreational opportunities.
5. Support the continued use of responsible grazing on federal and state lands. Park County recognizes that grazing and agricultural industries are important from a cultural, economic, and land management perspective.
6. Consult, where appropriate, with local conservation districts concerning the use and management of natural resources.
7. Support land ownership exchanges between federal, state, or private lands that are beneficial for landowners, the public, and natural resources.
8. Protect and respect private property rights that are affected by proposed actions on federal or state lands.

Land Access

Resource Assessment

Access to federal and state lands is part of Park County's custom and culture, and changes in land management uses or activities should consider impacts to that value. Access to and across federal and state lands has also been identified through public survey (Appendix C) as one of the largest concerns within the County. Access is important for non-motorized uses such as horseback riding, hiking, biking, climbing, hunting, etc., and motorized uses in some areas.

Off-Highway Vehicle (OHV) and other motorized vehicle use on federal lands supports many operations within Park County, including livestock grazing, mineral exploration and development, law enforcement, fire protection, and recreation. Overall, federal lands have seen rapidly increasing OHV use over the past 20 years in comparison to other types of recreation. Park County recognizes that land access may have competing land use needs with water quality and wildlife resources. OHV use can lead to environmental concerns, including disturbance of wildlife in crucial habitats, siltation of streams due to increased erosion, and degradation of scenic qualities and cultural sites. Effective transportation management seeks to balance these environmental concerns with uses of federal lands that are important to Park County's economy and culture.

United States Forest Service Motorized Travel Routes

Within USFS-administered lands a road is defined as "a motor vehicle route over 50 inches wide, unless identified and managed as a trail". A trail is defined as "a route 50 inches or less in width or a route over 50 inches wide that is identified and managed as a trail" (USFS 2021b). Within USFS-administered lands in Park County, there are approximately 650 miles of roads (i.e., open roads), no trails designated for

motorized use, and 12 miles of trail designated for snowmobile use (Map 3 in Appendix B).

Motorized Recreation on National Park Service Lands

While the NPS has fewer lands open to motorized recreation than the BLM or USFS, disagreement still exists over its management. Supporters point to benefits such as improved access to remote locations, economic benefits from tourism, and outdoor recreation opportunities for those with mobility limitations. Opponents take issue with increased damage to the environment and safety concerns, in addition to conflicts with other forms of recreation. In general, NPS regulations limit OHV use to national recreation areas, national seashores, national lakeshores, and national preserves. Additionally, separate regulations govern snowmobile use, limiting it to designated routes and water surfaces that are used by other motor vehicles or boats in other seasons (Congressional Research Service 2013).

Bureau of Land Management Off-Highway Vehicle Management Areas

All BLM-administered lands have a motorized vehicle use designation. Lands designated as open are open to all OHV use, on or off established roads and vehicle routes, as long as this activity does not cause unacceptable levels of natural resource damage. Limited means that OHV use is subject to some type of restriction such as the number or type of vehicles, time of season, permitted or licensed use only, use on existing roads and trails, or use on designated roads and trails. Closed areas are closed to all motor vehicle access, with exceptions for emergencies, firefighting, public safety, or related incidents. A closed designation usually does not exclude foot, horseback, or mechanized travel (BLM 2015).

Across BLM-administered lands within Park County, OHV use is limited to existing roads and trails on 358,207 acres, limited to designated roads and trails on 248,621 acres, and limited to designated roads with seasonal limitations on 16,896 acres. A total of 421 acres are closed to OHV use. OHV management areas are displayed in Map 3 in Appendix B.

Bureau of Reclamation Off-Highway Vehicle Use

All BOR lands are closed to off-road vehicle use, unless designated otherwise (43 CFR § 420.21). Across BOR-administered lands within Park County, there are no areas designated as open to off-road vehicle use. Generally, the public is allowed to drive on existing roads or two-tracks crossing BOR land. Notable exceptions are BOR irrigation system operations and maintenance roads and roads or two-tracks that have been closed for resource protection. Roads used for operations and maintenance of BOR irrigation features, whether they are on BOR surface or not, are solely for the operation and maintenance of those features and are not for public use.

Electric Bicycle Use on Public Lands

The USFS classifies electric bicycles (e-bikes) as motorized vehicles under the Travel Management Rule. As such, e-bike use is permitted on USFS-administered motorized roads and trails within the County. E-bike use is not currently allowed on NFS roads, on NFS trails, or in areas on NFS lands that are not designated for motor vehicle use. The USFS has proposed revisions to its directives, including the definition of three e-bike classes and criteria for designating e-bike use on NFS roads, on NFS trails, and in areas on NFS lands.

The 2019 Secretary's Order 3376 directed the BLM, NPS, U.S. Fish and Wildlife Service (USFWS), and BOR to expand public lands access to e-bikes. The BLM E-bike Rule became effective in December 2020. This rule defines e-bike classes and provides District and Field Managers the ability to authorize the use of e-bikes on non-motorized roads and trails through subsequent land-use planning or implementation-

level decisions. The adoption of this rule did not result in immediate on-the-ground changes for e-bike use on BLM-administered lands. Instead, an authorized officer must issue a land-use planning or implementation-level decision compliant with NEPA and other applicable laws.

In 2019, the Wyoming State Legislature passed Senate File 81, adopting three e-bike classes and allowing for the use of correctly labeled class 1, 2, and 3 e-bikes on state trails and roadways. The legislation also gives local governments the right to further regulate e-bike usage. Wyoming State Parks are currently working on rules that will allow the class 1 e-bikes on non-motorized trails and are assessing the impacts of class 2 e-bikes as well.

Resource Management Objectives

1. Park County encourages federal and state agencies to provide, maintain, and enhance access for a variety of uses, activities, and values.
2. Park County relies on access to federal and state lands to enhance quality of life, but also to fulfill its statutory mandate of protecting the health, safety, and general welfare of people within its jurisdiction.

Priorities

1. Encourage federal and state land managers to prioritize and balance access, wildlife, and water quality on all land use actions.
2. Provide sustainable, well-maintained access to federal and state lands that provides for a variety of recreational, economic, and other uses to maintain the quality of life for Park County residents.
3. Encourage federal and state agencies to consult with the County and local citizens to resolve any potential access conflicts with the County's objectives and priorities prior to taking action. In the case that access must be restricted, Park County places the burden on state and federal officials to show an analysis and disclosure as to why that access is being restricted.
4. Request that all restrictions placed on accesses, seasonal or otherwise, coordinate with other agencies to consider and accommodate other land uses, activities, habitat, and wildlife or needs that may be impacted by that restriction[2].
5. Encourage federal and state agencies to provide full public disclosure and justification prior to closing, abandoning, restricting, withdrawing, or changing use of any road, trail, Revised Statute 2477 [3], rights-of-way, corridors, easements, or other traditional accesses for the transportation of people, products, recreation, energy, minerals, or livestock.
6. Evaluate land use needs on a case-by-case basis, weighing ecological health, economic stability, public safety, and considerations of future generations. Park County understands that there will be competing land use needs within the same landscape.

[2] An example of this may include seasonal closures of roads during hunting seasons that reduce or eliminate access opportunities for certain groups of citizens within the County.
[3] Revised Statute § 2477 (commonly known as "RS 2477") is a federal law enacted by the United States Congress in 1866 that authorized construction of roads across federal public lands.

7. Discourage closure or seek opportunities or other means to avoid the closure of system roads and trails, for reasons such as, but not limited to, maintenance concerns or lack of law enforcement.

Wilderness and Other Special Land Use Designations

Resource Assessment

Special designations discussed here include Wilderness Area, Wilderness Study Area (WSA), Inventoried Roadless Area, Lands with Wilderness Characteristics (LWCs), and Area of Critical Environmental Concern (ACEC). Refer to Chapter 4 for a discussion of Wild and Scenic Rivers, Chapter 5 for a discussion of Wild Horse and Burro Ranges, and Chapter 6 for a discussion of recreation. See Map 4 in Appendix B for a map of Park County's Special Land Use Designations.

Wilderness Areas

Five distinct qualities are used to define wilderness character: natural; solitude or a pristine and unconfined type of recreation; undeveloped; untrammeled; and other features, which may include cultural resources, historical sites, paleontological sites, or any feature with scientific, educational, scenic, or historic value. Congressionally designated wilderness areas are subdivided into the wilderness recreation opportunity spectrum settings based on differing levels of solitude and isolation: Pristine, Primitive, and Semi-Primitive (USFS 2015b).

Park County contains four Wilderness Areas: Absaroka-Beartooth Wilderness, North Absaroka Wilderness, Washakie Wilderness, and Teton Wilderness (Map 4 in Appendix B).

Wilderness Study Areas

Photo 2 McCullough Peaks WSA, Park County, WY

WSA is a special designation that applies to lands managed by the BLM to protect wilderness characteristics until Congress decides to designate the WSA as a Wilderness Area, or no longer considers the area for wilderness designation. Management of these special designations must maintain wilderness integrity so that they are unimpaired for designation. In 2016, the Wyoming County Commissioners Association organized the Wyoming Public Lands Initiative to develop a locally led legislative lands package addressing designation, release, and other management for WSAs in Wyoming. It is the BLM's policy to manage WSAs in a manner that maintains the area's suitability for preservation as wilderness (BLM 2012a). Park County contains two WSAs: High Lakes WSA and McCullough Peaks WSA (Map 4 in Appendix B).

Inventoried Roadless Areas

Inventoried roadless areas designated by the USFS are defined in the 2001 Roadless Area Conservation Final Rule, also known as the 2001 Roadless Rule, as areas identified in a set of maps contained in Volume 2 of the USFS Roadless Area Conservation, Final Environmental Impact Statement (EIS), or subsequent revisions. The 2001 Roadless Rule was adopted to establish prohibitions on road construction, road reconstruction, and timber harvesting within inventoried roadless areas. Inventoried roadless areas are undeveloped areas that are generally larger than 5,000 acres and meet the minimum

criteria for wilderness consideration under the Wilderness Act. These lands are based on the 1979 Roadless Area Review and Evaluation Final Environmental Statement, also known as RARE II, which identified roadless and undeveloped areas suitable for inclusion in the National Forest Wilderness Preservation System. Refer to Map 4 in Appendix B to view inventoried roadless areas within Park County.

Lands with Wilderness Characteristics

Section 201 of FLPMA requires the BLM to maintain on a continuing basis an inventory of all public lands and their resources and other values, which includes wilderness characteristics. It also provides that the preparation and maintenance of the inventory shall not, of itself, change or prevent change of the management or use of public lands. Regardless of past inventory, the BLM must maintain and update its inventory of wilderness resources on public lands. In order for an area to qualify as LWC, it must possess sufficient size, naturalness, and outstanding opportunities for either solitude or primitive and unconfined recreation (BLM 2012c). These lands, and management thereof, may or may not be protected in an RMP. LWCs do not need to be managed to retain wilderness characteristics.

As outlined in BLM Manual 6310 (BLM 2012c), the Cody and Worland Field Offices conducted inventories for LWCs on BLM-administered lands in 2011 and reviewed comments made during the public scoping process. Refer to Map 4 in Appendix B for inventoried LWCs.

Areas of Critical Environmental Concern

43 CFR § 1601.0-5(a) defines an ACEC as an area within public lands where special management attention is required to protect and prevent irreparable damage to important historical, cultural, or scenic values; fish and wildlife or other natural systems or processes; or to protect life and safety from natural hazards. Permissible activities on ACECs generally depend on the resources and values that the designation was meant to protect.

Park County contains four ACECs: Sheep Mountain ACEC, Carter Mountain ACEC, Clark's Fork Canyon ACEC, and Paleocene, Eocene Thermal Maximum (PETM) ACEC[4] (Map 4 in Appendix B).

Resource Management Objectives

1. Park County urges timely determinations on WSAs to provide clear direction for future management.
2. Park County discourages the creation of additional special designations without the County's involvement and encourages the protection of unique resources through the use of existing regulations instead of additional special designations.
3. Park County discourages the designation of LWCs.

Priorities

1. Encourage the USFS to move forward on a management recommendation for the High Lakes WSA that includes public input.

[4] The PETM ACEC contains world-class geological exposures that record the effects from the last time that global temperatures soared to the levels that they are expected to due to anthropogenic climate change. This is a record of massive extinction, and the best place on the planet to study this geologic boundary.

2. Encourage the release of WSAs that were not recommended for Wilderness.
3. Encourage the BLM to move forward with a management recommendation for the McCullough Peaks WSA that includes public input.
4. Encourage fire and fuels management and the control of invasive and noxious weeds within areas of special designation.
5. Request the reduction or elimination of any designations of LWCs that do not meet wilderness characteristic criteria.

Recreation Management

Resource Assessment

Recreation and tourism have been significant contributors to the custom, culture, and economy of Park County since the creation of Yellowstone National Park in 1872. Buffalo Bill promoted Cody and the Bighorn Basin for its land suitable for farming and ranching, and its proximity to Yellowstone with an abundance of hunting and fishing opportunities (Houze 2014). The development of the railroad in the early 1900s and the creation of several hotels in Cody made visiting Yellowstone easier for travelers from Montana and the Midwest. In addition, the increase in tourism led to the creation of dude ranches and outfitting businesses that took tourists into the park at first by horse and wagon and eventually by automobile to camp in tents for several weeks at a time (Houze 2014).

Federal and state lands continue to play a key role in creating recreational opportunities and stimulating related employment. Communities near public lands benefit economically from recreationists who utilize nearby lodging, ski resorts, restaurants, gift shops, and outfitting businesses. In addition, federal and state lands can stimulate growth in non-tourism sectors by attracting businesses and their associated workforces, and retirees who seek to live near aesthetic landscapes and recreational amenities. While residential development has increased over the last two decades, non-labor income in Park County dramatically increased by 578 percent from 1970 to 2018 (Headwaters Economics 2020). Dramatic increases in non-labor income, in particular investment income and age-related transfer payments, are often associated with influxes of retirees and second-home buyers (Headwaters Economics 2020).

Traditional recreation enjoyed within the County today includes hunting and fishing, boating, rock hunting, skiing, horseback riding, hiking, camping, mountain biking, OHV use, and enjoying the abundant wildlife of the area. As tourism and outdoor recreation increase within Park County, the need for services to support visitation such as parking, overnight accommodations, and access on public lands and within adjacent communities will increase as well.

United States Forest Service

Photo 3 Chief Joseph Scenic Highway, Shoshone National Forest

The 1986 Recreational Opportunity Spectrum Book (USFS 1986), as amended, identifies the recreational opportunity spectrum (ROS) that is used to classify and manage recreation opportunities based upon the following criteria: physical setting, social setting, and managerial setting. The ROS was specifically developed to enable the integration of outdoor recreation principles and guidelines into multiple use management and describes the setting in which recreation occurs, thus attaching value to a place. An opportunity includes qualities provided by nature (vegetation, landscape, topography, and scenery), qualities associated with recreational use (levels and types of use), and conditions provided by management (developments, roads, and regulations). By combining variations of these qualities and conditions, management can provide a variety of opportunities for recreationists that are organized into six ROS classes: Primitive, Semi-Primitive Non-motorized, Semi-Primitive Motorized, Roaded Natural, Rural, and Urban. The majority of forest lands in Park County are classified as Primitive and Primitive Non-motorized; however, the Semi-Primitive Motorized and Roaded Natural classes make an appearance as well (see Map 5 in Appendix B). The Shoshone National Forest provides recreation activities that range from high adventure in the back country to driving scenic byways. The Forest and Rangeland Renewable Resources Planning Act of 1974, as amended by the NFMA of 1976, as well as other laws and regulations, require that the USFS include requirements for consideration, treatment, and protection of scenery and aesthetics.

National Park Service

Yellowstone National Park is valued for its geothermal and hydrologic wonders, spectacular wilderness character, and free-roaming wildlife. Appropriate recreational use continues to be welcomed in places where it does not impact resources or interpretive activities. Recreation management in Yellowstone follows guidance from the NPS Management Policies (USDI 2006), as well as a variety of other planning documents specific to Yellowstone (NPS 2014). With increased visitation in the past two decades, park employees are working to understand the impacts on the resources, staffing, operations, infrastructure, visitor experience, and gateway communities and partners. An essential part of visitor use management includes conducting studies related to visitor use and experience, transportation, and resource impacts. These studies help the park understand current conditions and inform future management strategies that reduce visitation impacts and improve visitor experience. One specific recreation management concern for Yellowstone is visitor use during the winter because of potential damage to the park's plants, animals, and wild character when compared to other times of the year. Special regulations in Yellowstone National Park, published October 2013, authorizes Over-Snow Vehicle use and provides regulations to improve visitor experiences and minimize impacts (36 CFR § 7.13).

Bureau of Land Management

Instruction Memorandum No. 2011-004 includes revised guidance for Recreation and Visitor Services planning in conjunction with the BLM land use planning process. Recreation and Visitor Services objectives are a primary resource management consideration within Recreation Management Areas (BLM 2010b). Recreation Management Areas are classified as either special recreation management areas (SRMA) or extensive recreation management areas (ERMA). SRMAs are administrative units where the existing or proposed recreation opportunities and recreation setting characteristics are recognized for their unique value, importance, and/or distinctiveness, especially as compared to other areas used for recreation. A Recreation Management Zone is a SRMA which further delineates specific recreation opportunities. ERMAs are administrative units that require specific management consideration to address recreation use, demand, or Recreation and Visitor Services program investments. SRMAs and ERMAs in Park County are shown on Map 5 in Appendix B.

The BLM's Visual Resource Management system provides a framework for managing visual resources on BLM-administered lands. Included in this system is a mechanism for identifying visual resource values on BLM-administered lands, minimizing the impacts of surface-disturbing activities on visual resources, and maintaining the scenic value of tracts of land for the future. See Map 6 in Appendix B for a depiction of visual resource classifications on USFS and BLM lands in Park County.

Bureau of Reclamation

It is the BOR's goal to seek other federal and non-federal entities to manage recreation on project lands. Wyoming State Parks (Buffalo Bill State Park) and WGFD (Newton Lakes and several areas along the Shoshone River) are currently engaged in recreation management agreements with the BOR in Park County. In the absence of project-specific legislation or a managing partner, the BOR is limited by the Federal Water Project Recreation Act of 1965, to provide only "minimum basic" facilities. Therefore, the BOR's direct-managed recreation areas in Park County (Deaver Reservoir and Ralston Reservoir) provide only "minimum basic" facilities. Camping at BOR's direct managed facilities are regulated and limit camping at any single BOR Project to 14 days during any period of 30 consecutive days (43 CFR § 423.33).

Resource Management Objectives

1. Park County supports recreation and tourism opportunities carried out in an environmentally responsible manner consistent with sustaining local businesses that rely on tourism and recreation.

Priorities

1. Federal and state land use and management plans should include a thorough evaluation of measures proposed to reduce impacts on natural and cultural resources. Each plan needs to incorporate standards and objectives, which sustain and support local recreation and tourism economic interests and other development.
2. Coordinate with federal, state, and municipal officials to encourage and promote sustainable recreational opportunities and to support development of new recreational opportunities within the County.
3. Federal and state recreational planning should consider local community resources and long-

term economic stability and diversity when determining facility and service needs that support increased recreational use patterns.

4. Support access to diverse recreational opportunities on federal and state lands that provide balanced options for access and provide options for economic stability within recreation services.

Fire Management

Resource Assessment

Wildland fire describes any non-structural fire that occurs in vegetation and/or natural fuels. Wildfire and prescribed fires are two categories of wildland fire. Wildfires are unplanned ignitions caused by natural sources such as lightning, unauthorized and accidental human-caused fires, and escaped prescribed fires. Prescribed fire refers to the introduction of fire to an area under regulated conditions for specific management purposes (BLM 2015).

Data from the National Interagency Fire Center was used to analyze fire history within Park County from 1990 to 2019. Fire perimeter data are often collected at the local level, and fire management agencies have differing guidelines for submitting fire perimeter data. It is possible that this dataset does not contain all fires within the specified time period; therefore, lack of values in the figures below do not necessarily represent the absence of wildfire for any given year. While total fire occurrences varied from year to year, they generally stayed at or below 10 occurrences (ignitions) between 1990 and 2019 (Figure 1). Only 1996, 2003, 2004, 2013, and 2016 saw totals exceeding 10 occurrences. Greater annual variability is seen in total acres burned when compared to fire occurrences (Figure 2). From 1990 to 2019, 37 percent of the years had fires that cumulatively burned less than 1,000 acres, 40 percent of the years had fires that cumulatively burned between 1,000 acres and 10,000 acres, and 23 percent of the years had fires that cumulatively burned in excess of 10,000 acres.

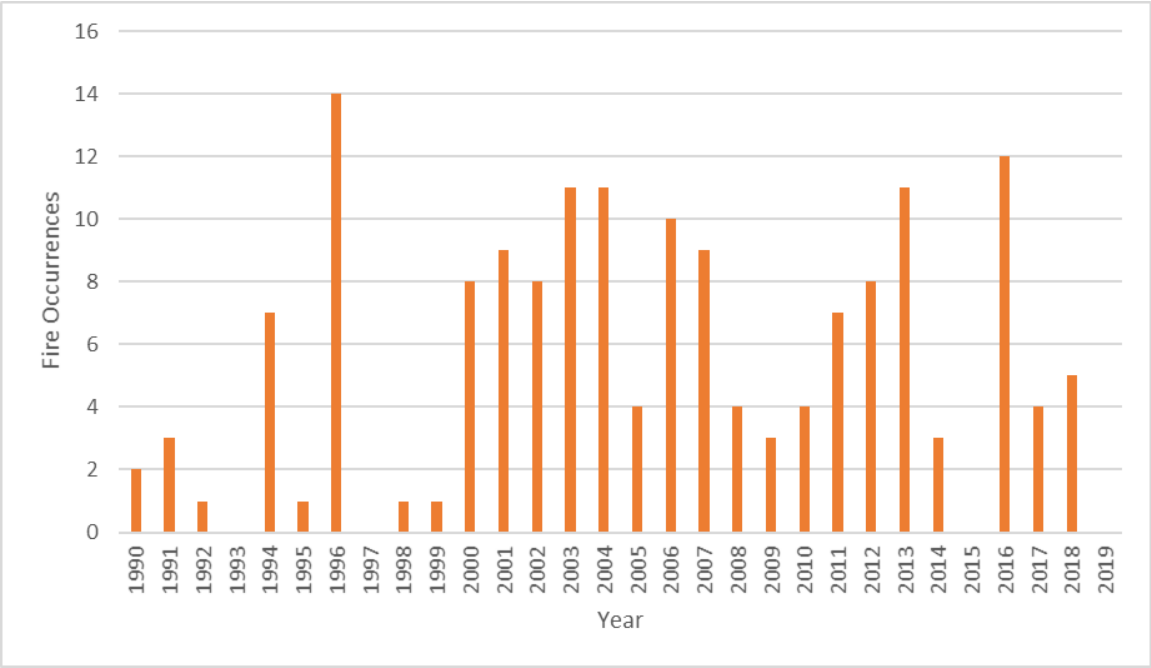


Figure 1 Fire occurrences in Park County (1990–2019) (National Interagency Fire Center 2020)

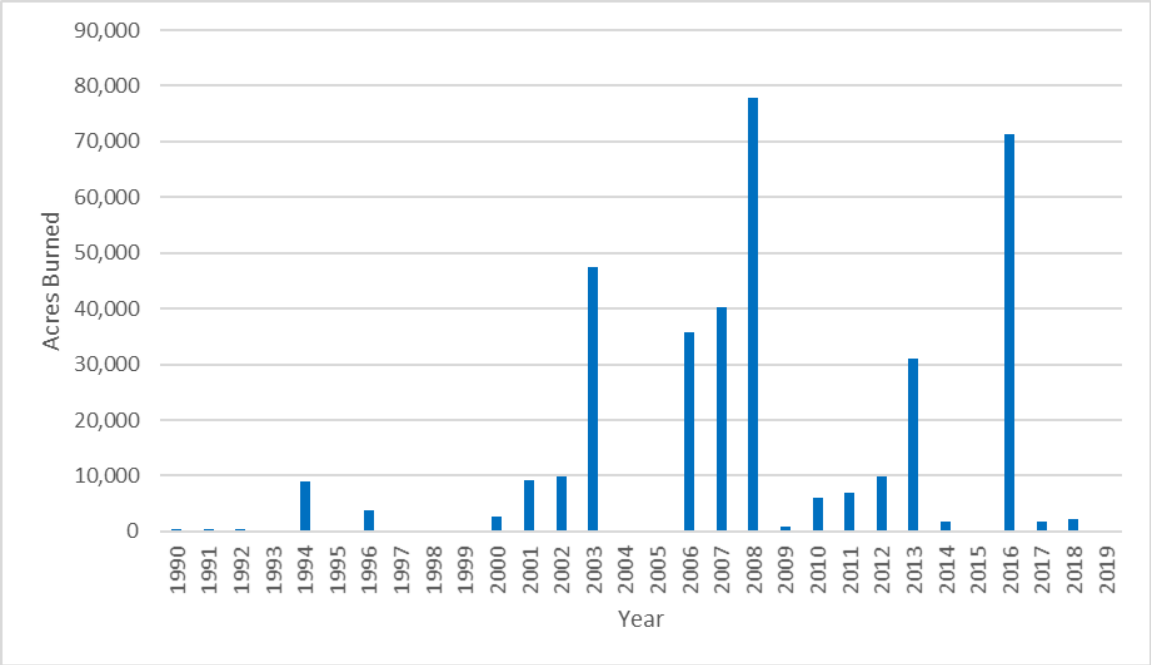


Figure 2 Acres of land burned in Park County (1990–2019) (National Interagency Fire Center 2020)

Broadly speaking, wildland fire may have both positive and negative impacts. Fire is an important component in the ecological processes of many plant communities. Certain vegetation types have developed under a regime of intermittent fire and have made appropriate adaptations to the occurrence of wildland fire (BLM 2015). Fire and fuels treatments are often employed for improving rangeland health, disease and insect control, and hazardous fuel reduction. Many factors contribute to wildfire behavior and future outlook, including weather patterns and climate, invasive annual grasses, forest disease, and past fire management practices. Generally, as vegetation conditions depart from reference conditions, fire return intervals and severity will also change. Cheatgrass invasion, for example, has become more widespread over the past 25 years. Areas impacted by cheatgrass will likely experience increased fire size and frequency (BLM 2015).

Wildfires may negatively impact the County in a number of ways. Wildfires can impact water quality and quantity, wildlife habitat, long-term soil productivity, and increase threats to human life and property. Smoke may contribute to health effects such as asthma, emphysema, and heart disease. Furthermore, recreation and local businesses that rely upon it may also be impacted (Wildland Fire Leadership Council 2014).

Resource Management Objectives

1. Park County supports active management of excessive fuel loads and vegetation and the utilization of tools and treatments that prevent and/or minimize the negative effects of wildfire.

Priorities

1. Request aggressive management of cheatgrass or other invasive annual grasses that degrade intact ecosystems and increase the intensity and propensity of wildfires with currently available methods and tools. Park County encourages the expedited approval of vegetation management treatments where objectives to reduce wildfire risk or to slow wildfire spread are identified.

2. Encourage state and federal agencies to use prescribed burns as a vegetation management tool, especially in areas where access or roads are limited.
3. Encourage the use of all available efforts and tools to manage excessive fuel loads to mitigate wildfire.
4. Support aggressive suppression and prevention of wildfires where private property structures or historic values are threatened.
5. Support active rehabilitation (seeding, grazing treatments, chemical treatments, salvage-logging operations, or other forms of treatments that have been shown to be beneficial to post-fire rehabilitation) of forests and rangeland damaged by wildfires, where applicable, in order to protect habitat values and wildlife, and to reduce the potential for erosion and the introduction or spread of invasive annual grasses or noxious weeds.
6. Work with federal, state, and local agencies to educate the public on the value of prescribed burning in agriculture operations and wildfire risk reduction, while also providing education on the best practices, concepts, and applications for reducing agricultural and prescribed burning emissions, where applicable.

Forest and Rangeland Vegetation Management

Resource Assessment

Access to and the use of forest products such as firewood, posts and poles, building materials, and live tree or Christmas tree permits, is part of an effective forest management plan and important to the local community culture. The forest and rangeland vegetation management resource assessment and maps in this NRMP identify the need for active management in Park County. This document may be used for justification for funding or cross-boundary cooperation between federal, state, and local agencies and private landowners. This document should be included in federal forest health projects, fire management projects, wildfire risk reduction projects, and environmental assessments (EA). Active forest management is meant to promote healthy vegetation and prevent the spread of catastrophic wildfire and invasive species. Prior to implementing any treatments, it is important to evaluate historic fire patterns to understand characteristics of the landscape when fires burned as a natural part of the ecosystem. Fires historically moved through conifer forests of the western United States, clearing out brush and low branches. Today, active forest management practices, such as thinning trees and brush with chainsaws, piling fuels with dozers and excavators, controlled burning, and livestock grazing, are designed to achieve a similar effect by thinning fuels beneath the canopy and reducing crown fire potential (Rands 2019).

Healthy forests serve as the basis for many ecosystem processes that ultimately dictate the availability of resources that are valuable to the County. Healthy forests aid in providing clean water, diverse wildlife habitat, timber products, and a variety of recreation opportunities. Park County's forested areas are found across the entire central and western regions of the County (Map 2 in Appendix B).

Photo 4 Effects of Mountain Pine Beetle on Whitebark Pines in the Rocky Mountains

Native and nonnative insects and diseases are useful indicators of forest and woodland health. Since 2000, widespread bark beetle epidemics have occurred across the Shoshone National Forest, causing widespread tree mortality and a pronounced change in age class distribution (USFS 2015b). The National Insect and Disease Detection Survey has been conducted since 1997 and includes annual aerial and ground surveys. When considering all Insect and Disease Detection Surveys conducted between 1997 and 2019, top causes of damage within Park County include five-needle pine decline, spruce beetle, Douglas-fir beetle, mountain pine beetle, and western spruce budworm (USFS 2019). While this data set is useful in assessing current forest disturbances in an area of interest, it is not necessarily ideal for analyzing long-term trends county-wide, as survey extents and locations vary from year to year. Refer to Map 7 in Appendix B for a display of the top damage causal agents within Park County.

The majority of forested lands within the County occur within NPS- and USFS-administered lands. In alignment with the NPS mission to preserve unimpaired natural and cultural resources, the range of permitted uses within Yellowstone National Park is more limited in comparison to other public lands within the County, and consumptive uses such as timber harvesting is generally discouraged. Within the Shoshone National Forest, management area categories direct management activities and include management prescriptions consisting of desired conditions, standards, and guidelines (USFS 2015b). Lands within management area categories 1 (Wilderness and non-motorized back country), 2 (Research and minimal use areas), and 3 (Natural processes predominate), receive no or infrequent vegetation management actions. As a result, natural process such as fire and insects are the primary disturbances influencing stand structure and landscape patterns. Stands are typically older, and the amount of dead and down materials is greater in comparison to other forest lands. Management area categories 1, 2, and 3 constitute approximately 85 percent of the Shoshone National Forest. In contrast, lands in management area categories 4 (Recreation use), 5 (Forested and grassland ecosystems with a variety of uses), and 8 (Developed areas) are influenced by prescribed fire, timber harvest, and silviculture treatments, often resulting in more resilient and healthy forested stands. Forested stands within management area categories 4, 5, and 8 generally have smaller patch sizes, reduced stand density, and a higher portion of stands in younger age classes. These qualities all reduce the susceptibility to insect epidemics. Management area categories 4, 5, and 8 constitute approximately 15 percent of the Shoshone National Forest. Over 60 percent of USFS-administered lands within Park County are Wilderness Areas, which fall under management area category 1. This indicates that, like the Shoshone National Forest as a whole, a large majority of USFS lands within Park County fall within categories 1 through 3.

Timber harvest data is available for USFS lands in the County dating back to 1992. This data does not necessarily reflect all USFS timber harvest activities that have occurred within the County, as reporting the spatial component of timber activities has not always been required by the USFS. Spatial data is now required for timber harvest activities, so the comprehensiveness of this data set will likely continue to improve. Figure 3, below, displays acres which have received treatments as part of the USFS timber

harvest program. Overall, shelterwood cutting, overstory removal, and seed-tree cutting accounted for the majority of timber harvests (by area) performed on USFS-administered lands within Park County over this time. These techniques are defined in the USFS Reforestation Glossary.

