AUGUST 3, 2021

# Niobrara County
# Natural Resource Management Plan

(Intentionally left blank)

**CONTENTS**

***PHOTOS PROVIDED BY Lisa Shaw – Niobrara Conservation District**

## LIST OF FIGURES

## LIST OF TABLES

## ACRONYMS

ACEC- Areas of Critical Environmental Concern

APHIS – Animal and Plant Health Inspection Service

ARPA – Archeological Resources Protection Act

AUM- Animal Unit Month

BLM- Bureau of Land Management

BMP-Best Management Practice

BOR- Bureau of Reclamation

CAA- 1970 Clean Air Act

CAP-SSE-- Community Assistance Program – State Support Services

CCA – Candidate Conservation Agreements

CCAA – Candidate Conservation Agreements with Assurances

CEQ- Council on Environmental Quality

CWA – Clean Water Act

DEQ- Department of Environmental Quality

DOD- Department of Defense

EA- Environmental Assessment

EIS- Environmental Impact Statement

ENSO- El Niño-Southern Oscillation

EPA- Environmental Protection Agency

ERFO – Emergency Relief for Federally Owned Roads

ESA- 1973 Endangered Species Act

FAST – Fixing America's Surface Transportation act

FDQA – Federal Data Quality Act

FHWA- Federal Highway Administration

FLAP – Federal Lands Access Program

FLPMA- 1976 Federal Land Policy and Management Act

FLTP – Federal Lands Transportation Program

FSA – Farm Service Agency

GHG- Greenhouse Gas

GLO - General Lands Office

GPC—Groundwater Pollution Control

IMR – Intermountain Range

LUP- Land Use Plan

LWCF- Land and Water Conservation Fund Act of 1964

MOA - Memorandum of Agreement

MOU - Memorandum of Understanding

MUSY- 1960 Multiple Use Sustained Yield Act

NAAQS – National Ambient Air Quality Standards

NAO- North Atlantic Oscillation

NEPA- 1973 National Environmental Policy Act

NFHL – National Flood Hazard Layer

NFIP – National Flood Insurance Program

NFMA- 1976 National Forest Management Act

NFS – National Forest System

NPS- National Park Service

NRCS – Natural Resource Conservation Service

NRMP- Natural Resource Management Plan

NSFLTP – Nationally Significant Federal Lands and Tribal Projects Program

NSS – Native Species Status

NWR – National Wildlife Refuge

OAA-1897 Organic Administration Act

OHV – Off-Highway Vehicle

OMB - Office of Management and Budget

PDO -Pacific Decadal Oscillation

PFC—Proper Functioning Condition

PILT- Payments In Lieu of Taxes

RTP – Recreational Trails Program

SWAP – State Wildlife Action Plan

USACE – U.S. Army Corps of Engineers

USFS- U.S. Forest Service

USFWS – U.S. Fish and Wildlife Service

USGS- United States Geological Survey

USRS- United Stated Reclamation Service

WDEQ – Wyoming Department of Environmental Quality

WEQA – Wyoming Environmental Quality Act

WGFD – Wyoming Game and Fish Department

WMO- World Meteorological Organization

WOGCC – Wyoming Oil and Gas Conservation Commission

WQD—Wyoming Quality Division

WSA – Wilderness Study Area

WSFR – Wildlife and Sport-Fish Restoration

WWDC – Wyoming Water Development Commission

WWDO – Wyoming Water Development Office

WYDOT- Wyoming Department of Transportation

# CHAPTER 1: INTRODUCTION

## 1.1 PURPOSE

In a joint effort, the Niobrara County Commissioners and the Niobrara Conservation District have developed the Niobrara County Natural Resource Management Plan. The purpose of the plan is to protect Niobrara County's custom, culture, economic, and community stability as stated in the Niobrara County Land Use Plan revised in 1996. That plan, as well as this joint plan, seeks to achieve a balance between the community's natural and man-made environments, offering recommendations that promote the area's prosperity within a context that is compatible with the County's historical heritage. The overarching definition of custom and culture from the citizens of Niobrara County that has spanned through the decades is as follows:

> *Niobrara County's culture is a low population density and a high quality of life followed closely by self-sustaining environmental quality and diversity in use of the natural resources. Niobrara County's custom is resolutely independent with strong family values, quality education, unified and community-driven when facing adversity and mutual respect for each individual. Niobrara County has placed paramount importance on the continued use of the natural resources (on both private and public lands) for the production of food and fiber when defining economic and community stability. The vast open spaces in our locale are vital to the unlimited recreational and tourism opportunities. Local retail and family-type businesses, railroads, oil and gas, industries, prison, and government agencies also contribute to the economic and community stability.*

### 1.1.1 Natural Resource Management Plan

A Natural Resource Management Plan (NRMP) is a document prepared and adopted by a local government that federal agencies are required to review and consider when making decisions that may affect the local area. Locally elected governments, elected officials, and Conservation Districts have far-ranging and important responsibilities to their constituents, described by state statute as protecting their "health, safety and welfare" (Wyo. Stat. §§ 18-3-504(v); 18-5-208(a); Wyo. Stat. § 11-16-103). That responsibility includes specifically interacting with federal agencies on all federal issues impacting the local community and counties. Rural counties' socioeconomic well-being, health, safety, and culture are impacted by the management of the surrounding federal and public lands. To give locally elected governments the strongest voice possible during "government-to-government" interactions, local governments can formally adopt "local land use plans" (LUPs) or NRMPs. These plans establish policy regarding the use and management of federal lands in local governments' jurisdiction and can influence the development and implementation of federal policies, programs, and decision-making that affect local communities. NRMPs are intended to help protect the local citizens' use of, and access to, federally-administered lands and resources and to ensure the socioeconomic wellbeing, culture, and customs of a local community are adequately considered in federal decisions (Budd-Falen, 2018).

## 1.2 STATUTORY REQUIREMENTS AND LEGAL FRAMEWORK

Federal agencies are required to identify and analyze the impacts on local economies and community culture when making decisions. NRMPs outline the present economic and cultural

conditions and desired future conditions of a local community and demonstrate how those conditions are tied to activities on adjoining federal and public lands. The plan establishes the local government's preferred policies for the planned use, management, protection, and preservation of the natural resources on the federal and public lands within its jurisdiction. The goal is to protect private property, the local tax base, and local custom and culture. An adopted NRMP is a critical tool that allows a local government to have a substantive impact on federal decisions, plans, policies, and programs. A written plan can play a key role in the success of a local government engaging the federal government (Budd-Falen, 2018).

Required engagement between federal agencies and local governments takes the form of "consistency review," "coordination," and/or "cooperating agency." These engagements are allowed under the 1970 National Environmental Policy Act (NEPA), the 1976 Federal Lands Policy and Management Act (FLPMA), the 1976 National Forest Management Act (NFMA), and the State of Wyoming Governor's consistency review process.

The Niobrara County NRMP serves as a basis for communicating and coordinating with the federal government and its agencies on land and natural resource management and use within the county. Counties and conservation districts are particularly well-suited to understand the impacts of federal land management decisions on the local economy, custom, and culture. Under Wyoming statute, 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 (Wyo. Statute 18-5-208(a)). Similarly, Wyoming conservation districts have state statutory authority related to the conservation of soil and water resources, control and prevention of erosion, conservation, development, utilization of water, stabilization of the ranching or farming industry; preservation for wildlife; protection of the tax base, etc. *See* Wyo. §§ 11-16-103; 11-16-135; 11-10-122(b)(iii). Those statutory requirements outline the districts' areas of special expertise under NEPA. Wyo. § 11-16-122(b)(viii).

These local NRMPs do not regulate the use of private lands and do not constitute zoning. LUPs are generally associated with the planning document that counties use to determine zoning on private lands. An NRMP is a separate type of land use plan prepared by rural counties and conservation districts, containing policies relating to the management of federal and public land in the County and reflecting the local government's position on federal decisions concerning those lands (Budd-Falen, 2018).

Local governments do not have jurisdiction over the federal government or federal lands. NRMPs cannot require federal agencies to take specific actions. However, federal agencies and departments are mandated by various federal statutes (described below) to engage local governments during decision-making processes on federal plans, policies, and programs that will impact the management of land and natural resources within a community and ultimately affect the local tax base and lives of local citizens. Federal agencies are required to coordinate and consult with local governments and give meaningful consideration to policies asserted in written

plans prepared and adopted by local governments concerning the management of federal lands in their area (Budd-Falen, 2018).

### 1.2.1 The National Environmental Policy Act

The National Environmental Policy Act (NEPA) applies to "every major Federal action significantly affecting the quality of the human environment" (42 U.S.C. § 4332(1)(C)). The courts have interpreted this to generally mean that every time the federal government makes a decision for almost any action that may have an environmental impact, NEPA compliance is required. Some courts have even required agencies to follow NEPA when the agency spends a small amount of money on a project or program that they are not the lead agency. *See e.g., Citizens Alert Regarding the Environment v. United States Environmental Protection Agency*, 259 F.Supp.2d 9, 20 (D.D.C. 2003).

On July 16, 2020, the Council on Environmental Quality (CEQ) announced major regulation reforms to NEPA, including new rules trying to clarify what is a "major federal action." *See* 85 F.R. 43304 (July 16, 2020). The CEQ regulations define a "Major Federal Action" as "an activity or decision subject to Federal control and responsibility" (40 C.F.R. § 1508.1(q)). However, those activities and decisions are limited to those decisions that are discretionary or in which the federal government has sufficient control and responsibility over the outcome of the project. *See id*. This means that those projects that the government has a minor role in are not included. Further, minor actions that do not typically have a significant effect on the human environment (such as allowing certain range improvements on a grazing allotment) are categorically exempt from NEPA (40 C.F.R. § 1508.1(d)).

NEPA requires that federal agencies undertake an environmental analysis to determine whether a federal action has the potential to cause significant environmental effects. If a proposed major federal action is determined to significantly affect the quality of the human environment, federal agencies are required to prepare an Environmental Impact Statement (EIS). The regulatory requirements for an EIS are more detailed and rigorous than the requirements for an Environmental Assessment (EA). There are several ways local governments can participate in the NEPA process depending on the type of federal decision, the level of commitment of the local government, and the goals of the local government.

It is also important to note that the "human environment," as defined in NEPA, does not consist solely of ecological or environmental concerns, but also consists of the aesthetic, historic, cultural, economic (such as the effects on employment), social, or health effects in the human environment. 40 C.F.R § 1508.1 (g) and (m). Thus, decisions that may affect the historic, cultural, economic, or social stability of a community must also comply with NEPA and take those things into consideration.

#### *Consistency Review*

First, local government can use an NRMP as part of the federal agency's "consistency review" process. Under this provision, if the federal agency receives a local plan while writing an EIS or EA, NEPA commands the federal agency 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 C.F.R. §§ 1506.2, 1506.2(d)). Additionally, NEPA regulations require that the environmental consequences section of an EIS include "possible conflicts between the proposed action and the objectives of Federal, Regional, State, Tribal and local land use plans, policies, and controls for the area concerned. (§ 1506.2(d) of this chapter)." 40 C.F.R. § 1502.16(a)(5). Thus, the agencies are not only supposed to exercise consistency review and attempt to reconcile its proposed actions with local government plans or laws but they are also mandated to identify and include those possible conflicts within the planning document itself for the public to review and comment upon. For the local government to take advantage of the consistency review requirements, a written and adopted local plan is required. With a written plan, this analysis is supposed to happen even when the local government does not know about the pending decision or action if the NRMP was provided in advance to the reviewing federal agency. However, to best ensure that the agency adequately conducts consistency review, it is recommended that the County comment on pending decisions or actions and direct the agency's attention to any inconsistencies with the county NRMP. State agencies do not normally have to follow the consistency review requirements that federal agencies have to follow. However, this may change if there is a federal nexus involved in the decision and NEPA is required.

NEPA requires that copies of comments from state or local governments accompany the EIS or EA throughout the review process (42 U.S.C. § 4332(c)). Written comments submitted by a local government not tied to a formally adopted NRMP require less consideration than those tiered to an adopted NRMP.

### *Cooperating Agency*

Local governments can separately participate in the NEPA process as a "cooperating agency" (40 C.F.R. § 1501.8(a)). "Cooperating agency status" requires federal agencies to work with local governments before any federal plan or proposal is presented to the general public. It does not require a written land use plan prepared by local governments. If a local government believes that a proposed federal action will impact the local government, and the local government wants to be involved in the federal process at its inception, the government may request "cooperating agency status" to the deciding federal agency. As a part of the scoping process, lead agencies must invite likely affected local agencies and governments to participate as a cooperating agency (40 C.F.R. § 1501.9). An invitation during the scoping period is not required to participate as a cooperating agency and a local government can request to be a cooperating agency even after the scoping period. With respect to cooperating agencies, a lead agency must (1) request the participation of cooperating agencies at the earliest practicable time; (2) use the environmental analysis and proposals of cooperating agencies with jurisdiction to the maximum extent practicable; (3) meet a cooperating agency at the cooperating agency's request; (4) determine the purpose and need, and alternatives in consultation with the cooperating agency (40 C.F.R. § 1501.7(h)). Should a local government request cooperating agency status for a particular agency decision (for example, the designation of critical habitat for a listed threatened or endangered species), the local government can participate in drafting portions of the relevant NEPA document. Additionally, becoming a cooperating agency guarantees early involvement in the

decision because NEPA regulations require that, "With respect to cooperating agencies, the lead agency shall consult with all cooperating agencies as soon as practicable." 40 C.F.R. § 1501.7(h). This can involve identifying appropriate scientific data, assisting with alternative development for the proposed federal action, and ensuring that the discussion of impacts to the local economy or the local citizens is accurate. An NRMP, while not required, can aid this process and analysis. Cooperating agency status can be reserved for more significant federal decisions likely to have a larger impact on a community and is not required for every federal action.