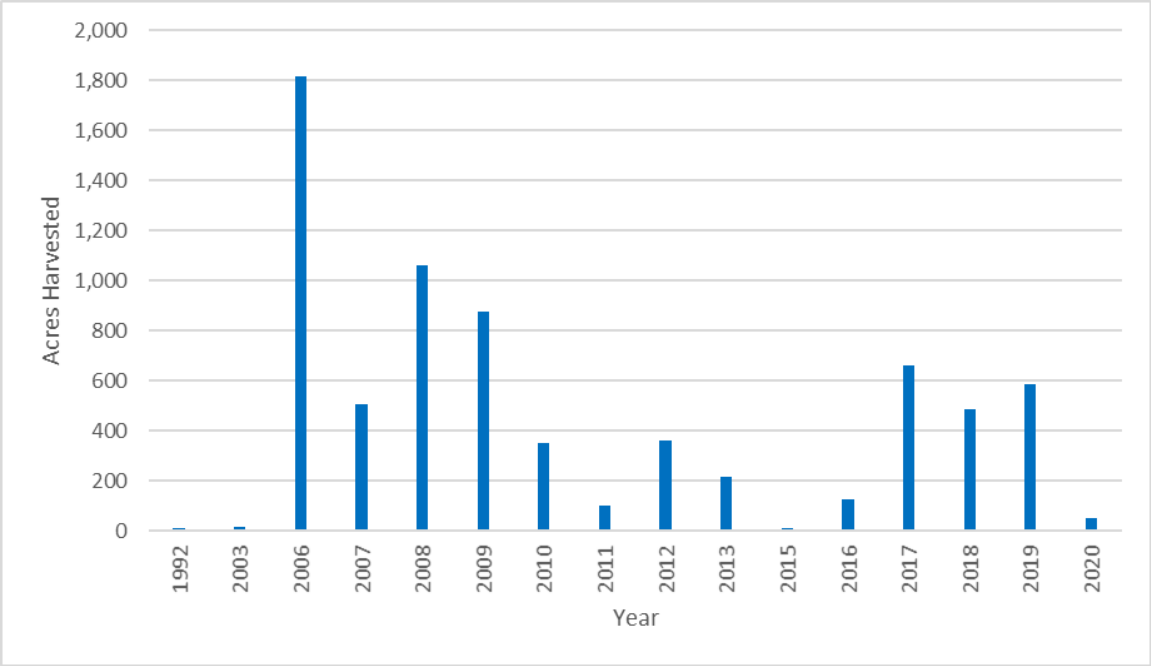


Figure 3 Acres of timber harvested in Park County (1992–2020) (USFS 2021a)

Rangeland communities are also an important component of Park County. Grasslands are generally located in valley bottoms, uppermost south-facing slopes, and in patches on windswept ridges (BLM 2015). Shrublands, prevalent primarily on the eastern side of the County, are generally diverse in plant composition and provide forage and cover for wildlife and livestock (BLM 2015). The presence of invasive species is one of several indicators of rangeland health described in *Technical Reference 1734-6, Interpreting Indicators of Rangeland Health*. Invasive plants are plants that are not a part of, or are only a minor component of, the original plant community and have the potential to become a dominant or co-dominant species on the site if not actively controlled (Pellant et al. 2005). Invasive plants, which can include noxious, non-native, or native plants, can impact an ecosystem's type and abundance of species as well as the processes by which energy and nutrients move through the ecosystem (Pellant et al. 2005). Fire suppression, historic livestock grazing practices, and road development have altered fire return intervals in rangeland communities across the Bighorn Basin, resulting in decreases in perennial bunchgrasses and forbs and proliferation of invasive species, such as cheatgrass (BLM 2015).

Resource Management Objectives

1. Park County encourages active forest and rangeland management to ensure healthy and vibrant watersheds and wildlife habitat for current and future generations.

Priorities

1. Encourage the use of the authorities granted under the Healthy Forests Restoration Act, Healthy Forests Initiative, and Good Neighbor Authority to expedite cross-boundary agency planning and

collaboration processes and project implementation to economically and efficiently treat and protect the resources of Park County.

2. Support the use of timber and forest by-products, as well as innovative ways to harvest timber, while supporting local and regional economies.
3. Encourage federal and state agencies to maintain and increase, as needed, the road system/inventory as an integral part of good forest and range management.
4. Encourage federal and state agencies to support the ability of local communities to derive economic and social benefits from forested areas.
5. Support vegetation management actions that protect intact native vegetation communities. Park County also supports the use of native species in restoration treatments, seedings, and reclamation where conditions are conducive for successful use.

Chapter 3: Physical Resources

Air Quality

Resource Assessment

Air quality is important to the health, safety, and welfare of Park County's residents. Under the Clean Air Act of 1970, the United States Environmental Protection Agency (EPA) is responsible for setting and enforcing air quality standards (U.S. EPA 2020). In Wyoming, local enforcement of many air pollutants is delegated to the Wyoming Department of Environmental Quality (DEQ). DEQ's Air Quality Division (AQD) monitors and maintains ambient air quality according to National Ambient Air Quality Standards to protect public health and welfare. Ambient air refers to that portion of the atmosphere, external to buildings, to which the general public has access. The status of areas with respect to federal ambient air quality standards are classified as nonattainment (violating the air quality standard), attainment (better than federal standards), or unclassified (due to an absence of monitoring data). Park County is currently considered in attainment or unclassified for all federal ambient air quality standards.

In August of 2018, DEQ installed the Cody Ambient Air Monitoring Station, a mobile unit placed at the east edge of the City of Cody to monitor the following pollutants through October of 2019: Ozone, Oxides of Nitrogen, Sulfur Dioxide, Continuous Particulate Matter (PM_{10} and $PM_{2.5}$), and Total Hydrocarbon (Methane and Non-Methane) (Wyoming DEQ Air Quality Divison 2018). The monitoring station was intended to identify large sources of pollutants upwind of the Cody area to determine if pollutants from other areas in Wyoming, as well as sources in Idaho and Montana, could impact this area. Data gathered from the monitoring station indicated satisfactory air quality (Wyoming DEQ Air Quality Divison 2020). The AQD would like to site a monitor in this area to characterize ozone precursor concentrations in an area of extensive oil and gas development amid rural residential populations (Wyoming DEQ Air Quality Divison 2019). DEQ has also established limits on the quantity, rate, and concentration of emissions of various air pollutants from various sources including, but not limited to:

- Vehicle engines
- Construction/Demolition activities (asbestos)
- Handling and transport of materials
- Agricultural practices
- Fuel burning equipment
- Oil and gas operations
- Manufacturing operations

Resource Management Objectives

1. Park County supports maintaining air quality in accordance with state and federal air quality standards.

Priorities

1. Discourage practices that tend to cause deterioration of air quality to below satisfactory standards.
2. Support higher air quality standards for new and existing industrial, commercial, and large-scale residential projects.

3. Support decisions that minimize or prevent harmful air pollution, but do not hamper normal family agricultural operations.
4. Federal and state agencies should consider incentives for mitigating sources of air pollution over regulatory restrictions, where feasible. If regulatory restrictions are deemed necessary, then the goal will be to implement those regulations on terms and conditions that will not be invasive of the rights of individual property owners, but only for the public's health, safety, and welfare.
5. Support the goals of the Wyoming Environmental Quality Act, which implements the Clean Air Act, as amended. DEQ establishes emission standards and permit procedures that are economically achievable and protect the public health and welfare.
6. Federal and state land management agencies will notify Park County of all air quality studies undertaken. Study methods for air quality analysis shall be developed with, and agreed upon, by the County. If necessary, a third-party consultant approved by the County may be enlisted to complete the required air quality analysis so long as that consultant conforms to the agreed upon methods. Air quality baselines for the area must be established with the participation of the County.
7. Federal land management agencies shall coordinate with the County when formulating permitting and leasing stipulations for proposed activities or projects that have significant impacts to air quality. Permitting and leasing stipulations shall include: provisions for the implementation of agreed upon mitigation strategies to reduce or eliminate criteria pollutants where state or federal air quality standards are likely to be violated; and provisions for the implementation of agreed upon enforcement strategies to be implemented in the case of a violation.
8. To maintain high air quality, federal and state agencies will work to protect the area's air from degradation from non-area sources that have been identified.
9. The individual and cumulative impacts to air quality and the significance thereof, of any proposed actions on federal lands shall be analyzed thoroughly and quantitatively by the federal agency proposing the activity. Analysis of individual and cumulative impacts must be coordinated with, and the findings provided to, the County.

Cultural, Historical, Geological, and Paleontological Resources

Resource Assessment

Park County's traditional lifestyle has centered on agricultural pursuits and resource-based industries for generations. Cultural resources are a link to the past and convey the legacy prior inhabitants left behind. Historic and pre-historic sites are a reminder of the County's rich cultural heritage, provide a sense of time and place, and guarantee a continuing source of educational opportunity with continued preservation of these resources. Park County has a Historical Preservation Commission that assists with archeological and historical matters within the County.

Historic trails, old churches, tipi rings, and arrowheads are evidence of Park County's long and remarkable anthropological history. Many significant cultural, paleontological, and archeological sites have already been identified on public and private land, with the likelihood that additional important sites have yet to be identified. Since the majority of land within Park County is publicly owned, it is

reasonable to assume most future discoveries will occur on public land. Many policies offer an enforcement mechanism with substantial penalties to protect the quality of historical and archeological resources on federal lands:

The Antiquities Act (1906)
Provides for the protection of historic, prehistoric, and scientific features and artifacts on federal lands.

The Historic Sites Act (1935)
Sets a national policy to "preserve for future public use historic sites, buildings, and objects."

The National Historic Preservation Act (1966)
Requires that federal agencies take into account effects of their undertakings on historic properties. Authorizes the creation of the National Register of Historic Places and gives extra protection to National Historic Landmarks and properties in the National Register. National parks established for their historic value are automatically registered; others, such as Yellowstone National Park, because they were established to protect from development, must nominate landmarks and properties to the register.

The Archeological and Historic Preservation Act (1974)
Provides for the preservation of significant scientific, historic, and archeological material and data that might be lost or destroyed by federally sponsored projects. For example, federal highway projects in Yellowstone National Park and extractive industry exploration and development on federal lands require archeological surveys.

American Indian Religious Freedom Act (1978)
Protects and preserves American Indian access to sites, use and possession of sacred objects, and the freedom to worship through ceremonial and traditional rites.

The Archeological Resources Protection Act (1979)
Provides for the preservation, protection, and custody of excavated materials, records, and data.

The Native American Graves Protection and Repatriation Act (1990)
Assigns ownership or control of Native American human remains, funerary objects, and sacred objects of cultural patrimony to culturally affiliated Native American groups.

Executive Order 13007, *Indian Sacred Sites*
Guarantees access to and ceremonial use of Indian sacred sites by Indian religious practitioners to ensure that these sites are not adversely affected.

National Historic Trails and Other Historic Trails

A National Historic Trail is a congressionally designated trail that is an extended, long-distance trail, not necessarily managed as continuous, that follows as closely as possible and practicable the original trails or routes of travel of national historic significance. The purpose of a National Historic Trail is the identification and protection of the historic route and the historic remnants and artifacts for public use and enjoyment. A National Historic Trail is managed in a manner to protect the nationally significant resources, qualities, values, and associated settings of the areas through which such trails may pass, including the primary use or uses of the trail. The Nez Perce and Bridger National Historic Trails runs through Park County (Map 5 in Appendix B).

Geological and Paleontological Resources

Park County has an abundance of geological and paleontological resources: fossils, minerals, mountains, basins, folds and faults, igneous, metamorphic and sedimentary rocks, geothermal features, and glacial features. The variable geologic landscape is unique and vital to the character of Park County. As with archeological resources, it is important that the geological and paleontological resources be protected and preserved for current and future inhabitants.

Photo 5 Heart Mountain, largest terrestrial landslide in the world

Key geological and paleontological sites identified within Park County include:

- Absaroka Volcanic Province
- Buffalo Bill Dam & Rattlesnake Mountain
- Clarks Fork Canyon
- Cody Hydrothermal System
- Dead Indian Hill
- The Great Unconformity
- Heart Mountain
- Kirwin Mining Town
- McCullough Peaks
- Oregon Basin Field
- Polecat Bench & PETM
- Sunlight Basin
- Tatman Mountain & Squaw Peak

Federal Land Policies

United States Forest Service

A paleontological resource may only be collected from USFS lands in accordance with the casual collecting provisions (36 CFR § 291.11 and § 291.12), or in accordance with a permit issued by the Authorized Officer (36 CFR § 291.13).

National Park Service

The NPS prohibits removing or possessing natural or cultural resources (such as wildflowers, antlers, rocks, and arrowheads) from all national parks.

Bureau of Land Management

Currently, the BLM does not allow commercial collecting of fossils from public lands, except petrified wood which is managed as a mineral material and is salable under the Mineral Materials Act. Congress passed the Paleontological Resources Preservation Act in March 2009. This Act supplements existing laws and guidance regarding paleontological resources on BLM-administered lands.

Under current policy, the BLM allows the public to collect common invertebrate or plant fossils in reasonable quantities for personal use, making negligible disturbance using only hand tools (casual-use or hobby collecting). Permits may be issued to qualified researchers and fossils collected remain public property and must be curated in an approved repository. The BLM-generated Potential Fossil Yield Classification for Park County is shown in Map 8 in Appendix B where value 1 is the lowest potential yield and value 5 is the highest potential yield.

Bureau of Reclamation

The BOR does not allow for the removal or disturbance of natural or cultural resources from BOR-administered lands. Engaging in renewable natural resource gathering activities such as picking berries and mushrooms, collecting antlers, and other similar activities is permitted as regulated by part 423 and other applicable federal, state, and local laws (43 CFR § 423.29).

Resource Management Objectives

1. Park County recognizes the value that cultural, archeological, historical, paleontological, and geological resources have on the County's custom, culture, and economy. The County supports the development of public education and stewardship programs to increase awareness of these resources so as to enhance responsible visitation and appreciation of historical sites.
2. Park County encourages the preservation of oral, written, and pictorial history for future generations and the recordation of the custom and culture of the County.

Priorities

1. Support historical organizations throughout the County and encourage funding from private groups and volunteers as long as it does not infringe on private property rights.
2. Continue to support the Park County Historical Archives and County museums.
3. Participate, when available, as a CA on federal agency actions affecting historic buildings and culturally significant sites. It is Park County's intent to be recognized as a consulting party under Section 106 of the National Historic Preservation Act, as amended.
4. Support site protection and visitation opportunities to local cultural resources. Park County relies on state and federal agencies for the fiscal costs and expertise necessary to carry out this policy.
5. Actively participate in regional tourism efforts that link and promote Park County's unique attractions and activities. This participation will encourage efforts that will attract new and repeat visitors to this community's lodging, retail, and restaurant facilities.

Energy, Mining, and Mineral Resources

Resource Assessment

Mineral and energy production has played and continues to play one of the most significant roles in the culture and economy of Park County. Natural gas, oil, and gypsum constitute the majority of energy and mineral resources in Park County. Sand and gravel are other economic resources present within the County.

Photo 6 Oregon Basin oil field, date unknown

Although the production of energy resources and minerals, and associated economic and cultural activity, have waxed and waned with demand and pricing in the past; it has been, and remains a significant portion of Park County's tax base.

Congruently, the County uses this funding to provide the industry with infrastructure and services such as roads, bridges, medical services, and law enforcement. It is also Park County's duty and obligation to be a part of and/or intervene in the regulatory process as provided for by federal and state law. This requires interaction and cooperation with agencies such as the BLM, USFS, and DEQ.

The extraction of these energy resources has played a significant role in the culture and economy of Park County, starting with the discovery of crude oil in the 1910s. It is known today that substantial amounts of crude oil and natural gas are present in the County (BLM 2015). There are currently 1,368 active oil wells, 105 active natural gas wells, and 740 miles of pipeline (Map 9 in Appendix B). As shown in Table 2, mineral production including oil and gas contribute substantially to tax dollars within Park County. Locally assessed taxable valuation in 2020 was $245.1 million (Wyoming Department of Revenue 2020).

*Table 2 Energy and mineral resource production in Park County (2015–2020) (Wyoming Department of Revenue 2020) **

Mineral Production and Value in Park County	2015	2016	2017	2018	2019	2020
Production or Sales (units)						
Oil (barrels)	6,597,606	6,568,385	6,072,314	6,020,202	5,956,761	5,480,782
Gas (mcf)	7,360,801	7,149,838	7,409,791	7,189,790	6,704,114	6,052,456
Coal (tons)	0	0	0	0	0	0
Gypsum (tons)	77,758	82,887	96,644	98,302	89,905	73,396
Sand and Gravel (tons)	444,699	421,760	276,943	402,942	453,366	306,185
Bentonite (tons)	0	0	0	0	0	0
Taxable Valuation ($ millions)						
Oil	457.6	223.1	178.8	232.4	235.0	235.9
Gas	17.9	9.1	8.6	10.4	9.9	6.7
Coal	0	0	0	0	0	0
Gypsum	0.6	0.8	9.0	1.1	1.7	1.8
Sand and Gravel	1.0	1.0	0.6	0.9	1.0	0.7
Bentonite	0	0	0	0	0	0
Total ($ millions)	**$477.1**	**$234.0**	**$197.0**	**$244.8**	**$247.6**	**$245.1**

*Valuation is not adjusted from the values indicated in the report; thus, it is generally in January of the previous year dollars (based on the reporting dates). Notes: Taxable valuation may differ from market or sales value because it excludes certain costs of production. This table includes all minerals for which Wyoming Department of Revenue provides data on production from the County.

Wyoming Pipeline Corridor Initiative

The Park County Commissioners and other Wyoming county agencies are currently involved in the Wyoming Pipeline Corridor Initiative (WPCI). The WPCI project is a proposal from the state of Wyoming

to designate approximately 1,958 miles of pipeline corridors across private, state, and BLM–managed lands throughout the central and western portions of the state that are essential to future production and distribution of oil and gas products viable to the state's economy (BLM 2020b). Approximately 1,104 miles of the proposed corridors are located on BLM-managed lands managed by nine field offices: Buffalo, Casper, Cody, Kemmerer, Lander, Pinedale, Rawlins, Rock Springs, and Worland. Approximately 211 miles lie in Park County as lateral and trunk lines. The WPCI project, as proposed by the state of Wyoming, would designate a statewide pipeline corridor network dedicated to pipelines and facilities associated with carbon capture, utilization, and storage, and of pipelines and facilities associated with enhanced oil recovery. Carbon dioxide (CO_2) will be injected into existing, often "played-out" oil fields, thereby increasing oil production beyond conventional recovery methods with little additional surface disturbance. The project would not authorize any new pipelines or construction but would amend several BLM resource management plans across the state (Map 9 in Appendix B).

Renewable Energy Resources

There are currently no solar facilities or known pending applications for solar facilities on federal or state lands in Park County; however, there are permitted solar facilities planned for construction on private land near Frannie. Based on the findings of the BLM Renewable Resource Assessment Project, there are no locations in the County that receive six or more kilowatt hours per square meter per day of solar insolation. As a result, the potential for development of extensive solar resources in the County is not likely. Similarly, geothermal resource development potential has been considered low (BLM 2015).

Currently, there are no windfarms in Park County; however, there are areas of medium to high wind potential around Cody along the Absaroka Mountain Front and McCullough Peaks area (USGS et al. 2020). The Absaroka Mountain Front area is close to major transmission lines that could be used to distribute wind energy. The BLM did not anticipate widespread energy development of those resources during the development of their RMP in 2015 (BLM 2015). Nevertheless, federal lands are available for leasing should there be any advances in technology that increase potential.

The BOR operates the Buffalo Bill Dam and Reservoir where spring mountain runoff of the Shoshone River is stored. The waters of the reservoir are later released for multiple uses including irrigation and power generation. Hydroelectric power is developed at the Shoshone, Heart Mountain, Buffalo Bill, and Spirit Mountain power plants and is transmitted into Western Area Power Administration transmission lines.

Resource Management Objectives

1. Park County supports continued mineral and oil and gas exploration and development on federal and state land, where appropriate, in an environmentally responsible manner and in keeping with the local and regional custom and culture to ensure local economic diversity, stability, and tax base.
2. Park County encourages new opportunities for the development of energy industries in an environmentally responsible manner and the adoption of new technologies for existing energy industries, in order to balance responsible renewable and non-renewable energy development while supporting traditional energy developments.

Priorities

1. Welcome renewable energy development, provided that such developments are carefully sited to minimize adverse effects on other resources and values, as well as private properties and landowners within the County.
2. Support full bonding to ensure removal and reclamation of abandoned renewable and non-renewable energy projects. Impacts from disposal of materials related to these renewable and non-renewable projects should be considered and analyzed as part of the socioeconomic impacts on the local area.
3. Encourage local, state, and federal land use and management plans to fully discuss and evaluate coal bed methane development and the implications such development has on surface land uses, wildlife, and waters. The resulting water generated by operations needs to be considered in any planning process to assure local health, safety, and general welfare considerations are protected.
4. Encourage federal and state land management agencies to consider local government transportation and maintenance needs for local resources such as rock, gravel, road base, etc. Encourage federal and state land management agencies to provide options for siting new or expanding existing year-round sources on federally managed lands that are reasonably distributed around the County and that provide sufficient material for those needs. All planning or permitting for actions on federal and state lands that requires the use of a road or travel route that is maintained by the County, should provide consideration within that project's environmental analyses for the potential maintenance needs and locations of material sources that are available. If no sources are available for a project that meet the above requirements, then new locations should be permitted.
5. Encourage federally-managed lands to remain open and available for mineral resource exploration, development, and production, unless land has been withdrawn congressionally.
6. Encourage the placement of energy transmission infrastructure, such as oil and gas pipelines and high voltage electric transmission lines in existing utility corridors and on state and federal lands, where feasible.
7. Support federal and state projects that explore new carbon technologies and uses.
8. Support the delineation and management of oil and gas fields and associated residual oil zones, that are amenable to tertiary recovery efforts. This includes the delineation of CO_2, water, and oil and gas pipeline infrastructure to facilitate tertiary recovery efforts.
9. Participate as a CA, when applicable, for energy development and infrastructure projects.

Soils

Resource Assessment

Soil conservation is crucial to sustaining a viable agricultural economy, wildlife populations, and high-quality water and air resources. The Natural Resources Conservation Service (NRCS) has mapped and conducted research to support detailed soil surveys for Park County, which are available online at the Web Soil Survey website. Soil surveys are the base information source used for evaluating land use

development and disturbance activities. Soil surveys identify soil properties that are used in making various land use or treatment decisions and identify soil limitations on various land uses. Great differences in soil properties can occur within short distances. Soils in Park County are diverse and highly variable, reflecting differences in parent material, position on the landscape, elevation, aspect, and climatic variables such as precipitation and temperature. The plant communities supported by such a wide diversity of soils are equally diverse, ranging from sparsely vegetated desert saltbush and sagebrush-bunchgrass communities to forests and alpine meadows. The NRCS soil database allows soil data to be applied for use and suitability interpretations; the database is adequate for most soil interpretations.

Resource Management Objectives

1. Encourage soil conservation, soil protection, and maintenance or improvement of soil quality.

Priorities

1. Support that all new development proposals or changes in land use shall limit erosion and use best practices to reduce soil erosion and other impacts to soils.
2. Encourage federal and state agencies to consult, coordinate, and collaborate with local agencies, including Park County Conservation Districts, and any affected stakeholders regarding projects potentially affecting soil resources in Park County.
3. Support updated soil survey mapping and the use of ecological site descriptions developed by the NRCS, or proxy, as a foundation for the inventory, evaluation, monitoring, and management of federal and state lands.

Chapter 4: Water Resources

Surface and Ground Waters

Resource Assessment

Surface and groundwater resources are vital to support a variety of needs of Park County constituents. Water is necessary for domestic, agricultural, business/industrial, and recreational use. Of the 29 public land resource areas provided from a 2020 survey of Park County residents (Appendix C), rivers/streams and water quality were both ranked in the top five, in terms of importance to include within this NRMP illustrating their necessity. The overall need for and importance of this resource is reflected throughout this NRMP, as it is a component of many chapters outside its own. As discussed in Chapter 5, the County supports miles of high-quality, fishable waters. Fishing, along with other types of recreation, is driven largely by the unique opportunities that the waterbodies of Park County provide. Recreation, tourism, and associated economic considerations directly related to the Counties water resources are discussed in Chapter 6. Refer to Map 10 in Appendix B, which shows Park County's waterbodies and irrigated lands.

Park County is comprised of the Bighorn, Gallatin, Upper Yellowstone, and Missouri Headwaters River Basins. Precipitation is the main source of surface and groundwater in these basins, and much of the precipitation that falls either evaporates or is transpired by vegetation. Precipitation and snowmelt that is not evaporated or transpired either feeds into Park County's numerous rivers and streams through surface runoff, or infiltrates to become groundwater.

Within the Bighorn River Basin, the north and south forks of the Shoshone River originate in the Absaroka Mountains and converge at the Buffalo Bill Reservoir. The Shoshone River then flows through several dams (Buffalo Bill, Corbett, Willwood, Elk-Lovell Canal, and Penrose) on its way into Big Horn County. The Greybull River, also within the Bighorn River Basin and originating in the Absaroka Mountains, flows northeast into Big Horn County and later joins the Bighorn River.

The Yellowstone, Clarks Fork of the Yellowstone, and Lamar Rivers are each contained within the Upper Yellowstone River Basin and flow through Park County. The Yellowstone River originates in southwestern Park County, flows north into Yellowstone Lake (part of Teton County), and continues north into Montana. The Clarks Fork of the Yellowstone River flows southeast through the Shoshone National Forest before winding northeast into Montana and later into the Yellowstone River. The Lamar River forms within Park County on the eastern edge of Yellowstone National Park and flows northwest, where it enters the Yellowstone River.

The basins of Park County also contain many of the tributaries of these larger rivers and reservoirs along with all of the associated riparian areas, wetlands, and floodplains. Additionally, Park County has a vast irrigation system because, like many arid parts of the West, irrigation has historically been, and still is, an essential tool for agricultural operations within the County. Irrigation is discussed later in this chapter.

Riparian Areas and Wetlands

Wetlands and riparian ecosystems are critical to maintaining water quality. Specifically, they help to maintain stream flows, provide shading to channels, and reduce erosion and sediment inputs (MWH Americas Inc. et al. 2010). These areas also help buffer against flood waters and function as filters for runoff. While riparian and wetland ecosystems comprise less than 2 percent of Western landscapes,

they are incredibly valuable for many types of recreation, fish and wildlife, water supply, and many other uses (BLM 2015). The value of these ecosystems is recognized nationally through policies such as the 1989 "no-net loss" policy and incorporation into provisions of many acts such as the "Swampbuster provisions" of the 1985 Food Security Act. These areas are also protected under the Clean Water Act, specifically Section 404 which regulates the discharge of dredged or fill material into waters of the United States including wetlands. Without these ecosystems, all the water resources found in Park County would suffer.

The National Land Cover Database was used to assess the change in land cover, including wetlands, across Park County between 2001 and 2016 (Map 2 in Appendix B). While this nation-wide database has a relatively coarse resolution (30 meters), it enables the assessment of land cover change over time. Between 2001 and 2016, wetland land cover classes in Park County (including both emergent herbaceous wetlands and woody wetlands) increased by approximately 8.6 percent. In general, riparian ecosystem conditions have improved over the past 15 to 20 years across the Bighorn Basin Planning Area and the Shoshone National Forest in response to modifications to livestock grazing practices and other management actions (USFS 2015c, BLM 2015).

Severe damage to riparian areas or wetlands typically leads to waterbody impairments caused by sediment or temperature exceedances or habitat alterations. As described later in this document, there are currently no waterbodies within Park County listed on the State's list of impaired waters. The lack of impaired waterbodies does not signify the absence of water quality issues; however, it does indicate that the state has developed an EPA-approved Total Maximum Daily Load (TMDL) for assessed waterbodies that do not meet water quality standards. The *Water Quality* Section below further describes requirements of the Clean Water Act, including TMDL development.

Floodplains

According to the Federal Emergency Management Agency, a floodplain is "any land area susceptible to being inundated by floodwaters from any source"(FEMA 2020). By this definition, several areas of Park County are within floodplains and are at risk of flooding based upon historic events. Approximately 1.5 percent of the County, excluding the Yellowstone National Park area, is within a mapped Special Flood Hazard Area (SFHA). SFHAs are defined as areas that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. The County regulates development in the mapped floodplain, participates in the National Flood Insurance Program, and has Flood Insurance Rate Maps (Park County 2020a).

Groundwater

The Wyoming State Geological Survey completed the Wind/Bighorn River Basin Plan Update Groundwater Level I Study in 2012 (Wyoming Water Development Office 2012). Among other components, this study identified major aquifers in the Wind/Bighorn River Basin (which encompasses Park County), described aquifer recharge areas, and assessed physical and chemical characteristics of groundwater hydrogeologic units.

DEQ's Groundwater Pollution Control Program[5] oversees groundwater remediation projects, issues permits for monitoring wells, assists agencies with NEPA reviews, and reviews subdivision applications.

[5] http://sgirt.webfactional.com/wqd/gpc/

Resource Management Objectives

1. Park County will work to maintain or improve watershed health and promote the stewardship of water to meet and plan for the varied needs of the County citizens and wildlife.
2. Park County will work to maintain the integrity of ground and surface waters within the County to enhance cultural, recreational, and ecological objectives for water usage.

Priorities

1. Work with and support federal and state agencies and local conservation districts in the education of citizens regarding water use issues and water conservation practices.
2. Encourage responsible development in the mapped floodplain by upholding floodplain development permitting responsibilities.
3. Encourage programs that identify, monitor, and abate all non-point source pollution-generating activities on lands and waters. The County supports the use of best management practices that reduce non-point source pollution and promote water conservation. Park County encourages sustainable land and water use on private and public lands to minimize erosion and pollution.
4. Where appropriate, support the maintenance or improvement of streams, floodplains, wetlands, and groundwater function. This includes but is not limited to the planting of willows or other species that provide habitat structure for bank erosion; the removal of invasive species; and beaver translocation and/or artificial beaver structures on federal and state lands.
5. Support locally led, watershed-based planning with federal and state participants, and encourage the acquisition of grants or funding for watershed and water quality improvement projects on public and private lands that benefit overall watershed integrity or water quality.

Irrigation and Related Infrastructure

Resource Assessment

Early settlers in northwest Wyoming had hopes of turning the arid region into productive farmland; however, for this they needed irrigation water. There were multiple failed attempts to irrigate the region in the late 1800s. It was not until the approval of the Shoshone Project, authorized by the Secretary of the Interior in 1904, that substantial progress was made. The Shoshone Project was an extensive construction project aimed at delivering irrigation water to tens of thousands of acres in northwest Wyoming. Upon completion, the project transformed the region and initially allowed a wide variety of crops ranging from alfalfa to sugar beets to be grown in the area, with more acres devoted to pastureland as years passed. According to the USDA Agricultural Census of 2017, there were 127,546 acres of irrigated lands utilized by 824 farms in Park County (USDA 2017). The project also introduced several dams (discussed in the next section), power plants, associated transmission facilities, and a network of canals and laterals to four irrigation divisions: Garland, Frannie, Willwood, and Heart Mountain. Generally, Park County's irrigation network is located adjacent to the Greybull River, Shoshone River, and Buffalo Bill Reservoir, and irrigation season lasts from mid-April to mid-October with use peaking in July (Willwood Working Group 3 2019).

As described in the *Surface and Groundwater* Section of this chapter, the north and south forks of the Shoshone River drain into Buffalo Bill Reservoir. Water is released to the Shoshone River at the Buffalo

Bill Dam through the Shoshone Power Plant and various outlet gates. Water from the dam is also released to the river downstream through the Buffalo Bill and Heart Mountain power plants. The Shoshone Canyon Conduit, beginning at Buffalo Bill Dam, conveys water to the Spirit Mountain, Buffalo Bill, and Heart Mountain power plants, and an inverted siphon which crosses the Shoshone River and delivers irrigation water into the Heart Mountain Canal for the Heart Mountain Division. Distribution of this irrigation water is managed by the Heart Mountain Irrigation District. Water for the Garland and Frannie Divisions is diverted from the Shoshone River into the Garland Canal at Corbett Diversion Dam and is managed by the Shoshone Irrigation District. The Frannie Canal branches off the Garland Canal and serves the Frannie Division. Distribution of water in the Frannie Division is managed by the Deaver Irrigation District. Water for the Willwood Division is diverted into the Willwood Canal at Willwood Diversion Dam and is distributed by the Willwood Irrigation District (Bureau of Reclamation 2020). Figure 4 illustrates the vastness and components of the Shoshone Project.

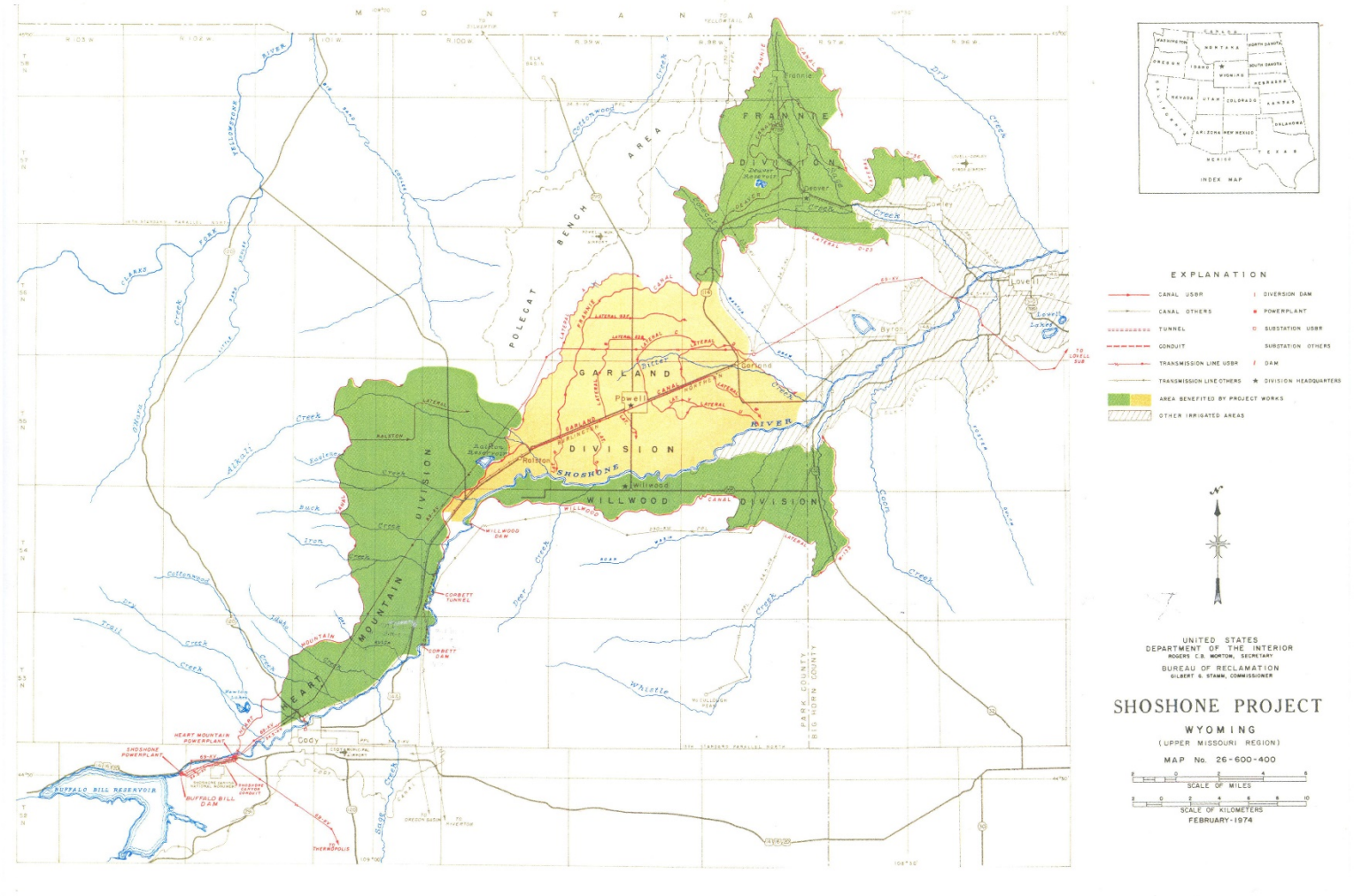


Figure 4 Shoshone Project (Shoshone Irrigation District)

Park County must recognize the importance of its irrigation systems which play a critical role in the County's water cycle. Additionally, waters stored in the County's reservoirs are not only used for irrigation, but also for power generation, domestic water, flood control, and recreation. Via the Shoshone Canyon Conduit and the water treatment plant near Cody, Buffalo Bill Reservoir provides drinking water for the towns of Cody, Powell, Frannie, and the Northwest Rural Water District through the Shoshone Municipal Pipeline.

Resource Management Objectives

1. Park County encourages maintaining or improving the integrity of watersheds within the County, as well as the continued exploration for and the use of water sources and aquifers on federal and state lands in an environmentally responsible manner, ensuring that the quantity and quality of local water resources will be sustained for future uses.

Priorities

1. Continue to support and advocate for augmentation of water storage (both underground and above) and conveyance facilities in appropriate locations on federal and state land. Park County recognizes and supports existing irrigation systems, and ditch rights-of-way, as crucial to maintaining state water law and water storage agreements that benefit local agricultural interests.
2. Support water development and restoration projects that increase water quantities and quality for beneficial use within the County, while also considering the traditional custom, culture, ecology, and economy of the area.
3. Support the management of irrigation infrastructure to not only ensure water quantity and quality but also to provide habitat for wildlife.
4. Support efforts to speed up the process of agencies processing permits on federal lands for the construction, maintenance, or expansion of irrigation distribution systems to private lands in a reasonable timeframe.
5. Encourage the use of infrastructure that prevents unnecessary fish and wildlife deaths in canals and other human developed waterways.

Dams and Reservoirs

Resource Assessment

Park County is home to many dams and reservoirs, most of which are managed by the BOR and range in size and complexity from the elaborate Buffalo Bill Dam and Reservoir to numerous small earthen dams and stock ponds. Reservoirs are typically utilized for surface water storage, flood control, hydroelectric power generation, recreation development, and range improvements. Buffalo Bill Dam, Corbett Diversion Dam, Deaver Dam, and Willwood Dam, shown in Figure 4, are all located within Park County and were built as part of the Shoshone Project. The Buffalo Bill Dam is located approximately six miles upstream of Cody on the Shoshone River and was completed in 1910. The Buffalo Bill Reservoir impounds over 646,000 acre-feet of water and is a popular fishing and boating destination today. Corbett Diversion Dam is located 16 miles downstream of Buffalo Bill Dam on the Shoshone River and was completed in 1908. The Deaver Dam, completed in 1918, created Deaver Reservoir which has become a popular warm and cold-water fishery. Willwood Dam is located eight miles downstream of Corbett Diversion Dam and was completed in 1924 (Bureau of Reclamation 2020).

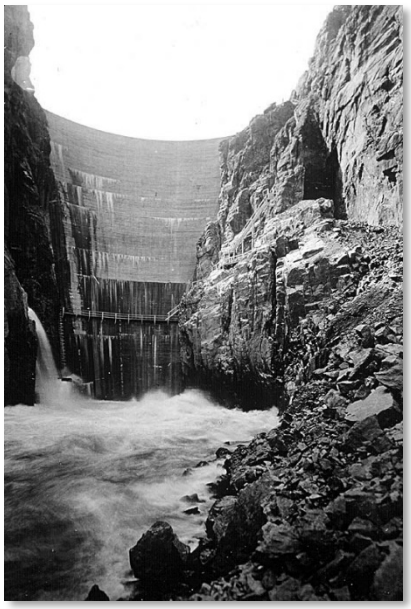


Photo 7 Buffalo Bill Dam in 1918, eight years after its completion

Upper and Lower Sunshine Reservoirs can also be found in Park County along the Greybull River west of Meeteetse. Both are popular fishing and boating destinations. The Greybull Valley Dam and Reservoir, also known as the Roach Gulch Dam and Reservoir, is located downstream of Meeteetse and includes a diversion dam on the Greybull River, a four-mile supply canal, and an off-channel reservoir on Roach Gulch, a tributary of the Greybull River. The reservoir has a capacity of 30,000 acre-feet and primarily provides irrigation water to the Greybull Valley Irrigation District (BRS Inc. et al. 2003).

While small in size, Luce and Hogan Reservoirs (56 and 35 acres, respectively) are popular fishing destinations located approximately 20 miles northwest of Cody. Another fairly small but popular angling destination northwest of Cody is Newton Lakes (80 acres). The lakes are located just five miles northwest of Cody and, like Luce Reservoir, are managed by the WGFD as “trophy” fisheries (Bureau of Reclamation 2021). Refer to Map 10 in Appendix B, which shows Park County’s waterbodies and irrigated lands.

Resource Management Objectives

1. Park County supports active management of dams and reservoirs for water storage and flood control purposes, recreational attractions, fisheries, sources of livestock water, and hydroelectric power generation to maximize benefits while reducing negative effects such as sedimentation.

Priorities

1. Support the prevention and management of reservoir sedimentation and promote best

management practices that reduce sedimentation.

2. Support agency actions that analyze impacts using the best available science. Park County also supports agency actions that grant permissions or offer guidance related to facilities such as dams, reservoirs, delivery systems, monitoring facilities, etc.
3. Support the use of the best available science in modeling water quantity, specifically related to timing of snowpack melt and variability of snowpack depth.

Water Rights

Resource Assessment

The state of Wyoming has a rich history pertaining to water law, beginning even before its statehood when it was still the Wyoming Territory. Wyoming's first territorial legislature enacted laws pertaining to water rights, and the basis of these early laws are still used today (Squillace 1989). Wyoming water law is based on the doctrine of prior appropriation, as are most Western states. Users with earlier rights are entitled to water during periods of limited supply, over those with later rights. Wyoming water law also has preferred use rankings and lists them in the following order: Drinking water for both humans and livestock; water for municipal purposes; water for steam engines, general railway use, cooking, laundering, bathing, refrigerating (including ice manufacturing), steam and hot-water heating plants, and steam power plants; and water for industrial purposes (Jacobs et al. 2003). The Wyoming State Engineer's Office is the chief administrator of Wyoming waters and oversees appropriation, distribution, and applications to apportion beneficial uses of state water resources in each of four districts; Park County is located within District 3.

Established in 1975, Wyoming's Water Development Program, which is administered by the Wyoming Water Development Office (WWDO), provides for the planning, selection, financing, construction, acquisition, and operations of projects. Water development projects have three levels, with planning performed in levels one and two and construction in level three. The Program is developed and recommended to the Legislature by the Wyoming Water Development Commission which is composed of 10 members, appointed by the governor, who represent the State's four districts and the Wind River Reservation (Wyoming Water Development Office 2021).

Resource Management Objectives

1. Park County will work with local, state, and federal government to encourage and support state ownership and control of water rights and to maintain opportunities for future water right allocations.
2. Park County supports the state working with other states as it pertains to water rights and water allocations that benefit the County.

Priorities

1. Oppose any federal governmental control over individual water rights within the County.
2. Support Wyoming's beneficial uses of water as defined under administrative policy of the State Engineer's Office.
3. Support the precedence of historic and customary beneficial uses of water.

Water Quality

Resource Assessment

The use and enjoyment of a variety of natural resources is linked to water quality. As such, it is often a useful tool in assessing overall habitat conditions in the surrounding area. In addition, many beneficial uses of water resources are contingent on healthy watersheds, including drinking water, recreation, propagation of aquatic life, agricultural water supply, and industrial water supply.

The Clean Water Act

Under the Clean Water Act, states are required to monitor water pollution and report to the EPA biannually. Waters that do not meet water quality standards (referred to as impaired waters) are placed on the State's 303(d) list. The state identifies which pollutant is causing the impairment and assigns a priority for developing a TMDL. A TMDL is the maximum amount of a given pollutant allowed to enter a waterbody, given that the waterbody still meets that pollutant's water quality standards. By developing a TMDL, pollution reduction targets can be determined. A 303(d) listed waterbody generally remains listed until the EPA approves the TMDL developed by the state.

The EPA requires that surface waters be placed into one of five categories in order to standardize water quality, with Category 1 being of the highest quality and Category 5 being the lowest/most impaired. No waterbodies within Park County are currently on the State's 303(d) list and in need of a TMDL (i.e., classified as Category 5). Several waterbodies within the County are classified under Categories 2 and 4A. Placement in Category 2 indicates that at least one designated use is supported, while one or more other uses are either indeterminate or not assessed. Category 2 waterbodies are not on the state 303(d) list; therefore, a TMDL is not needed (Wyoming Department of Environmental Quality 2018). Placement in Category 4A signifies that available data and/or information indicate that at least one designated use is not being supported or is threatened, but that a state-developed TMDL has been approved or established by the EPA; thus, no further TMDL development is needed (Wyoming Department of Environmental Quality 2018).

Waterbodies within Park County classified as Category 4A include Dry Gulch, Bitter Creek, the Clarks Fork of the Yellowstone River, and the Greybull River. A seven-mile segment of Dry Gulch was added to the state 303(d) list in 2008 due to an exceedance of E. coli criterion. The EPA later approved the 2013 E. coli TMDL for the Shoshone River Watershed, prompting the segment's movement from the state 303(d) list and placement in Category 4A. A 14-mile segment of Bitter Creek was added to the state 303(d) list in 2002 due to an exceedance in fecal coliform (Wyoming Department of Environmental Quality 2013). After improvements to septic systems in the watershed, subsequent monitoring, and the approval of the aforementioned 2013 TMDL, this segment of Bitter Creek was moved from the state 303(d) list and placed in Category 4A. A 6.8-mile segment of the Clarks Fork of the Yellowstone River just downstream from the Montana border was added to the state 303(d) list in 2000 for not meeting its aquatic life uses due to cadmium, silver, and copper. Montana developed TMDLs for the river and the DEQ adopted them in 2008 placing the river into Category 4A. The Greybull River was also added to the state 303(d) list in 2002 due to fecal coliform exceedances and has since been the focus of two Section 319 grants. The South Big Horn Conservation District collected water quality samples on the Greybull River from 2002–2004 and 2005–2007. Despite improvements to animal feeding operations and septic systems in the lower Greybull River watershed, bacterial concentrations remained high along impaired segments. In 2014, the EPA approved the 2013 E. coli TMDL for the Big Horn River Watershed, prompting its

movement to Category 4A. While the three waterbodies described above are no longer on the state's list of impaired or threatened waters (the state 303(d) list), this does not mean that said waters are no longer impaired. Although TMDLs have been developed and approved for waterbodies in Category 4A, these waterbodies are still tracked until they meet water quality standards (Wyoming Department of Environmental Quality 2018).

Also notable is the classification of the North Fork Shoshone River Drainage under Category 2. After collecting physical, chemical, and biological data in this drainage, DEQ concluded that the entire North Fork Shoshone River Drainage watershed above Half Mile Creek supported its cold-water fish and aquatic life other than fish designated uses. As a result, the entire North Fork Shoshone River Drainage watershed above the confluence with Half Mile Creek, near the Shoshone National Forest boundary, was placed in Category 2 in 2002.

DEQ ensures compliance with the Clean Water Act. Detailed, up-to-date water quality information is available in their biannual Integrated 305(b) and 303(d) Reports[6]. Map 11 in Appendix B depicts Park County's assessed waterbodies.

Water Quality Concerns—Sediment Levels in the Shoshone River

In 2007 and 2016, the Shoshone River experienced the release of large quantities of sediment at Willwood Dam, each resulting in fish kills and the loss of aquatic invertebrates (Willwood Working Group 3 2019). The 2007 sediment release was caused by a dam malfunction, while the 2016 event occurred during scheduled and required maintenance. In response to the 2016 sediment release, DEQ established three working groups to "1) restore aquatic life and habitat damaged due to a release of accumulated sediment from the Willwood Dam reservoir into the Shoshone River and 2) reduce and/or eliminate future need to release accumulated sediment from the dam in amounts and of duration that are harmful to aquatic life and the aquatic and riparian habitats below the dam." (Wyoming Department of Environmental Quality 2017). The three working groups have operated under the direction of an executive committee, which is made up of representatives from DEQ, WGFD, WWDO, Willwood Irrigation District, and BOR. Willwood Working Group 1 had the task to clean up debris and sediment released through Willwood Dam in the fall of 2016. With multi-agency cooperation and assistance from volunteers, their work was completed in 2017. Willwood Working Group 2, led by DEQ, has the ongoing task of developing operational criteria for Willwood Dam which will allow Willwood Irrigation District to operate the dam throughout the year for irrigation diversion and protection of their infrastructure while also protecting downstream aquatic and riparian habitats. Willwood Working Group 3, led by the Powell Clark's Fork Conservation District, has developed a sediment watershed plan and associated story maps[7,8], which provide detailed information about Willwood Dam, the surrounding watershed, sediment sources, and monitoring activities. The DEQ website also offers resources pertinent to this effort.

The Shoshone River is currently not on the 303(d) list for sediment impairments. While DEQ has conducted monitoring within the Shoshone Sub-basin, it has primarily focused on fecal bacteria criterion exceedances (Wyoming Department of Environmental Quality 2018).

[6] http://deq.wyoming.gov/wqd/water-quality-assessment/resources/reports/
[7] https://wacd.maps.arcgis.com/apps/Shortlist/index.html?appid=69c4ca45589e46d6b7a348e23c65e58e
[8] https://wdeq.maps.arcgis.com/apps/Cascade/index.html?appid=ed288248983c467b9365852bd32f01c1

Resource Management Objectives

1. Park County will work to maintain water quality within the County to prevent or mitigate potential harm to the health and safety of County residents, promote a safe domestic water supply, maintain or improve water quality where feasible, and to consider cultural, recreational, and ecological objectives for water quality and usage.

Priorities

1. Encourage the education of citizens of the County regarding their personal responsibility and best management practices in maintaining and improving water quality in regards to sedimentation, chemical usage, pathogens, or other areas of water quality concern and sources of potential pollution.
2. Review development proposals for potential impacts to ground and surface water quantity and quality. Park County recommends, where practical, environmentally sound, and economically viable, the recycling of water, use of appropriately treated reclaimed water, and use of alternative water sources to reduce the use of potable water for industrial uses, agricultural uses, maintenance of roads and dust abatement, and for energy production.
3. Request that industrial or energy development proposed actions on federal or state lands that impact ground or surface water provide for baseline testing and water quality monitoring, and implement requirements to reduce impacts to downstream or adjacent water sources. Federal and state agencies shall involve the Conservation Districts and the County in developing and setting water quality monitoring protocol.
4. Work with federal and state agencies, where feasible and appropriate, to develop and/or implement water quality/quantity monitoring processes.
5. Park County and its citizens, as evidenced by public input as part of this document, prioritize water quality within the County and the protection of the County's groundwater and surface water and request that it is prioritized in planning processes.
6. Park County recognizes the impacts that wildfire can have on water quality. Park County encourages active management of vegetation and forest resources to reduce the prevalence and intensity of wildfires. See Fire Management and Forest, Rangeland, and Vegetation Management objectives and priorities.

Wild and Scenic Rivers

Resource Assessment

Wild and Scenic Rivers are designated under the Wild and Scenic Rivers Act of 1968 to preserve selected rivers (and their immediate environments) which possess outstanding natural, cultural, or recreational values. While the Act strives to balance dam and other construction, designation of a river as part of the National Wild and Scenic River System does not prohibit all development or give the federal government control over private property. The USFWS offers several resources, including a map of the entire National Wild and Scenic Rivers System.

The BLM has evaluated rivers within the Cody Field Office Planning Area to determine if they are suitable for inclusion in the National Wild and Scenic River System. While several waterbodies meet

eligibility requirements, only the Clarks Fork of the Yellowstone River (Segment 3) also meets suitability screening factors. Eligible waterbodies within the County include: North Fork Shoshone River, South Fork Shoshone River, Meeteetse Creek, and Pat O'Hara Creek (BLM and Jonas Consulting 2003). Map 4 in Appendix B shows Park County's Special Land Use Designations, as well as Segment 3 of the Clarks Fork of the Yellowstone River.

Resource Management Objectives

1. Park County supports the protection of the Clark's Fork of the Yellowstone Wild and Scenic River, while encouraging the balance of local uses and scenic and recreational values with economic sustainability.

Priorities

1. Request that federal land managers coordinate with and involve the County on any determinations, suitability screenings, or discussions involving Wild and Scenic Rivers. Considerations for designations must show how the designation will affect the County, including economic stability and future land uses.

Chapter 5: Wildlife and Fisheries

Fisheries

Resource Assessment

Park County has three main river drainages: the Yellowstone, Clark's Fork, and Big Horn. Ultimately, waters from these drainages flow into the Missouri River drainage basin, including the Clark's Fork River, which eventually flows into the Yellowstone River. The remainder of the County is drained by the Shoshone and Greybull Rivers, as well as Fifteenmile Creek, which flow into the Big Horn River (Lowry and Smalley 1993). Within Yellowstone National Park, portions of the Yellowstone River flow northwards, passing through Yellowstone Lake. A mix of waterbodies exist throughout the County, including reservoirs, ponds, mountain lakes, and a plethora of perennial and ephemeral streams which initiate within the Beartooth Mountains and Absaroka Range, eventually draining into the Yellowstone and Big Horn Rivers. Park County supports 148 miles of classified blue-ribbon trout streams, 168 miles of red ribbon trout streams, and 496 miles of yellow ribbon trout streams[9] (Map 12 in Appendix B). These high-quality, fishable waters support the area's healthy fisheries which contribute to increased visitation by outdoor recreationists. Anglers within Park County contribute important funds to the area's local economy, by direct purchases of fishing licenses in addition to indirect expenditures for gear, guides, and other services (Taylor 2016). The Big Horn River Drainage supports six walk-in fishing areas northeast of Cody, along the Bitter, Alkali, and Patch Creeks, and the Shoshone River (Wyoming Game and Fish Department 2018). These areas consist of private lands which the landowner has given WGFD permission to lease for the purpose of allowing fishing access. Park County is also home to the Clarks Fork Fish Hatchery, the second largest hatchery in the state. The hatchery focuses on raising fish for stocking into waters that allow public fishing. Trout species raised include rainbow, brown, and cutthroat. Occasionally artic grayling are also raised for stocking (Wyoming Game and Fish Department 2021).

Resource Management Objectives

1. Recognizing that fisheries are an important component to local recreational enjoyment, the tourism industry, and overall ecological function, Park County supports agency efforts to ensure fisheries systems can sustain into the future for all relevant values.

Priorities

1. Encourage agency management that supports healthy, diverse fisheries through habitat improvement, water quality, and/or other beneficial projects.
2. Support, where possible, efforts to restore stream bank vegetation in order to shade water and decrease water temperatures. Park County encourages planting willow and native cottonwoods along waterbodies where invasive Russian olive stands have been removed.
3. Encourage, where feasible, the replacement or modification of culverts or structures to provide fish or aquatic organism passage and connectivity in stream systems.

[9] Blue ribbon streams contain more than 600 pounds of trout per stream mile. Red ribbon streams contain 300–599 pounds of trout per stream mile. Yellow ribbon streams contain 50–299 pounds of trout per stream mile.

Threatened, Endangered, and Sensitive Species

Resource Assessment

Park County provides important habitat for several federally listed species as well as designated critical habitat for Canada lynx (*Lynx canadensis*); a summary of these species and their status is available within Table 3 (USFWS 2020). Refer to Map 13 in Appendix B for a map of Canada lynx critical habitat within Park County.

Table 3 Federally listed species and species of concern in Park County, WY

Category	Common Name	Scientific Name	Status	Critical Habitat (Park County)
Federally listed	Black-footed ferret	*Mustela nigripes*	Experimental population, Non-essential	None
Federally listed	Canada lynx	*Lynx canadensis*	Threatened	Final critical habitat
Federally listed	Grizzly bear	*Ursus arctos horribilis*	Threatened	Proposed critical habitat
Federally listed	North American wolverine	*Gulo gulo luscus*	Proposed threatened	None
Federally listed	Western Glacier stonefly	*Zapada glacier*	Threatened	None
SOC	Bald eagle	*Haliaeetus leucocephalus*	N/A	N/A
SOC	Gray wolf	*Canis lupus*	N/A	N/A
SOC	Greater sage-grouse	*Centrocercus urophasianus*	N/A	N/A
SOC	Mountain plover	*Charadrius montanus*	N/A	N/A
SOC	White-tailed prairie dog	*Cynomys leucurus*	N/A	N/A

United States Forest Service - Special Status Species

USFS management guidelines for special status species can be found in the Forest Service Manual (FSM) 2600, Chapter 2670 (USDA 2018).

Shoshone National Forest

The Shoshone National Forest published a report on Species of Concern (SOC) within the forest in April of 2009. This list identified 62 plants, fish, and invertebrates that meet criteria set forth in Forest Service Handbook (FSH) 1909.12 and for which the Shoshone National Forest contains habitat (USFS 2009). Also, a 2015 revision of the Land Management Plan for the Shoshone National Forest identifies multiple trout species and three bird species as management indicator species (MIS) for the forest that would be considered during management decisions (USFS 2015b). Sixty-one federally listed and sensitive species and 29 species of local concern (SOLC) were also identified within this plan. Within Park County, the Wyoming Natural Diversity Database (WYNDD) list of USFS SOLC and sensitive status species identified 54 invertebrate and vertebrates. Federally listed species require biological assessment for proposed projects, and MIS require specific analyses at the project level. SOLC are typically analyzed with less rigor than either (USFS 2009). The Shoshone National Forest also categorizes emphasis species that

serve to provide general guidance as to what species may or may not be present within the Forest; this category includes selected threatened, endangered, and sensitive species as well as SOLC and includes both plants and animals.

Bridger-Teton National Forest

The Bridger-Teton National Forest Land and Resource Management Plan, as amended in 2015, clarified that it will utilize MIS for forest planning and management. As with the Shoshone National Forest, these species represent threatened, endangered, or sensitive species, USFS Sensitive Species, and other species of social or ecological importance (USFS 2015a). Groups of MIS are selected according to habitat types with a higher risk of being affected by potential management activities. Currently there are six MIS (cutthroat trout, bighorn sheep, boreal toad, boreal chorus frog, pine marten, and Brewer's sparrow) each corresponding to a specific habitat type (USFS 2015a).

National Park Service

All wildlife within Yellowstone National Park falls under the purview of the USFWS.

Bureau of Land Management - Sensitive Species

The most recent BLM sensitive species list of 2010 includes 27 species present within Park County (BLM 2010a, Wyoming Natural Diversity Database 2020b). A complete discussion of BLM responsibilities relating to special status species can be found in the BLM Manual 6840 (BLM 2008).

State - Special Status Species

The WGFD published an updated State Wildlife Action Plan (SWAP) in 2017 that identified threats and conservation strategies for 229 species (Wyoming Game and Fish Department 2017). Within Park County, 205 vertebrates and invertebrates are categorized as Species of Greatest Conservation Need by WGFD (Wyoming Natural Diversity Database 2020d). This category adheres to congressional guidelines for SWAPs which also directs that Wyoming must provide "information on the distribution and abundance of species of wildlife, including low and declining populations as the state wildlife agency deems appropriate, that are indicative of the diversity and health of the state's wildlife."

One such species, the Greater Sage-grouse (*Centrocercus urophasianus*), is present within Park County and depends on sagebrush habitats year-round, serving as an umbrella species for other sagebrush-obligates who benefit when this species and their habitat is protected. For potential projects located in core areas for Greater Sage-grouse, Executive Order 2019-3, *Greater Sage-Grouse Core Area Protection*, provides management guidelines for Greater Sage-grouse throughout Wyoming and Park County, and will be consulted when making land management decisions. Specific to local (County) governments, the Executive Order states:

> Counties are political subdivisions of the State and are statutorily granted enumerated powers to be exercised to promote the general welfare of the public. For example, Wyoming statutes § 18-5-201(a) grants counties the authority to regulate and restrict land use and development in the unincorporated area of the County through zoning and comprehensive planning to limit impact to wildlife, such as Greater Sage-grouse.

Per Wyoming Statute § 18-5-208, a county involved in federal land planning and management is "…deemed to have special expertise on all subject matters for which it has statutory responsibility, including but not limited to, all subject matters directly or indirectly related to the health, safety, welfare, custom, culture and socio-economic viability of a county." Counties regularly advocate for

county interests related to wildlife management, state species, recreation, private property rights, and water rights or leasehold rights as pursuant to Wyoming Statute § 9-4-218(a).

Under the 2019 Wyoming Greater Sage-Grouse Approved RMP Amendment, the BLM retained the designations of priority habitat management areas (PHMA) and general habitat management areas (GHMA). The management for PHMA is "to open to oil and gas leasing, but with restrictions; to exclude or avoid disturbance to Sage-grouse and their habitat; and to minimize impacts to PHMA where they cannot be avoided." GHMAs are "where avoidance and minimization are applied flexibly, consistent with both local conditions and the State's science-based objectives for species management." Table 4 below and Map 14 in Appendix B show the designated PHMAs, GHMAs, and non-habitat for Greater Sage-grouse in Park County.

Table 4 Greater Sage-Grouse habitat management areas in Park County, WY

Habitat Management Area	Acreage
PHMA	592,498
GHMA	1,029,258
Total	**1,621,756**

The WYNDD maintains an extensive list detailing special status species throughout Wyoming as identified by multiple agencies. The WYNDD maintains a list of Wyoming SOC, which tracks species vulnerable to extirpation at a global or state level due to: 1) their rarity, 2) their inherent vulnerability, and 3) threats to that species. As of 2020, Park County contains 126 SOC and 78 species of potential concern, which may appear secure currently, but are expected to be vulnerable to large-scale changes, warranting periodic assessment (Wyoming Natural Diversity Database 2020a, c). This analysis includes both vertebrate and invertebrate species. These lists are intended solely to be a reference for decision makers and the public, and not all species on this list require specific management considerations.

Migratory Birds and other Protected Raptors

The Migratory Bird Treaty Act, as amended, made the taking, killing, or possessing of migratory birds unlawful. Executive Order 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds,* clarified the responsibilities of federal agencies regarding migratory bird conservation and directed federal agencies to evaluate the effects of federal actions on migratory birds with an emphasis on SOC. The Executive Order also directed federal agencies to develop an MOU with the USFWS regarding their role with respect to the Migratory Bird Treaty Act, and the Bald and Golden Eagle Protection Act. Park County has 396 documented migratory bird species present at various times throughout the year.

In December 2008, the USFS entered into an MOU with the USFWS that further clarified the responsibility of the USFS to protect migratory birds (USDA and USDI 2008). In the 2008 MOU, the USFS agreed to consider the most up-to-date USFWS list of Birds of Conservation Concern when developing or amending land management plans, and to evaluate the effects of agency actions on migratory birds within the NEPA process, focusing first on species of management concern along with their priority habitat and key risk factors. When negotiating the 2008 MOU, both the USFWS and USFS focused on bird populations and effects at that level, not at the individual level.

Because raptors are protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act, and because they are particularly sensitive to disturbance during the breeding season, raptors are afforded further protection. The USFWS Wyoming Ecological Service Field Office recommends seasonal and spatial buffers for raptors, as well as recommended steps for addressing

raptors in project planning[10].

Resource Management Objectives

1. Park County recognizes the diversity of its wildlife populations, including threatened, endangered, and sensitive species which are part of the uniqueness of Park County. The County encourages land managers to balance current and existing land uses with species management.

Priorities

1. Encourage the responsible and selective use of pesticides on all lands within the County.
2. Recommend that any recovery plan, habitat management plan, critical habitat designation, or any other plan for wildlife or threatened or endangered species adequately considers local existing and anticipated future water uses, land uses, and local economic and individual needs.
3. Request involvement in the review of federal actions (ESA listings, delisting, and management plans) regarding species within the County, including discussions and decisions regarding any proposed reintroduction or introduction of experimental populations of listed species.
4. Support the use of credible data in agency decision making regarding species of conservation concern. Single-species management in all planning efforts will be avoided.
5. Encourage local working groups to develop management plans that use the best available science for species at risk.
6. Support the development and adoption of local collaborative solutions to prevent a species from being listed as endangered or threatened under the ESA or to keep a species from being listed as a sensitive species or SOC.
7. Listen to landowner needs and support cooperation between private landowners and federal agencies pertaining to managing threatened or endangered species.
8. Oppose the reintroduction of listed species into the County where it is not in the best interest of Park County and support the prompt delisting of a species when current science indicates that population or recovery plan objectives have been met.

Wildlife

Resource Assessment

Big Game and Trophy Game

Hunting is not permitted within Yellowstone National Park, but ample hunting opportunities exist throughout the remainder of Park County. Big game species available to hunt include elk, pronghorn, mule deer, white-tailed deer, moose, bighorn sheep, and rocky mountain goat (Table 5). Trophy game species in Park County include black bear, mountain lion, and gray wolf. Wild bison are also hunted in specified areas. These hunting opportunities bring significant revenue into the local economy and provide livelihoods and recreation to both tourists and residents. Published in 2015, Park County Related Hunting and Fishing Spending (Taylor 2016) details seasonal and crucial habitat by species within Park County. Seasonal habitat reflects land that may be used by the animal during any given part

[10] https://www.fws.gov/wyominges/Species/Raptors.php

of the year in order to fulfill specific life cycle requirements and generally reflects the estimated range of the species. Crucial habitat are lands that have characteristics that are the determining factor in a population's ability to maintain itself at a certain level long term (Wyoming Game and Fish Department 2015). These population levels typically reflect WGFD population objectives. Yearlong habitats are lands where animals make general use of the area on a year-round basis (Wyoming Game and Fish Department 2015). Refer to Map 15 (Pronghorn), Map 16 (Elk), Map 17 (Mule Deer), Map 18 (White-tailed Deer), Map 19 (Moose), Map 20 (Bighorn Sheep), and Map 21 (Rocky Mountain Goat) in Appendix B showing big game habitat within Park County.

Table 5 Big game habitat acreage in Park County, WY

Species	Habitat Type	Acres
Pronghorn	Crucial Winter/Yearlong	26,897
	Winter/Yearlong	199,728
	Spring/Summer/Fall	197,298
	Yearlong	1,002,869
	Non-habitat	3,028,901
	Total Pronghorn Habitat	**1,426,793**
Elk	Crucial Winter/Yearlong	708,596
	Winter/Yearlong	227,662
	Spring/Summer/Fall	1,179,244
	Yearlong	69,795
	Non-habitat	2,270,396
	Total Elk Habitat	**2,185,297**
Mule deer	Crucial Winter	3,755
	Crucial Winter/Yearlong	511,786
	Winter/Yearlong	377,332
	Spring/Summer/Fall	1,749,107
	Yearlong	857,120
	Non-habitat	956,599
	Total Mule Deer Habitat	**3,499,100**
White-tailed deer	Yearlong	336,336
	Non-habitat	4,119,109
	Total White-tailed Deer Habitat	**336,336**
Moose	Crucial Winter & Crucial Winter/Yearlong	54,247
	Winter & Winter/Yearlong	142,138
	Spring/Summer/Fall	506,344
	Yearlong	1,233,412
	Non-habitat	2,418,732
	Undetermined	100,573
	Total Moose Habitat	**1,936,140**
Bighorn sheep	Crucial Winter/Yearlong	635,581
	Winter/Yearlong	205,290
	Spring/Summer/Fall	80,856
	Yearlong	574,340
	Non-habitat	2,959,627
	Total Bighorn Sheep Habitat	**1,496,066**
Rocky Mountain goat	Crucial Winter/Yearlong	41,347
	Spring/Summer/Fall	119,313
	Undetermined	412,145
	Non-habitat	3,882,889
	Total Rocky Mountain Goat Habitat	**572,804**
Wild bison	Data Unavailable	Data Unavailable

Migration Corridors

The migration corridors and stopover areas of Wyoming's eight ungulate (hoofed mammal) species are vital to maintaining big game populations. The WGFD issued a Ungulate Migration Corridor Strategy which outlines the goals and objectives for managing ungulate migration (Wyoming Game and Fish Department 2019). The strategy ultimately guides the WGFD to: 1) update the Wyoming Game and Fish Commission's mitigation policy, 2) designate ungulate migration corridors, 3) conduct risk assessments, research, and proactive actions to conserve migration corridors, and 4) provide input on federal surface projects and planning efforts. While there are no currently available published migration corridor data, WGFD is expected to develop such in the next three to five years. This data will help better guide County management decisions.