Pursuant to NEPA, an applicant for cooperating agency status must be a locally elected body such as a conservation district, board of supervisors, or a County commission; and possess "special expertise." A local government's special expertise is defined as the authority granted to a local governing body by state statute.

Cooperating agency status can be an expensive, time-consuming, and cumbersome process and may be particularly challenging for small rural communities with limited resources. An NRMP ensures that the federal agency addresses the County's policies for virtually every federal decision without the burden of cooperating agency status.

### 1.2.2 The Federal Land Policy and Management Act

The Federal Land Policy and Management Act (FLPMA), which governs the Bureau of Land Management (BLM), provides detailed requirements for "coordination" and "consistency" with local land use plans. In addition to public involvement, the BLM is obligated to coordinate its planning processes with local government land use plans. 43 C.F.R. § 1610.3-1(a). With regard to the requirements for "coordination", FLPMA states that the BLM must:

> *To the extent consistent with laws governing the administration of the public lands, coordinate the land use inventory, planning, and management activities of or for such lands with the land use planning and management programs of other Federal departments and agencies and of the State and local governments within which the lands are located […] by considering the policies of approved State and tribal land resource management programs (43 U.S.C. § 1712(c)(9)).*

Such coordination is to be achieved by:

- To the extent practicable, the BLM **must** stay apprised of local land use plans. 43 C.F.R. § 1610.3-2(c)
- The BLM **must** assure that local land use plans germane to the development of BLM land use plans are given consideration. 43 C.F.R. § 1610.3-2(a).
- Provide local governments the opportunity for review, advice, and suggestion on issues and topics which may affect or influence local government programs. 43 C.F.R. § 1610.3-1(c).
- To the extent practicable, the BLM **must** assist in resolving inconsistencies between local and BLM land use plans. 43 C.F.R. § 1610.3-2(b).

- The BLM **must** provide for the meaningful involvement of local governments in the development of BLM land use programs, regulations, and decisions. This includes early notification of proposed decisions that may impact non-federal lands (43 U.S.C. § 1712(c)(9)).

Additionally, FLPMA requires BLM land use plans to be consistent with local land use plans, provided that achieving consistency does not result in a violation of federal law. FLPMA states: "Land use plans of the Secretary [of the Interior,] under this section **shall** be consistent with state and local plans to the maximum extent he finds consistent with Federal law and the purposes of this Act" (43 U.S.C. § 1712(c)(9)). BLM regulations further strengthen this by requiring that State and local governments shall have at least 30 days to review and comment on BLM land and resources management plans. Should they notify the Field Manager, in writing, of what they believe to be specific inconsistencies between the Bureau of Land Management resource management plan and their officially approved and adopted resources related plans, the resource management plan documentation shall show how those inconsistencies were addressed and, if possible, resolved. 43 C.F.R. 1610.3-1(f). However, the BLM has no duty to make its plan consistent with a local government plan, if the BLM is not notified by the local government of the existence of its local plan. 43 C.F.R. § 1610.3-2(c). Thus, it is important that the local government provides the BLM notice of the existence of the local land use plan.

In other words, FLPMA requires both "coordination" and "consistency review." Coordination should include both regularly scheduled meetings between the various local governments and BLM managers, as well as inviting local BLM staff to local government meetings (Bureau of Land Management, 2012b). Pursuant to FLPMA's consistency review requirement, if a BLM land use plan is inconsistent with a local land use plan, the BLM owes an explanation of how achieving consistency would result in a violation of federal law (43 U.S.C. § 1712(c)(9)).

### 1.2.3 The National Forest Management Act

The National Forest Management Act (NFMA) governs the U.S. Forest Service (USFS) and requires the agency to "coordinate." The NFMA requirements are as follows:

> *[T]he Secretary of Agriculture shall develop, maintain, and, as appropriate, revise land and resource management plans for units of the National Forest System, coordinated with the land and resource management planning processes of State and local governments and other Federal agencies. 16 U.S.C. § 1604(a).*

The fact that the USFS is directed to "coordinate" with local governments implies, by its plain meaning, that the USFS must engage in a process that involves more than simply "considering" the plans and policies of local governments; it must attempt to achieve compatibility between USFS plans and local land use plans.

The USFS is also obligated to perform a consistency review. For the development of forest plans, the Forest Service shall review the planning and land use policies of State and local governments where relevant to the plan area. The results of the review shall be displayed in

the EIS. 36 C.F.R. 219.4(b)(2). Such review of the plans and policies of State and local governments shall include consideration of:

(1) The objectives as expressed in local plans and policies
(2) The compatibility and interrelated impacts of these plans and policies
(3) Opportunities to address impacts identified and to contribute to joint objectives
(4) Opportunities to reduce or resolve conflicts, within the context of developing desired future conditions. 36 C.F.R. § 219.4(b)(2)(i) – (iv).

Additionally, the USFS is obligated to consider and provide for "community stability" in its decision-making processes. S. Rept. No. 105.22; 30 Cong. Rec. 984 (1897); *The Use Book* at 17; *see also* 36 C.F.R. § 219.6(b)(6) ("The Forest Service land use plan must provide for social, economic, and cultural sustainability"). "Community stability" is defined as a combination of local custom, culture, and economic preservation. As described by the Forest Service:

> *Forest reserves are for the purpose of preserving a perpetual supply of timber for home industries, preventing destruction of the forest cover which regulates the flow of streams, and protecting local residents from unfair competition in the use of the range . . . .*
>
> *We know that the welfare of every community is dependent upon a cheap and plentiful supply of timber; that a forest cover is the most effective means of maintaining a regular streamflow for irrigation and other useful purposes, and the permanence of the livestock industry depends upon the conservative use of the range.*

Forest Service, United States Department of Agriculture, *The Use Book*, 13 (1906 ed.). Thus, in addition to providing for coordination and attempting to achieve consistency with local land use plans, the USFS is required to understand the cultural and economic drivers of a community and its plans must attempt to protect those drivers whenever possible.

### 1.2.4 County Commissioner Authority

The Niobrara County Commissioners have in place an annual resolution supporting local custom, culture, and heritage as well as a Local Planning and Zoning Commission and Plan to protect the fundamental rights of the private lands and citizens of Niobrara County as directed by law. The state Land Use Planning Act of 1975 required all local governments to develop a Land Use Plan. Niobrara County's first plan was signed on November 22, 1977. In 1995, Niobrara County felt the need to revise the plan and embarked on the County Planning and Zoning process which was completed in 1998. The County Commissioners are governed by Wyo. Stat. §§18-02-101 Counties Power and Duties – General Powers. The 18-3-504(i) make such order concerning the property of the county as deem expedient.

### 1.2.5 Conservation District Authority

The Niobrara Conservation District (District) has a broad mandate to assist, promote, and protect public lands and natural resources, soil, water, and wildlife resources, to develop water and to prevent floods, to stabilize the ranching and agriculture industry, to protect the tax base, and to provide for the public safety, health, and welfare of the citizens. The District is charged with conserving, protecting, and developing these resources on all lands within the District and, thus, it is one of the few governmental entities with express authority to address resource issues, in cooperation with private landowners, state, or federal land management agencies on private, state, and federal lands. State law also gives the District broad powers to accomplish these policies and mandates, through research and education, implementation of erosion control, water and range projects with landowners, development of comprehensive plans, demonstration projects, providing financial and other assistance to landowners, management of flood control projects or lands under cooperative agreements with the U.S., and adoption of rules and ordinances. Both federal and state law authorize intergovernmental coordination and cooperation, which provide a mechanism for the local government to meet its mandate and policies for all lands within Niobrara County.

The District is a local governmental subdivision of the state as defined and established by the Wyoming Conservation Districts Law (Wyo. Stat. Title 11, Art. 16). The people of Niobrara County elect the five-member Board of Supervisors to the District during the general election by popular vote. The elected members represent both the rural and urban populations within Niobrara County. The District supervisors are the only locally elected board specifically charged with the responsibility of representing the citizens of Niobrara County on natural resource issues. A conservation district supervisor serves the community voluntarily. The District Board of Supervisors administers and implements projects and programs funded through local, state, federal, and private partnerships. The District, pursuant to the Wyoming Conservation Districts Law, is authorized to develop plans and policy for the District and file said plans in the office of the Niobrara County Clerk (Wyo. Stat. §11-16-122 (iv) and (xvi)).

The legislative declarations and policies of the Wyoming State Legislature guide the District's exercise of authority in developing this Plan.

**Wyoming Statute §11-16-103 – Legislative Declarations and Policy:**

(a) It is hereby declared that the farm and grazing lands of Wyoming are among the basic assets of the state; that improper land use practices cause and contribute to serious erosion of these lands by wind and water; that among the consequences which would result from such conditions is the deterioration of soil and its fertility and the silting and sedimentation of stream channels, reservoirs, dams and ditches; that to conserve soil, and soil and water resources, and prevent and control soil erosion, it is necessary that the land use practices contributing to soil erosion be discouraged and that appropriate soil conserving land use practices be adopted.

(b) It is hereby declared to be policy of the legislature to provide for the conservation of the soil, and soil and water resources of this state, and for the control and prevention of soil erosion and for flood prevention for the conservation, development, utilization, and disposal of water, and

hereby to stabilize ranching and farming operations, to preserve natural resources, protect the tax base, control floods, prevent impairment of dams and reservoirs, preserve wildlife, protect public lands, and protect and promote the health, safety, and general welfare of the people of this state. (Laws, 1941, ch. 134, 2; C.S. 1945,m 34-1402; Wyo. Stat. 1957, 11-236; Laws 1959, ch. 193, 2; Wyo. Stat. 1977, 11-19-103; Laws 1978 ch. 32,1.)

The term "conservation" is broadly defined to include "development, improvement, maintenance, preservation, protection, and use of natural resources, and the control and prevention of floodwater and sediment damages, and the disposal of excess waters" (Wyo. Stat. §11-16-102(iv)). Thus, the policy and authority granted to the District cover virtually all aspects of natural resource use and management within the District.

### 1.2.6 Governor's Consistency Review Process

FLPMA also requires that the BLM provide for a governor's consistency review as part of their land use planning process (43 C.F.R. § 1610.3-2(e)). State governors are entitled to an additional and entirely separate review of BLM land use plans, revisions, and amendments; this provides an opportunity to identify inconsistencies with state or local plans. If the governor's comments result in changes to the plan, the public should be re-engaged in the process. The governor may also use policies in the NRMP in their review of the proposed federal action.

## 1.3 PROTECTION OF PRIVATE PROPERTY RIGHTS

The Niobrara County Commissioners and District believe that the American concept of government of the people, by the people, and for the people is best served when government affairs are conducted as close to the people as possible (i.e., at the local government level). We find it desirable to address the use and management of these important resources, especially rangelands, soil, and water conservation, within the political jurisdiction of the District and the County as the heart of its comprehensive planning efforts.

The Commissioners and District understand one goal of the County's citizens and, therefore, its government has been the continuation of a lifestyle, which assures the quiet enjoyment of private property rights and property interest and provides the highest degree of protection for these rights. Property rights and interests are important to the people living and working in this remote, rugged county, which is the least populated county in the least populated state. Many people who live in Niobrara County rely on the land and its productive use. Private ownership and the incentives provided by private ownership are driving forces that support the livelihood of many Niobrara County citizens.

The U.S. Constitution created a form of government characterized by:

1. Limited powers granted to the federal government, with all un-enumerated powers being reserved to the respective states.
2. Separation of those limited powers into legislative, judicial, and executive branches.
3. Creation of a process where the branches act to check and balance the power of the other branches.
4. Guarantee rights of due process and just compensation when private property is taken for public use.
5. Grant of authority to Congress to make laws governing federal property.

### 1.5.1 Resource Management Objectives (Private Property Rights):

A. The fundamental rights of mankind as enumerated in the Declaration of Independence, the constitutional rights of citizens as set forth in the U.S. Constitution and Bill of Rights, and the Wyoming Constitution are reaffirmed, and the limited nature of government as intended by the nation's founding fathers is acknowledged.
B. Private property and interests in private property are protected and the continuation of private economic pursuits is promoted within Niobrara County.
C. The principles of due process are applied and followed at all levels of government within Niobrara County.