Resource Management Objectives

1. Park County supports management that ensures healthy habitat and wildlife populations for future generations.

Priorities

1. Support working collaboratively with the WGFD to reduce conflicts between private lands, transportation systems, and wildlife.
2. Support federal and state agencies in their efforts to manage invasive plant species in relation to wildlife habitat.
3. Encourage agencies to balance wildlife needs with human recreation, access, and uses (see Land Access objectives and priorities) to understand the full measure of impacts and to determine if other mitigation would be more effective.
4. Work with federal and state agencies where federal resources are committed for wildlife management actions; for the development of management plans and population objectives; or for other decisions that may affect the economic stability of Park County.
5. Work with federal and state agencies to identify potential locations and opportunities to improve wildlife crossings through overpasses, underpasses, or other measures.
6. Encourage the use of wildlife-friendly fencing, where appropriate, in order to maintain wildlife movement and reduce injury or death.
7. Encourage the State to take all measures to research, manage, and control Chronic Wasting Disease to ensure the viability of wildlife populations into the future.

Predator Control

Resource Assessment

As defined in Wyoming Statute § 23-1-101, predatory animals are: coyote, jackrabbit, porcupine, raccoon, red fox, skunk, and stray cats. If gray wolves are ever removed from the list of experimental nonessential population, endangered species, or threatened species in Wyoming as provided by Wyoming Statute § 23-1-108, the gray wolf would also be classified as a predatory animal in areas where the state of Wyoming has jurisdiction for wildlife management; but not where the gray wolf is designated as a trophy game animal or repealed by specified laws. Predacious birds in Wyoming include the English sparrow and starling. Further details regarding predatory animal and gray wolf regulations

for the state of Wyoming, along with county responsibilities, are present within Wyoming Statute Title 23 (Wyoming Game & Fish Department 2017).

Resource Management Objectives

1. Park County supports the control of predatory animals to reduce property damage and to protect wildlife, the agriculture community, and the local economy.

Priorities

1. Support predator control strategies that consider the best available science, economic considerations, pragmatic logistics of the livestock industry, landowners, and wildlife objectives.
2. Support efforts by the Wyoming Department of Agriculture, the WGFD, and other wildlife management agencies to reduce predation on domestic livestock and wildlife. Park County supports private property owner rights to protect their property and livestock from predation.

Wild Horses and Burros

Resource Assessment

Fossil history clearly documents that equid species developed in North America along with grasslands during the Eocene Epoch. Thousands of complete, fossilized skeletons of the first equid, Eohippus, along with subsequent species, have been found in the Wind River basin of Wyoming (USFS 2021c). In the late Pleistocene (approximately 10,000 years ago), extinction events wiped out most of the large mammals in the Americas, including all equid species (USFS 2021c). At the end of the 15th century, the exploration of the Spanish brought horses back to the Americas. There are varying perceptions that lead Park County to categorize these horses as feral. Park County defines feral as domesticated animals that have been reintroduced to the wild. Most wild/feral horses and burros living today are descendants of animals that were released or escaped from Spanish explorers, ranchers, miners, the United States Cavalry, and Native Americans (USFS 2021c).

In 1971, Congress enacted the Wild Free-Roaming Horse and Burro Act, which guides the management, protection, and control of wild horses and burros on federal lands managed by the USFS and BLM. Herd Management Areas (HMAs) were established in 10 Western states based on the existing populations during the passing of the Act in 1971. This Act also mandates that wild/feral horses and burros are managed in a thriving ecological balance with the land and as part of the natural landscape (USFS 2021c).

Wild/feral horses contribute to the history, culture, and custom of Park County, but can also be a strain on public lands. To ensure wild/feral horse and burro populations remain in good condition and that federal lands are protected from degradation, the growth of wild/feral horse and burro herds must be actively managed. Park County values local wild/feral horse management activities that are currently pursued by Friends of a Legacy (FOAL) for the McCollough Peaks HMA; however, Park County is not supportive, generally, of the management tactics utilized by the federal government in other HMAs. Wild/feral horses and burros have few natural predators and, if not managed, can increase herd populations at a rate of up to 20 percent annually, doubling herd size in 4 to 5 years (BLM 2021b). Population control is necessary to protect fragile ecosystems, balance shared use of resources by wildlife, maintain herd health, and protect herds from starvation. Herd growth is managed through the application of fertility measures, such as birth control, and through periodic removals of excess animals

and the placement of those animals into private care through adoptions.

Several additional acts and amendments have provided further guidance on the management of wild/feral horse and burros, including the Public Rangeland Improvement Act of 1978, which called for the inventory and management of populations at Appropriate Management Levels (AML) within each HMA (Danvir 2018). There are two HMAs present within Park County; the McCullough Peaks HMA and the Fifteenmile HMA which contain only wild/feral horses. These HMAs and accompanying wild/feral horses are managed by the BLM. See Table 6 for the AMLs assigned to each HMA. Wild/feral horses from the McCullough Peaks HMA are known for their good health and striking coat colors and patterns, drawing potential adopters to the region. Refer to Map 22 in Appendix B for a map of HMAs within Park County.

Table 6 Herd management areas in Park County, WY

HMA	Acres	AML
McCullough Peaks HMA	120,000	70-140
Fifteenmile HMA	26,869	100-230

Resource Management Objectives

1. Park County considers wild horses and burros to be feral animals and encourages aggressive wild horse and burro management that will not adversely impact rangeland resources, livestock or grazing, wildlife habitat or resources, soil resources, or other varied land uses.

Priorities

1. Oppose the introduction or reintroduction of wild/feral horses or burros on federal and state lands within the County.
2. Support herd management plans that prevent habitat degradation and native wildlife displacement, using all available agency tools.
3. Oppose any establishment, enlargement, or expansion of wild/feral horse and burro HMAs and Herd Areas and be involved in discussions regarding any proposed enlargement or expansion of such boundaries or areas.
4. Encourage public education programs that inform the public at large about domestic livestock, wild/feral horse and burros, wildlife management needs, and balancing the impacts and the needs to maintain healthy ecosystems.

Aquatic Invasive Species

Resource Assessment

Aquatic Invasive Species (AIS) pose a significant threat to waterways throughout Park County given their ability to disrupt natural ecological processes within the ecosystem they invade. Threats associated with AIS include extirpation of native fishes, infrastructure damage, and widespread ecological degradation. With Wyoming being home to the headwaters of four major river basins, potential impacts of established AIS could be catastrophic, affecting much of the nation downstream. The WGFD prepared a Wyoming AIS Plan in 2010 that classified 13 AIS and outlined management objectives, priorities, and implementation to prevent and treat the issue of AIS (Wyoming Game and Fish Department 2010). The

AIS Plan also assigns a priority class to each AIS (1-4). As of 2019, five of 13 classified AIS were present in Wyoming; New Zealand mudsnail, Asian clam, rusty crayfish, brook stickleback, and curly pondweed. There are three of these AIS known to exist within Park County's waterways (Wyoming Game & Fish Department 2020). Table 7 shows highlighted SOC and known occurrences of AIS in Park County. The State of Wyoming has regulations in place to minimize the spread of AIS and associated negative impacts to wildlife, infrastructure, water supply, recreation, agriculture, and other commercial activities throughout Wyoming and adjacent states (Wyoming Game & Fish Department 2021).

Table 7 Aquatic invasive species of concern in Park County, WY

Species	Priority Class *	Affected Waterways (Park County)
Zebra/Quagga mussel	1	None known
Asian carp	1	None known
Rusty crayfish	1	None known
Asian clam	2	None known
Curly pondweed	N/A	Shoshone River East Newton Lake West Newton Lake Deaver Reservoir
New Zealand mudsnail	2	Shoshone River
Brook stickleback	4	Polecat Creek
Whirling disease	2	None known
Snakehead	N/A	None known

* Priority Class 1 species are those not known to be present in Wyoming, but that have a high potential to invade. Management for these species will focus on prevention of introductions and containment of new populations. Priority Class 2 species are present in Wyoming and have the potential to spread. Management of these species will focus on prevention of spread to other waters through increased public awareness, and control of population size and eradication when economically and ecologically effective. Priority Class 3 species are those not known to be present in Wyoming, have a high potential to invade, but some management techniques are available for these species. Management for these species will include prevention of introductions and eradication of new populations. Priority Class 4 species are present in Wyoming and have the potential to spread, but some management techniques are available for these species. Management for these species will include prevention of spread and eradication of existing populations where feasible.

Resource Management Objectives

1. Park County supports aggressive prevention and management measures of AIS on all waters in Park County.

Priorities

1. Support cooperative efforts with federal, state, and private land managers to enhance cooperative AIS management efforts county-wide.

Chapter 6: Socioeconomics

Economic Considerations

Resource Assessment

Demographics and Environmental Justice

Federal and state lands and their amenities can be considered an economic asset, contributing to economic growth by supporting renewable and non-renewable industries and creating a setting that attracts and retains people and businesses. Long-term, steady growth of population, employment and income is generally an indication of a stable, prosperous economy. From 1970 to 2018, Park County's population grew from 17,805 to 29,324 people, a 65 percent increase. The majority of that population growth from 1990 to 2018 was due to migration (73 percent) rather than natural change from births and deaths. In addition, full- and part-time jobs increased 147 percent between 1970 and 2018. Service industry related jobs showed the greatest increase since 1970 comprising 74.7 percent of non-government employment in 2018. Specifically, when comparing all service industry related jobs, employment in the real estate, rentals, accommodation, and food service subsectors showed the greatest increase.

Government employment within Park County has been a consistent and steady source, with total employment growing from 18 percent to 25 percent between 1970 and 2018. This is reflective of the influence of Yellowstone National Park and the amount of federal and state lands present within the County. Government employment has been stable during recession years and has provided a source of stability to the local economy.

Like population and employment, income has displayed similar growth trends. From 1970 to 2018, labor earnings grew from $333.5 million to $780.6 million (in real terms), a 134 percent increase. In addition, non-labor income increased significantly, 578 percent, in the same time frame. While total labor and non-labor income has grown steadily in Park County over the past 50 years, it is also important to consider average earnings per job in order have a better idea of the quality of local employment. From 1970 to 2018, average earnings per job only grew by 3 percent from $41,409 to $42,799 (in real terms). In fact, average earnings per job in Park County for 2014 ($38,305) were 23 percent below the Wyoming average earnings per job ($49,701) and 28 percent below the United States average earnings per job ($53,247) in that same timeframe. This indicates a continuing problem of relatively low paying jobs in the County.

While population, employment, and income have grown in Park County over the last 50 years, it is important to consider whether or not these trends truly indicate economic growth in Park County. Dramatic increases in non-labor income, in particular investment income and age-related transfer payments, are often associated with influxes of retirees and second-home buyers. Because retirees are not tied to a place for work, they are relatively mobile and able to choose where they live based on non-employment type factors. Counties with federal and state lands and associated recreation and visual amenities can help attract and retain retirees. While retirees do support economic growth in an area, the presence of retirees and people with investment income can distort the image that high income figures depict.

Additionally, growth in employment related to service occupations can be characteristic of growth

associated with recreation and tourism. Services that support these industries often pay relatively low wages and many jobs are seasonal and/or part time. Increases in low wage and part-time/seasonal jobs can lead to income stratification even as overall population, employment, and income trends indicate economic growth. Non-service industries related to mining (including fluid minerals) and construction tend to be more temporary and seasonal forms of employment, but with higher wages. In addition, both the service and non-service industries can result in influxes of temporary populations to support the cyclic fluctuations or boom-and-bust cycles that occur with tourist visitation or building or mining booms. Populations that are employed in these types of industries are also typically minority populations and can fall within lower income brackets. When making county-wide project decisions, disproportionate effects to minority and low-income populations could occur and can be prevalent in areas with high income stratification.

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,* directs federal agencies to identify and address the disproportionately high and adverse human health or environmental effects of their actions on minority and low-income populations, to the greatest extent practicable and permitted by law. The order also directs each agency to develop a strategy for implementing environmental justice. The order is also intended to promote nondiscrimination in federal programs that affect human health and the environment, as well as provide minority and low-income communities access to public information and public participation.

In 2017, the Tax Cuts and Jobs Act was passed expanding "Opportunity Zones", giving individuals and businesses preferential tax treatment for investing in communities going through economic distress (IRS 2021). Park County has one Opportunity Zone, located in Cody (Map 23 in Appendix B). Opportunity Zones differ from existing programs that provide tax incentives for community and economic development because of less complex rules and regulations, their eligibility period, and their flexibility. To attract investment in low-income and undercapitalized communities, tax benefits are available to corporations and individuals that invest capital in Opportunity Zones. These benefits defer or reduce taxes on capital gains and favor long-term investment. Once selected, Opportunity Zones keep the designation for 10 years. Capital for eligible projects is directed to Opportunity Funds, which are organized as partnerships or corporations and certified by the United States Treasury. There is no limit to the number of Opportunity Funds that can be established, and they can be created to invest in a single project or multiple projects. Unless stated otherwise, all socioeconomic data presented in the above section is from Headwaters Economics (2020).

Industries Reliant on Public Land

Three defining industries characterize Park County while influencing its economy: recreation/tourism, agriculture, and mineral extraction. These industries are natural resource-based and are heavily dependent on federal and state lands for viability. The recreation/tourism industry is a specifically important part of land use planning because of its extensive amount of federal and state land use. While the agricultural industry accounts for a relatively minor portion of economic activity, the sector is relatively stable and will continue to have an impact on Park County economics. Mineral extraction (including fossil fuels) has had greater variability with significant changes in mineral extraction related jobs year to year. However, County revenue from property taxes is greatly impacted by this industry. Figure 5 displays the trends of employment (number of jobs) of Park County's defining private industries that rely on federal and state land.

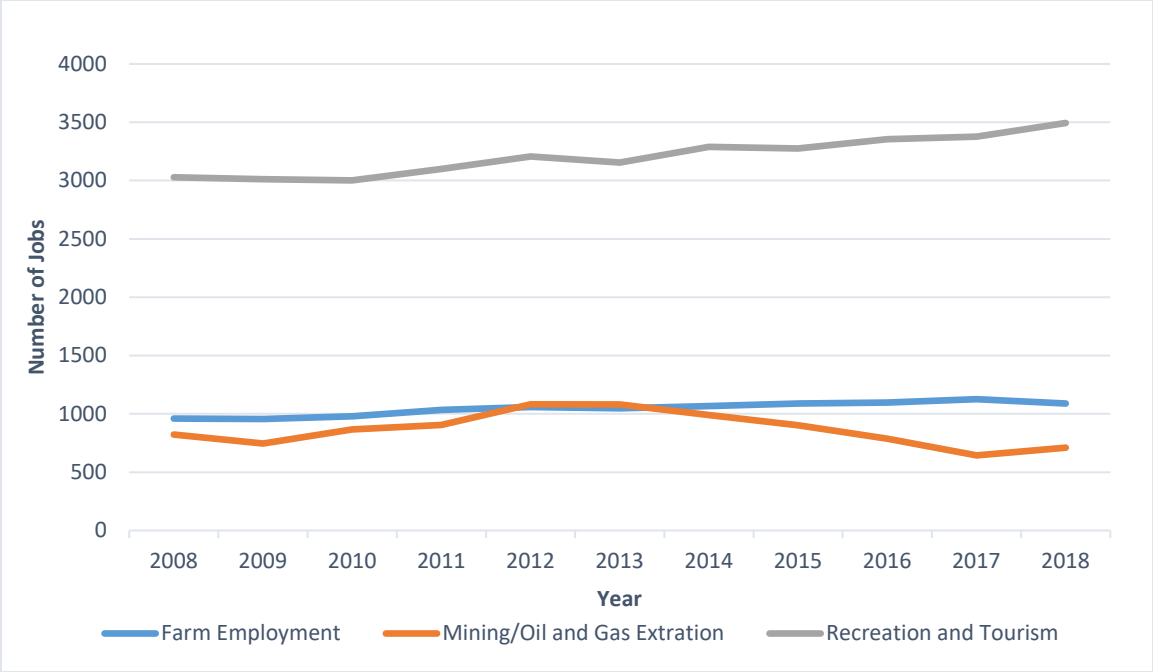


Figure 5 Total full and part-time employment in public land reliant industries in Park County (2008–2018) (U.S. Department of Commerce 2019)

Agriculture

Since the mid-1800s, the vast open rangelands of Wyoming have been pivotal for livestock production within the state, and Wyoming has also been important in producing meat and fiber for markets across the United States. As irrigation techniques evolved, the Bighorn Basin's climate was recognized as suitable for a variety of crops, and lowlands, usually along waterways, were turned into cropland. Currently, agriculture provides a consistent economic base for local economies including County revenues to provide public services. In 2017, there were 1,008 agricultural operations in Park County, with an average size of 923 acres. The market value of agricultural products sold in the County were over $85 million according to the 2017 Census of Agriculture (USDA 2019).

In 2017, the County ranked 18th out of 23 counties in Wyoming in terms of cattle and calf inventory, and 13th out of 23 counties in terms of sheep and lamb inventory. It also ranked first in barley and sugar beet production, and fifth for forage (all hay and haylage, grass silage, and greenchop) production (USDA 2019). The agriculture industry in Park County ranked 17th out of 21 sectors in the County's economy in terms of total employment and 17th out of 21 sectors in terms of total labor earnings. In 2019, irrigated land and non-irrigated agricultural land valuations totaled $21.3 million (Wyoming Department of Revenue 2019).

In addition to jobs and revenue, agriculture provides important natural resource services such as open space and increased water sources. Open space offers landscapes, lifestyles, and wildlife habitat that can have immeasurable value to both residents and visitors. Open space is particularly important because it determines the character of the landscapes surrounding a community. Increased water sources benefit wildlife and their distribution across the landscape.

Recreation and Tourism

In 2017, visitors spent $418.2 million while in Park County and generated 4,410 direct jobs. There was a

4.2 percent increase in spending and a 2.9 percent increase in employment between 2007 and 2017, compared to state averages of 3.4 percent and 0.6 percent, respectively. In addition, local and state tax revenue in the County increased by 8.2 percent with the state average increasing 6.2 percent. Employment generated by tourism is an impressive 20.3 percent of total employment, second only to Teton County (26.6 percent) with a state average of 8 percent (Wyoming Office of Tourism 2018).

As with Shoshone National Forest and Bridger-Teton National Forest, Park County's proximity to Yellowstone National Park has stimulated the local economy since the park was created in 1872. Largely, tourism and outdoor recreation comprise the bulk of employment and businesses within the County. As with agriculture, mining, and manufacturing, the travel industry is also considered an export-oriented industry since goods and services are sold to visitors, rather than residents. The travel industry injects money into the local economy, as do the exports of other industries.

National parks and national forests experience seasonal surges in tourism. The economic linkages between national parks and forests and their surrounding communities have become increasingly important in recent years. NPS and USFS lands contribute to the economies of surrounding communities by attracting recreation visitors who, as part of their trip, spend money in communities on the periphery.

Most recreation and tourism opportunities occur on public land but draw on County resources and infrastructure to provide support for that experience. Since public land is not taxed, the County relies on programs like the Payments in Lieu of Taxes (PILT) program to provide infrastructure, and public services. As a Park County resident stated in the anonymous public survey:

> Park County receives significant revenue from the Federal Government every year through [PILT] to help offset lost revenue typically associated with private taxable property. In addition, diversity, quality, and access to public lands draws people to the area which supports our tourism industry. We all benefit from this. This is why many people live in Park County (access to vast stretches of public land) and incredible natural resources. (Appendix C)

Oil/Gas/Mining

As a major energy resource producer, the state of Wyoming is significantly affected by the fluctuations in the national energy market, and the historic cycles of boom and bust in the oil/gas/coal industries are familiar to Wyoming residents. Similarly, employment in the oil and gas industries in Park County has had great variability over the past 20 years with significant changes seen year to year. In 1998, there were 427 jobs in the oil and gas extraction sector, this number fluctuated and rose to over 550 jobs in 2007 and continued to fluctuate all the way down to 173 jobs by 2017. The mining industry supported (1,057 jobs) 5 percent of total employment and 7 percent of total labor earnings ($65.0 million) in Park County during 2014 (Headwaters Economics 2020). Since then, employment has dropped and will likely continue to fluctuate.

Despite these fluctuations, Park County's mining industry, including the associated industrial property, had an assessed valuation of $496.6 million in 2015 based on 2014 production (Headwaters Economics 2020). This valuation represented 57 percent of the total assessed valuation for the County. In 2014, the County produced 9.6 million mcf (thousand cubic feet) of natural gas and 6.7 million barrels of crude oil from 2,532 wells. Park County receives a significant portion of its revenue from oil and gas industry property taxes which generated $34.9 million in 2015. Of this total, 63 percent went to K-12 schools

($21.9 million), 17 percent went to local county government ($6.0 million), 13 percent went to county special districts ($4.5 million), and seven percent went to the Community College ($2.5 million) (Headwaters Economics 2020). Park County also produces sand, gravel, and gypsum but these industries remain small in the County.

Resource Management Objectives

1. Park County will balance quality of life with traditional economies and potential future growth, while ensuring a stable and diverse economy with equal job and financial opportunities for County residents to encourage a diverse demographic.
2. Park County recognizes the importance of varied uses of federal and state lands as an important factor in maintaining a strong tax base and appreciation, both economic and aesthetic, of cultural and natural resources and these lands within the County.

Priorities

1. Support the local community's custom, culture, and economic well-being and growth, by promoting and seeking out sustainable economic industries and uses of federal and state lands.
2. Support the oil and gas industry and workers in the responsible management of these resources. Support the reclamation and restoration of former industrial and developed sites on federal and state lands.
3. Provide ways of attracting responsibly managed industries and businesses.
4. Explore ways of retaining existing businesses, farms, and ranches as part of a diverse economy.
5. Encourage education on conservation easements and other private property tools that could help farmers and ranchers retain their land.
6. Support stakeholders in the pursuit of utilizing agriculture byproducts.
7. Evaluate, mitigate, and minimize impacts to custom and culture and the economic stability of the County by any proposed change in land use or management. Federal land management agencies must work in chorus with Park County to accurately provide socioeconomic impact analysis and provide socioeconomic impact mitigation or compensation when a negative impact is unavoidable.

Law Enforcement

Resource Assessment

The United States Constitution is the supreme law of the land (Article VI, U.S. Constitution); however, those laws that are not held by the federal government are retained by the states (Amendment X, U.S. Constitution). Under the authority of the Wyoming State Constitution, the sheriff has jurisdiction to protect the health, safety, and general welfare of its citizenry.

Federal government retains authority over federal lands pursuant to Article 1 Section 8 and Article 4 Section 3 of the United States Constitution. Aside from lands reserved for exclusive federal jurisdiction (i.e., Yellowstone National Park), the State of Wyoming retains its state jurisdiction on those federal lands.

Generally speaking, federal laws or regulations pertaining to federal land are restricted to those prohibitions which affect federal land or have a nexus. Violations or crimes affecting people or private property when there is no federal nexus are not prohibited by federal law. That authority to enforce those crimes generally remains with the State.

FLPMA provides a means for federal agencies to work with local law enforcement authorities to assure law enforcement protections have no gaps. The pertinent language follows: "The Secretary may authorize Federal personnel or appropriate local officials to carry out his law enforcement responsibilities with respect to the public land and their resources."

The search and rescue program for Park County is conducted through the Park County Sheriff's Department. In addition, the Park County has a Homeland Security Coordinator on staff to assist with the coordination of local and state resources and liaison for federal resource needs.

Law enforcement communications equipment and radio towers, vital to law enforcement and search and rescue operations are often located on public land. Communication facilities on public land are important for public and law enforcement safety and welfare.

Resource Management Objectives

1. Park County supports cooperation between and among federal, state, and county authorities for uninterrupted communications, necessary access, expedited emergency response, and unimpeded law enforcement protection of County resources, residents, and visitors.

Priorities

1. Through the Park County Sheriff's Office, coordinate all federal and state law enforcement actions within the County.
2. Promote federal agency recognition of the County Sheriff as the primary law enforcement official in the County.
3. Require the Park County Sheriff's Office to be notified immediately when there is a life-threatening situation, criminal act, project structure failure, resource contamination, natural phenomenon (landslide, flood, and fire), and/or cultural resource site disturbance on public lands.
4. Federal and state land management agencies will identify and make available sites for the strategic location of communications towers to aid in law enforcement activities.

Chapter 7: Agriculture

Livestock and Grazing

Resource Assessment

Livestock and grazing are of large economic and cultural significance in Park County with many ranches still under the control of multigenerational families. With the passage of the Taylor Grazing Act in 1934, millions of public land acres across the West were transferred to the control of the DOI in attempt to end conflicts between ranchers and improve rangeland health (BLM 2021a). As appreciation of public lands grew over the next 40 years and expectations of their management changed, multiple federal acts (e.g. NEPA, ESA, FLPMA, and MUSYA) placed additional regulations on BLM and USFS livestock grazing throughout the West (BLM 2021a).

Cattle operations are the most common form of livestock operations in Park County, with 335 farms dedicated to cow-calf operations and 288 farms dedicated to beef cow operations in 2017 (USDA 2017). County-wide, BLM and USFS grazing allotments total approximately 1,170,885 acres and 555,206 acres, respectively (Map 24 in Appendix B). Note that while USFS grazing allotments within Park County generally remain within USFS-administered lands, BLM grazing allotments periodically extend into private, state, BOR, and County lands.

Because grazing allotments are designated according to the federal agency boundaries and not the boundary of Park County, specific Animal Units and Animal Unit Months (AUM) cannot easily be tabulated for the County. There are 86,618 AUMs on BLM allotments and approximately 42,000 AUMs on USFS allotments that intersect Park County. Changes in AUMs and grazing practices are typically implemented on a case-by-case basis in order to accommodate for seasonal conditions (e.g., drought or fire), available resources, or needs of federal agency or individual permittees. Park County supports opportunities for enhancement of land stewardship based on objective scientific data.

Resource Management Objectives

1. Park County supports responsible agriculture businesses, livestock grazing, and rangeland management for sustained and continued preservation of open space, habitat, working landscapes, historic customs, and economic viability.

Priorities

1. Encourage development of federal and state land use and management plans that contain a thorough evaluation of agriculture, incorporating standards and objectives that sustain agricultural interests, where appropriate.
2. Support fencing strategies that enhance the ability of permittees and other agricultural interests to keep their operations financially viable, and reduce or otherwise mitigate risks to the health, safety, and general welfare of wildlife and the public.
3. Park County seeks to be consulted or a CA in any discussions that modify existing grazing allotments, AUMs, or allotment management plans on state and federal lands.
4. Support a permit renewal process that considers active and adaptive management actions and practices proposed by the permittee that manage forage and vegetation to benefit the

ecological site as a whole or address a specific vegetation management objective.

5. Support the development and use of new technologies, monitoring techniques, and range management practices in federal grazing authorizations, and request that all options be considered before making permanent reductions in authorized stocking rates.
6. Support the use of current site-specific soils and ecological site data, as developed by NRCS, to create appropriate objectives for livestock management.
7. Support grazing rest prescriptions related to wildfires or prescribed burns that will be determined on a site-specific basis and be dependent on post-fire monitoring. Post-fire grazing will not be limited when post-fire monitoring and subsequent evaluation produces relevant data that demonstrates that grazing will not unduly harm the long-term sustainability.
8. Encourage the improvement or development of range improvements.
9. Support the review and incorporation of monitoring or baseline data, collected by a permittee or qualified team, for use in management decisions by federal agencies.

Noxious Weeds and Invasive Species

Resource Assessment

Plants and animals that are determined to be noxious in Wyoming are identified on the State Designated Weed and Pest List (Wyoming Department of Agriculture 2020). The 2018 Wyoming State Noxious Weed and Pest List includes 30 plants and six animals or insects. Since 2016, four plant species have been added to the noxious weed list. Noxious species are plants and animals that are considered detrimental to the health or welfare of Wyoming due to their ability to:

- Aggressively invade native plant communities and/or agricultural crops
- Be injurious or poisonous to livestock
- Carry disease or parasites
- Negatively impact management (ecological and/or economical) of agricultural systems and/or natural ecosystems

Wyoming Statute § 11-5-105(a)(i) directs that “The district board shall: Implement and pursue an effective program for the control of designated weeds and pests.”

Additionally, each county may consider plants or animals as noxious within their county. These species are recognized by the Wyoming Board of Agriculture and the Wyoming Weed and Pest Council as “declared” weeds and pests within that county only. Wyoming Statute § 11-5-102(a)(vii) defines declared weeds and pests as “…[any plant, animal, or insect that] the board and the Wyoming weed and pest council have found, either by virtue of its direct effect, or as a carrier of disease or parasites, to be detrimental to the general welfare of persons residing within a district”. The Park County Declared Weed and Pest List was amended in April 2019 and contains 15 plants and one insect (Wyoming Weed and Pest Council 2019).

Some invasive SOC to Park County include but are not limited to: leafy spurge, spotted knapweed, houndstongue, oxeye daisy, perennial pepperweed, Dalmatian toadflax, Russian olive, common tansy, Sulphur cinquefoil, saltcedar, and the emerald ash borer.

Leafy spurge (*Euphorbia esula)* is an aggressive, non-native, persistent, deep-rooted perennial, growing to a height of three feet, with small yellow flowers and bright, yellow-green bracts. It spreads via extensive, deep (30-foot) roots and seeds. Once established, leafy spurge causes significant ecological damage by crowding out native and desirable plant species. It reduces rangeland productivity and plant diversity, degrading wildlife habitat, displacing sensitive species, and drastically reducing land values. All parts of the plant contain a milky latex that contains a toxic substance (ingenol) that may cause blisters and other skin irritations and vomiting in many animal species, including wildlife, and humans.

Photo 8 Leafy spurge (Euphorbia esula)

Photo 9 Spotted knapweed (Centaurea stoebe)

Spotted knapweed (*Centaurea stoebe*) is a short-lived perennial, reproducing only from seeds that can remain viable for seven-plus years. Spotted knapweed grows upright and branched with single flowers at the tip of each stem. Flowers are pink-purple with black tipped bracts under flower heads, hence the name "spotted". Lower leaves are deeply lobed. It can grow to four feet or more. Plants release a toxin that inhibits the growth of more desirable species (allelopathic). A prolific seed-producer, spotted knapweed can quickly outcompete native species, reduce plant diversity, and degrade wildlife habitat.

Houndstongue (*Cynoglossum officinale)* is a biennial tap-rooted species that can produce from several hundred to thousands of Velcro-like seeds. Plants grow to four feet the second year and have red-purple flowers that are clustered on the ends of the upper stems. Plant parts are hairy. Leaves are velvety to touch with basal leaves broad and lance-shaped, resembling the shape of a dog's tongue. Due to the high rate of seed dispersal, it is the fastest spreading species in Park County. This plant is typically found on disturbed sites, trails, roadsides, logging areas, abandoned cropland, rangelands, pastures, riparian areas, and borders of wooded areas. Houndstongue contains pyrrolizidine alkaloids that stop the reproduction of liver cells and is toxic to cattle, horses, goats, and other livestock. While it is typically avoided by grazers when alive, dead plants are easily consumed in hay and maintain the toxic component. Plants can also cause dermatitis in humans. Once established, houndstongue quickly forms dense monocultures.

Photo 10 Houndstongue (Cynoglossum officinale)

Photo 11 Oxeye daisy (Leucanthemum vulgare)

Oxeye daisy (*Leucanthemum vulgare)* is a non-native perennial plant with a creeping root system. Plants grow to three feet in height, with single flower heads. Ray flowers are white with yellow disk flowers in the center. Basal leaves are spoon-shaped and have lobed margins. Leaves get progressively narrower and smaller as they move up the stem. This plant is not grazed by livestock or wildlife due to a disagreeable odor and taste, which allow it to aggressively invade native grasslands and displace valuable forage. It aggressively invades fields where it forms dense populations and decreases plant species diversity.

Perennial pepperweed (*Lepidium latifolium)* is a creeping perennial that can spread via roots or seed. Plants can reach four feet in height with small, white, 4-petaled flowers in dense clusters near the top of the plant. Leaves are alternate, lance-shaped, and waxy with smooth to toothed margins. These leaves decrease in size from the base to apex of plant. Perennial pepperweed is an invader of riparian areas, ditches, roadsides, dry habitats, pastures, and disturbed areas. It is difficult to control once established. Accumulations of its semi-woody stems degrade nesting habitat for wildlife. Additionally, it can displace more desirable species and poses a particular threat to natural areas and hay meadows.

Photo 12 Perennial pepperweed (Lepidium latifolium)

Photo 13 Dalmatian toadflax (Linaria dalmatica)

Dalmatian toadflax (*Linaria dalmatica)* is an aggressive introduced species that spreads by roots and seed. Each mature plant can produce 500,000 seeds. These plants reach three feet in height and have multiple stems ablaze with yellow flowers resembling snapdragons from early June through fall. Leaves are oval to heart-shaped and clasp the upper stem. Leaves are waxy, with blue-green color. Dalmatian toadflax has both taproots and horizontally creeping stems (called rhizomes), which produce new plants. Dalmatian toadflax infestations reduce available forage and productivity for cattle and wildlife, and is found on roadsides, pastures, rangeland, forests, waste areas, southern and southeastern facing slopes, and meadows—almost anywhere in elevations from 5,000 feet to over 10,000 feet. It is an aggressive competitor of native species.