### 1.5.2 Priority Statements (Private Property Rights):

1. Federal agencies should respect private property rights and consider the effects of policies, regulations, and decisions on these rights.
2. Federal agencies shall conduct a takings implication assessment pursuant to Executive Order 12630[1] [Addendum Tab No. 47 at 236] for each federal action and should allow Niobrara County to provide comments regarding said assessment.
3. Federal agencies should recognize that the protection and preservation of privately owned land are desirable and necessary in Niobrara County.
4. Federal agencies should coordinate with Niobrara County to facilitate the opportunity of County citizens to be heard in the appropriate proceeding.
5. Federal agencies should promote the disclosure and public education of proposed actions, regulations, policies, and land use plan decisions that affect Niobrara County.
6. Federal agencies should avoid conflicts of interest in all decisions and disclose to the public when a possible conflict of interest exists.
7. Federal agencies should work with Niobrara County to ensure due process is given in all situations.

## 1.4 NATURAL RESOURCE MANAGEMENT PLAN ORGANIZATION

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

- **Resource Assessment and Legal Framework.** Includes background and detailed information on the resource, including qualitative as well as quantitative information. The assessment includes an evaluation of the importance of the resource to the County, location, quality, and size, as well as a map of the resource, where appropriate. The Resource Assessment relies on the best data available at the time of publication, though new data collection or research is not required. The Resource Assessment addresses the question, "What is the state of the resource now?" This section does not describe how the County interprets or proposes to use a particular resource or topic. This section describes how federal agencies are interpreting federal laws, guidance, and handbooks.
- **Resource Management Objectives**. Describes general goals in the form of broad policy statements regarding the use, development, and protection of each resource. 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 are tied to Resource Management Objectives for each resource and address the question, "How would the County like to see its objectives achieved?" The general agreement or disagreement with the interpretation described in the Resource Assessment section should be used as the defining direction for the priority statements.

## 1.5 NATURAL RESOURCE MANAGEMENT PLAN DEVELOPMENT PROCESS

Consistent with Wyo. Stat. § 9-4-218(a)(viii)(D) and in accordance with Wyo. Stat. §§ 16-4-401 through 16-4-408, Niobrara County and Niobrara Conservation District developed the Niobrara County NRMP in public meetings, allowing for participation and contribution from the public. This plan is based on criteria developed by the Office of the Governor of the State of Wyoming in consultation with the counties, consistent with Wyo. Stat. § 9-4-218(a)(viii)(B). Further information on the statutes and authorities for the County Commissioners and District can be found above in section 1.2.4 County Commissioner Authority and section 1.2.5 Conservation District Authority.

The Draft 2019-2024 Niobrara County Land & Resource Use Plan and Policies, a joint plan between the Niobrara County Commissioners and the Niobrara Conservation District that is still in draft form, was heavily referenced for the development of this plan. The Niobrara County Commissioners along with the Niobrara Conservation District reviewed and approved this plan along with other steering committee members. A list of those involved in the review and development of this plan can be found in Appendix D*:* Review Committee Members of this document.

The Niobrara NRMP document was released for a 45-day public comment period beginning on June 7, 2021, and ending on July 21, 2021. There were no public comments received during the public comment period.

The Niobrara County Commissioners and the Niobrara Conservation District recognize that the NRMP is dynamic and adaptive and will be updated as needed. It will require the cooperation, work, and dedication of many county residents. The ongoing planning will include consideration of historic, current, and future land uses in Niobrara County.

### 1.4.1 Amending the Natural Resource Management Plan

This plan can be amended following the same process for public involvement and adoption as described in the previous section. It is recommended to review the plan at least every five years. It is recognized that economic data within the county is constantly changing and this information will be updated in Appendix E: Economic Information for Niobrara County as updated studies and information is available.

## 1.6 COUNTY EXPECTATIONS FOR NATURAL RESOURCE MANAGEMENT PLAN

While the statutes and regulations outlined above spell out the legal requirements of the federal agencies in their duties in dealing with local governments, Niobrara County and District recognize that part of this land use planning process is to develop a solid working relationship with the federal agencies doing business in Niobrara County. The County and District also recognize that "coordination," "cooperating agency status" and "consistency review" are required actions on behalf of both the federal agencies and the local governments. To that end, the County and District commit to the following actions:

1. Within 60 days of the date of adoption of this plan, Niobrara County and the District will inform federal agencies of the date, time, and location of their regularly scheduled meetings with an open invitation that federal agency personnel should attend such meetings if there are issues to discuss. Meetings will be scheduled on a biannual basis.
2. Within 60 days of the date of adoption of this plan, Niobrara County and District will transmit a copy of this local land use plan to the state, regional, and local federal agency offices doing business within Niobrara County for their consideration as part of any consistency review that is required pursuant to federal statute. Those agencies include but are not limited to:
    a. Bureau of Land Management – Newcastle Field Office (Newcastle, WY)
    b. Bureau of Land Management – State Office (Cheyenne, WY)
    c. U.S. Forest Service – Thunder Basin National Grasslands (Laramie, WY)
3. Within 60 days of the adoption of this plan, Niobrara County and District will contact the BLM and USFS offices to determine a protocol for informal communication so that each is apprised of issues and concerns as early as possible.
4. In a timely manner, Niobrara County and District will review NEPA documents to determine if they will request "cooperating agency status" and will consider entering into Memorandums of Understanding (MOU) or Memorandums of Agreement (MOA) as appropriate. The County reserves the right to negotiate an MOU or MOA on a case-by-case basis, although an MOU or MOA is not appropriate nor necessary in all cases.

Niobrara County and District support establishment of a multi-agency stakeholder group, hosted by the County Commissioners, to review and discuss ongoing projects and issues on federal lands and propose regular meetings on a schedule to be determined, but not less than quarterly. The County expects that federal agencies will provide a record of compliance with the "standards of quality" and its peer review.

## 1.7 CREDIBLE DATA

To the greatest extent possible, data should drive all land use planning decisions. In this plan, "data" refers to information that meets, at a minimum, the Federal Data Quality Act (FDQA). The FDQA directs the Office of Management and Budget (OMB) to issue government-wide guidelines that "provide policy and procedural guidance to Federal agencies for ensuring and maximizing the quality, objectivity, utility, and integrity of information (including statistical information) disseminated by Federal agencies" (Sec. 552(a) Pub. Law. 106-554; HR 5658; 114 Stat. 2763 (2000)).

The OMB guidelines apply to all federal agencies and require that information disseminated by the Federal government will meet basic informational quality standards (66 Fed. Reg. 49718, Sept. 28, 2001; see also 67 Fed. Reg. 8452, Feb. 22, 2002).

This "standard of quality" essentially requires that data used and published by all Federal agencies meet four elements. These elements include (66 Fed. Reg. at 49718):

a) Quality,
b) Utility (i.e., referring to the usefulness of the data for its intended purpose),
c) Objectivity (i.e., the data must be accurate, reliable, and unbiased), and
d) Integrity.

In addition to following the OMB guidelines, all federal agencies were to issue data quality guidelines by October 1, 2002 (67 Fed. Reg. 8452).

In 2004, the OMB issued a memorandum requiring that, after June 15, 2005, influential scientific information representing the views of the department or agency cannot be disseminated by the federal government until it has been "peer-reviewed" by qualified specialists (Office of Management and Budget, 2004). This requirement does not specifically require outside peer review, but an internal review.

Many federal agencies have handbooks or guidelines related to credible data within their agency. Those manuals for relevant agencies in Niobrara County are:

a. BLM: BLM H-1283-1 Data Administration and Management (Public) (Bureau of Land Management, 2012a)
b. USFS: FS FSH 1909.12, Chapter 40, Land Management Planning Handbook – Key Processes Supporting Land Management Planning (US Forest Service, 2013)

Niobrara County and Niobrara Conservation District involve local individuals, who have expertise, experience, or general interest, as well as groups that deal with specific issues, to aid in participating in the decision-making processes. The Niobrara Resources Association is composed of local citizens, who will assist the County and District in compiling and disseminating pertinent information, identifying issues, drafting resolutions, and developing policy.

### 1.7.1 Credible Data Resource Management Objectives:

A. Credible data has a universal meaning for all federal agencies in Niobrara County and is the basis for all agency decisions that affect the County.
B. Data and information are developed in a way that provides credible scientific support for management decisions.

### 1.7.2 Credible Data Priority Statements:

1. Federal agencies should ensure that land management decisions within Niobrara County are based on quality data rather than just available data.
2. Federal agencies should require the inclusion of quantitative data that meets credible data criteria, even if the data were not produced by a federal agency.
3. Federal agencies should give greater weight to data submitted that meet credible data criteria compared to data that fails to meet the credible data criteria.
4. Federal agencies should facilitate and support monitoring and evaluation of rangeland, soil, and water conditions to ensure that management decisions are based on sound and credible data as mandated in state and federal law.
5. Only credible data that, at a minimum, meet the standards set forth in this Plan, meet the Federal Data Quality Act, and are legally collected should be recognized when assessing data and making any management decisions within Niobrara County.
6. Federal agencies should be transparent in their decision-making and provide the source for all data relied upon for their analysis.

# CHAPTER 2: NIOBRARA COUNTY OVERVIEW, CUSTOM, AND CULTURE

## 2.1 NIOBRARA COUNTY OVERVIEW

Niobrara County is in the east-central part of Wyoming with the states of South Dakota and Nebraska bordering on the east, Weston County bordering on the north, Converse County bordering to the west, and Goshen and Platte counties bordering to the south (Figure 1). The town of Lusk is the county seat with Manville and Van Tassell also recognized as incorporated towns. The one unincorporated town within the county is Lance Creek. According to the 2010 U.S. Census data, the total population of Niobrara County is 2,484 persons. Niobrara County is the least populated of the 23 counties in Wyoming. Approximately 1,662 people (or two-thirds of the population) in Niobrara County live within the towns of Lusk and Manville, while the remaining population lives in rural areas throughout the county.

Most of the county is rolling prairie, although there is a ridge of pine and cedar-covered hills, known as the Hat Creek Breaks, that run east to west through the south-central portion of the county. The Hat Creek Breaks make a climatic division with land south of the breaks receiving 15-17 inches of precipitation annually, while north of the breaks the land is 1,000 feet lower in elevation and receives 10-14 inches of precipitation annually. Elevations in the county range from 6,100 feet in the Rawhide Buttes to 3,600 feet in the northeastern corner of the county. The elevation of Lusk is 5,015 feet. Most of the county ranges from 3,800 feet to 5,000 feet.

Niobrara County is located at the crossroads of U.S. Highway 85 and U.S. Highway 20/26. The County is a gateway to the Black Hills of South Dakota to the northeast, Yellowstone and Grand Teton National Parks to the northwest, Cheyenne Frontier Days and the Colorado Front Range to the south, and the rich farmlands and sandhill counties of Nebraska to the east.

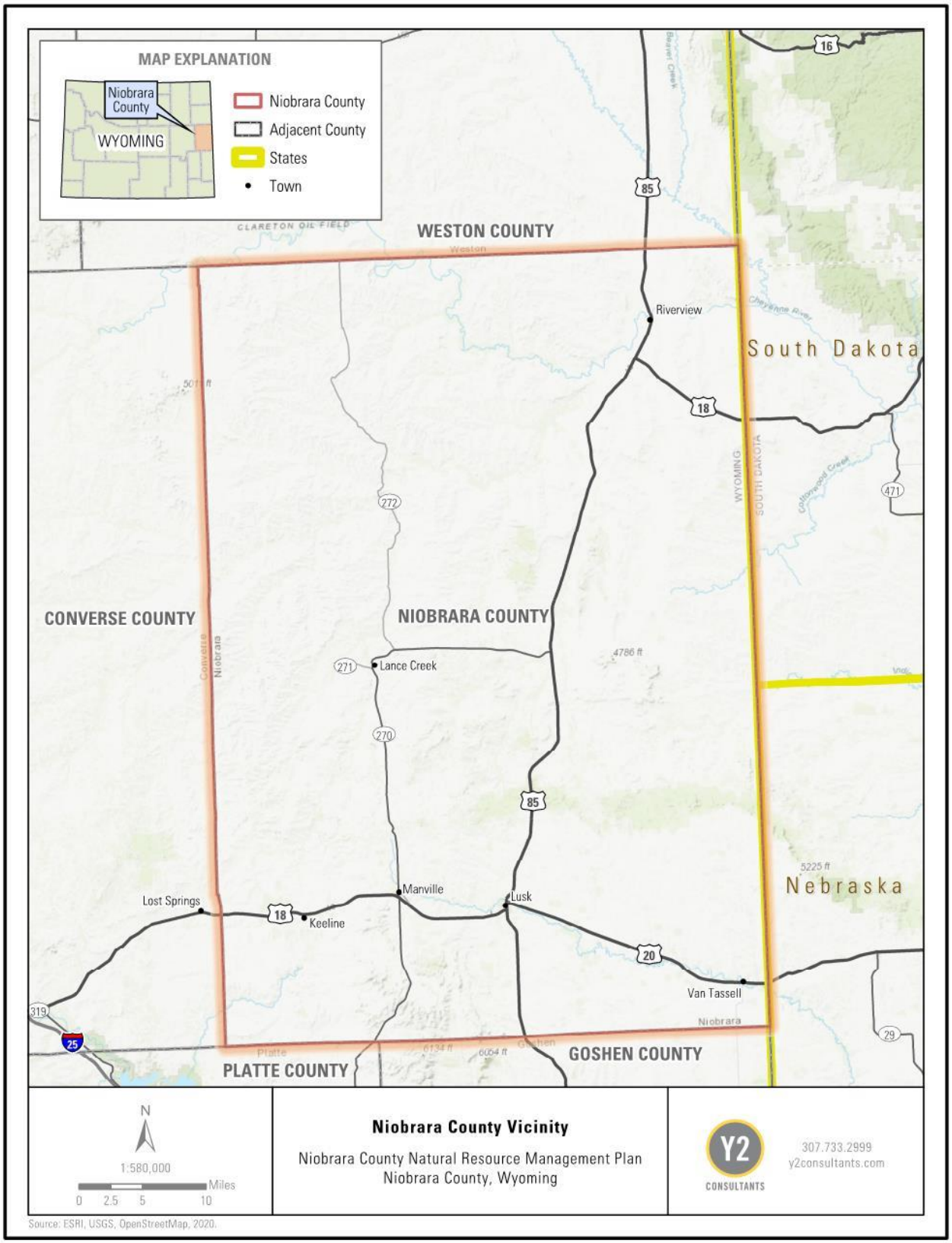



*Figure 1. Niobrara County Natural Resource Management Plan Area.*

## 2.2 NIOBRARA COUNTY CUSTOMS, CULTURE, AND HISTORY

Historically, the custom and culture of Niobrara County is a story retold in many western counties. The settlement of the county is defined by the history of mining, railroads, ranching, and oil and gas development. It was led by hardy individuals willing to work and develop the resources and to bring forth communities. The settlement of Niobrara County is based on the beneficial use of the land.

Life was never easy for the settlers of this county. This is a land where nature has the upper hand. Water is scarce and access is critical. The early settlers of this land worked hard to establish their livelihood, and today's residents work equally hard to continue that diligence and maintain their livelihood. The people of Niobrara County have traditionally earned their livelihood from activities associated with natural resources. The economy of the county in the past and today depends on the availability and utilization of natural resources. Directly or indirectly, most of the people employed in Niobrara County depend on oil and gas, mining in the form of rock and gravel quarries and related service industries, ranching/farming, recreation, and other activities related to the availability of natural resources.

The early settlers were diligent in pursuing legal protection of their property rights. Property rights remain important today to the residents of Niobrara County. Private ownership and the incentives provided by that ownership are a driving force behind the culture and lifestyle of Niobrara County.

The custom and culture of Niobrara County have been driven by available technology and resources, the distance to markets and prices, and the forces of a market economy. The beneficial use of natural resources has been the basis for Niobrara County's economy, customs, and culture, even though technology, mechanization, and markets have altered the means of production and marketing of these resources from their historic beginnings. Mining, oil and gas, ranching, and

farming provide the heritage of the County's residents, and residents continue these activities today.

## Niobrara History

Niobrara County contains some evidence of “Spanish Diggings”, stone quarries of the prehistoric age. In the mid-1800s, Niobrara County grasslands supported herds of buffalo and were a favored hunting ground for Native Americans. Teepee rings are still visible on the plains and lend credence to the fact that this was one of the final frontiers.

The first white settlers in the County were owners and employees of large cattle outfits. Originally, cattle were trailed from Texas and other southern territories to Wyoming to be fattened on the nutritious native grasses. After the grazing season was over, these cattle would be shipped to market, bringing good prices as grass fat cattle. Later, cattlemen learned that Wyoming would be a profitable place to operate year-round ranches, as cattle would thrive on the cured grass on the range, coming through the winter in better condition than cattle in the south. The Old Texas Trail crossed the territory comprising Niobrara County, some of the trail marks are visible to this day. This trail was used from 1876 to 1897. The Cheyenne Deadwood Stage Road crossed through the county and the Hat Creek Stage Station still stands today.

In 1884, copper mining began in the Rawhide Buttes and between 1884 and 1898, the Great Western Mining and Milling company operated a mill and smelter on what is known as the mining hills just west of the present town of Lusk. Over 200 men were employed at the Silver Cliff Mill.

In 1886, a branch of the Chicago Northwestern railroad (now Union Pacific) was built across the southern portion of the county and was a large part of the assessed valuation. The town was born as the legal headquarters for the Wyoming Central Railway which leased the line to the Fremont, Elkhorn, and Missouri Valley Railway. The Wyoming Central and the Fremont, Elkhorn, and Missouri Valley Railway were consolidated in 1891 and the railroad was purchased by the Chicago and Northwestern in 1903. Ranch manager Frank Lusk established post offices along the corridor and towns were formed.

With the railroad came a flood of homesteaders. The homestead movement began in the 1880s. The first settlers came here intending to operate small stock ranches. It was not realized at that time that someday parts of the county would develop into good farming country. Most of the families came from Nebraska, Iowa, Minnesota, and other nearby states. Most settlers were of

Western European and Scandinavian descent. Considerable homesteading failed to produce enough food and financial income to provide an adequate living. This was especially true on the heavier soils below the Hat Creek Breaks. Irrigation from groundwater was developed in the late 1860s and irrigated farming has become an important economic factor in the area.

Oil was discovered at Buck Creek Dome and Lance Creek in 1917. Lance Creek became one of the most prolific oil fields in its peak years between 1919 and 1928. In September 1918, a natural gas well was discovered near Lance Creek. According to notes submitted to the writer by Dr. J. E. Hawthorne, of Lusk, the early history of development in the Lance Creek field is briefly as follows:

> *As early as 1912 Dr. Hawthorne made an effort, by advertising, to obtain the necessary funds to drill a hole on Buck Creek. He failed to interest anyone at that time, but on April 29, 1913, what is known as the Lusk, Wyoming, Oil Co. was incorporated. After consulting L. W. Truinbull, State geologist, the company decided to drill a hole in the extreme northeast corner of sec. 15, T. 35 N., R. 64 W. Drilling began in August, and by June, 1914, when the funds were exhausted, a depth of 2,250 feet had been reached. A California company, represented by H. A. Rispin, then attempted to finish the hole but did not drill deeper than 2,600 feet. In April, 1913, Mr. McWhinnie, of Douglas, shipped a portable rig to Lusk.*

At least 16 oil companies staked claims in the area by 1918, and activity boomed until the Ohio Company shut down its production there in April 1920. The Lance Creek oil field boomed again a decade later, but by then most of the early drillers had moved away. In 1933, the Ohio Oil Company slowed its operations as the Great Depression spread across the country and oil prices fell and kept falling. During this time, residents Roy E. Chamberlain and Jim Hoblit were themselves in need of work. They risked their personal savings to open a refinery to provide home-heating fuel and gasoline for Niobrara County residents. The C&H Refinery was successful even during such financially unstable years, and in 1936 Chamberlain sold his interest to Hoblit and made a profit. Joe Chamberlain (no relation to Roy Chamberlain) purchased the refinery in 1974, but it closed in 1978 as it could not compete with big oil.

Today, the largest group of small businesses are involved in the agriculture industry or natural resources in general. Other employers in the County include the public schools, the Union Pacific Railroad, the Wyoming Women's Center, and local government agencies.

## 2.3 CUSTOM AND CULTURE RESOURCE MANAGEMENT OBJECTIVES:

A. Niobrara County custom and culture is protected and promoted as part of the County's conservation activities to protect rangeland, soil, water, and natural resources, to stabilize ranch and farm operations, to protect the tax base, and to provide for the general health, safety, and welfare of the citizens at local, state, and federal government levels.
B. The custom and culture of Niobrara County is considered in all forms of planning considerations and processes and continues to develop and retain Niobrara County's cultural identity.

C. The effects and impacts of local, state, and federal land management actions on the custom and culture of Niobrara County are analyzed and considered in every decision.

## 2.4 CUSTOM AND CULTURE PRIORITY STATEMENTS:

1. Niobrara County and Niobrara Conservation District request the opportunity to review local, state, and federal land use and planning documents that may impact the County's custom and culture and make recommendations pertinent to the issue or proposal in question.
2. Environmental quality should be enhanced to preserve and conserve Niobrara County's rangeland, water, and soil resources while protecting the tax base, economic opportunity of Niobrara County citizens, and promoting public welfare.
3. The continued viability of agriculture in Niobrara County should be encouraged due to its direct tie to the custom and culture of the area and its importance to the conservation of rangeland resources, soil, and water which are needed by residents of and visitors to the County.
4. Federal agencies should recognize the continued importance of mineral and energy development to Niobrara County's custom and culture.
5. Federal, state, and local agencies should ensure that the physical environment, social, cultural, and economic needs of Niobrara County are considered when making land use decisions and plans that affect the custom and culture of the County.
6. Any impact assessment of Niobrara County custom and culture should be clearly articulated and cited and included as part of all federal land management plans.
7. Local, state, and federal agencies should enhance opportunities for responsible use of public lands, which benefit the custom, culture, and economic base of Niobrara County.

# CHAPTER 3: LAND USE

## 3.1 LAND USE

### 3.1.1 Land Ownership

Niobrara County covers 2,614 square miles or 1,672,960 acres and is the 16th largest county in Wyoming. Approximately 82% of the land is privately owned, 8% of the land is owned by the federal government, and 10% of the land is owned by the State. Most of the federal land is administered by the Newcastle BLM Field Office but a small portion is administered by the USFS as the Thunder Basin National Grassland (TBNG). Figure 2 shows land ownership within the County.

### 3.1.2 Niobrara Conservation District

***History, Custom, & Culture***

During the 1930s, the Dust Bowl made clear the need to conserve natural resources, particularly soil. The Soil Conservation Act of 1935 created the Soil Conservation Service, now called the Natural Resource Conservation Service (NRCS), to develop and implement soil erosion control programs (WACD, n.d.). In 1941, the Wyoming State Legislature passed an enabling act which established conservation districts in Wyoming. Conservation districts were to direct programs protecting local renewable natural resources. Wyoming now has 34 conservation districts in 23 counties (WACD, n.d.).

The Niobrara Conservation District encompasses all of Niobrara County. Lands of Northern Niobrara County were initially administered in the Upper Cheyenne River Soil and Water Conservation District and the Beaver Skull Soil and Water Conservation District. The Niobrara Soil and Water Conservation District was formed on June 4, 1968. In June 1972, the boundaries and name changed to the current boundary and title. The Niobrara Conservation District administers programs on all lands within Niobrara County.

***Resource Assessment & Legal Framework***

The focus of the District has expanded from primarily working to reduce and prevent soil erosion to also addressing other important natural resource management matters. These include water quality and quantity, grazing management, wildlife conservation, tree establishment, land-use planning, public education efforts, and conservation in urban areas.

The District is charged under state law to conserve rangeland, soil, and water resources to stabilize ranching and farming operations; to preserve natural resources, public lands, and wildlife; to protect and promote the health, safety, and general welfare of the people of this state; and to protect the tax base.

### 3.1.3 Bureau of Land Management

***History, Custom, and Culture***

The BLM we know today was established in 1946 by combining the General Lands Office (GLO) and the U.S. Grazing Service. The GLO was created in 1812 and was responsible for all federal

land sales, patents, and entries established within Treasury Department to oversee the disposition of ceded and acquired lands (Bureau of Land Management, 2016a). In 1934, the Taylor Grazing Act authorized grazing districts, regulation of grazing, and public rangeland improvements in Western states and established the Division of Grazing (later renamed U.S. Grazing Service) within the Department of the Interior.

***Resource Assessment & Legal Framework***

The BLM manages approximately 7% of the lands in Niobrara County. BLM administered lands in the County are managed by the Newcastle Field Office out of Newcastle, WY which is part of the High Plains District Office located in Casper, WY. The Newcastle Field Office encompasses approximately 292,000 acres between Crook, Weston, and Niobrara counties. The Newcastle Field Office Resource Management Plan (RMP) was approved in a record of decision (ROD) signed on August 25, 2000.

FLPMA is the BLM's governing document outlining management responsibilities of the BLM to balance public access and multiple uses with the protection and preservation of the quality of the lands and its resources (43 USC § 1732) (FLPMA, 1976). FLPMA requires the BLM to administer federal lands "on the basis of multiple use and sustained yield" of all resources.

### 3.1.4 U.S. Forest Service

***History, Custom, and Culture***

In 1876, United States forest management was formalized with the creation of the Office of Special Agent within the Department of Agriculture to assess the quality and condition of U.S. forests. In 1881, the Division of Forestry was added to the Department of Agriculture. In 1891 Congress passed the Forest Reserve Act allowing the President to designate western lands as "forest reserves" to be managed by the Department of the Interior. Western communities strongly opposed forest designations because development and use of "reserved lands" were prohibited. In 1897, Congress adopted the Organic Administration Act of 1897 (OAA) to protect the use of forest reserves for local citizens. The OAA declared that forest reserves would be created either to protect water resources for citizens and agriculture, and/or to provide a continuous supply of timber. Thus, the purposes for which forests were to be used changed from the land being reserved from local communities to the land being used for economic development by local communities.

All USFS lands in Niobrara County are part of the Thunder Basin National Grassland (TBNG). The TBNG was created in 1934 as the Northeastern Wyoming Land Utilization Project under the Agricultural Adjustment Administration and administered by the Farm Security Administration, Bureau of Agriculture, and the Soil Conservation Service. The lands were transferred from the Soil Conservation Service to USFS in 1954. The TBNG was designated with permanent National Forest System status in 1960. The TBNG is divided into three units for grazing administration, with each unit having a grazing association. These associations were established during the mid-1930s and have been in effect ever since. In 1987, the TBNG was combined with Laramie Peak Ranger District into the Douglas Ranger District and in 1993 was consolidated into the Medicine Bow-Routt National Forest.