Photo 14 Russian olive (Elaeagnus angustifolia)

Russian olive (*Elaeagnus angustifolia*) is an aggressive invader of riparian areas. This deciduous tree or long-lived, multi-stemmed shrub grows to 30 feet in height. Branches are covered in 1- to 2-inch thorns. Alternate leaves are light green above and silvery below. Small, clustered yellow flowers give way to olive-like, yellowish to red-brown fruits. These plants spread via seeds and roots. This species quickly displaces native vegetation and creates monocultures, decreasing diversity of species needed by native wildlife.

Common tansy (*Tanacetum vulgare)* is a non-native aromatic perennial species that spreads via a creeping root system and seed. Plants grow to over four feet in height. These plants have yellow, button-like flowers in dense clusters. Leaves are pinnately lobed, divided almost to the center into about seven pairs of segments, or lobes. Their lobes are again divided into smaller lobes having saw-toothed edges, giving the leaf a somewhat fernlike appearance. The leaves and flowers are toxic if consumed in large quantities; the volatile oil contains toxic compounds including thujone, which can cause convulsions and liver and brain damage. In addition, hand pulling of common tansy has been reported to cause illness, suggesting toxins may be absorbed through unprotected skin. It can form dense cover and degrade pastures, impeding revegetation efforts and outcompeting native plants.

Photo 15 Common tansy (Tanacetum vulgare)

Photo 16 Sulphur cinquefoil (Potentilla recta)

Sulphur cinquefoil (*Potentilla recta*) is an introduced perennial forb that flowers in the late spring and summer and is found in meadows, grasslands, and pastures. It spreads by seeds. It is unpalatable to most livestock and wildlife species due to high tannin content. Sulphur cinquefoil will outcompete native plants and reduce biodiversity of a site if left unmanaged. This species is identifiable from native species by pale yellow flowers combined with stems covered with erect hairs at right angles to the stem. Sulfur cinquefoil seeds also have a net-like pattern on them, compared with the smooth seed coat of the native graceful cinquefoil.

Saltcedar (*Tamarix* spp.) is a small tree or shrub that can invade riparian areas. Leaves are small and scale-like, on highly branched slender stems of red-brown bark. Flowers are pink to white, five-petalled, and borne in finger-like clusters. Saltcedar is deep-rooted, capable of pulling salts from 90–100 feet below ground and depositing them above ground via special structures on the leaves. This increases the salinity of the surrounding area, inhibiting the growth of other desirable and native species. Each plant produces hundreds of thousands of seeds. This species quickly displaces native vegetation and creates dense monocultures. It provides little value to wildlife as a food source.

Photo 17 Saltcedar (Tamarix spp.)

Photo 18 Emerald Ash Borer (Agrilus planipennis)

The **Emerald Ash Borer (*Agrilus planipennis*)** is an invasive beetle that attacks all 16 species of ash trees in the country. It is typically spread through the transportation of firewood and can cause stand-wide mortality within just a few years (Herms and McCullough 2014). According to the Emerald Ash Borer Information Network, the beetle has not been found in the state of Wyoming.

Various tools can be implemented to combat noxious weeds and invasive species within Park County. These include, but are not limited to biological control, cultural control, preventative measures, mechanical and physical control, and chemical control. Different control measures have varying degrees of success depending on the target weed or pest. It is recommended that land managers contact Park County Weed and Pest District or conduct literature reviews in order to understand the implications of various control techniques before implementation (i.e., application of pesticide on public lands and impacts to wildlife, fisheries, and waterways). Fire management and prescribed burning need to have a plan and funding in place to deal with noxious weeds or invasive species. This is especially important for annual grasses such as cheatgrass. Management of large-scale noxious weed infestations is more effective with integrated management practices including: proper grazing, biological control agents, rehabilitation of disturbed sites with desirable species, and/or manual or mechanical methods as well as chemical applications.

Resource Management Objectives

1. Park County supports the Weed and Pest Control District in their invasive and noxious weed and pest control programs to ensure human health and safety, productive agricultural systems, intact ecosystems, and to protect wildlife habitats. This includes preventative measures such as use of ‘Certified Weed Free Forage’ and educational programming (signage, boot brush stations, etc.) geared towards users of public lands.
2. Limit the introduction of invasive species of plants and animals.

Priorities

1. Support elimination of the importation of exotic species of plants and animals.

2. Prioritize the control of localized or small infestations of noxious weeds, pests, and invasive species that offer a realistic hope of containment or eradication.
3. Support cooperative efforts with federal, state, and private land managers to enhance cooperative weed management efforts county-wide coordinated with and primarily managed by the Park County Weed and Pest Control District.
4. Support and strongly encourage education about the control of noxious weeds, invasive species, and pests by owners, managers, and users of all private, state, and federal lands including easements, rights-of-way, and municipalities.

References Cited

BLM. 2008. Manual Transmittal Sheet 6840 Special Status Species Manangement. (6-125 Release).

BLM. 2010a. BLM Wyoming Sensitive Species Policy and List.

BLM. 2010b. Instruction Memorandum 2011-004.

BLM. 2012a. *BLM Manual 6330-Management of BLM Wilderness Study Areas* https://www.blm.gov/sites/blm.gov/files/uploads/mediacenter_blmpolicymanual6330.pdf.

BLM. 2012b. *A Desk Guide to Cooperating Agency Relationships and Coordination with Intergovernmental Partners*. https://www.blm.gov/sites/blm.gov/files/uploads/IM2012-115_att1.pdf.

BLM. 2012c. *Manual Transmittal Sheet 6310—Conducting Wilderness Characteristics Inventory on BLM Lands (Public)*. https://www.blm.gov/or/plans/rmpswesternoregon/files/lwci-manual.pdf.

BLM. 2015. *Bighorn Basin Resource Management Plan Revision Project Proposed Resource Management Plan and Final Environmental Impact Statement*.

BLM. 2020a. BLM Wyoming history. https://www.blm.gov/about/history/history-by-region/wyoming.

BLM. 2020b. *Notice of Availability of the Final Environmental Impact Statement for the Wyoming Pipeline Corridor Initiative (WPCI) Resource Management Plan Amendments to 9 BLM-Wyoming Resource Management Plans*.

BLM. 2021a. About Livestock Grazing on Public Lands. https://www.blm.gov/programs/natural-resources/rangelands-and-grazing/livestock-grazing/about.

BLM. 2021b. Wild Horse and Burro - About the Program. https://www.blm.gov/programs/wild-horse-and-burro/about-the-program.

BLM, and Jonas Consulting. 2003. Cody Field Office Review of Potential Wild and Scenic Rivers in the Cody Resource Management Plan Planning Area.

BOR. 2012. Reclamation—Managing Water in the West: Reclamation's NEPA Handbook.

BOR. 2020. Bureau of Reclamation-Fact Sheet. https://www.usbr.gov/main/about/fact.html.

BRS Inc., MWH, Lidstone and Associates, TriHydro Corporation, Donnell and Allred Inc., and Water Rights Services LLC. 2003. Wind/Bighorn River Basin Plan Final Report. https://waterplan.state.wy.us/plan/bighorn/2003/finalrept/final_report.pdf.

Budd-Falen Law Office. 2018. Local Government Participation in Federal Agency Decision Making.

Bureau of Reclamation. 2020. Shoshone Project. https://www.usbr.gov/projects/index.php?id=422.

Bureau of Reclamation. 2021. Wyoming Recreation. https://www.usbr.gov/gp/recreation/wyoming_recreation.html (accessed 2/4/2021).

Congressional Research Service. 2013. Motorized Recreation on National Park Service Lands.

Danvir, Rick. 2018. Multiple-use management of western U.S. rangelands: wild horses, wildlife, and livestock. *Human-Wildlife Interactions* 12, (1): 5-17.

DOI. 2008. *43 C.F.R. Part 46 Implementation of the National Environmental Policy Act (NEPA) of 1969; Final Rule*. https://www.federalregister.gov/documents/2008/01/02/E7-25484/implementation-of-the-national-environmental-policy-act-nepa-of-1969.

FEMA. 2020. FEMA Definitions. https://www.fema.gov/flood-insurance/terminology-index (accessed 2/4/2021).

Headwaters Economics. 2020. A Profile of Socioeconomic Measures: Park County, Wyoming.

Herms, D.A., and D.G. McCullough. 2014. Emerald Ash Borer Invasion of North America. *Annual Review of Entomology* 59: 13-30.

Houze, Lynn. 2014. Park County, Wyoming. WyoHistory.

IRS. 2021. Opportunity Zones Frequently Asked Questions. https://www.irs.gov/credits-deductions/opportunity-zones-frequently-asked-questions#general.

Jacobs, James A., Patrick T. Tyrrell, and Donald J. Brosz. 2003. *Wyoming Water Law: A Summary*.

Johnson Houze, Lynn. 2014. Park County, Wyoming. https://www.wyohistory.org/encyclopedia/park-

county-wyoming.
Lowry, Marlin E., and Myron L. Smalley. 1993. USGS Water-Resources Investigations Report 93-4183: Hydrology of Park County, Wyoming, Exclusive of Yellowstone National Park.
Merriam-Webster. 2020a. culture. https://www.merriam-webster.com/dictionary/culture.
Merriam-Webster. 2020b. custom. https://www.merriam-webster.com/dictionary/custom.
MWH Americas Inc., Short Elliott Hendrickson Inc., and Harvey Economics. 2010. Wind-Bighorn Basin Plan Update.
National Interagency Fire Center. 2020. *Historic Perimeters 2019*. https://data-nifc.opendata.arcgis.com/datasets/historic-perimeters-2019.
National Park Service. 2015. National Park Service NEPA Handbook.
National Park Service. 2020. National Park System Timeline. https://www.nps.gov/parkhistory/hisnps/npshistory/timeline_annotated.htm.
NPS. 2014. *Foundational Document - Yellowstone National Park*.
Office of State Lands and Investments. 2018. Frequently Asked Questions About the Wyoming Office of State Lands and Investments. https://lands.wyo.gov/resources/frequently-asked-questions.
Park County. 2020a. Floodplain Development. http://www.parkcounty.us/planningandzoning/Floodplain.html.
Park County. 2020b. History of Park County. http://www.parkcounty.us/aboutus.html.
Park County Planning & Zoning Commission, and Park County Board of County Commissioners. 1998. Park County Land Use Plan.
Pellant, M. , P. Shaver, D.A. Pyke, and J.E. Herrick. 2005. *Interpreting Indicators of Rangeland Health, Version 4—Technical Reference 1734-6*.
Rands, Beth. 2019. Making Forests Stronger through Active Management.
Squillace, Mark. 1989. A Critical Look at Wyoming Water law. *Land and Water Law Review* 24.
Taylor, David T. 2016. Park County Related Hunting and Fishing Spending, 2015. https://wyomingwildlife.org/wp-content/uploads/2016/07/Park-County-Economic-Impact-Hunting-Fishing-2015-1.pdf.
U.S. Department of Commerce. 2019. Bureau of Economic Analysis, Regional Economic Accounts. https://census.data.commerce.gov/dataset/Economic-Census/.
U.S. EPA. 2020. Delegations of Authority for NSPS and NESHAP Standards to States and Tribes in Region 8.
USDA. 2017. *Agricultural Census - County Summary Highlights*.
USDA. 2018. *Forest Service Manual Chapter 2670-Threatened, Endangered And Sensitive Plants And Animals*. December 18.
USDA. 2019. *2017 Census of Agriculture—Wyoming State and County Data*.
USDA, and USDI. 2008. *Memorandum of understanding between the U.S. Department of Agriculture Forest Service and the U.S. Fish and Wildlife Service to promote the conservation of migratory birds*.
USDI. 2006. *Management Policies 2006*.
USFS. 1986. 1986 ROS Book. https://www.fs.fed.us/eng/ROS-RecCapacity/ROS1986,ch1,2.pdf.
USFS. 2009. Species of Concern Report Shoshone National Forest Version 4.0.
USFS. 2015a. Bridger-Teton National Forest Land and Resource Management Plan: Forest Plan with Amendments and Corrections.
USFS. 2015b. Land Management Plan: 2015 Revision-Shoshone National Forest.
USFS. 2015c. Shoshone National Forest Land Management Plan Revision—Final Environmental Impact Statement.
USFS. 2019. Insect & Disease Detection Survey Data. https://www.fs.fed.us/foresthealth/applied-sciences/mapping-reporting/detection-surveys.shtml.
USFS. 2020. Our History. https://www.fs.usda.gov/learn/our-history.

USFS. 2021a. *Timber Harvest Data*. https://data.fs.usda.gov/geodata/edw/datasets.php.
USFS. 2021b. Travel Management Glossary. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5180812.pdf.
USFS. 2021c. Wild Horse and Burro Frequently Asked Questions. https://www.fs.fed.us/wild-horse-burro/faqs.shtml.
USFWS. 2020. IPaC Information for Planning and Consulting: Park County, WY.
USGS, LBNL, and AWEA. 2020. The U.S. Wind Turbine Database. https://eerscmap.usgs.gov/uswtdb/.
Wildland Fire Leadership Council. 2014. National Cohesive Wildland Fire Management Strategy.
Willwood Working Group 3. 2019. Working Together to Protect the Shoshone River—A watershed plan to reduce sediment loading to the Shoshone River upstream of Willwood Dam, Wyoming. https://wdeq.maps.arcgis.com/apps/Cascade/index.html?appid=ed288248983c467b9365852bd32f01c1.
Wyoming County Commissioners Association. 2015. Wyoming Public Lands Handbook.
Wyoming Department of Agriculture. 2020. Wyoming Weed & Pest Control Act State Designated Weeds and Pests.
Wyoming Department of Environmental Quality. 2013. *E. Coli total maximum daily loads for the Shoshone river watershed*.
Wyoming Department of Environmental Quality. 2017. Willwood Dam Advisory Committee and Working Groups Terms of Reference.
Wyoming Department of Environmental Quality. 2018. Wyoming's 2016/2018 Integrated 305(b) and 303(d) Report.
Wyoming Department of Revenue. 2019. State of Wyoming Department of Revenue Annual Report.
Wyoming Department of Revenue. 2020. State of Wyoming Department of Revenue 2020 Annual Report.
Wyoming DEQ Air Quality Divison. 2018. Wyoming Ambient Air Monitoring Annual Network Plan 2018. http://deq.wyoming.gov/media/attachments/Air%20Quality/Monitoring/Annual%20Network%20Plans/2018_Network_Plan_FINAL.pdf.
Wyoming DEQ Air Quality Divison. 2019. Wyoming Ambient Air Monitoring Annual Network Plan 2019. http://deq.wyoming.gov/media/attachments/Air%20Quality/Monitoring/Annual%20Network%20Plans/2019_Network_Plan_FINAL_with%20addendum.pdf.
Wyoming DEQ Air Quality Divison. 2020. Wyoming Department of Environmental Quality – Air Quality Division Annual Network Plan 2020. http://deq.wyoming.gov/media/attachments/Air%20Quality/Monitoring/Annual%20Network%20Plans/2020_Network_Plan_FINAL.pdf.
Wyoming Game & Fish Department. 2017. Title 23.
Wyoming Game & Fish Department. 2020. Wyoming Aquatic Invasive Species Locations. http://wgfd.maps.arcgis.com/apps/webappviewer/index.html?id=935acbec194f4d42823af3db59272409.
Wyoming Game & Fish Department. 2021. AIS Boating Information. https://wgfd.wyo.gov/Fishing-and-Boating/Aquatic-Invasive-Species-Prevention/AIS-Boating-Information.
Wyoming Game and Fish Department. 2010. Wyoming Aquatic Invasive Species Management Plan.
Wyoming Game and Fish Department. 2015. Standardized Definitions for Seasonal Wildlife Ranges. November.
Wyoming Game and Fish Department. 2017. *Wyoming Game and Fish Department State Wildlife Action Plan*.
Wyoming Game and Fish Department. 2018. 2018 Walk-In Fishing Areas. https://wgfd.wyo.gov/Public-Access/Walk-In-Fishing.
Wyoming Game and Fish Department. 2019. *Wyoming game and fish department ungulate migration corridor strategy*. January 28.

Wyoming Game and Fish Department. 2021. Clarks Fork Fish Hatchery. https://wgfd.wyo.gov/About-Us/Offices-and-Facilities/Clarks-Fork-Hatchery.

Wyoming Natural Diversity Database. 2020a. Glossary of Codes and Definitions: Species of Concern. https://www.uwyo.edu/wyndd/find-data-info/about-our-data-information/codes-and-definitions/species-concern.html.

Wyoming Natural Diversity Database. 2020b. WYNDD Custom PDF Report: BLM Sensitive Species.

Wyoming Natural Diversity Database. 2020c. WYNDD Custom PDF Report: WYNDD SOC and SOPC.

Wyoming Natural Diversity Database. 2020d. WYNDD Custom PDF Report: Wyoming Game and Fish Department Species of Greatest Conservation Need in Park County.

Wyoming Office of Tourism. 2018. The Economic Impact of Travel on Wyoming-Detailed State and County Estimates 2000-2017.

Wyoming Water Development Office. 2012. Available Groundwater Determination Technical Memorandum. https://waterplan.state.wy.us/plan/bighorn/2010/gw-finalrept/gw_toc.html.

Wyoming Water Development Office. 2021. Wyoming Water Development Office. https://wwdc.state.wy.us/ (accessed 2/4/2021).

Wyoming Weed and Pest Council. 2019. Weed and Pest Declared List (By County).

Appendix A: Legal Framework

Federal statutes provide opportunities for counties to share their own special expertise with federal agencies during decision-making processes in order to protect the local custom and culture, tax base, and private property. NRMPs establish the current economic and cultural conditions and the desired future conditions of an area and illustrate how those conditions are linked with activities that occur on adjoining federal and state lands. Specifically, federal laws require federal agencies, including the BLM and USFS, to consider state and local LUPs and to explain deviations from these plans in decision documents per the following statutes:

The National Environmental Policy Act

NEPA and its implementing regulations under the Council on Environmental Quality (CEQ) require all federal agencies to address inconsistencies between a proposed action and state and local plans, and address the extent to which the agency would harmonize its proposed action with the local law or plan (40 CFR § 1506.2). Consistency review and CA status are provisions that allow local input through the federal planning process.

In order to participate in a federal agency's consistency review process, an adopted local plan is required. On March 16, 1981, CEQ published the *Memorandum for Federal NEPA Liaisons, Federal, State, and Local Official and Other Persons Involved in the NEPA Process*. Questions 23b and 23c of this document address how an agency should handle potential conflicts between a proposal and the objectives of federal, state, or local LUPs, policies and controls for the area concerned under 40 CFR § 1502.16(c). As defined in this document, local LUPs or policies include all types of formally adopted documents for land use planning, zoning, and related regulatory requirements. Provided that the local government submits the local plan to the agency in the course of writing an EIS or EA, the federal agency is required to:

> (…) discuss any inconsistency of a proposed action with any approved State or local plan and laws (whether or not federally sanctioned). Where an inconsistency exists, the [environmental impact] statement should describe the extent to which the [federal] agency would reconcile its proposed action with the [local government] plan or law. (40 CFR § 1506.2 (d))

Local governments can also participate in the NEPA process as a CA. CAs are defined as: "any federal agency other than a lead agency which has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal (or a reasonable alternative) for legislation or other major federal action significantly affecting the quality of the human environment." (40 CFR § 1508.5). As a CA, the local government would be involved in the federal process at its inception and participate in the NEPA process, such as scoping and drafting portions of the NEPA document (40 CFR § 1501.6(b)).

CEQ regulations also permit a CA to "assume on request of the lead agency responsibility for developing information and preparing environmental analyses including portions of the EIS concerning which the CA has special expertise." (40 CFR § 1501.6(b)(3)). As a CA in future planning efforts, the County could take part in arranging for resource, environmental, social, economic, and institutional data and information to be collected or compiled, if already available (43 CFR § 1610.4-3). This NRMP can be used by a federal agency in an environmental analysis or specialist report under these regulations.

In short, federal agencies are required to cooperate with state and local agencies to reduce duplication

between NEPA and comparable local requirements (40 CFR § 1506.2(b)). By adopting a local NRMP, a county (1) ensures that local policies are considered during a federal agency's consistency review process, and (2) demonstrates the special expertise required for participation in the NEPA process as a CA (if desired by the County).

The Federal Land Policy and Management Act

FLPMA, BLM's guiding statute, requires BLM to coordinate their LUPs with local and state government LUPs, providing that BLM's plans "shall be consistent with State and local plans to the maximum extent [the Agency] finds consistent with federal law and the purposes of this Act." (43 United States Code (USC) § 1712(c)(9)).

Specifically, FLPMA requires that the BLM:

- Stays apprised of local LUPs;
- Assures that consideration is given to those local LUPs that are germane in the development of LUPs for federal and state lands;
- Assists in resolving, to the extent practical, inconsistencies between federal and local LUPs; and
- Provides for meaningful public involvement of local government officials in the development of land use programs, land use regulations, and land use decisions for federal and state lands, including early public notice of proposed decisions which may have a significant impact on non-federal lands (43 USC § 1712(c)(9)).

A consistency review is required under FLPMA. Prior to the approval of a proposed resource management plan, or amendment to a management framework plan or resource management plan, the BLM is also required to provide for the State Governor's consistency review as part of their land use planning process (43 CFR § 1610.3-2(e)). This provides an opportunity to identify any inconsistencies with state or local plans. If the Governor recommends changes which were not raised during the public participation process, the public should be re-engaged in the process.

The National Forest Management Act

NFMA requires the USFS to coordinate national forest land and resource plans with the land and resource management planning processes of state and local governments and other federal agencies (16 USC § 1604(a)). While the USFS is not required to comply with state and local plans, a final decision document must contain results of a review of local plans, including consideration of objectives, the compatibility and interrelated impacts of USFS plans and local government policies, opportunities to contribute to common objectives, and ways to reduce conflicts between a USFS plan and local policies (36 CFR § 219.4(b)(2)).

Agency-Specific Guiding Documents and Regulations Supporting Cooperating Agency Status

There are additional orders, policies, regulations, and handbooks that outline or support CA status and the use of an NRMP. The Wyoming Public Lands Handbook provides "guidance for County Commissioners on Wyoming's federal and state lands and the laws and policies that govern their management." (Wyoming County Commissioners Association 2015). This handbook provides best management practices and explanations for those working with federal land managers.

Section 3 of Executive Order 13352, *Facilitation of Cooperative Conservation,* requires that the Secretaries of the Interior and Agriculture:

> (a) carry out the programs, projects, and activities of the agency that they respectively head that implement laws relating to the environment and natural resources in a manner that:
>
> i. facilitates cooperative conservation;
>
> ii. takes appropriate account of and respects the interests of persons with ownership or other legally recognized interests in land and other natural resources;
>
> iii. properly accommodates local participation in Federal decision making; and
>
> iv. provides that the programs, projects, and activities are consistent with protecting public health and safety.

In 2008, the DOI broadened its regulations to require every DOI agency to offer CA status to all eligible intergovernmental partners for all EISs (DOI 2008). The DOI also indicated that CA procedures could be used to support efforts under EAs, as well. Under this regulation, agencies under DOI will "collaborate, to the fullest extent possible, with all cooperating agencies concerning those issues relating to their jurisdiction and special expertise" (43 CFR § 46.230).

Bureau of Land Management

The BLM published *A Desk Guide to Cooperating Agency Relationships* in 2005 as a "how to" publication that all BLM managers and staff were required to put into practice in order to guide the BLM through the legal, regulatory, and planning roles when involved in a CA relationship. Requirements for working with CAs were added to the BLM's planning regulations at that same timeframe (43 CFR § 1601.0-5, 43 CFR § 1610.3-1, 43 CFR § 1610.4). The desk guide was revised in 2012 when the BLM adopted *A Desk Guide to Cooperating Agency Relationships and Coordination with Intergovernmental Partners* (BLM 2012b) based on DOI's broadened regulations passed in 2008 (see discussion above). Specifically, this desk guide highlights the role of CAs in the planning process. The BLM's Land Use Planning Handbook (H-1601-1) and National Environmental Policy Handbook (H-1790-1) also provide additional guidance for collaborative planning and preparation of an EIS or EA for approval, amendment, or revision of a LUP.

Prior to the approval of a proposed RMP, or amendment to a management framework plan or RMP, the BLM is also required to provide for the State Governor's consistency review as part of their land use planning process (43 CFR § 1610.3-2(e)). During this period, additional inconsistencies and recommendations to remedy inconsistencies may be identified. "This step, in addition to the ongoing coordination with State and local governments, supports implementation of the FLPMA requirement that the BLM keep apprised of State, local, and tribal LUPs and assist in resolving, to the extent practical and consistent with Federal law, inconsistencies between Federal and non-Federal government plans (see 43 USC 1712(c)(9))."

National Park Service

Under Executive Order 13352, *Facilitation of Cooperative Conservation,* the NPS is required to carry out its natural resource management responsibilities in a manner that facilitates cooperative conservation and takes

> (…) appropriate account of and respects the interests of persons with ownership or other legally recognized interests in land and other natural resources properly accommodates local participation in Federal decision making; and provides that the programs, projects, and activities are consistent with protecting public health and safety.

The NPS NEPA Handbook (National Park Service 2015) guides the NPS through the legal, regulatory, and planning roles when involved in a CA relationship.

Bureau of Reclamation

The BOR, under DOI, developed a NEPA handbook (BOR 2012) as a guidance tool for all BOR staff. Under 40 CFR § 1501.6, BOR will consider requests for CA status based on jurisdictional responsibilities, project effects, and any special expertise (BOR 2012).

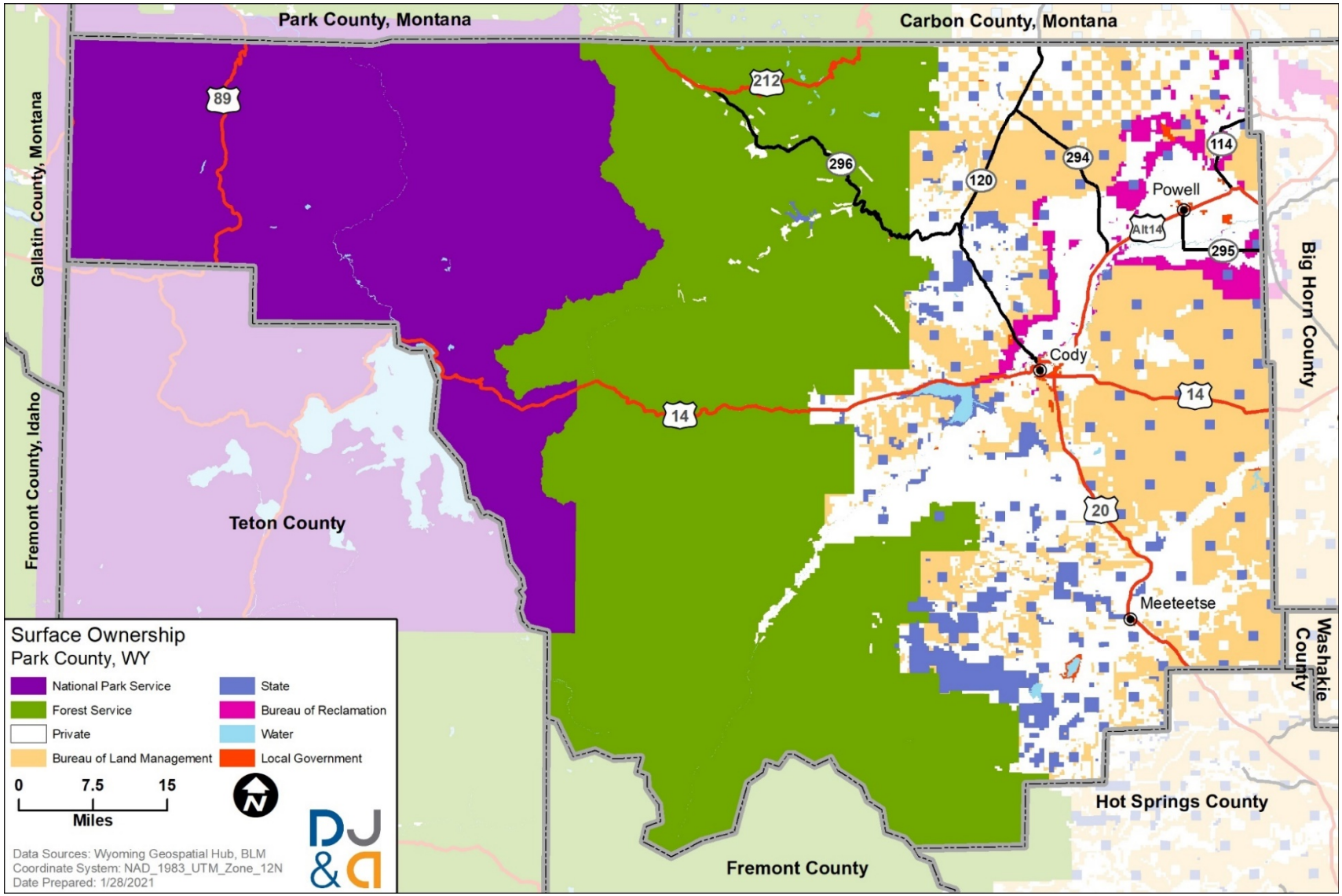
United States Forest Service

In July 2008, the USFS, under the USDA moved its NEPA procedures from directives to regulations, codifying FSM 1950 and FSH 1909.15, and expanding them to incorporate CEQ guidance (36 CFR § 220). As outlined under FSH 1909.15 and explained in *Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations* the USFS has the responsibility to solicit cooperation from other federal, tribal, state, or local agencies with jurisdiction by law or special expertise on environmental issues that should be addressed in the environmental analysis (40 CFR § 1508.5).

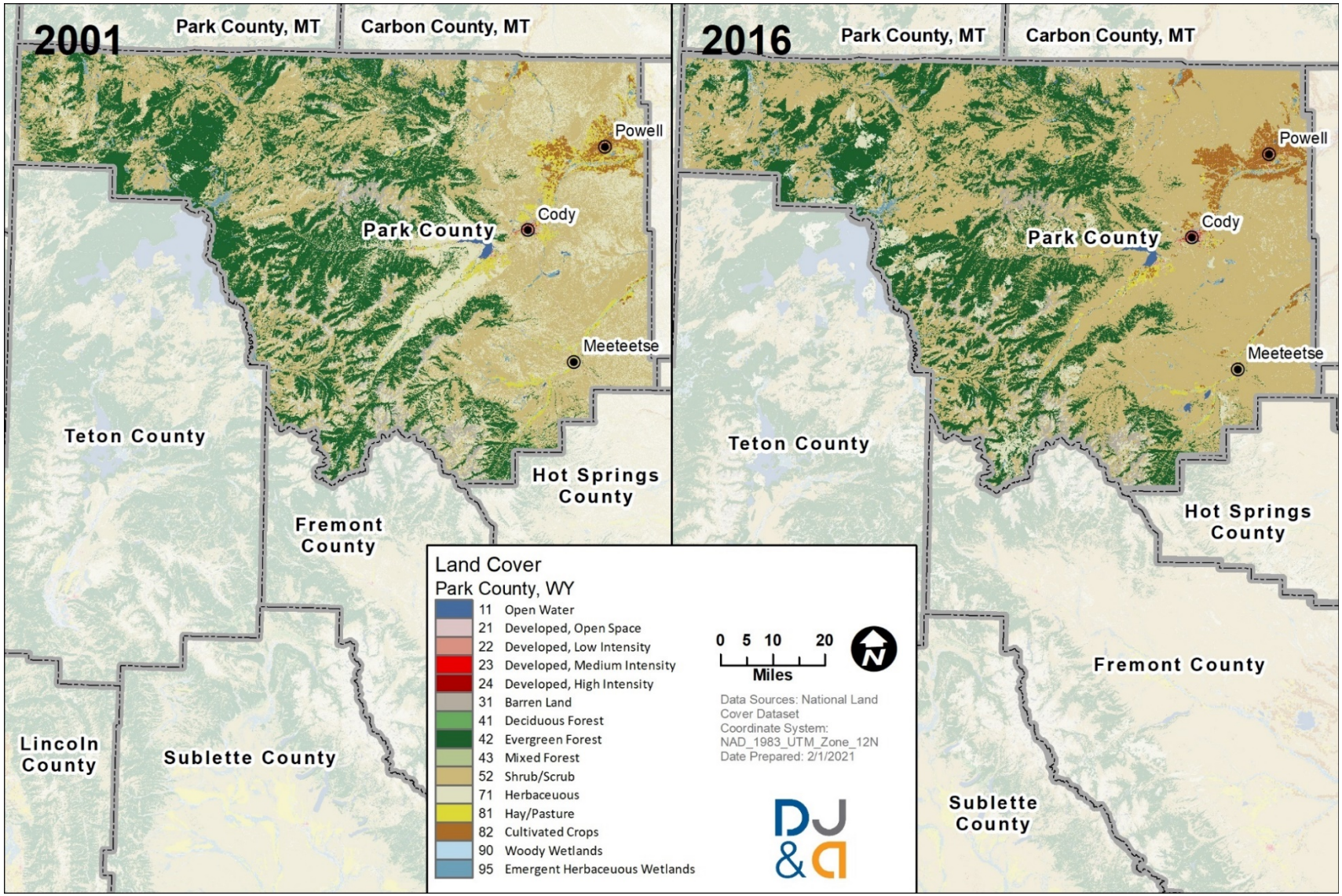
In October 2020, the USFS revised its NEPA regulations (36 CFR § 220) to establish new and revised categorical exclusions and restoration. The USFS uses CEs to satisfy a Determination of NEPA Adequacy provision. The updates will help expedite environmental analysis and decision making through these new tools and flexibility that supports the Forest Service in its mission to sustain the health, diversity, and productivity of the nation's forests and grasslands to meet the needs of present and future generations. Public comment informed and improved the final rule, which is effective immediately. The USFS refers to CEQ regulations and guidance, along with their NEPA handbook for working with CAs. Additional information regarding NEPA procedures, policy, and guidance is found on the USFS website[11].