***Resource Assessment & Legal Framework***

The USFS manages approximately 832 acres (0.5%) of the total land in Niobrara County all within the TBNG, which is part of the Medicine Bow-Routt National Forest. The TBNG is headquartered in Laramie, Wyoming with the Douglas, Wyoming Ranger District being the closest ranger district. TBNG spans over 572,000 acres in eastern Wyoming in a mosaic of state, federal, and private lands totaling over 1.8 million acres.

The Land and Resource Management Plan (LRMP) for the TBNG was approved in 2001. The TBNG finalized the TBNG Prairie Dog Management Strategy and Land and Resource Management Plan Amendment[2] in December of 2020. Two previous amendments have been made to the Land and Resource Management Plan, the 2001 TBNG Land and Resource Management Plan Amendment, and the 2001 Teckla to Antelope Coal Mine 69kV Power Line Amendment.

### 3.1.5 Bankhead Jones Farm Tenant Act

***History, Custom, and Culture***

The TBNG, along with all 20 National Grasslands in the U.S., was created through the Bankhead-Jones Farm Tenant Act (BJFTA) which authorized the federal government to acquire damaged lands for rehabilitation after the Dust Bowl.

The BJFTA originally contained four titles. Title I authorized loans to farm tenants, laborers, sharecroppers, and others for the purchase of farms. Title II authorized rehabilitation loans and the voluntary adjustment of indebtedness between farm debtors and their creditors. Title III gave the Secretary of Agriculture a broad mandate to acquire sub-marginal lands (lands not suitable for farming) by purchase or donation. It resulted in the formal establishment of the formerly ad hoc Land Utilization Program and set forth the purpose and direction of the program. Section 33 of Title III also authorized payment to counties of 25% of the net revenues received on lands acquired under BJFTA from grazing, forestry, mining, and energy development. Title IV established the Farm Security Administration to implement and administer the Act. There have been major changes to the Bankhead-Jones Act since its enactment including the repeal of Titles I, II, and IV by Congress in the Agricultural Act of 1961 (Olson, 1997). Title III, however, remains in effect. It has been amended several times by Congress and today Section 31, which sets forth the purpose of the program and the permitted uses for the acquired lands administered under BJFTA, states:

> *The Secretary is authorized and directed to develop a program of land conservation and land utilization, in order thereby to correct maladjustments in land use, and thus assist in controlling soil erosion, reforestation, preserving natural resources, protecting fish and wildlife, developing and protecting recreational facilities, mitigating floods, preventing impairment of dams and reservoirs, developing energy resources, conserving surface and subsurface moisture, protecting the watersheds of navigable streams, and protecting the public lands, health, safety, and welfare, but not to build industrial parks or establish private industrial or commercial enterprises.* (71 U.S.C. § 1010) (Olson, 1997)

### *Resource Assessment and Legal Framework*

The authority to manage national grasslands such as the TBNG comes from the 1937 Bankhead-Jones Farm Tenant Act (BJFTA) (7 U.S.C. §§ 1010–1012). The BJFTA authorizes the Secretary of Agriculture, through the USFS, to:

> *Develop a program of land conservation and land utilization, in order thereby to correct maladjustments in land use, and thus assist in controlling soil erosion, reforestation, preserving natural resources, protecting fish and wildlife, developing and protecting recreational facilities, mitigating floods, preventing impairment of dams and reservoirs, developing energy resources, conserving surface and subsurface moisture, protecting the watersheds of navigable streams, and protecting the public lands, health, safety, and welfare, but not to build industrial parks or establish private industrial or commercial enterprises.*

The BJFTA was originally enacted to address agricultural problems caused and exacerbated by the Great Depression and Dust Bowl and continues to be one of the principal laws governing the Forest Service's administration of the national grasslands today. However, several other laws provide additional direction for grassland management:

- The Granger-Thye Act of 1950 established a new direction for some aspects of National Forest System management (16 U.S.C. § 572 et seq.). This Act authorized: (a) the use of grazing fee receipts for rangeland improvement; (b) the Forest Service to issue grazing permits for terms up to 10 years; (c) the Forest Service to participate in funding cooperative forestry and rangeland resource improvements; (d) the establishment of grazing advisory boards; and (e) the Forest Service to assist with work on private forestlands. Shortly after the Granger-Thye Act of 1950, the Department of Agriculture, in 1954, turned the management of the national grasslands over to the Forest Service.

- NEPA requires federal agencies to evaluate and disclose the environmental impact of "major federal actions significantly affecting the quality of the human environment" (42 U.S.C. §§ 4321 et seq.). In short, NEPA is a procedural statute that generally outlines the steps a federal agency must take when planning a project, though other federal statutes specific to a particular agency or type of project may require additional procedures.

- The 1973 Endangered Species Act (ESA) generally requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of the designated critical habitat of such species (16 U.S.C. §§ 1531 et seq.).

- The Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA) requires, among other things, the Forest Service to develop land and resource management plans for units of the National Forest System. Congress added more specific requirements to the Forest Service planning obligations in the NFMA (16 U.S.C. §§ 1600 et seq.). Specifically, the NFMA:

Forest Service regulations governing management of the national grasslands are found at 36 C.F.R. Part 213 (the 213 Regulations). Relevant provisions of the 213 Regulations provide:

> The national grasslands shall be "permanently held by the Department of Agriculture for administration under the provisions *and purposes* of Title III of the Bankhead–Jones Farm Tenant Act," and "administered under sound and progressive principles of land conservation and multiple-use, *and to promote development of grassland agriculture and sustained-yield management of the forage*. . . ." (36 C.F.R. §§ 213.1(b) and (c) (emphasis added)).

Grassland resources "shall be managed so as to maintain and improve soil and vegetative cover, and to demonstrate sound and practical principles of land use for the areas in which they are located" (36 C.F.R. § 213.1(d)). The Chief of the Forest Service also must, to the extent feasible, enact management policies that "exert a favorable influence for securing sound land conservation practices on associated private lands" (36 C.F.R. § 213.1(d)).

Additionally, the 213 Regulations explicitly provide that other regulations applicable to national forests, including those governing livestock grazing, are incorporated and apply to regulate the protection, use, occupancy, and administration of the national grasslands to the extent they are consistent with the provisions of the BJFTA (36 C.F.R §§ 222 et seq. and 36 C.F.R. § 213.3(a)).

### 3.1.6 Other Federal Agencies

At the time this NRMP was adopted there were no other federally administered lands within Niobrara County. A small portion of the 60 square miles of restricted air space around Camp Guernsey falls within the borders of Niobrara County.

### 3.1.7 Land Use Resource Management Objectives:

A. The basis for management of all public lands within Niobrara County is multiple-use management and the management limitations identified in the land management agencies' Resource Management Plan or Land Use Plan.
B. Impacts to state and private lands are minimized within Niobrara County by considering the direct and indirect effects on private and state lands on a region-wide basis rather than just federal lands.

C. Projects in mixed land ownership areas within Niobrara County are coordinated and rely heavily on the input from affected neighboring landowners.
D. Effective reclamation plans that protect existing uses are a primary requisite when approving projects in mixed land ownership projects within Niobrara County.

### 3.1.8 Land Use Priority Statements:

1. Federal agencies should conduct any National Environmental Policy Act analysis within Niobrara County using multiple-use principles that take into consideration all the resources such as, but not limited to, agriculture, air, energy, mineral extraction, range, recreation, socioeconomics, timber, tourism, wildlife, and water.
2. Niobrara County shall be notified and allowed to participate as a cooperating agency on National Environmental Policy Act projects that may influence the economic stability of the County and its residents.
3. Federal agencies should support decisions that ensure the socioeconomic wellbeing of Niobrara County citizens, maintain the culture and customs of the constituents, and consider natural resource health.
4. Federal agencies should consider the effects their decisions will make to neighboring private and state lands within Niobrara County.
5. When an agency decision or proposed alternative will negatively impact the current use of neighboring lands, that proposed decision or alternative is not supported by Niobrara County.
6. Federal agencies should coordinate with and accommodate the reclamation needs of neighboring landowners whenever a project will affect neighboring lands.
7. Federal agencies should give regular updates on the status of current and proposed projects within Niobrara County's jurisdiction and support reasonable timelines and explanations for the issuance of delays.

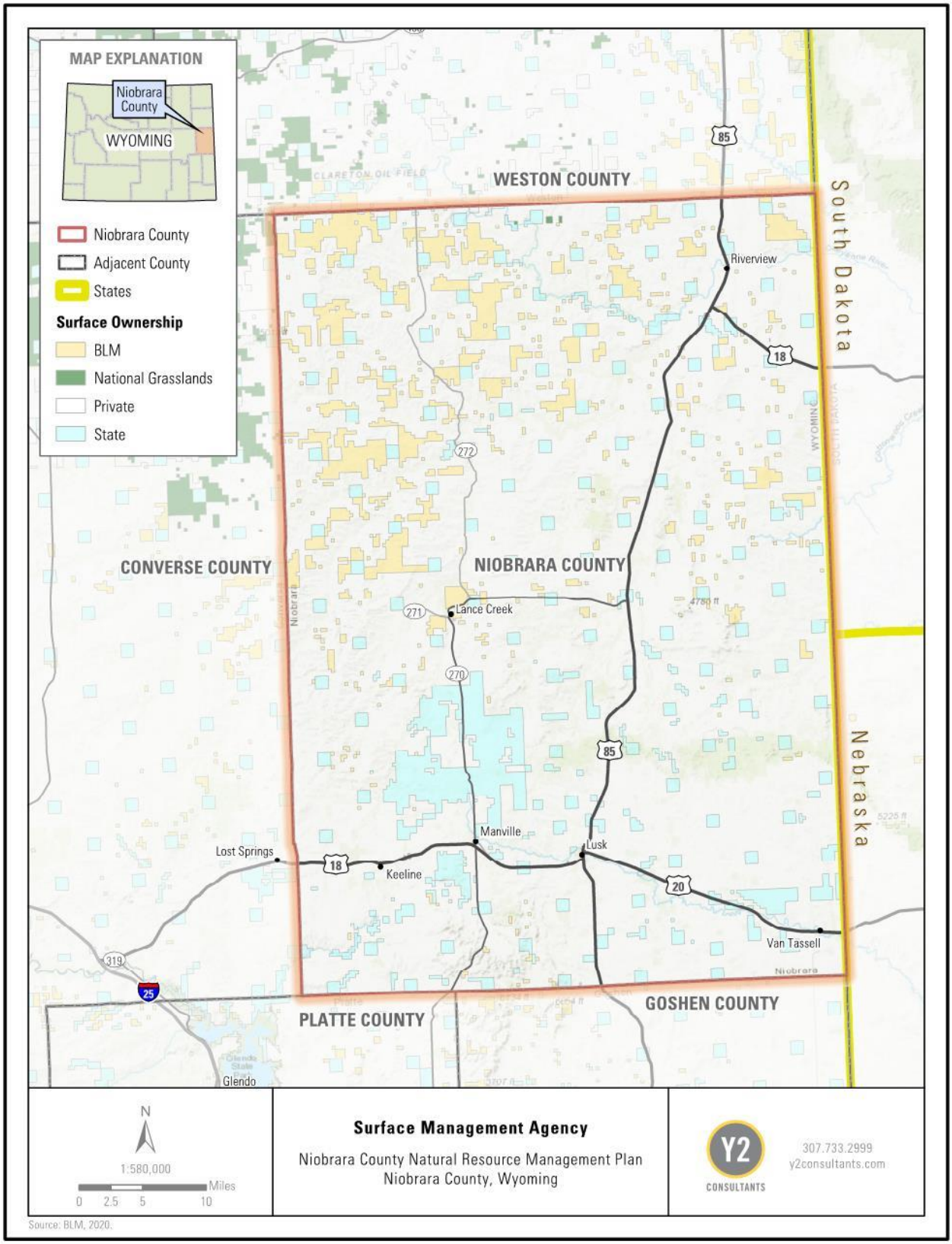



*Figure 2. Niobrara County Surface Ownership Map.*

## 3.2 TRANSPORTATION AND LAND ACCESS

### 3.2.1 History, Custom, and Culture

Public access to routes of travel is essential to the County's transportation and public access systems and to the economic, social, political well-being, custom and culture of the communities and citizens of Niobrara County. Access, rights-of-way, and water rights were critical to the early settlers and remain critical today. Many private landowners need rights-of-way across the state and federal lands to access their property, to use their water rights, and to exercise their grazing rights. Today, access to land, water, and natural resources remains critical to the economic stability and culture of Niobrara County. Because the County also depends upon the responsible use and development of public land resources; adequate, feasible, and fully protected access is required to utilize and protect these resources. Many land uses in the County depend upon roads and rights-of-way associated with general non-motorized and motorized travel.