[11] https://www.fs.fed.us/nepa/

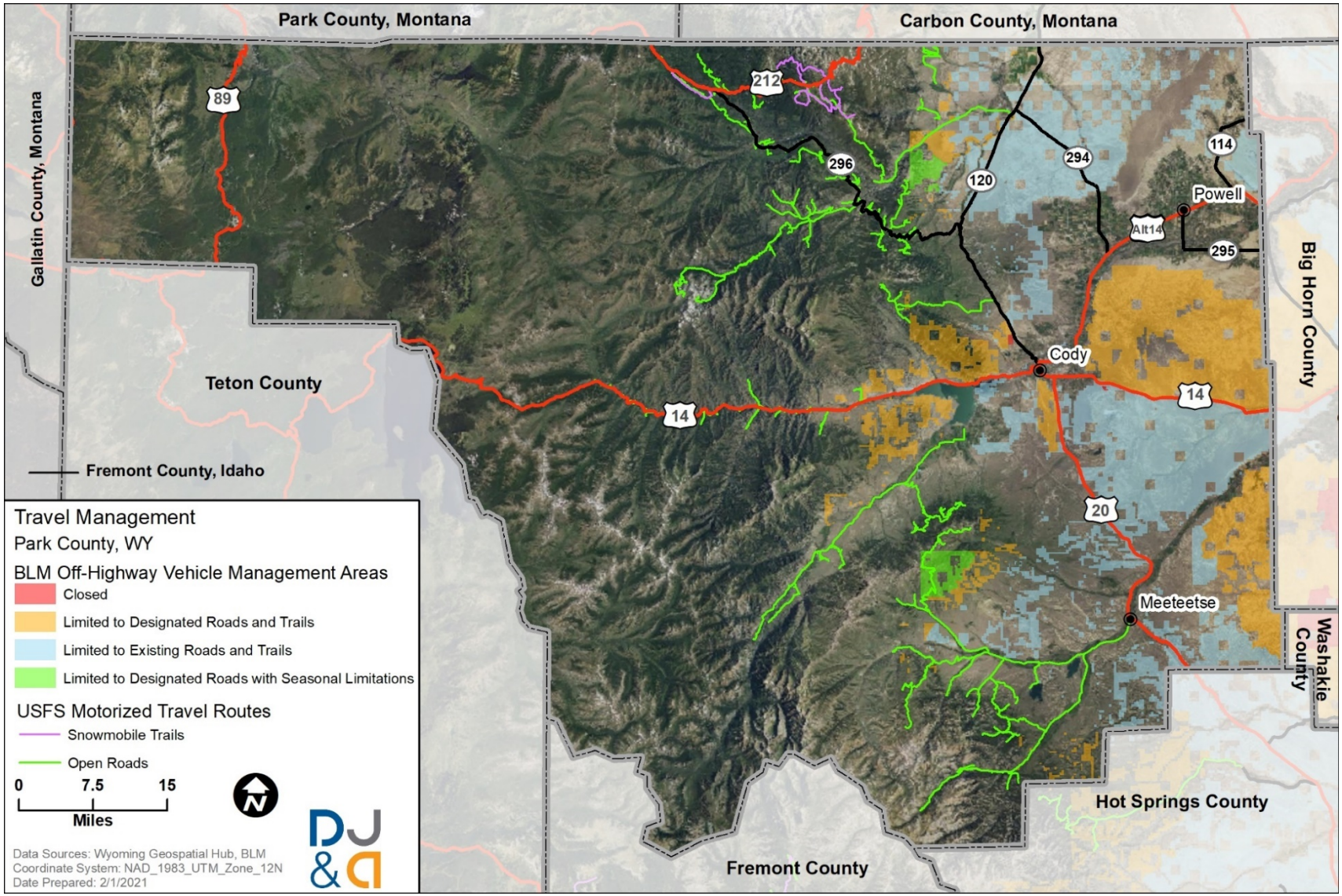
Appendix B: Maps



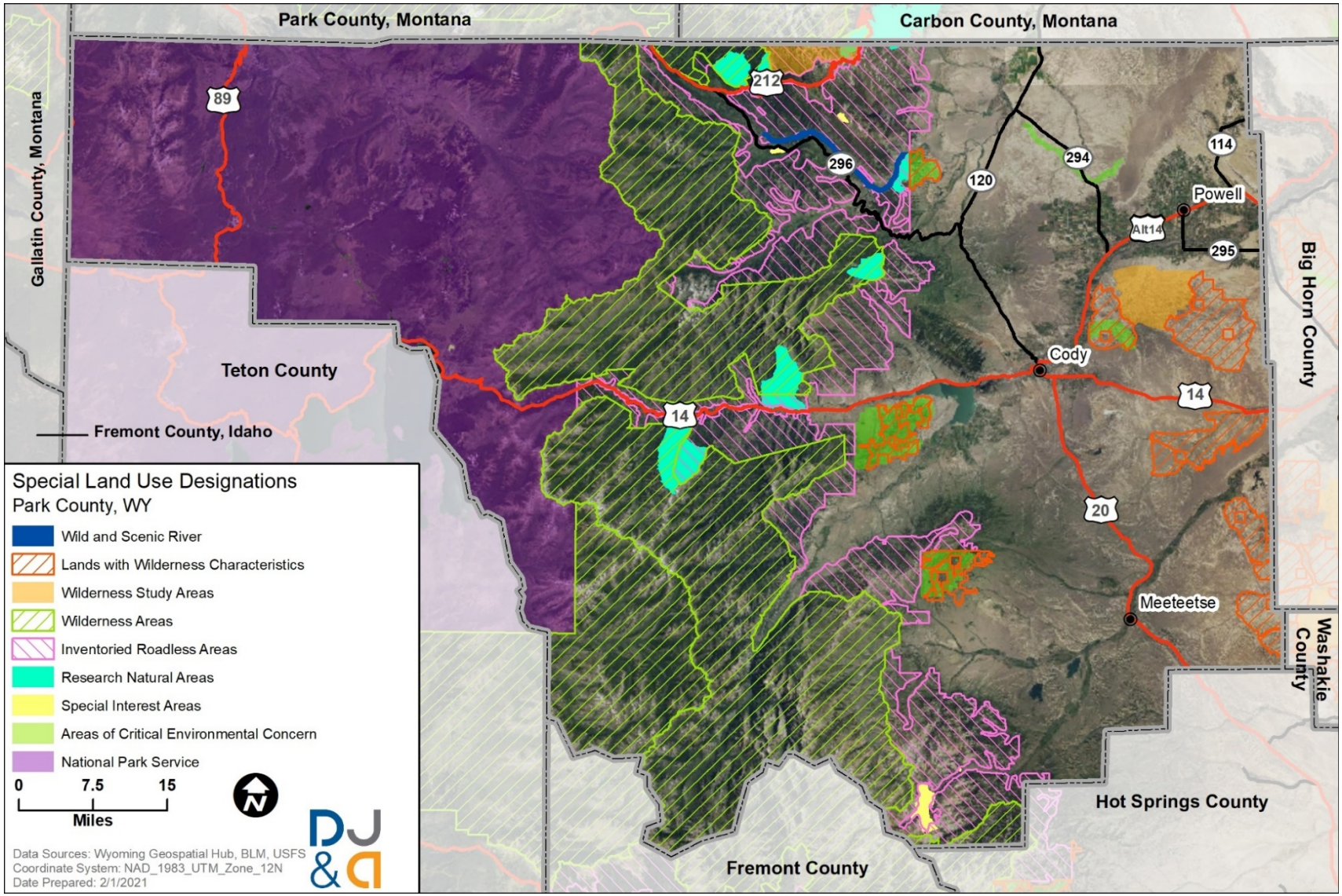
Map 1 Surface Ownership within Park County



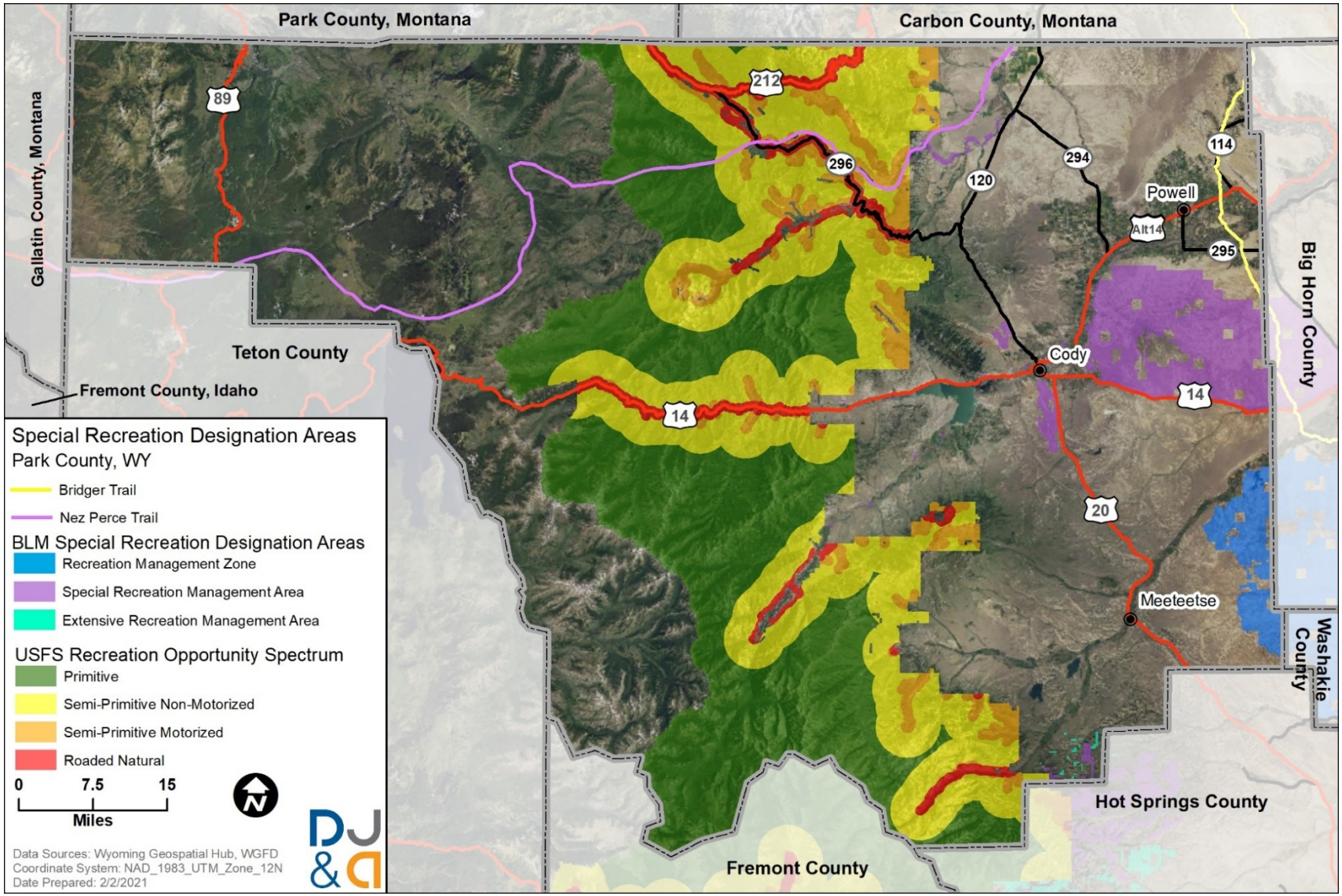
Map 2 Land Cover Designations within Park County



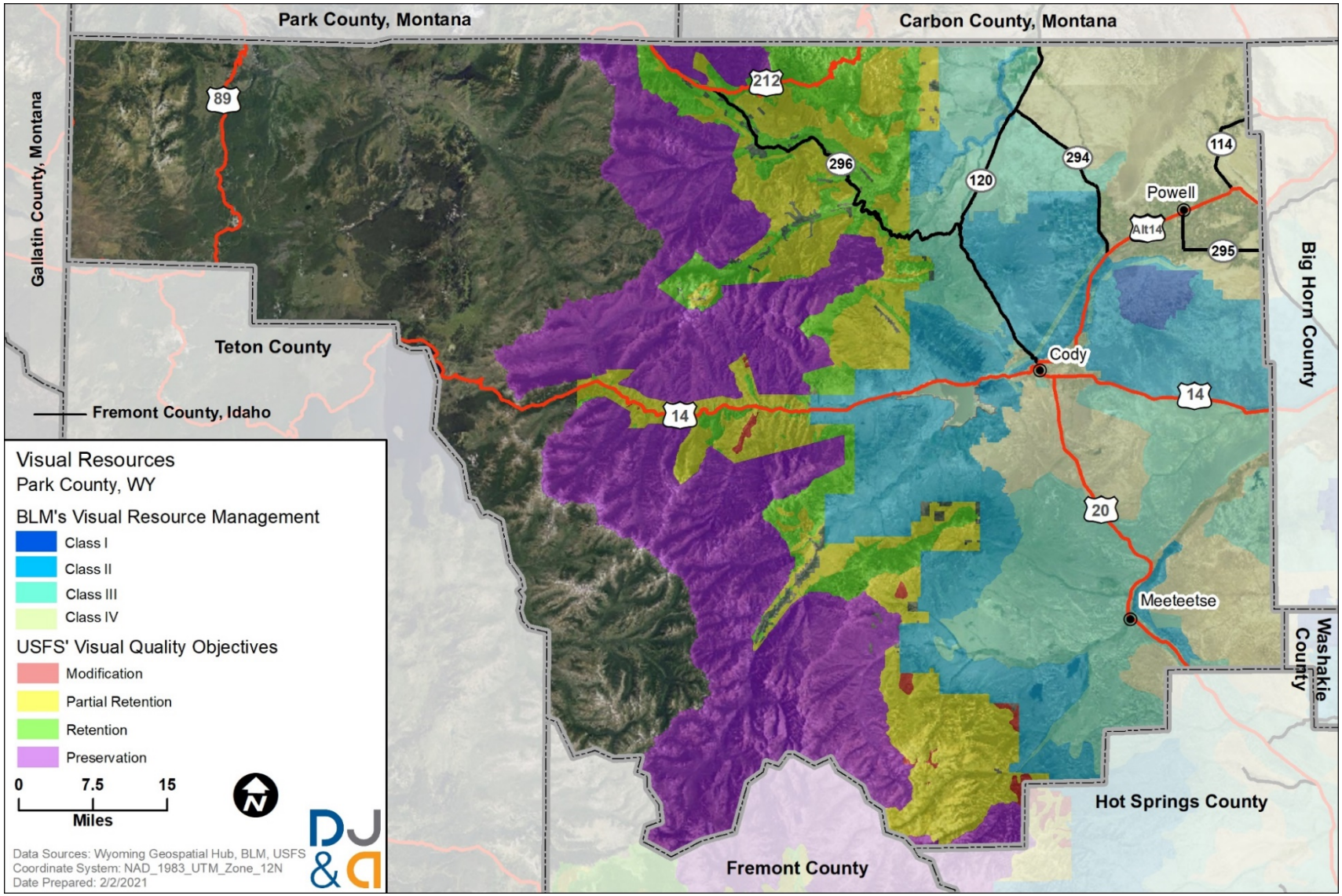
Map 3 Travel Management Designations within Park County



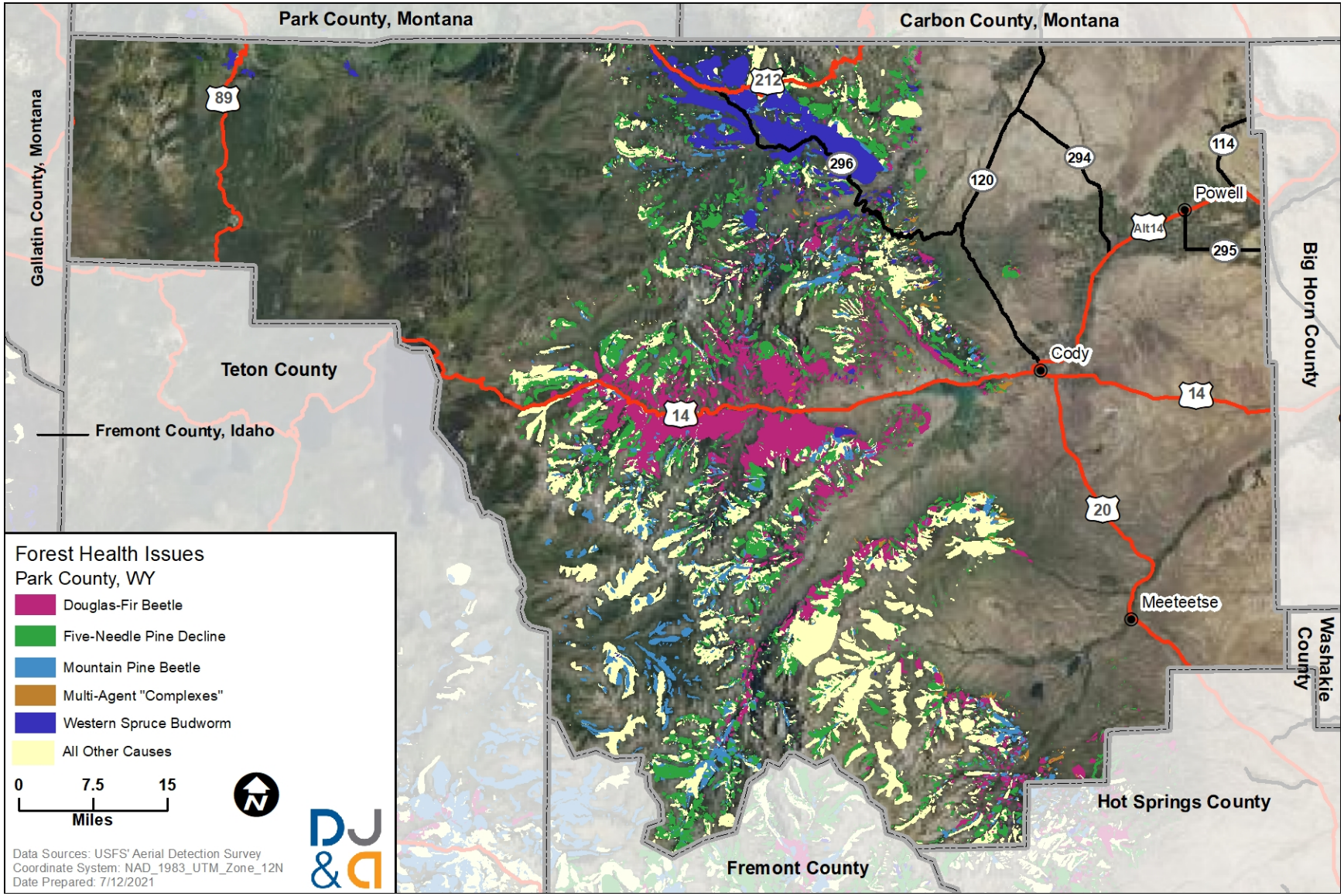
Map 4 Special Land Use Designations within Park County



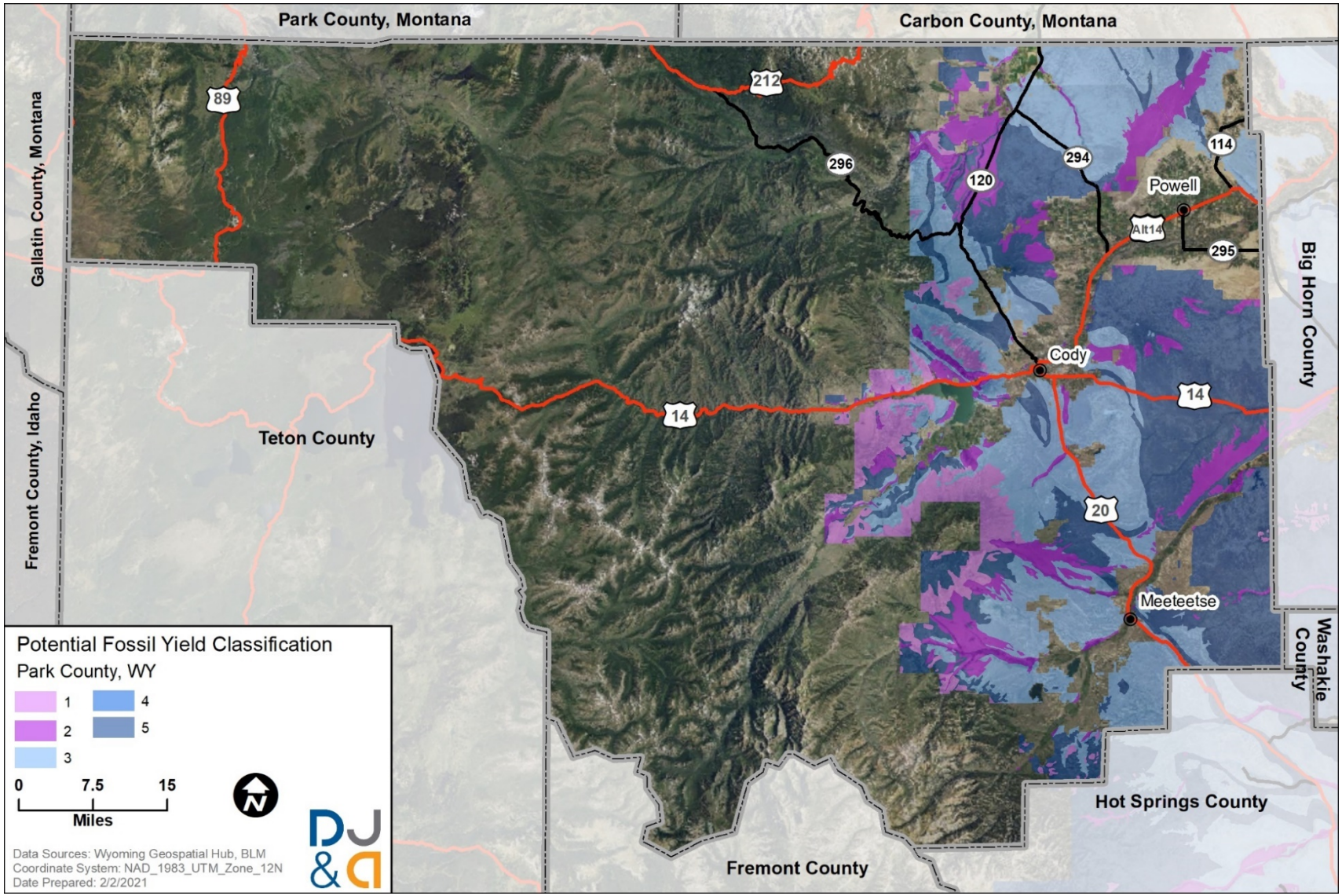
Map 5 Special Recreation Designation Areas within Park County



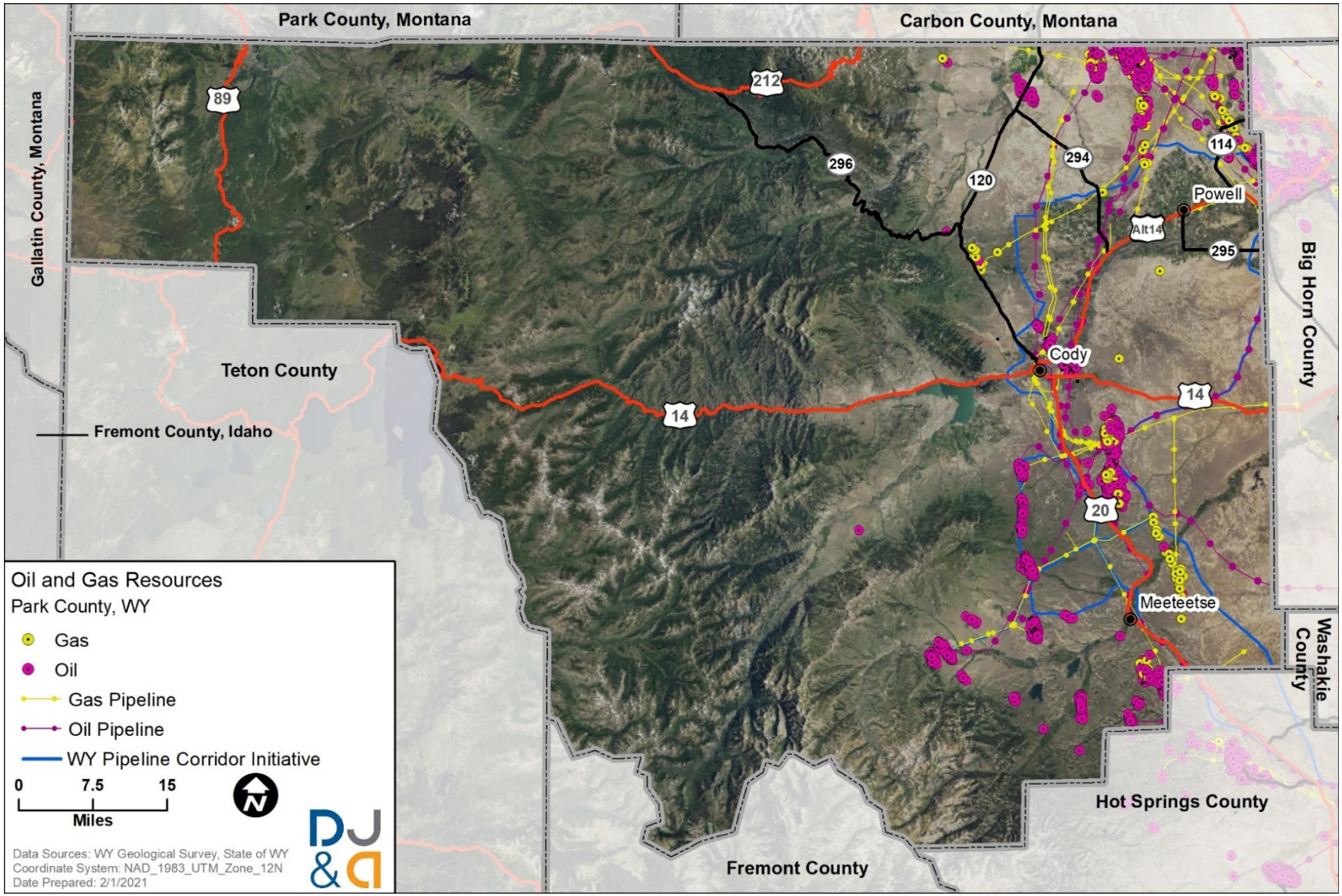
Map 6 Visual Resource Management / Visual Quality Objective Classification within Park County



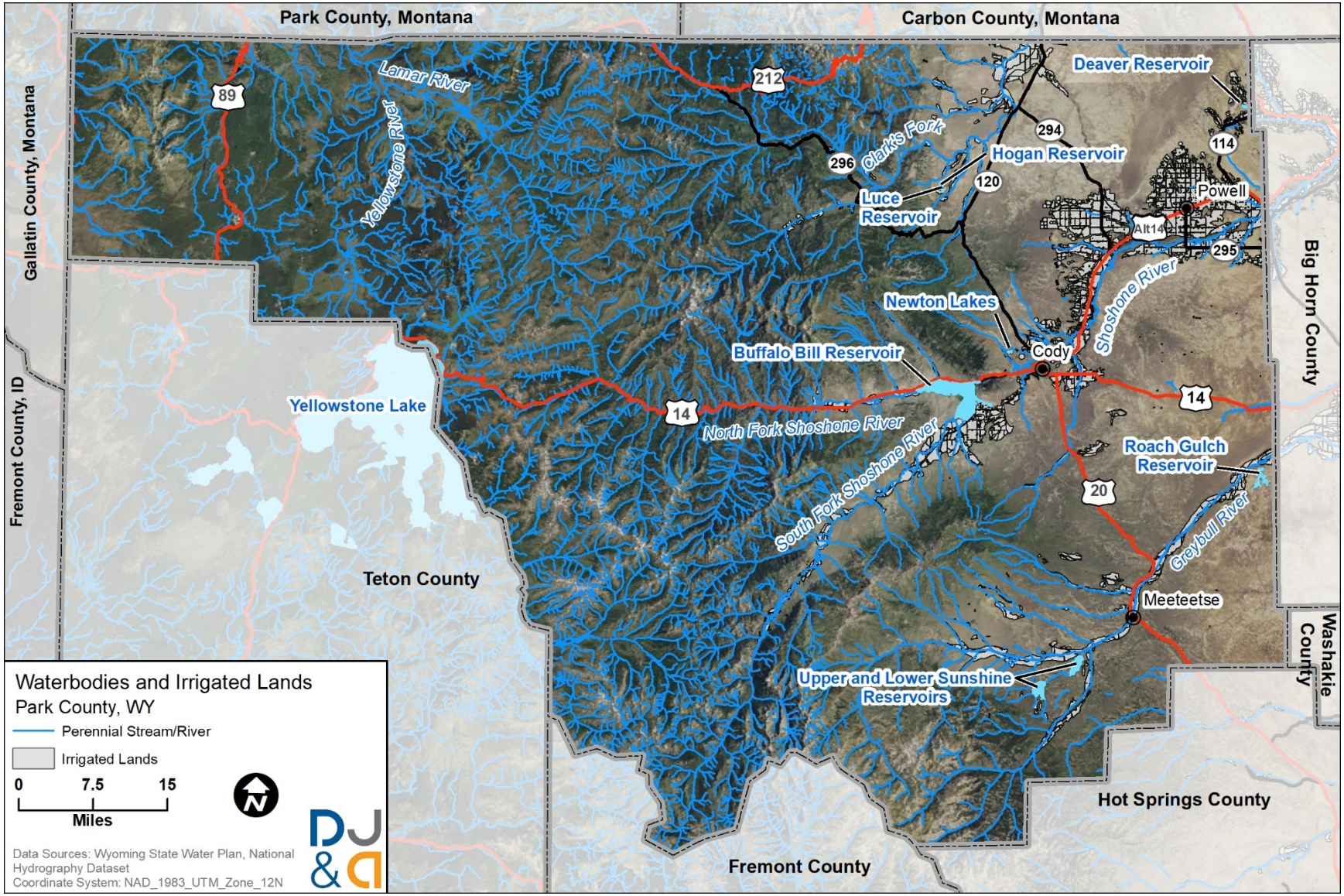
Map 7 Forest Health Issues within Park County, 1997–2019



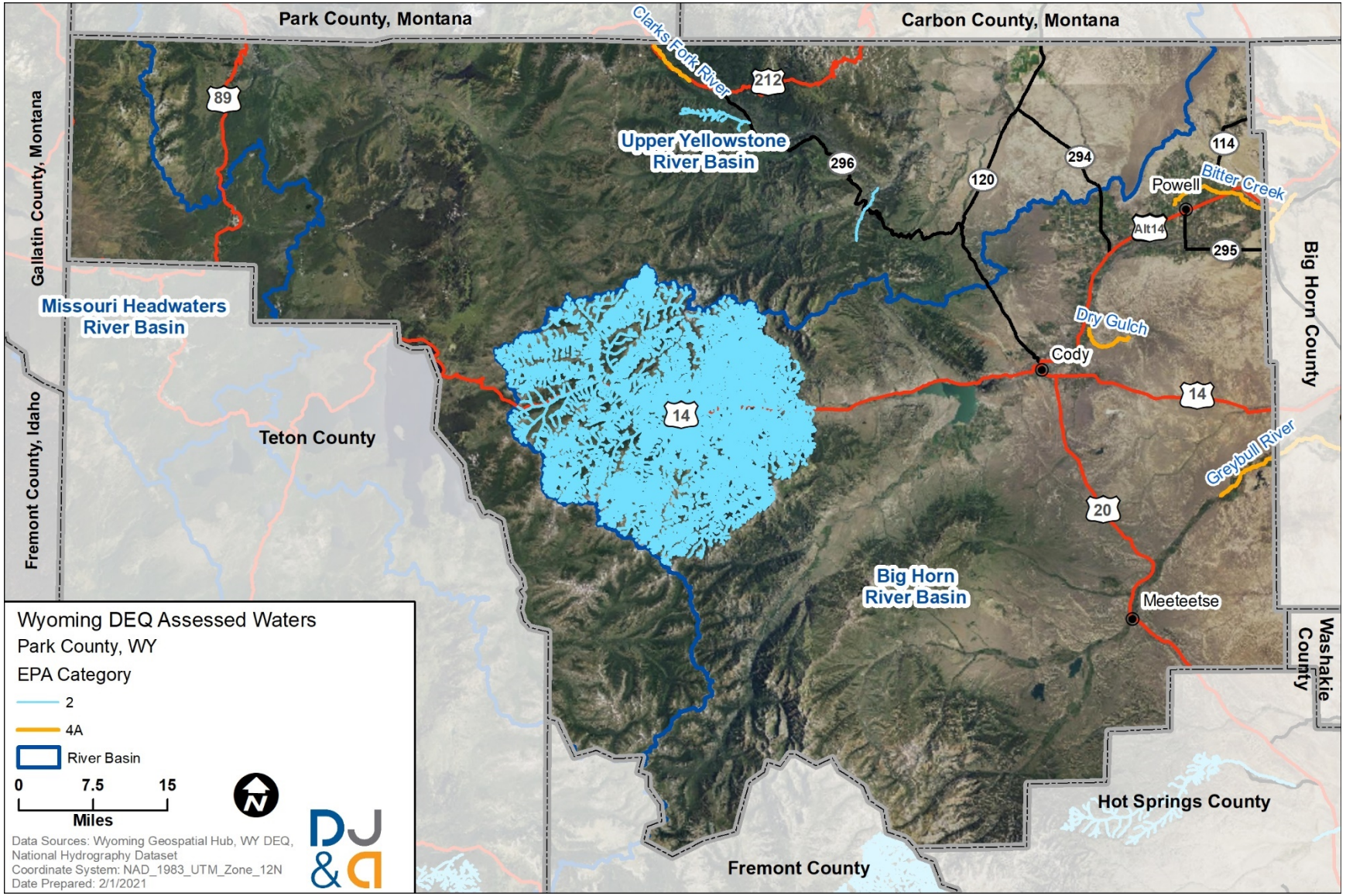
Map 8 Potential Fossil Yield Classification within Park County