Recreation users depend on trails and roads to hunt, camp, and enjoy the land and scenery in Niobrara County. The use and development of natural resources depend on access across and to federal and state lands. Livestock operators need access to forage on federal land and access to move livestock and construction materials to maintain and build range structures. Landowners need access in the form of rights-of-way to divert water for irrigation purposes and to provide water for livestock, or to use water in relation to other development. It is vital to the sustainability of the livestock industry in Niobrara County that grazing areas, and the stock trails that connect them, be open and accessible. Livestock “trailed” from one grazing area to another must have access to grazing areas on either end of that process, as well as lands in between. There are no designated stock trails within Niobrara County.

The County itself relies on access to federal lands to fulfill its statutory mandate to protect the health, safety, and general welfare of the people within its jurisdiction; including but not limited to fire protection, search and rescue, flood control, law enforcement, economic development, and the maintenance of County improvements.

### 3.2.2 Resource Assessment and Legal Framework

Congress, as the constitutional manager of the federal lands, has made it clear through natural resource statutes that the general public must have use of and access to the federal lands. It is vital to the County’s interests and performance of duties that full and complete access to the federal lands continues.

#### *Federal Highway Administration*

The Federal Highway Administration (FHWA) is an agency within the U.S. Department of Transportation and was created in 1966.

> *The mission of FHWA is to enable and empower the strengthening of a world-class highway system that promotes safety, mobility, and economic growth, while enhancing the quality of life of all Americans.*

Under this mission, the FHWA provides resources to municipalities across the nation and in the form of indirect and direct methods. Indirectly, the FHWA provides valuable research and design guidance on numerous topics to push the industry towards a safer, efficient, and holistic network. Directly, the FHWA provides grants to the local Department of Transportation divisions to facilitate project design and construction based upon merit. These grants are distributed through the Federal Highway-Aid Program.

Alongside the FHWA, numerous programs were created under the Federal Lands Highway Division (FLHD) to specifically service certain groups and were reauthorized under the Fixing America's Surface Transportation (FAST) Act. These programs are:

- Federal Lands Access Program (FLAP): "established in 23 U.S.C. 204 to improve transportation facilities that provide access to, are adjacent to, or are located within, Federal lands. The Access Program supplements state and local resources for public roads, transit systems, and other transportation facilities, with an emphasis on high-use recreation sites and economic generators."
- Federal Lands Transportation Program (FLTP): "established in 23 U.S.C. 203 to improve the transportation infrastructure owned and maintained by federal land management agencies including National Park Service (NPS), U.S. Fish and Wildlife Service (USFWS), USFS, BLM, U.S. Army Corps of Engineers (USACE), Bureau of Reclamation (BOR), and independent federal agencies with land and natural resource management responsibilities."
- Nationally Significant Federal Lands and Tribal Projects Program (NSFLTP): "…provides funding for the construction, reconstruction, and rehabilitation of nationally significant projects within, adjacent to, or accessing Federal and tribal lands. This program provides an opportunity to address significant challenges across the nation for transportation facilities that serve Federal and tribal lands."
- Emergency Relief for Federally Owned Roads (ERFO): "established to assist federal agencies with the repair or reconstruction of tribal transportation facilities, federal lands transportation facilities, and other federally owned roads that are open to public travel, which are found to have suffered serious damage by a natural disaster over a wide area or by a catastrophic failure."

Wyoming Department of Transportation (WYDOT) can work directly with any of the above programs to help secure funding and has annually. Through the FLAP program alone, Wyoming has secured $73.3 million spread across 16 projects from 2013 to 2022.

### *Revised Statute 2477*

In 1866, Congress enacted a law to provide and protect access across federal lands for miners and others reliant upon water to earn their livelihood. Section 8 of Revised Statute 2477 ("R.S. 2477") provided simply that, "the right-of-way for the construction of highways over public land, not reserved for public uses, is hereby granted" (the Act of July 26, 1866, § 8, ch. 262, 14 STAT. 251, 253 (1866) (formerly codified at 43 U.S.C. § 932)). The grant was originally section 8 of the

Mining Act of 1866, which became section 2477 of the Revised Statutes; hence the grant is commonly referred to as R.S. 2477. Niobrara County miners and ranchers developed such rights-of-way in the form of roads and trails, which continue to be used today.

The grant is self-executing and a R.S. 2477 right-of-way comes into existence "automatically" when the requisite elements are met (*See*, *Shultz v. Dep't of Army*, 10 F.3d 649, 655 (9th Cir. 1993)). One hundred and ten years after its enactment, R.S. 2477 was repealed with the passage of FLPMA (43 U.S.C. § 1701 *et seq.* *See*, 43 U.S.C. § 932, repealed by Pub. L. No. 94-579, § 706(a), 90 STAT. 2743, 2793 (1976)). Even though FLPMA repealed R.S. 2477, FLPMA explicitly preserved any rights-of-way that existed before October 21, 1976, the date of FLPMA's enactment (*See*, 43 U.S.C. § 1769(a) (stating that nothing "in this subchapter shall have the effect of terminating any right-of-way or right-of-use heretofore issued, granted, or permitted") (*see also*, 43 U.S.C. § 1701, Savings Provision (a) and (h)). Therefore, R.S. 2477 rights-of-way which were perfected prior to October 21, 1976 are valid even after the repeal of R.S. 2477. For a road to qualify as a R.S. 2477 right-of-way in Wyoming, the road must have been established by a board of county commissioners under the procedures established in Wyoming's county road statutes. *See* Yeager v. Forbes, 78 P.3d 241, 254 (Wyo. 2003).

The courts have clearly established that the states have proprietary jurisdiction over rights-of-way within their state (*Colorado v.* Toll, 268 US 228, 231 (1925)). This jurisdiction and control over rights-of-way through public lands must be actively ceded by the state (or counties as arms of the state) to the federal government or curtailed by Congress (*US v. Garfield County*, 122 F. Supp.2d 1201, 1235 (D. Utah 2000) *citing Kleppe v. New Mexico*, 426 US 529, 541-46 (1976)). Congress has yet to overturn R.S. 2477 or wrest control over the determination of what is a valid R.S. 2477 right-of-way. Thus, the question of whether an R.S. 2477 is established and the scope of the right-of-way is a matter of state law (*See U.S. v. Garfield County*, 122 F.Supp.2d at 1255; *Sierra Club v. Hodel*, 848 F.2d 1068, 1080 (10th Cir. 1988)).

Coordination between the government agency and the holder of the R.S. 2477 right-of-way is a necessity. The courts have clearly stated that both the holder of the dominant and servient estate must exercise their rights to not interfere with the other (*SUWA*, 425 F.3d at 746 *citing* Hodel, 848 F.2d at 1083). Thus, there must be a system of coordination between the federal agency and the holder of the R.S. 2477 right-of-way whenever there may be an action that may affect the rights or use of the other. *Id*. The repeal of R.S. 2477 "froze" the scope of the R.S. 2477 right-of-way. Thus, the scope of the R.S. 2477 right-of-way is limited by the established usage of the route

as of the date of the repeal of the statute (*Southern Utah Wilderness Alliance v. Bureau of Land Management*, 425 F.3d 735, 746 (10th Cir. 2005, as amended 2006)). In relation to the roads at issue here, this scope would be access to, and between private land sections. Further, the courts have also clearly demarcated that use of a R.S. 2477 right-of-way is a question of scope on a case-by-case basis, considering state law, that will allow for the use that is reasonable and necessary for the type of use to which the road has been put until 1976 (*SUWA*, 425 F.3d at 746). This, however, does not mean that the road had to be maintained in precisely the same condition it was in on October 21, 1976; rather, it could be improved "as necessary to meet the exigencies of increased travel," so long as this was done "in the light of traditional uses to which the right-of-way was put" as of repeal of the statute in 1976(*Hodel*, 848 F.2d at 1083).

R.S. 2477 does not give the holder a fee ownership, but an easement. However, unless otherwise specified when created, an easement is a permanent property right with a right to use and maintain until it is abandoned by the holder. To establish abandonment of an easement, the party asserting that the easement was abandoned must show affirmative acts manifesting an intention on the part of the owner of the dominant estate to abandon the easement (*Hasvold v. Park County School Dist. No 6*, 45 P.3d 635, 641 (Wyo. 2002)). Mere nonuse of an easement, even for a long time does not constitute an abandonment. *Id*. Thus, in Wyoming an R.S. 2477 right-of-way is a property right that exists until the holder of the right-of-way (typically the County, but sometimes a private user) manifests an intent to abandon the right.

As discussed earlier, a R.S. 2477 grant is self-executing and the right-of-way comes into existence "automatically" when the requisite state law elements are met (*See*, *Shultz v. Dep't of Army*, 10 F.3d 649, 655 (9th Cir. 1993)). Thus, adjudication of R.S. 2477 rights is not a prerequisite to their existence unless the agency contests the existence of the grant. In cases where the federal agency contests the existence of an R.S. 2477 right-of-way, a claim against the United States would need to be made under the Quiet Title Act (28 U.S.C.A. § 2409a). The Quiet Title Act provides that the United States may be named as a party defendant in a civil action to adjudicate a disputed title to real property in which the United States claims an interest, other than a security interest or water right (28 U.S.C.A. § 2409a(a)). In such an action, a plaintiff must demonstrate with particularity the nature of the right, title, or interest which the plaintiff claims in the real property, the circumstances under which it was acquired, and the right, title, or interest claimed by the United States (28 U.S.C.A. § 2409a(d)).

### *Federal agencies*

The BLM and USFS both have specific provisions they must follow when considering the closure of roads and trails. These provisions require that such activity be conducted in coordination with the County prior to such action being taken. Road closures in Niobrara County without prior coordination with the County could cause economic harm and impact citizen and visitor enjoyment of the County's natural resources.

#### *U.S. Forest Service*

The Multiple Use Sustained Yield Act (MUSYA) authorizes and directs the Secretary of Agriculture to manage the surface of USFS lands for multiple-use and sustained-yield uses (16 USC §1601(d))

(Multiple-Use Sustained-Yield Act of 1960, 1960). Those surface uses include, but not are limited to agriculture (farming, irrigation, livestock grazing); recreation (motorized and non-motorized transport and activities, such as hunting, fishing, water and land sports, hiking, etc.); industry (timbering); intangible values (historical and cultural sites, access to open space, aesthetic values, conservation); and weed, pest, and predator control (16 U.S.C. § 528).

The Federal Roads and Trails Act of 1964 (FRTA) recognizes the importance of an adequate road and trail system in the national forests to achieve the purposes of the MUSYA. (16 U.S.C. § 532). The FRTA, therefore, authorizes the Secretary of Agriculture to provide for the acquisition, construction, and maintenance of forest development roads within and near the national forests and other lands administered by the Forest Service in locations and according to specifications which will permit maximum economy in harvesting timber from Forest Service lands. However, the USFS must still meet the requirements for protection, development, management, and utilization of the resources in its jurisdiction. (16 U.S.C. § 535)

The USFS is directed to coordinate the preparation of Travel Management Plans with the County (36 CFR § 212).

> *The responsible official shall coordinate with appropriate Federal, State, County, and other local governmental entities and tribal governments when designating National Forest System roads, National Forest System trails, and areas on National Forest System lands pursuant to this subpart.* (36 CFR § 212.53)
>
> *Designations of National Forest System roads, National Forest System trails, and areas on National Forest System lands pursuant to §212.51 may be revised as needed to meet changing conditions. Revisions of designations shall be made in accordance with the requirements for public involvement in §212.52, the requirements for coordination with governmental entities in §212.53, and the criteria in §212.55.* (36 CFR § 212.54)

*Bureau of Land Management*

The Taylor Grazing Act (TGA) provides for the establishment, maintenance, and use of stock trails within established grazing districts (43 U.S.C. § 316). The National Trails Systems Act defines the standards and methods by which additional trails may be added to the system including scenic, historic, and recreational trails. NEPA requires federal projects and land use decisions, including opening and closing of roads, to go through an environmental review process. The Wilderness Act of 1964 prohibits motor vehicles in wilderness areas except in emergency situations or when there is a possible management need.

BLM land is enjoyed by the public for numerous recreational activities. The BLM must follow various federal laws regarding the management of transportation and travel on federal lands. FLPMA is the BLM's governing document outlining the management responsibilities of the BLM to balance public access and multiple uses with the protection and preservation of the quality of the lands and its resources (FLPMA, 1976). Due to the importance of transportation when making the balance of preservation with multiple use management, the BLM must now incorporate travel and transportation management decisions into all new and revised RMPs to address needs

about resource management and resource use goals and objectives (BLM, 2016a). Travel Management Plans (TMPs) are the primary implementation-level decision documents laying out the management of BLM's travel network and transportation systems. All decisions made in TMPs are implementation-level decisions and should be tied to the goals, objectives, and management actions contained within the RMP (*Id*. at 4-1). The BLM is required to coordinate "inventory" with the County (43 USC § 1712).

Federal law also authorizes rights-of-way across federal land under the Alaska National Interest Lands Conservation Act or Title 5 of FLPMA. Under FLPMA, the applicant must pay cost–recovery fees to process the permit and full market value of the easement, unless the applicant is a county. Mineral lessees are entitled to access under the terms of a mineral lease. In many cases, these access rights are not public rights-of-way and do not establish public access.

### 3.2.3 Transportation and Land Access Resource Management Objectives:

A. There is full and open access to and through Niobrara County federal lands for local purposes such as safety, health, rural access to population centers, use of agriculture, timber, forest management, mining/oil and gas industries, recreational purposes, and communication infrastructure.
B. Private property rights are protected in Niobrara County while facilitating rights of access.
C. A coordinated approach is developed to address roads and rights-of-ways with local, state, and federal agencies and private landowners within Niobrara County.
D. New rights-of-ways and road systems are evaluated in consideration of identified needs, in alignment with Niobrara County's Natural Resource Management Plan, goals and objectives, and private property rights.
E. Continued and consistent access to natural resources on federal and state lands in Niobrara County is ensured.
F. All federal agencies' travel management planning efforts are coordinated with Niobrara County.

### 3.2.4 Transportation and Land Access Priority Statements:

1. Federal agencies should support identification and protection of all Niobrara County roads and public rights-of-ways to protect the County's resources and promote public health, safety, and general welfare, including but not limited to, search and rescue, extreme weather, fire protection, resource conservation, health and law enforcement, and other services.
2. Federal agencies should support the designation of currently open motorized and non-motorized trails, rights-of-way, and roads as open transportation networks within Niobrara County.
3. No road, trail, or R.S. 2477 rights-of-way shall be closed in Niobrara County unless public safety or health demands its closing and the proper analysis and disclosure, in consultation with Niobrara County and private property owners, is completed prior to closure.

4. Federal agencies should support the recognition of valid R.S. 2477 claims in Niobrara County without requiring adjudication.
5. Federal agencies shall notify Niobrara County of any actions which could potentially affect historic rights to travel within and across Niobrara County.
6. Federal agencies should notify Niobrara County of any planning process or activity that restricts, eliminates, increases, or decreases access to federal or state lands and allow the County to initiate coordination and cooperation to resolve potential conflicts with the County's objectives, principles, and policies, prior to acting.
7. Federal agencies should support legal public access to the federal lands within Niobrara County for all beneficial uses in accordance with the Multiple Use Sustained Yield Act if it does not infringe on private property rights.
8. The right to travel over established rights-of-way and perform the maintenance necessary to continue historic use should be allowed.
9. Roads on federal lands within Niobrara County shall remain open to provide for the economic benefit, use, and safety of the public.
10. Where road closures are proposed, specific justification for the proposal shall be given on a case-by-case basis, and the proposal shall be discussed in coordination with Niobrara County.
11. Unfettered access through federal lands within Niobrara County for emergency services and law enforcement shall be granted.
12. Niobrara County considers long-term (greater than one year) road closures a major federal action that significantly affects the quality of the human environment. Thus, a road on federal lands may not be closed long-term until a full NEPA analysis has been completed, including public review and coordination with the County. Should the agency believe that a road closure falls under a categorical exclusion, Niobrara County shall be consulted.
13. Federal agencies should notify and coordinate with Niobrara County in the event of any proposed temporary road closures.
14. Federal agencies should support and facilitate access to federal lands for development and maintenance of communication infrastructure in Niobrara County.
15. Federal agencies should coordinate and seek concurrence between Niobrara County, District, local interested parties, and relevant federal and state land management agencies, before any proposed road closures and decommissioning in the County.
16. In order to allow for harmony with the current county road plans, whenever a new access route is proposed those plans should be submitted to Niobrara County for review and approval.
17. Pre-existing routes should be honored according to their identification and physical character.
18. Route maintenance standards should be in accord with designated classification and need.

19. Federal agencies should support a transportation plan that optimizes accessibility across all federal and state-managed lands within Niobrara County while respecting private property rights.
20. Access to and/or across federal and state-managed lands within Niobrara County should not entail exactions, encumbrances, or restrictions on private property rights.
21. Niobrara County should be notified of any temporary road closures.
22. Niobrara County supports the construction of temporary roads necessary to service natural resource development.

## 3.3 SPECIAL DESIGNATION AND MANAGEMENT AREAS

### 3.3.1 History, Custom, and Culture

There are no special designation or management areas within Niobrara County.

### 3.3.2 Resource Assessment and Legal Framework

***Areas of Critical Environmental Concern***

Areas of Critical Environmental Concern (ACEC) are BLM-managed areas "where special management attention is needed to protect important historical, cultural, and scenic values, or fish and wildlife or other natural resources (BLM, 2016b). An ACEC may also be designated to protect human life and safety from natural hazards (BLM, 2016b). An ACEC designation must go through the NEPA land use planning process. An ACEC designation may be revisited through subsequent land use planning, revision, or amendment. ACECs and other special designations may compete with the natural resource-based businesses that are important to the County's economy, like grazing and mining.

There are no designated ACECs within Niobrara County.

***Visual Resources***

Visual resources in the County are a composite of landforms, human and animal life forms, water features, cultural features, terrain, geologic features, and vegetative patterns which create the visual environment. These visible physical features are important to the landscape and the scenic quality of the County.

***Special Recreation and Extensive Recreation Management Areas***

The BLM's land use plans may designate Special Recreation Management Areas (SRMAs) or Extensive Recreation Management Areas (ERMAs) to provide specific management for recreation opportunities, such as developing trailhead areas for hikers, mountain bikers, or off-road vehicle users. SRMAs are BLM administrative units where a commitment has been made to prioritize recreation by managing for specific recreation opportunities and settings on a sustained or enhance long-term basis. SRMAs are managed for their unique value, importance, and/or distinctiveness; to protect and enhance a targeted set of activities, experiences, benefits, and desired resource setting characteristics; as the predominant land use plan focus; to protect specific recreation opportunities and resource setting characteristics on a long-term basis.

ERMAs are administrative units managed to address recreation use, demand, or existing Recreation and Visitor Services Program investments; support and sustain the principal recreation activities and the associated qualities and conditions; and commensurate with the management of other resources and resource uses.

There are currently no SRMAs or ERMAs within Niobrara County.

### *Wild and Scenic Rivers*

The National Wild and Scenic Rivers System was created in 1968 to preserve naturally, culturally, and recreationally valued rivers. Rivers are designated for the National Wild and Scenic River System by Congress or, in certain situations, the Secretary of Interior. The Wild and Scenic Rivers Act provides for identification and designation of individual river segments for study and recommendation of river segments as a wild, scenic, or Recreation River. The Act protects "certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values." The BLM and the USFS must assess whether to recommend waterways for wild or scenic designation as part of the land use planning process.

The Niobrara River is designated as a Wild and Scenic River in Nebraska but is not designated within Wyoming (National Wild and Scenic Rivers System, n.d.-a, n.d.-b). No BLM or USFS administered public lands along waterways within Niobrara County meet the wild and scenic rivers eligibility criteria.

### *Wilderness, Wilderness Study Areas, Lands with Wilderness Characteristics*

The Wilderness Act of 1964 established the National Wilderness Preservation System to be managed by the USFS, NPS, and the USFWS. The passage of FLPMA in 1976 added the BLM as a wilderness management authority to the Wilderness Act. The Act defines Wilderness, in part, as "an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain" (16 U.S.C. § 1131(c)). The definition states that a wilderness thus is in "contrast with those areas where man and his own works dominate the landscape." *Id.* Wilderness Study Areas (WSAs) are places that have wilderness characteristics; (i.e.: untrammeled, natural, undeveloped, and outstanding opportunities for recreation) which make them eligible for future designation as wilderness. Wilderness areas and WSAs must have "wilderness character," which is described by four qualities:

1. The area must be untrammeled by man. Untrammeled refers to wilderness as an area unhindered and free from modern human control and manipulation. Human activities or actions on these lands impairs this quality.
2. The area must be natural. The area should be protected and managed to preserve its natural conditions and should be as free as possible from the effects of modern civilization. If any ecosystem processes were managed by humans, they must be allowed to return to their natural condition.

3. The area must be undeveloped. No human structures or installations, no motor vehicles or mechanical transport, or any other item that increases man's ability to occupy the environment can be present.
4. The area must offer solitude or primitive and unconfined recreation. People should be able to experience natural sights and sounds, remote and secluded places, and the physical and emotional challenges of self-discovery and self-reliance.

WSAs are established three different ways: 1) they are identified by wilderness review as required by Section 603 of FLPMA; 2) they are identified during the land use planning process under Section 202 of FLPMA; 3) or they are established by Congress. Wilderness areas are designated by Congress alone.

Section 603(c) of the FLMPA requires that WSAs are managed so as not to impair their suitability for preservation as wilderness and strives to retain their primeval character and influence, without permanent improvements or human habitation. However, the FLPMA also requires that mining, livestock grazing, and mineral leasing (e.g., grandfathered uses) continue in the manner and degree as they were being conducted in 1976. Therefore, to the extent that grazing was allowed in the wilderness prior to 1976, its use, including allowing the same number of livestock as existed in 1976, should be continued. Grandfathered uses are protected and maintained in the same manner and degree as they were being conducted on October 21, 1976, even if they impair wilderness characteristics according to *Rocky Mountain Oil and Gas Association v. Watt,* 696 F.2d 734, 749 (10th Cir. 1982). This requirement includes the authority to develop and maintain livestock-related improvements (*Utah v. Andrus*, 486 F. Supp. 995 [D. Utah 1979]).

There are no designated Wilderness areas or WSAs within Niobrara County.

*Lands with Wilderness Characteristics*

Section 201 of FLPMA requires the BLM to maintain, on a continuing basis, an inventory of all federal 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 federal lands. It does not address or affect policy related to Congressionally designated Wilderness or existing Wilderness Study Areas.

The BLM uses the land use planning process to determine how to manage lands with wilderness characteristics as part of the BLM's multiple-use mandate. The BLM will analyze the effects of:

- Plan alternatives on lands with wilderness characteristics, and
- Management of lands with wilderness characteristics on other resources and resource uses.

There are no designated Lands with Wilderness Characteristics (LWCs) within Niobrara County.

***Scenic Routes***

There are no scenic routes present within Niobrara County.

### 3.3.3 Special Designation and Management Area Resource Management Objectives:

A. Designation and management of special designation or management lands are coordinated with Niobrara County and adjacent landowners and allow for multiple use.
B. No new special designation or management areas are created in Niobrara County without approval from the County and the Niobrara Conservation District.
C. Visual resources are protected while maintaining economic stability and underlying land use allocations in Niobrara County.
D. Private land uses, state lands rights, and federal land use allocations are protected by adjusting Visual Resource Management classifications to be consistent with the land uses.
E. Wild and Scenic River proposals are evaluated to determine the impact on water rights and the ability to utilize water rights in the future.

### 3.3.4 Special Designation and Management Area Priority Statements:

1. Federal agencies shall consult and coordinate with Niobrara County as early as possible when considering the designation of new special designation areas.
2. Any proposed special management area designation shall undergo analysis of the impact on Niobrara County's custom, culture, and economy.
3. Federal management of special designation areas shall be coordinated with Niobrara County and be consistent to the maximum degree with the Niobrara County Natural Resource Management Plan.
4. Federal agencies should support the use of various application methods of herbicides to control noxious weeds in special designation and management areas as allowable.
5. Federal agencies should promptly release and manage for multiple use, any area under consideration for wilderness should Congress recommend not to designate said area as Wilderness.
6. Niobrara County does not support future designations of Wild and Scenic Rivers and any proposed designation shall be coordinated with the County and District and undergo analysis of the impact on Niobrara County's economy.
7. Niobrara does not support the designation, creation, or construction of new special designation areas in the county that could limit current uses on federal lands.
8. All agencies should abide by the legal requirements and qualifications set forth by the Wild and Scenic Rivers Act, including those providing for the continuation of existing uses, privileges, and contracts for designated rivers in, adjacent to, or affecting Niobrara County.
9. Niobrara County and federal agencies should work closely to ensure that existing and future water development opportunities are protected if there is a proposed Wild and Scenic River designation in the County.
10. Any unsuitable rivers should be removed from Wild and Scenic River consideration at the earliest opportunity.

11. State and federal planning actions that affect the visual resource and Visual Resource Management classifications that affect land uses should be coordinated with Niobrara County and District.
12. Visual Resource Management classifications that will impair or impede land use on private and state lands should not be designated within Niobrara County.
13. Visual Resource Management classifications should not be used when they undercut the federal land use allocation, including grazing permits/leases, communication/internet services, special use permits, and oil and gas leases.
14. On-the-ground mapping of the roads, fences, rangeland improvements, and any other anthropogenic influence in lands under consideration for lands with wilderness characteristics or wilderness study area designations should occur to ensure accurate representations of the area.
15. Economic and environmental cumulative impacts analysis should be conducted for all existing and proposed designations of any specially designated areas before any new areas are designated.
16. Niobrara County should be notified at the earliest possible time and allowed to participate as a cooperating agency on future designations of any action to analyze any current or proposed special land use designation.

## 3.4 WILDFIRE MANAGEMENT

### 3.4.1 History, Custom, and Culture

Wildfire is defined as an unplanned, unwanted fire that spreads rapidly and is difficult to extinguish. This includes accidental human-caused fires, unauthorized human-caused fires, escaped fires used as a management tool, and naturally occurring fires. Wildfires have had catastrophic effects in Niobrara County, including severely damaging the County watershed, grazing lands, wildlife habitat, and recreational activities that rely on healthy grasslands and rangelands, endangering human health and safety, and lost economic opportunities. Refer to Figure 3 for a map of fire occurrences and extent within the County.