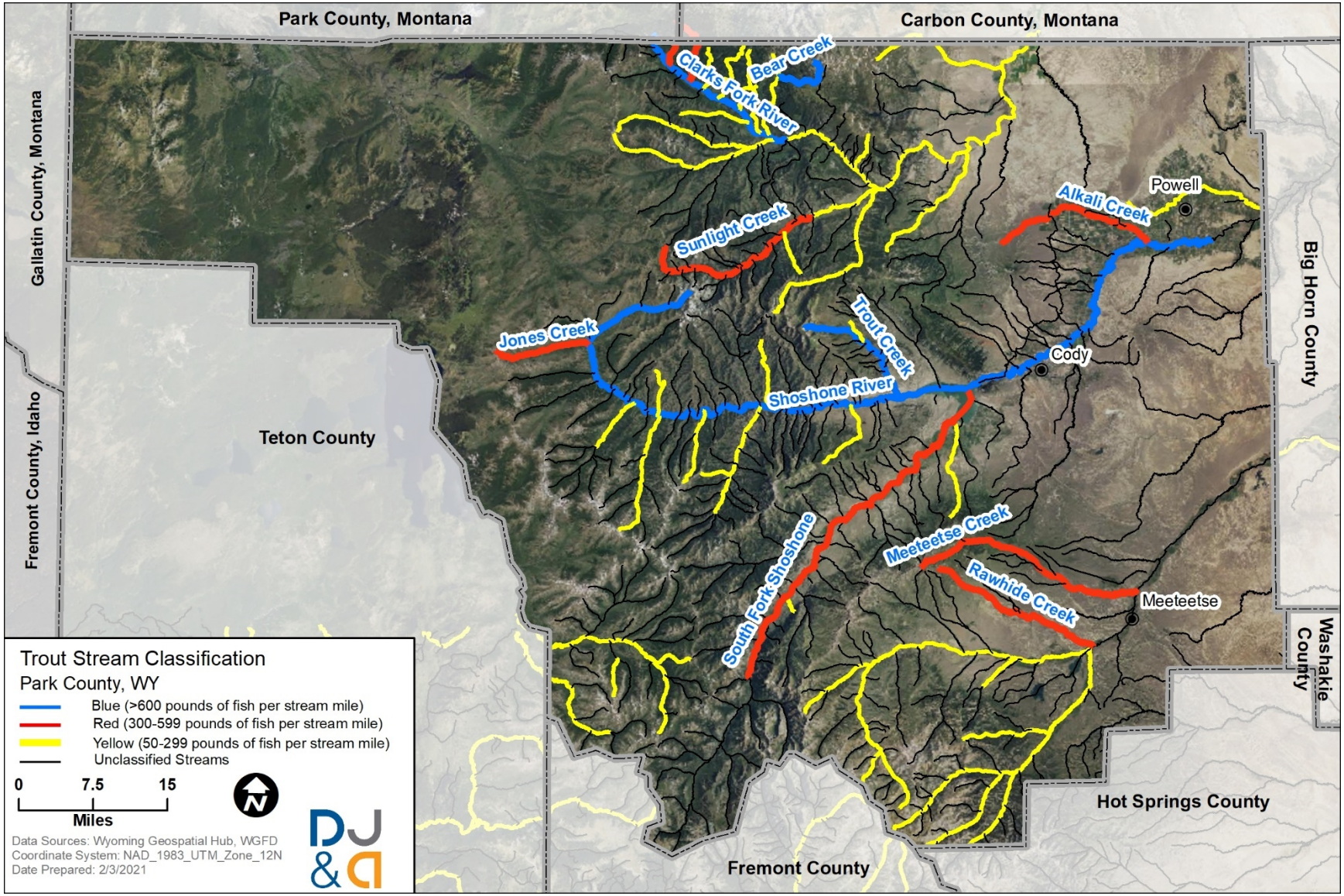
Map 9 Oil and Gas Resources within Park County



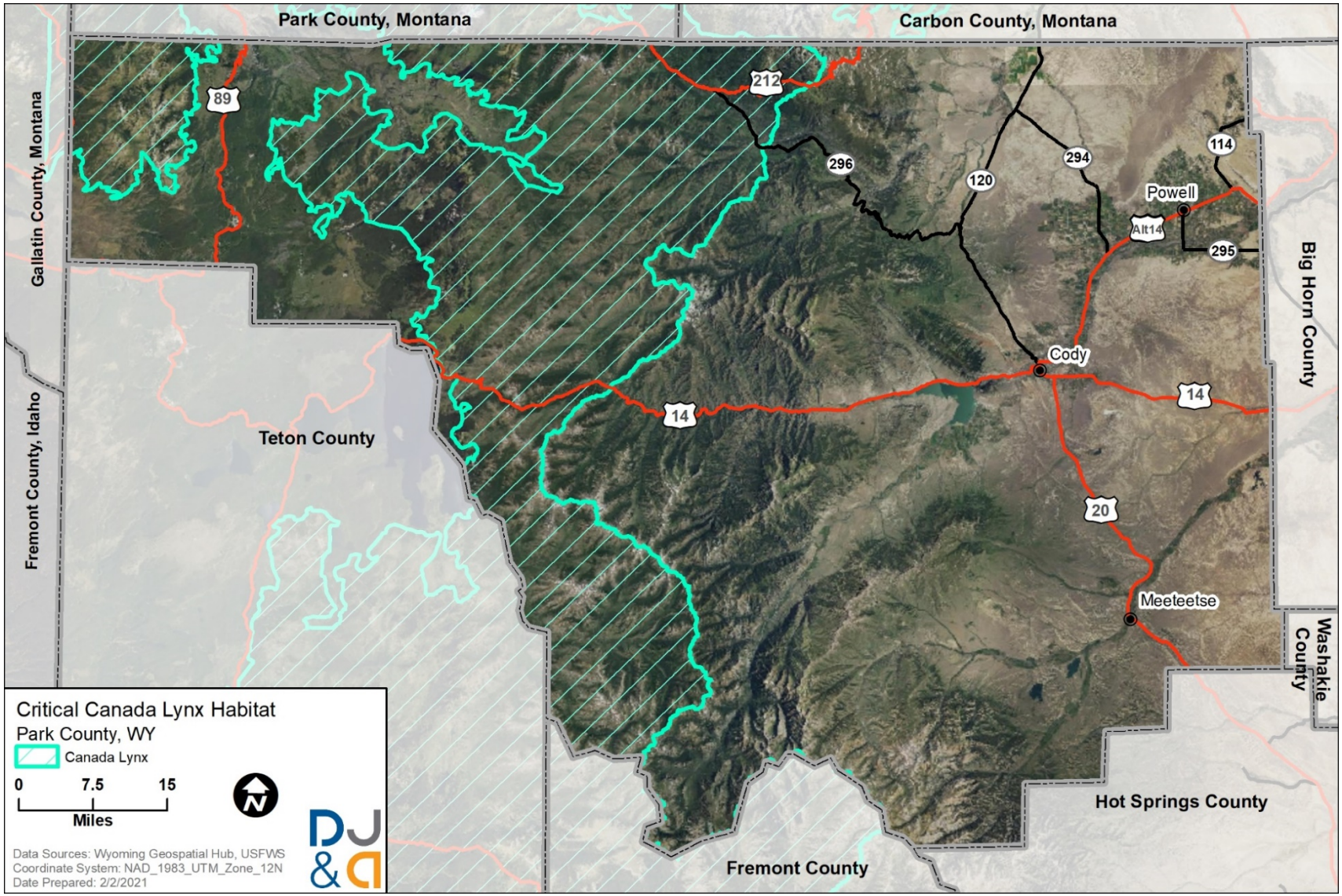
Map 10 Waterbodies and Irrigated Lands within Park County



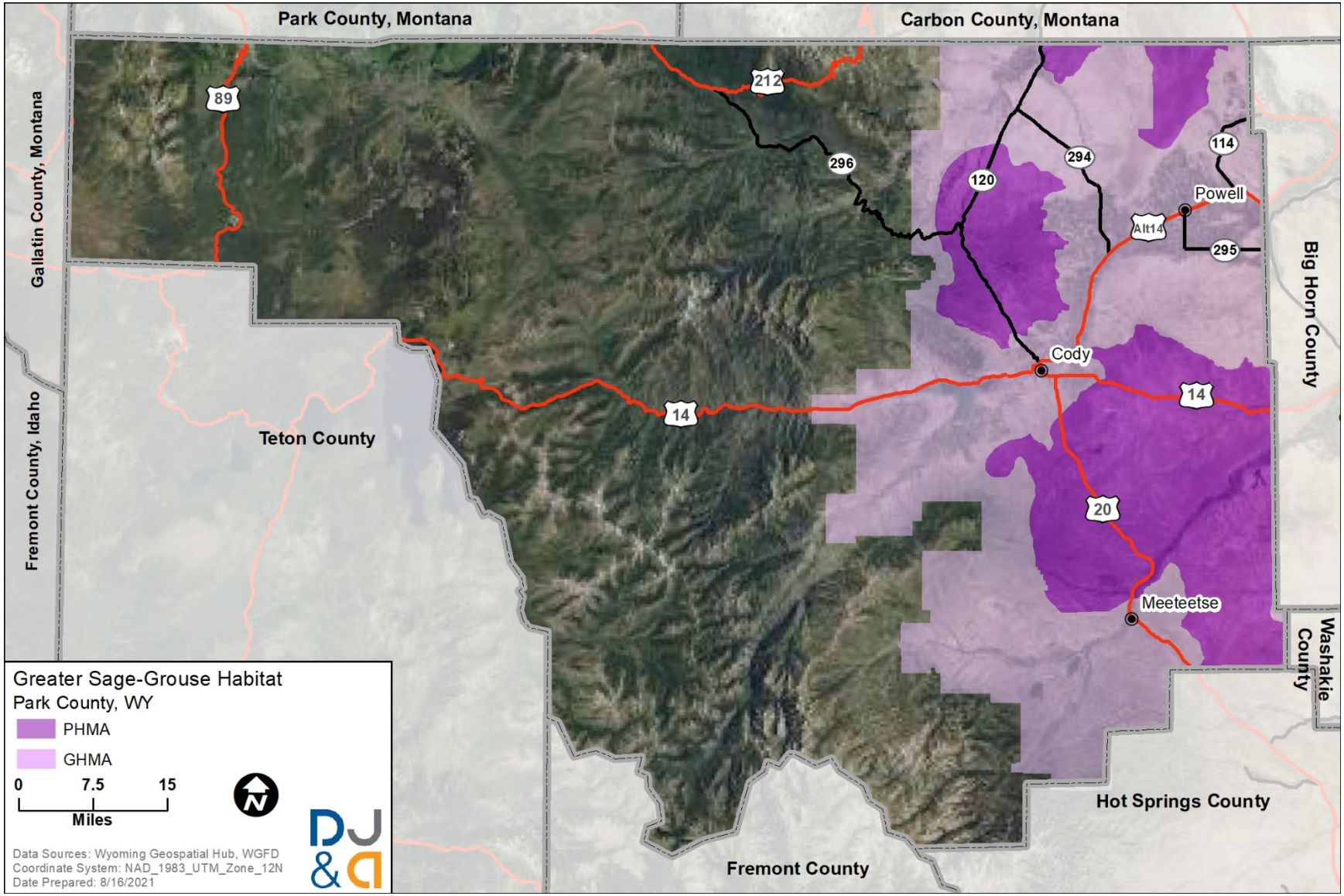
Map 11 Wyoming DEQ Assessed Waters within Park County



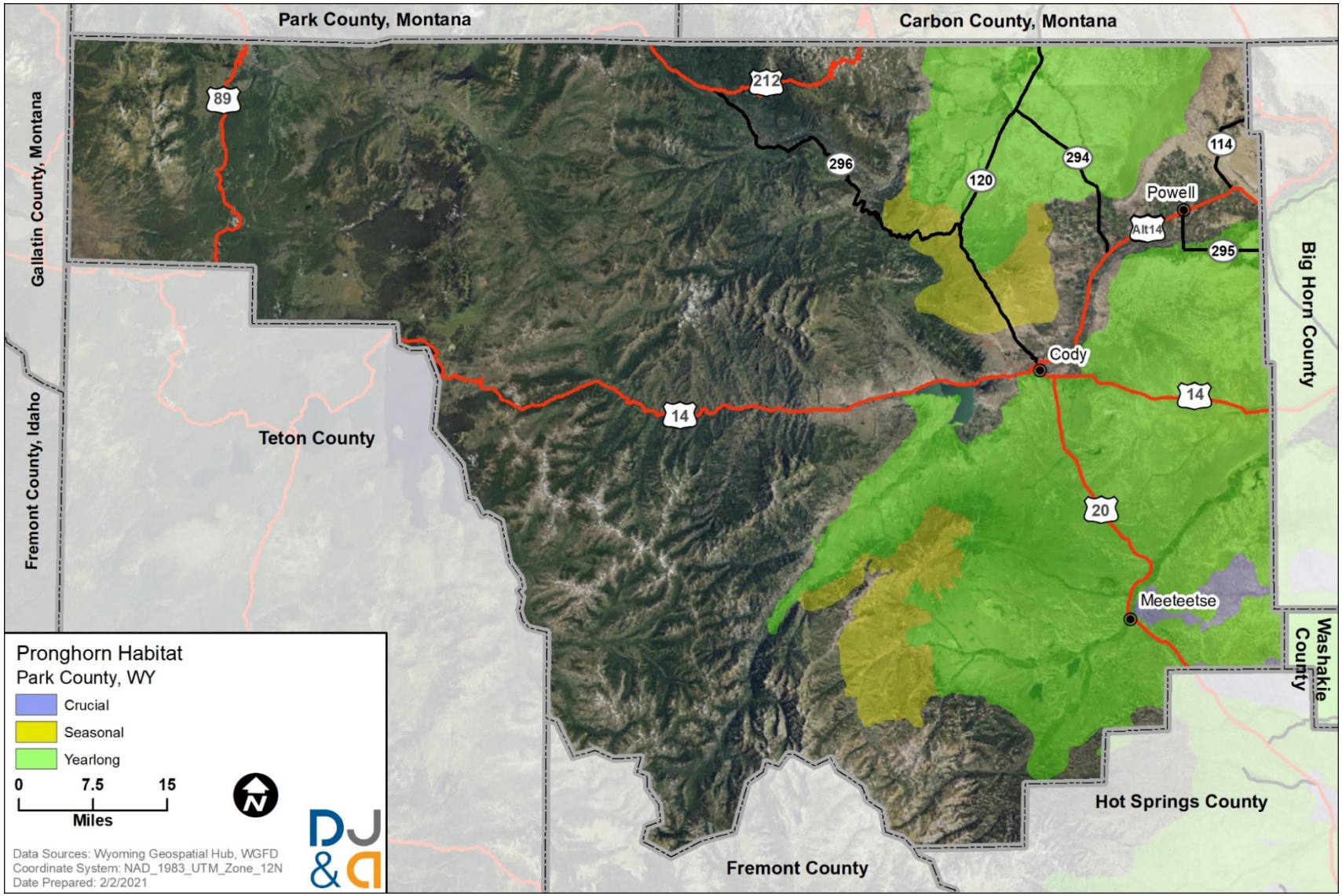
Map 12 Trout Stream Classifications within Park County



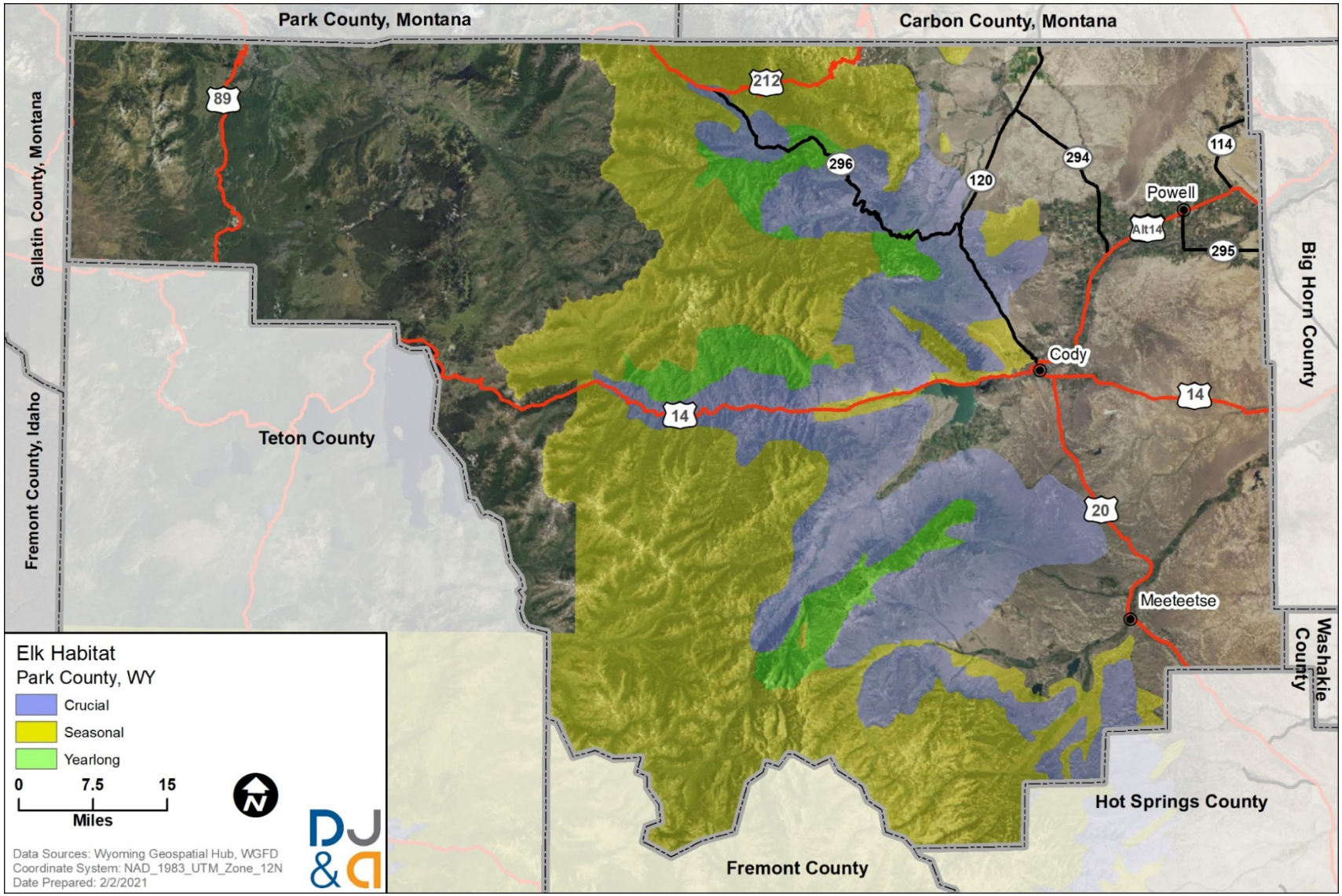
Map 13 Canada Lynx Critical Habitat within Park County



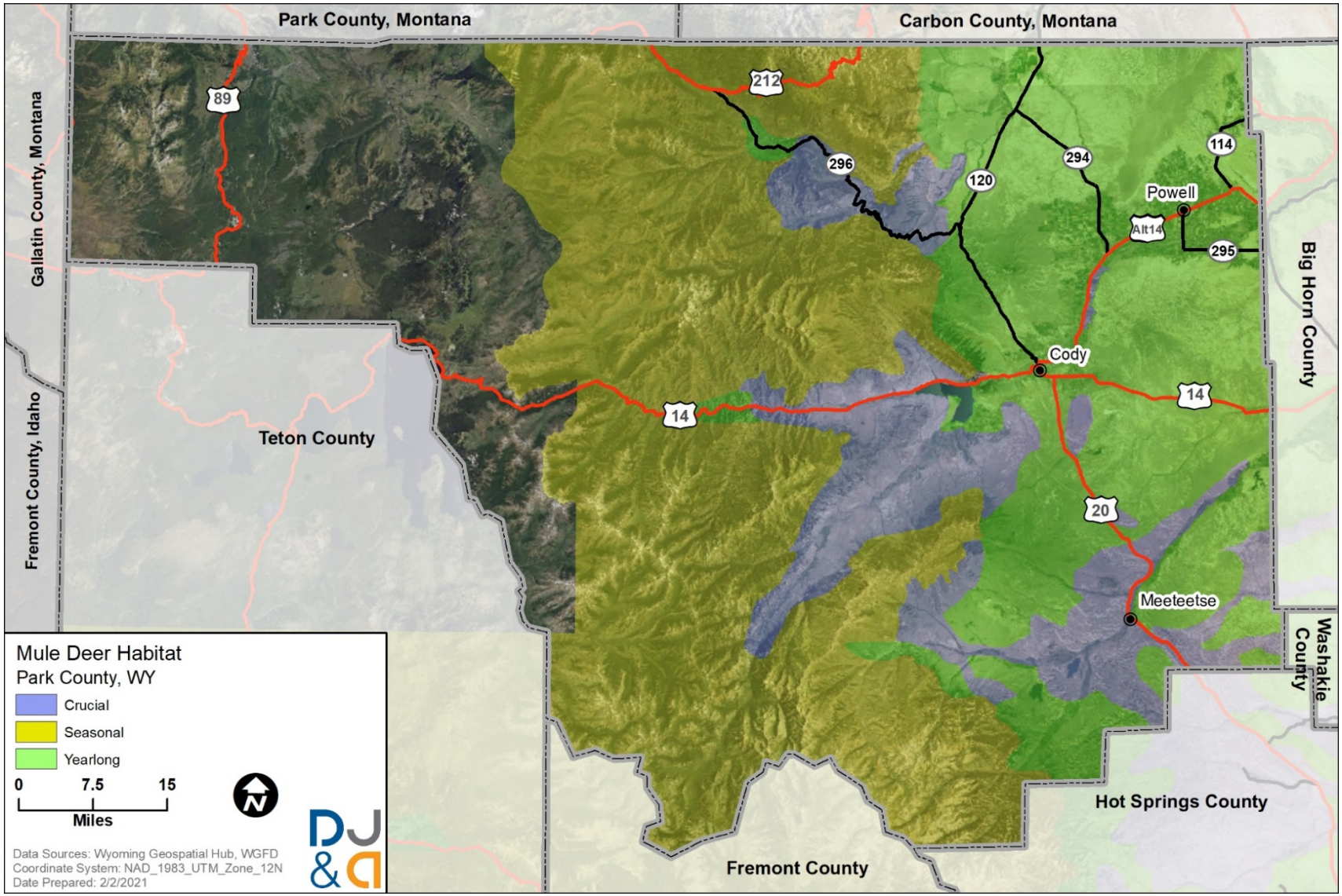
Map 14 Greater Sage-Grouse Habitat within Park County



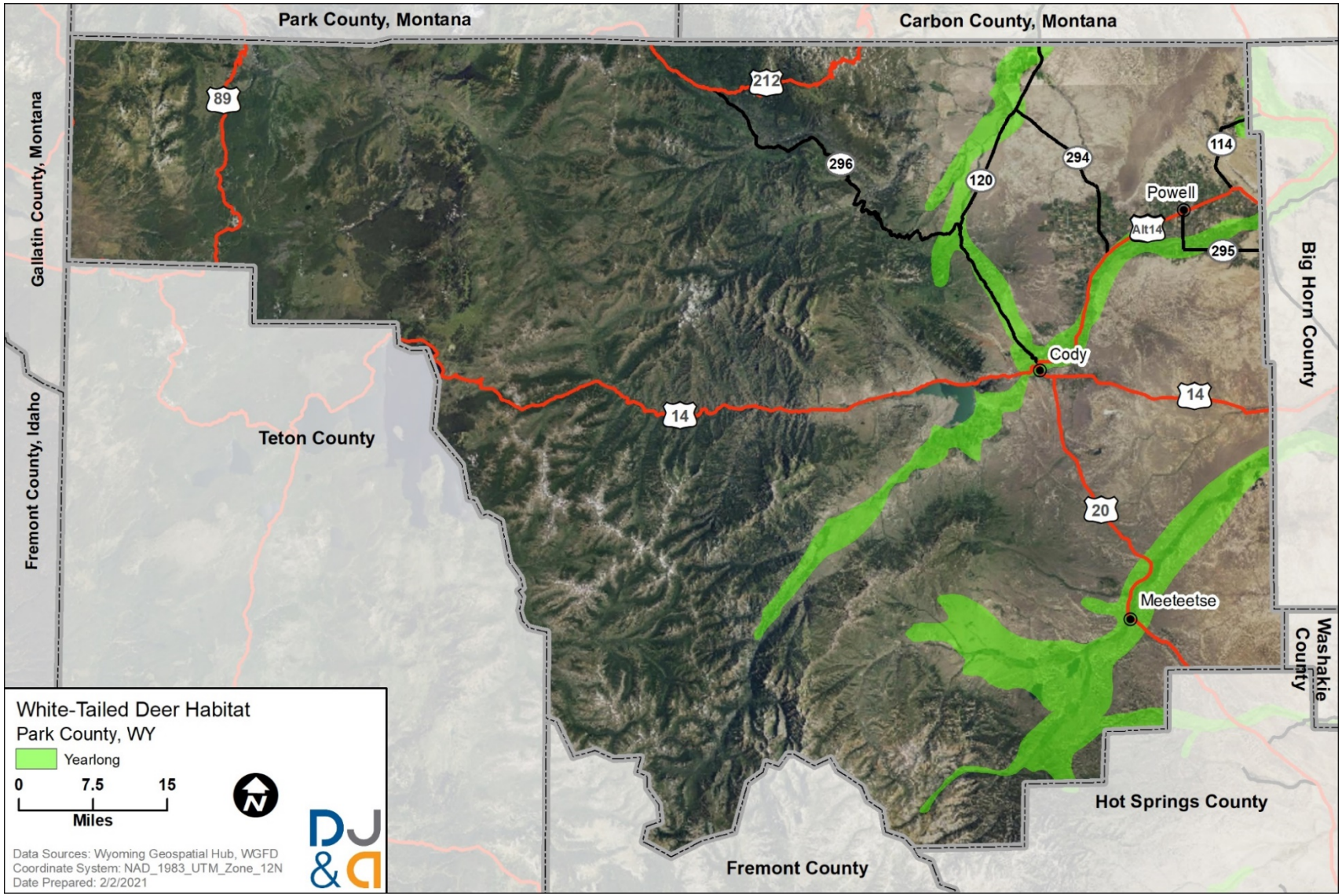
Map 15 Pronghorn Habitat within Park County



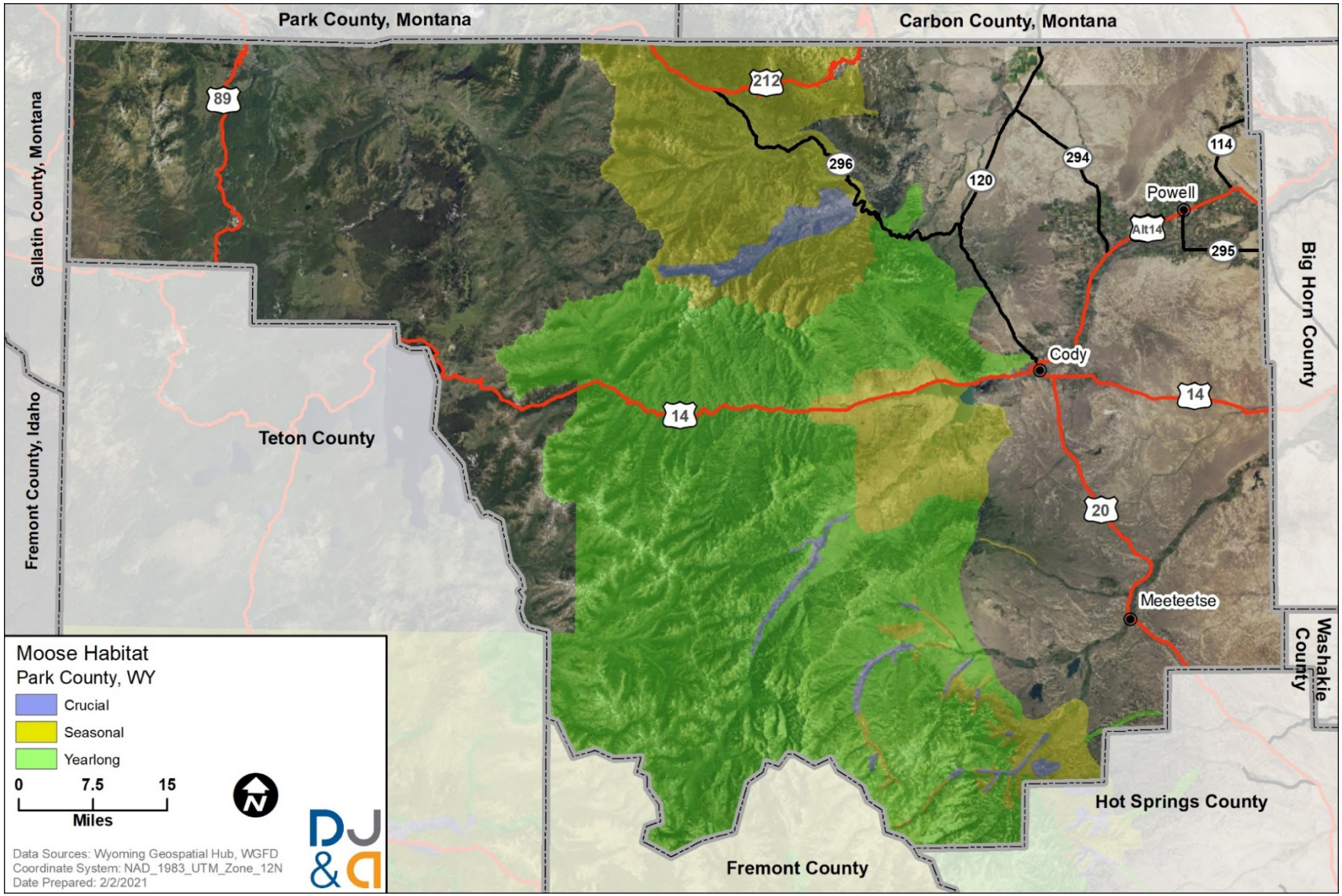
Map 16 Elk Habitat within Park County



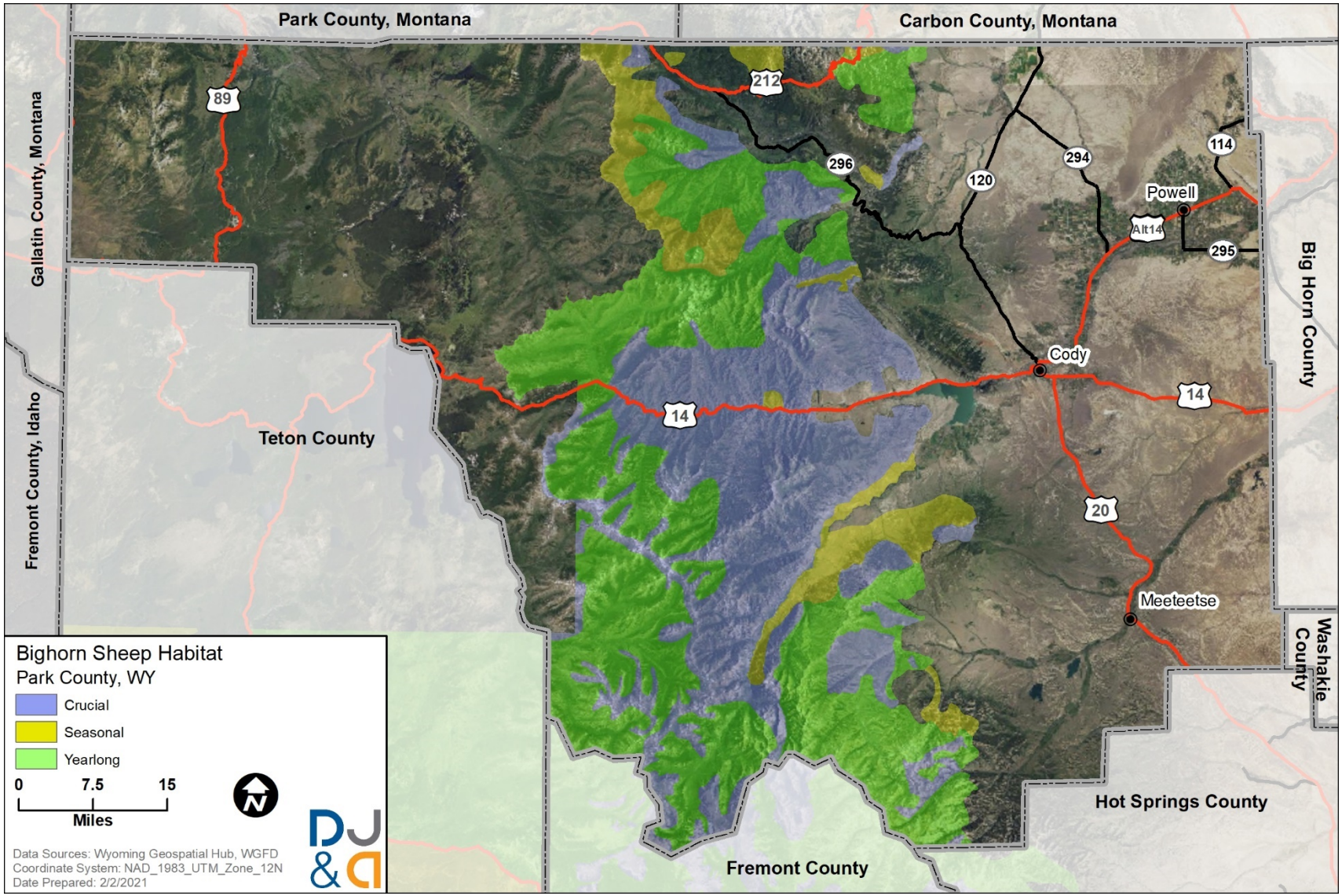
Map 17 Mule Deer Habitat within Park County



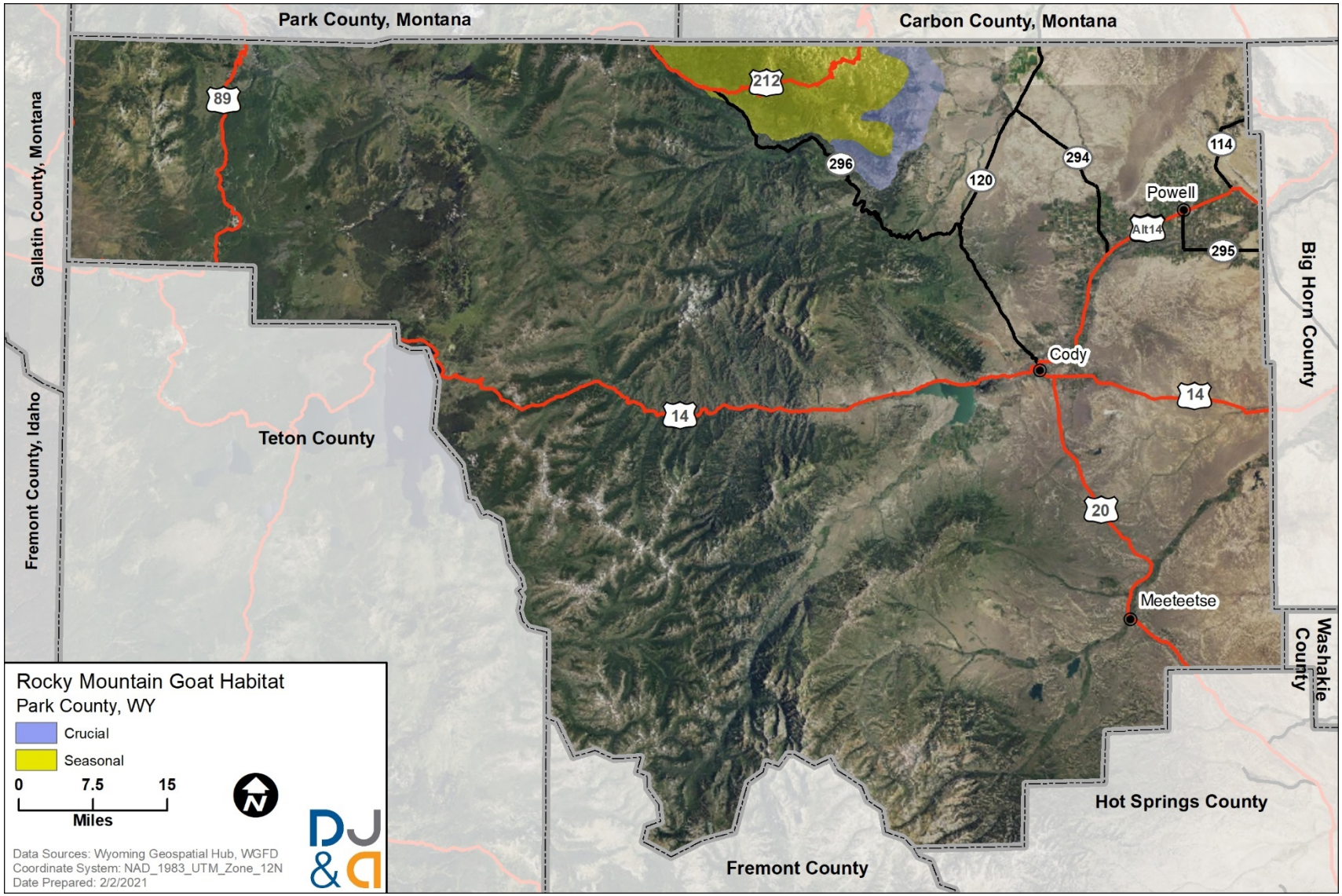
Map 18 White-Tailed Deer Habitat within Park County



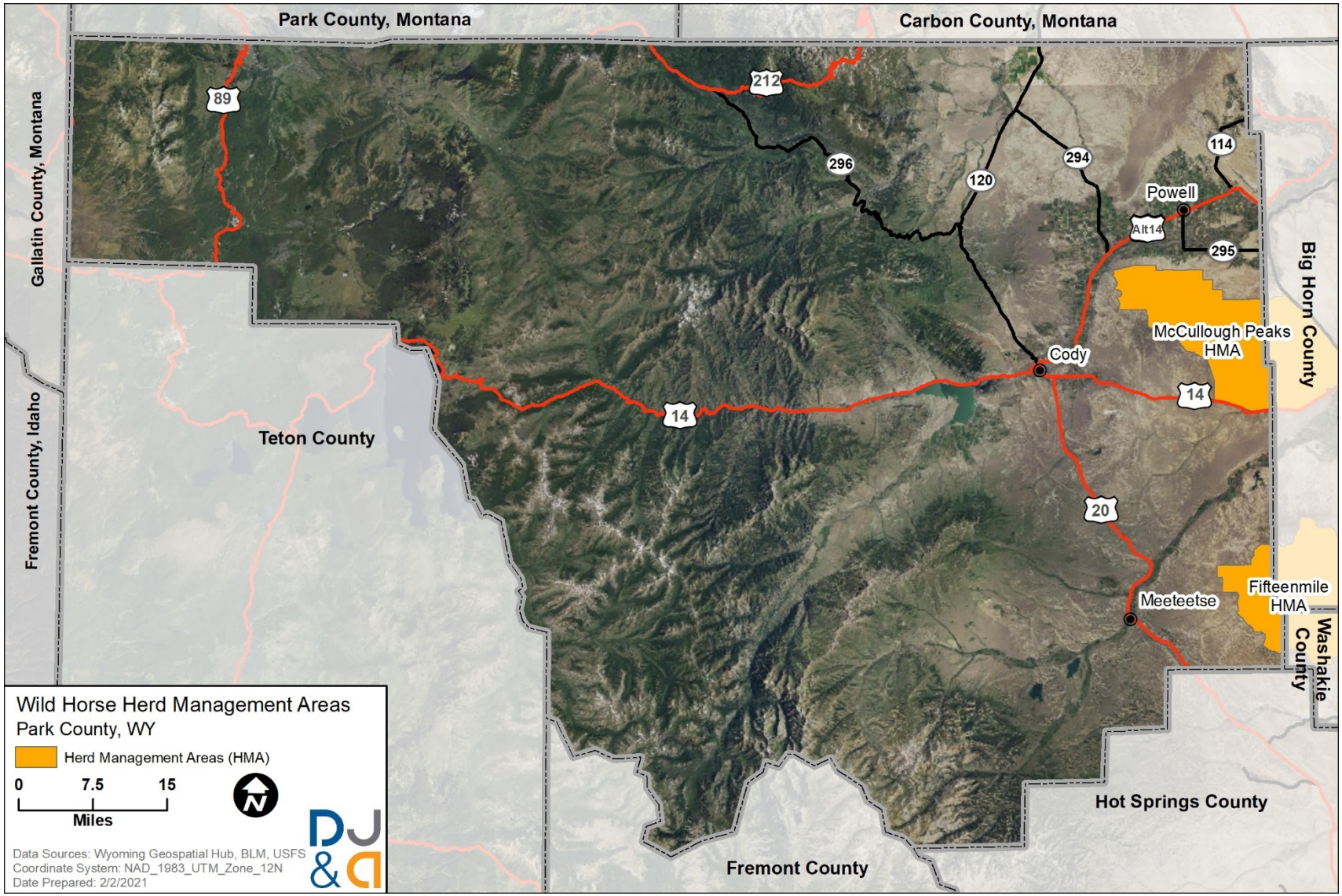
Map 19 Moose Habitat within Park County



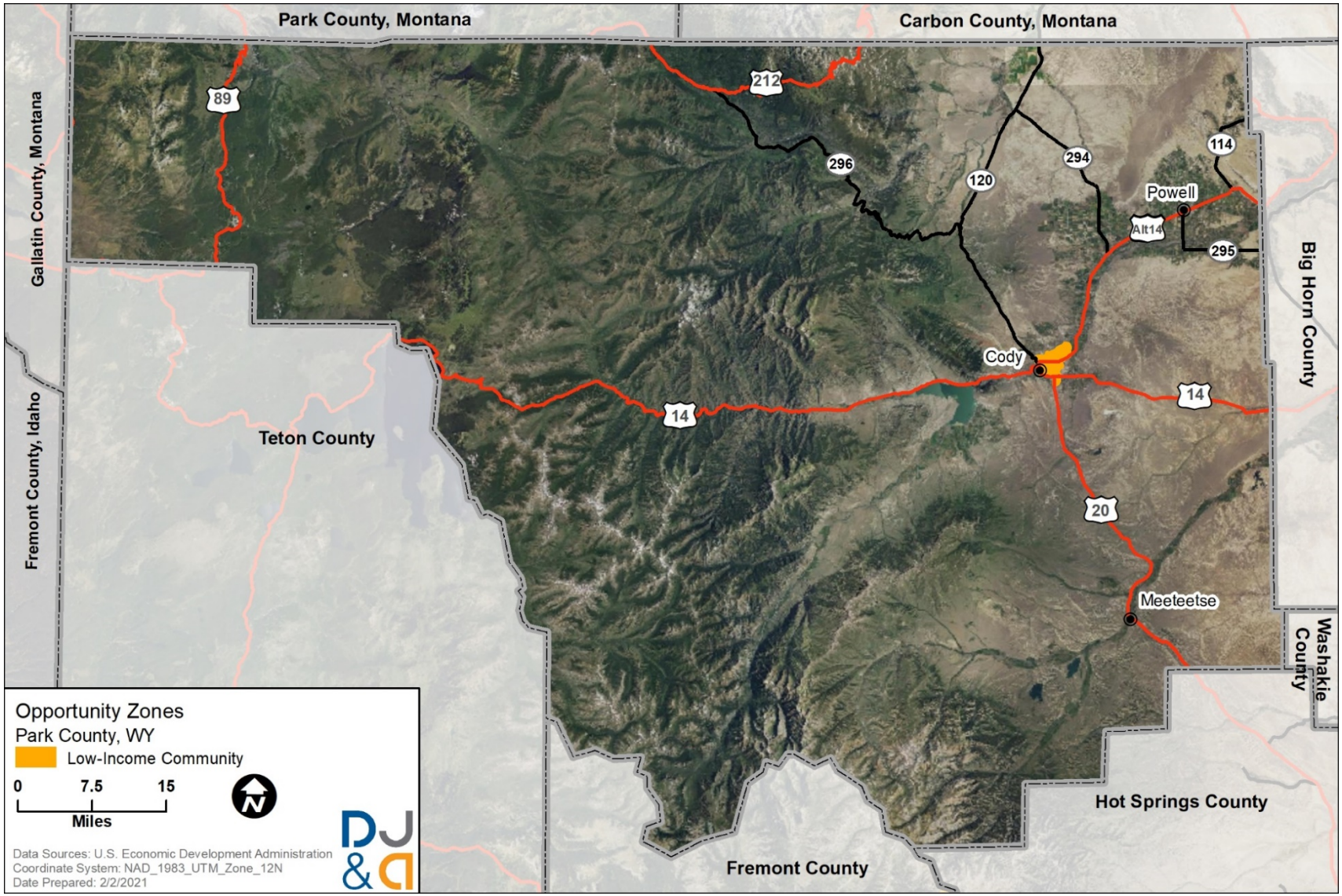
Map 20 Bighorn Sheep Habitat within Park County



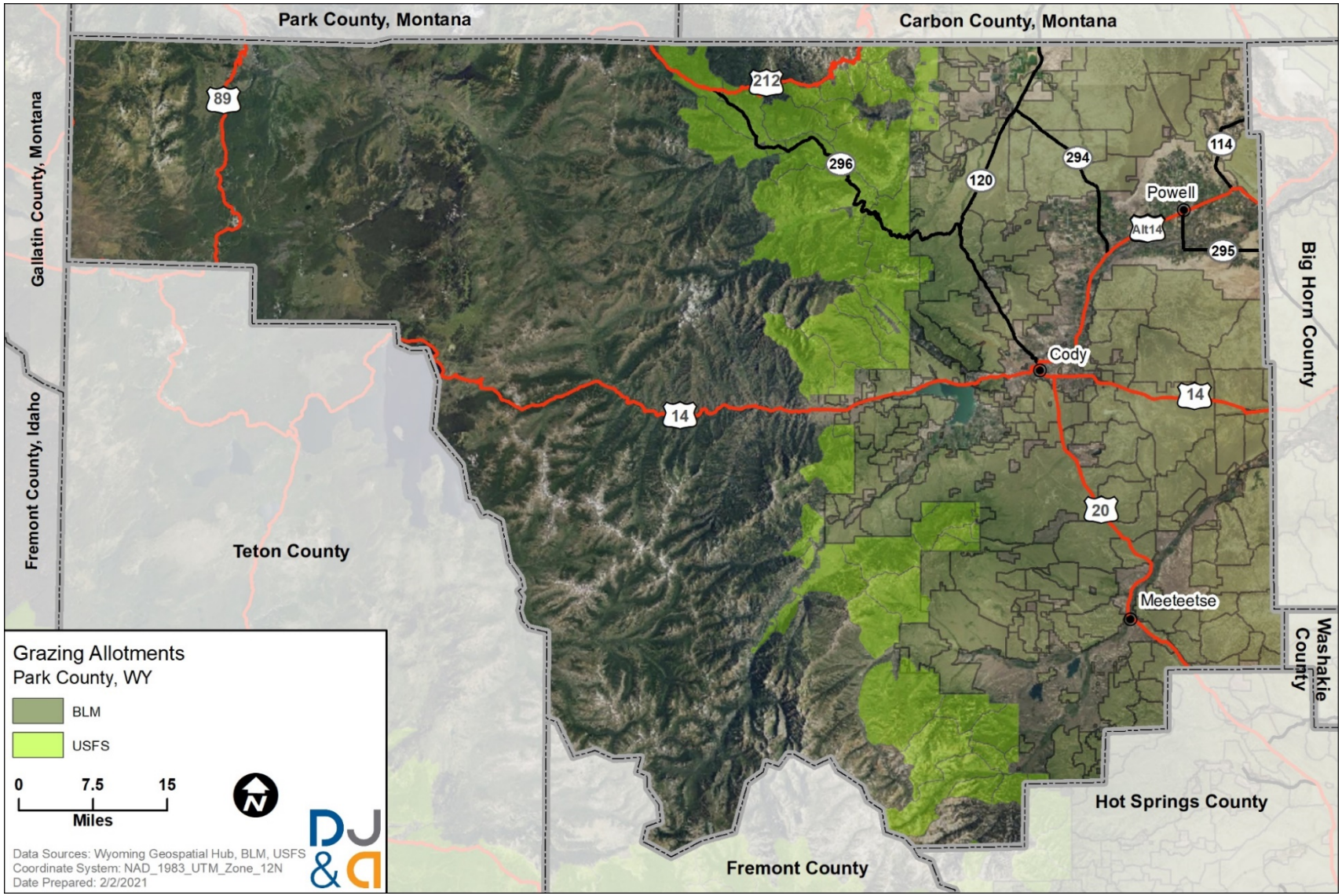
Map 21 Rocky Mountain Goat Habitat within Park County



Map 22 Wild Horse Herd Management Areas within Park County



Map 23 Opportunity Zones within Park County



Map 24 Grazing Allotments within Park County

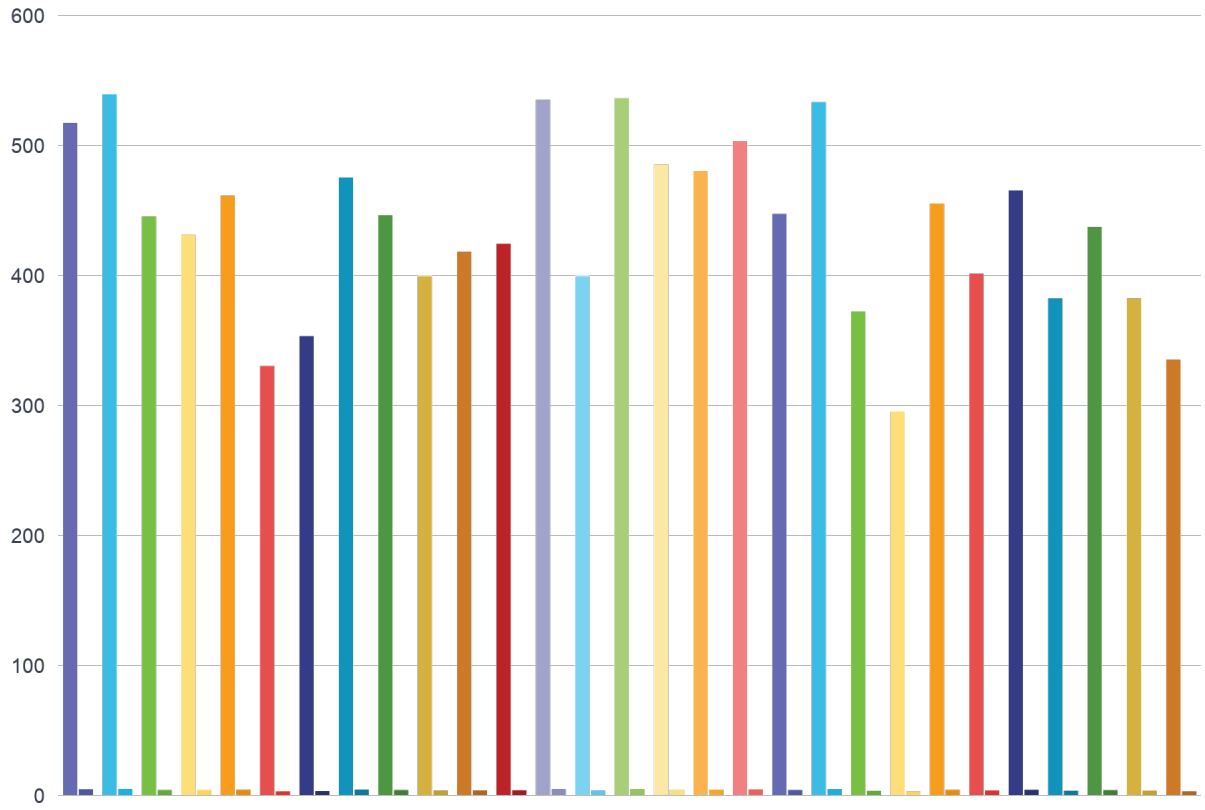
[This page was intentionally left blank.]

Appendix C: Public Survey

Park County Natural Resource Management Plan Survey

Park County is currently in the process of completing their Natural Resource Management Plan (NRMP). Counties can be strongly impacted by federal land management decisions on public lands located within, or adjacent to, the county. By adopting a NRMP, local governments can ensure that local policies and concerns are meaningfully considered by federal agencies.

Q1 Rank each public land resource area below based on its importance to Park County, with “0” being unsure, “1” being of no importance, and “5” being of highest importance.



Answered: 116 **Unanswered:** 4

	Choice	Score	Average
	Land Use	517	4.46
	Land Access	539	4.65
	Wilderness and Special Designations	445	3.84
	Fire Management	431	3.72
	Forest Management	461	3.97
	Mining and Mineral Resources	330	2.84
	Energy Resources	353	3.04
	Air Quality	475	4.09
	Soils	446	3.84
	Irrigation and Related Infrastructure	399	3.44

Choice	Score	Average
Dams and Reservoirs	418	3.6
Water Rights	424	3.66
Water Quality	535	4.61
Flood Plains	399	3.44
Rivers and Streams	536	4.62
Riparian Areas and Wetlands	485	4.18
Wild and Scenic Rivers	480	4.14
Fisheries	503	4.34
Threatened, Endangered, and Sensitive Species	447	3.85
Wildlife	533	4.59
Predator Control	372	3.21
Wild Horses and Burros	295	2.54
Noxious Weeds and Invasive Species	455	3.92
Economics and Society	401	3.46
Recreation and Tourism	465	4.01
Law Enforcement	382	3.29
Cultural, Historical, Geological, and Paleontological Resources	437	3.77
Economic Considerations	382	3.29
Livestock and Grazing	335	2.89

Q2 What industries in Park County are impacted by federal and state land management planning and should be discussed in the document?

Sunday, July 5, 2020, 7:33 PM UTC

Tourism/Recreational. Outfitting and Guides. Forest Management. Oil and gas Development.

Tuesday, June 30, 2020, 5:23 PM UTC

Tourism and ranching (grazing on publicly owned lands). However, the feds cannot and should not be toadies of the locals; federal agencies have their own mandates from Congress which they must adhere to.

Wednesday, June 24, 2020, 10:37 PM UTC

Cattle and Sheep

Sunday, June 21, 2020, 7:13 AM UTC

Tourism, Local Small Business Development, Wildlife Management, Energy - to name a few - our economy is so intertwined with the land and its uses, that the impact is far reaching.

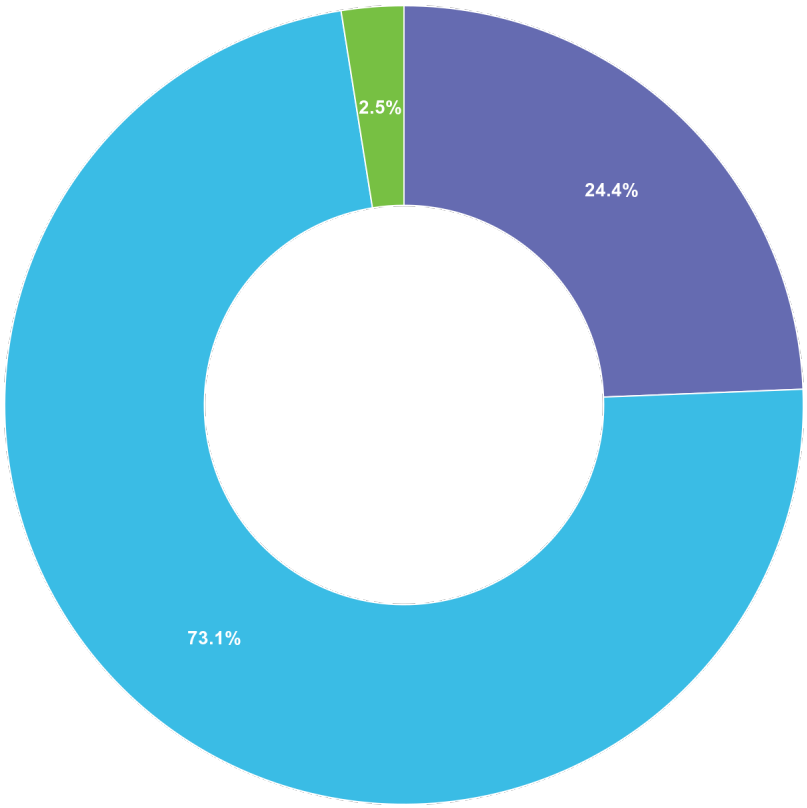
Saturday, June 13, 2020, 4:26 PM UTC

Just about all of them indirectly through the companies directly involved and those who support them and their employees as well as those benefiting from visitors

---

Answered: 81 **Unanswered:** 39

Q3 Do you or does anyone in your household earn income from an industry or commercial service that is dependent (directly or indirectly) on public lands (federal or state)?



Answered: 119 **Unanswered:** 1

Choice	Total
Yes	29
No	87
Unsure	3

Q4 If yes, what industry or commercial service?

Sunday, July 5, 2020, 7:33 PM UTC

Recreational. Forest management.

Sunday, June 21, 2020, 7:13 AM UTC

River Rafting

Saturday, June 13, 2020, 4:26 PM UTC

Tourism, recreation, energy

Monday, June 8, 2020, 8:53 PM UTC

I am a Montana Conservation Corps intern with the Forest Service

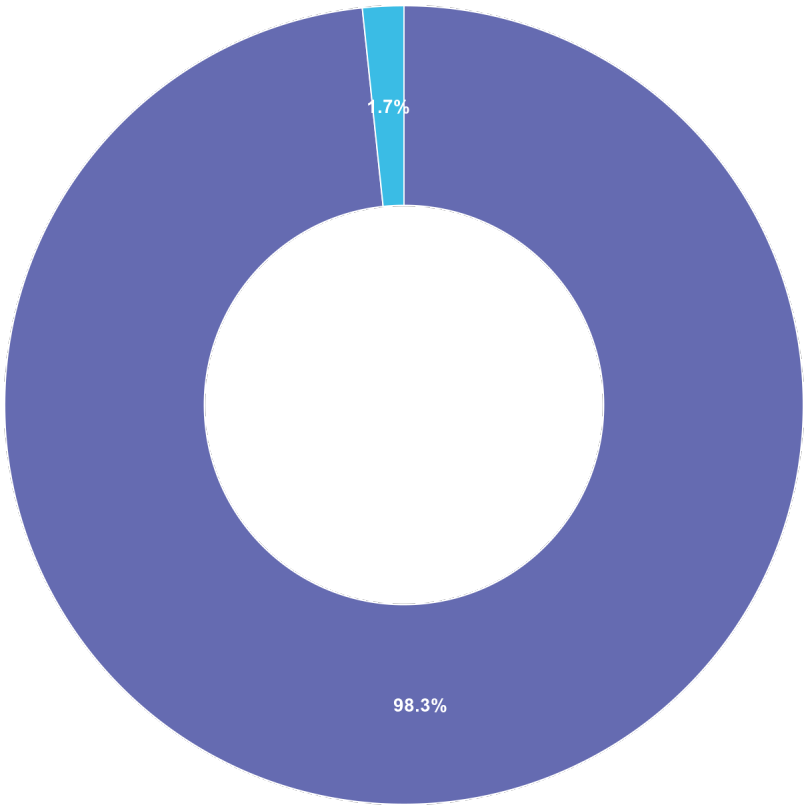
---

Sunday, June 7, 2020, 10:18 PM UTC

Security and hunter assistance

Answered: 30 **Unanswered:** 90

Q5 Do you or does anyone in your household use public lands in a recreational or other non-economic manner?



Answered: 120 **Unanswered:** 0

Choice	Total
Yes	118
No	2
Unsure	0

Q6 If yes, please list those recreational or other non-economic uses.

Sunday, July 5, 2020, 7:33 PM UTC

Hunting/fishing, hiking, wildlife viewing,

Tuesday, June 30, 2020, 5:23 PM UTC

One or two times a week I utilize public lands for recreational purposes.

Wednesday, June 24, 2020, 10:37 PM UTC

Hiking and Camping.

Sunday, June 21, 2020, 7:13 AM UTC

Fishing, hiking, camping, private rafting and river access, hunting, photography, sightseeing

---

Saturday, June 13, 2020, 4:26 PM UTC

Hiking, biking, ohv, hunting, fishing, skiing, camping, shooting

---

Answered: 114 **Unanswered:** 6

Q7 What words describe the values and culture of Park County? (i.e., local industries, traditions, customs, beliefs, or history)

Sunday, July 5, 2020, 7:33 PM UTC

Open space. Its what you don't see that counts. You don't see a lot of sprawling subdivisions up against public land boundaries.

Tuesday, June 30, 2020, 5:23 PM UTC

Too broad a question to lend itself to an easy answer.

Wednesday, June 24, 2020, 10:37 PM UTC

Cattle, Sheep and the Great Outdoors.

Sunday, June 21, 2020, 7:13 AM UTC

A sense of community and caring - for one another and for the land we are expected to honor and preserve. Our history and our future are tied to how well we balance the economic impacts of this area with the conservation and environmental concerns that we hold sacred. With respect to how the Native Americans in this area cared for the resources available to them in the past - we should consider that way of thinking and apply it to the way we function in the modern world. In addition, our history and culture are what draw people to this part of the world - to find what they may not have experienced anywhere else.

Saturday, June 13, 2020, 4:26 PM UTC

Clicky, special interest in terms of public lands and resources

---

Answered: 94 **Unanswered:** 26

Q8 How do those values and culture influence or impede future development?

Sunday, July 5, 2020, 7:33 PM UTC

Open space doesn't impede future development in Park Co as there currently are no regulations minimizing the effects of future development on open space.

Tuesday, June 30, 2020, 5:23 PM UTC

See Above.

Wednesday, June 24, 2020, 10:37 PM UTC

Both Influenced and impeded, but we all need to work together and listen to each other and they can be worked out..

Sunday, June 21, 2020, 7:13 AM UTC

Future development cannot exist or thrive if we ignore the values we place on our land and resources. Our culture of conservation and resource availability cannot maintain itself without checks and balances. There are many folks willing to think “outside the box” in terms of creating jobs and light industry in our area - that would still maintain a healthy balance of resources and land use.

Saturday, June 13, 2020, 4:26 PM UTC

Lack of community interest in the big picture hurts everyone. We need wilderness and we need energy and everyone needs to realize that without public land and resources we will have none of that

---

Answered: 84 **Unanswered:** 36

Q9 How have the values and culture influenced the economic stability or lack of stability within the county?

Sunday, July 5, 2020, 7:33 PM UTC

Open space has had a positive effect on the economic stability of the county as this is one common important theme in why people move to Park Co. Open space has pretty much been a direct result of ranches being on the landscape and not subdivisions.

Tuesday, June 30, 2020, 5:23 PM UTC

Extractive industries come and go; that's life in the American west. Remember the Atlantic City iron ore mine, and the Jeffrey City uranium boom. Adapting is what humans have always done.

Wednesday, June 24, 2020, 10:37 PM UTC

They have had some differences. However, I feel that they can be worked out.

Sunday, June 21, 2020, 7:13 AM UTC

Our values have often impeded new economic growth due to an unwillingness to accept change - change is often uncomfortable - but can also provide a stronger sense of community and opportunity for families trying to make a living here. We can make economic growth available without sacrificing the values of the community.

Saturday, June 13, 2020, 4:26 PM UTC

I don't know enough to comment on the economics

Answered: 78 **Unanswered:** 42

Q10 How have the values and culture influenced the diversity of industries or lack of diversity of industries within the county?

Sunday, July 5, 2020, 7:33 PM UTC

Park Co. and it's commissioner's (past and present) culture have had more influence on the lack of diversity of industries then the values of open space.

Tuesday, June 30, 2020, 5:23 PM UTC

Wyoming is hampered by climate severity and high elevation; 50+ percent of the state is over 6,000 feet in elevation. That means a very limited growing season. Plus, we are a headwaters state - with one major, one moderate and a couple of minor exceptions every river that leaves the state originates in the state.

Wednesday, June 24, 2020, 10:37 PM UTC

I am not completely sure. But if feel through communication they can be worked out.

Sunday, June 21, 2020, 7:13 AM UTC

I feel a lack of diversity exists because we hesitate to allow new enterprises that don't fit the current economic culture. But the historical culture of this area is one of Trail Blazers and Native history that relates back to the need for a more welcoming attitude toward new ideas - ideas that still maintain the treasures and resources that we have available to us here.

Saturday, June 13, 2020, 4:26 PM UTC

Diverse use of natural resources is important and should be a key driver in decision making. Too many extremes and special interests will destroy any chance for positive change

---

Answered: 71 **Unanswered:** 49

Q11 Thank you for completing this survey. If there is anything else you would like to share regarding this process, please use the space below to do so. All information will

be reviewed and considered for incorporation into the County Natural Resource Management Plan.

OPTIONAL: You may provide your name and affiliation, if desired. This information will be included in the compilation of this survey only if you choose to record below.

Tuesday, June 30, 2020, 5:23 PM UTC

John Osgood Cody, Wyoming resident Cody homeowner since 1980

Wednesday, June 24, 2020, 10:37 PM UTC

Jim Carlson

Retried

Monday, June 8, 2020, 8:53 PM UTC

Emma Heydenberk, emmaheydenberk@gmail.com

I would love to be involved in this process and care very deeply about the outcomes of this plan.

Monday, June 1, 2020, 3:26 AM UTC

No affiliation. I am deeply disappointed that the county is using tax payers dollars to pay a private county to make the land use plan, especially if it lessons protections for lands in Park County.

Tuesday, May 26, 2020, 7:35 PM UTC

Renee Tafoya

Answered: 24 **Unanswered:** 96

[This page was intentionally left blank.]