### 3.4.2 Resource Assessment and Legal Framework

Niobrara County is vulnerable to unplanned wildland fires in some areas due to its semi-arid climate, available fuels, and rural character. Wildfires generally occur somewhere within the County on an annual basis. Wildland fires within the County have the potential to damage crops and watersheds and contribute to soil erosion and deposition problems. The County develops an annual operating plan between BLM, Wyoming State Forestry Division, and Niobrara County that provides details of the Wyoming interagency cooperative agreements by outlining the specific fire zones that Niobrara County supports, either primarily or as a secondary responder. The 2015

Niobrara County Multi-Hazard Mitigation Plan (MHMP) outlines the goals and objectives for wildfire and other hazards across the County. The MHMP can be found here[3].

Fire suppression policy should be guided by the need to achieve the highest level of protection for human safety and private property. Fire suppression may be necessary in areas where fire would endanger human safety and private property or valuable vegetation that supports and expands multiple uses or threatens habitat of sensitive species. On rangeland and grassland areas, the combination of weather, drought, and reduced use can also lead to fuel loading that facilitates larger, more intense wildfires.

Proactive planning for response to a wildland fire event is critical to the protection of Niobrara County; its citizen's health, safety, welfare, and private property; and grassland and rangeland health. A high degree of coordination between federal, state, and local agencies is necessary for maximum prevention and suppression of unplanned wildfire. Table 1 shows all the wildfires over 100 acres within Niobrara County since 1987.

**Table 1. Fire Occurrences more than 100 acres in Niobrara County from 1966 to 2020.**

| Year of Fire | Fire Name | Acreage |
|---|---|---|
| 1987 | Coffee | 1080 |
| 2001 | Kaye Field | 850 |
| 2002 | Tollman | 5248 |
| 2007 | 77 Hill | 1743 |
| 2010 | Cooley Draw | 6113 |
| 2011 | Niobrara 4 | 100 |
| 2011 | Cheyenne River 2 | 143 |
| 2011 | Young Woman | 171 |
| 2011 | State 9 | 300 |
| 2011 | Meng | 348 |
| 2011 | Winter Ridge | 445 |
| 2011 | Cottonwood Draw | 632 |
| 2011 | 28 Fire | 762 |
| 2011 | Niobrara 1 | 800 |
| 2011 | Cheyenne River | 1548 |
| 2011 | Smith | 2204 |
| 2011 | Thompson | 10529 |
| 2012 | State Line | 104 |
| 2012 | Moss Agate | 1877 |
| 2015 | Snyder | 308 |
| 2015 | Lone Crow | 324 |
| 2016 | Roxson | 389 |
| 2017 | Mule Creek | 207 |

### 3.4.3 Wildfire Management Resource Management Objectives:

A. Wildfire, fuels, and fire rehabilitation are managed promptly and effectively using credible data, as defined above, in coordination with the Niobrara County Hazard Mitigation Plan.

B. Niobrara County is the lead on fires that occur within the County.
C. Fire suppression efforts are implemented effectively as appropriately determined through full coordination, communication, and cooperation between federal, state, and local fire suppression units within Niobrara County.
D. Multiple fire fuel management techniques are utilized throughout Niobrara County to reduce fire fuels including but not limited to logging, grazing, vegetation treatments, etc.
E. Post-fire resource objectives are coordinated with Niobrara County and applicable permittees.

### 3.4.4 Wildfire Management Priority Statements:

1. Federal agencies shall coordinate with local fire agencies on wildfire planning, management, and suppression within Niobrara County.
2. The U.S. Forest Service shall adhere to requirements set forth in the Cooperative Forestry Assistance Act 16 USC § 2106.
3. The effective cooperative relationships between the Secretary of Agriculture and the states regarding fire prevention and control on rural lands and in rural communities should continue.
4. Efforts in fire prevention and control in rural areas shall be coordinated among federal, state, and local agencies.
5. In addition to aiding state and local rural fire prevention and control programs, the Secretary of Agriculture and Interior shall provide prompt and adequate assistance whenever a rural fire emergency overwhelms or threatens to overwhelm the firefighting capability of the affected state and rural area.
6. Federal agencies shall incorporate local fire association plans (Niobrara County Hazard Mitigation Plan) into their fire suppression and control plans and support efforts of local fire departments in wildfire suppression activities.
7. Fire suppression efforts should be maximized through full coordination, communication, and cooperation between federal, state, and local fire suppression units.
8. Federal agencies should support and renew existing Master Good Neighbor Agreements and, where they do not exist, develop a Master Good Neighbor Agreement between federal, state, and local fire-suppression units with 1-year of the adoption of this plan.
9. Federal agencies should coordinate and communicate temporary fire restrictions based on fire hazard designations to minimize the potential for human-caused wildfires.
10. Federal agencies should support the Department of Interior's Secretarial Order 3336-Rangeland Fire Prevention, Management, and Restoration and the Bureau of Land Management should comply with the order and all subsequent revisions, reports, and instructional memos.
11. Federal agencies should promote the prompt rehabilitation of harvested areas and areas affected by wildfire, including the use of salvage logging operations.
12. Niobrara County and Niobrara Conservation District encourage the Secretaries of Agriculture and Interior to develop fire management policies that utilize and acknowledge the beneficial effects of planned grazing as a fuels management tool.

13. Niobrara County and Niobrara Conservation District encourage federal agencies to promptly manage weed infestations in fire-damaged areas.
14. Federal agencies should consult and coordinate with Niobrara County and Niobrara Conservation District on proposed changes and updates to Fire Management Plans on federal lands.
15. Federal agencies should participate in consideration of limited and judicious use of wildfire, rather than favoring a "let it burn" policy, in areas where invading and expanding shrubs and trees are reducing the value of rangeland resources.
16. Post-fire objectives shall be consistent with site potential as defined in approved Desired Future Conditions or Ecological Site Descriptions. Niobrara County and Niobrara Conservation District require the use of credible data as previously defined to make these determinations.
17. Federal agencies should rehabilitate forests, grasslands, and rangelands damaged by wildfires as soon as possible for habitat, wildlife, and to reduce the potential for erosion and introduction of invasive or noxious weeds.
18. Niobrara County and Niobrara Conservation District encourage fire suppression in areas where fire would endanger human safety, private property, or valuable vegetation that supports and expands multiple uses and/or provides critical habitat for sensitive species.
19. Federal agencies should coordinate with State and local agencies to implement fire control tools such as insecticide and herbicide treatments, livestock grazing, biomass fuel removal, slash pile burning, prescribed burning, timber harvesting, and encouraging knowledgeable and prepared practices to create defensible space around buildings.
20. Grazing rest prescriptions related to either wildfires or prescribed burns should be determined on a site-specific basis.
21. Should grazing on federal lands be temporarily suspended due to fire, grazing should be recommenced based on monitoring and site-specific rangeland health determinations rather than predetermined timelines.
22. Livestock grazing should return to pre-fire levels when post-fire monitoring data shows established objectives have been met or have been achieved to an extent allowed by site potential.
23. Initial post-fire monitoring data should be collected within two growing seasons of the fire and can be collected outside the agency if the appropriate monitoring protocols and credible data criteria are followed.
24. Federal agencies should allow for adaptive grazing management practices and include these practices in term permits to allow for flexible management practices that will decrease fine fuel loads on the landscape, particularly in areas with heavy grass understory.
25. When planning prescribed burns, where feasible, market timber resources while reserving desirable seed trees, before burning.
26. Fire should not replace timber harvest and other extractive uses as a primary forest management tool.

27. Federal agencies should support the four principal dimensions as outlined by the National Forest County Partnership Restoration Program to address existing extreme fire potential.
28. Federal agencies should manage invasive and noxious weeds after wildland fire events to reduce fire fuels on federal lands, using tools including (but not limited to) targeted livestock grazing; chemical, and mechanical controls that promote ecosystem health and as a management tool for vegetation manipulation.

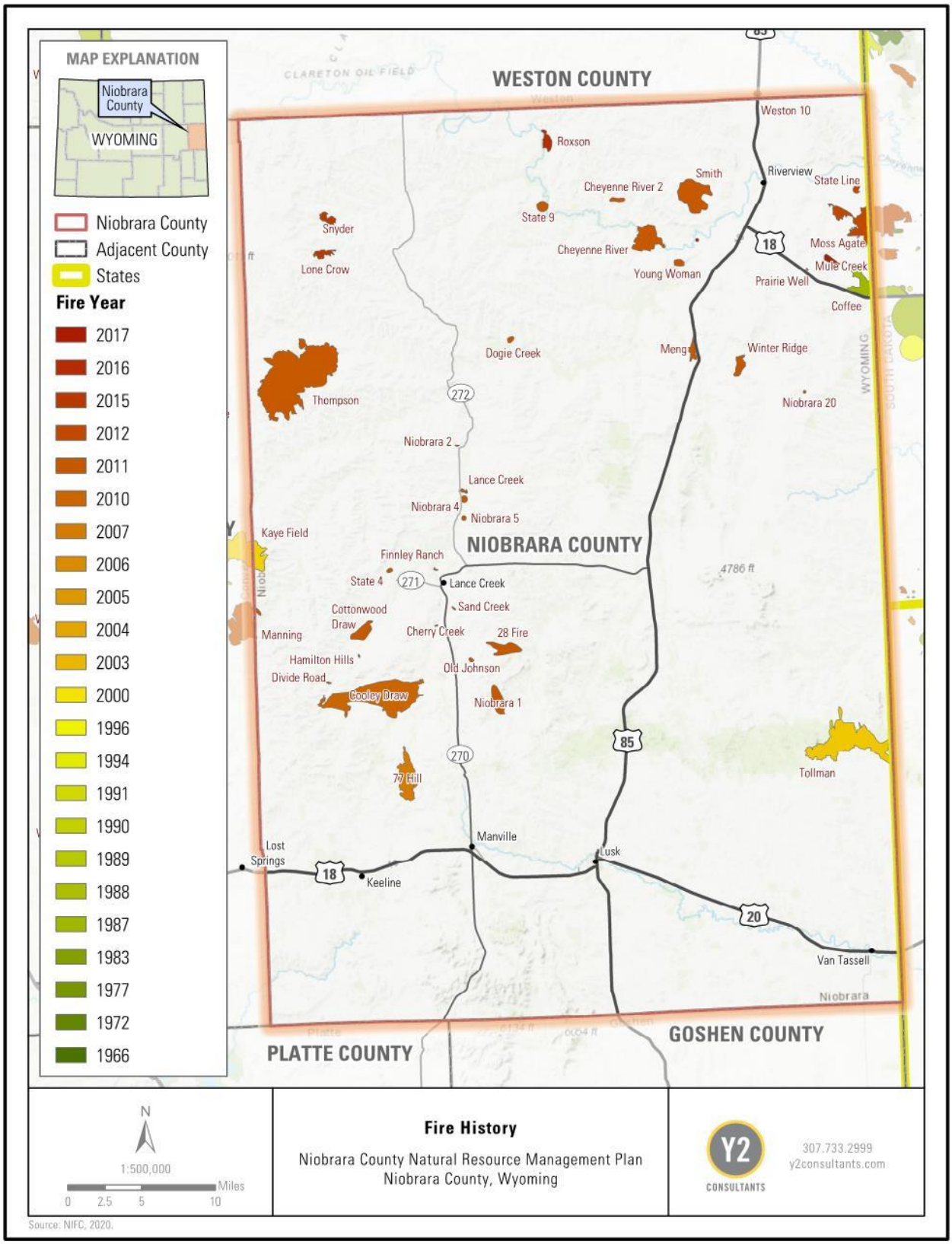



*Figure* 3. *Fire history of Niobrara County.*

## 3.5 RANGELAND AND GRASSLAND MANAGEMENT

### 3.5.1 History, Custom, and Culture

The beneficial use of rangeland and grassland natural resources has always been a part of Niobrara County's economy, customs, and culture. Early citizens relied on these resources for grazing of livestock, planting of crops, and materials for homestead building. A healthy grassland and range ecosystem provides employment and economic benefits for individuals and businesses in the County.

Management of vegetation is based on the flora (plants) of a particular region, district, or geographical period; a description of such plants describes plants living in nature that include both native and introduced plants to the County as well as desirable and undesirable plants. Activities depending on native and introduced flora include, but are not limited to:

- Agriculture (livestock carrying capacities, desired plant communities);
- Invasive species management;
- Recreation and education (plant identifying, 4-H range judging, etc.);
- Habitat management for domestic and wild animals;
- Species of concern;
- Endangered plants or habitat for animal species of concern (including state-sensitive species).

### 3.5.2 Resource Assessment and Legal Framework

Niobrara County enjoys a diverse and abundant plant population. Private, state and federal lands provide vital plant species managed for various consumptive and non-consumptive uses.

***Rangeland***

Most of the land in Niobrara County is classified as rangeland with public lands being managed by the BLM. Most of the rangelands and riparian zones in the County support an understory or periodic cover of herbaceous or shrubby vegetation amenable to rangeland management principles or practices. The principal natural plant cover is composed of native grasses, forbs, and shrubs that are valuable as forage for livestock, big game, other wildlife, and pollinators. Rangeland includes lands revegetated naturally or artificially to provide a plant cover that is managed as native vegetation. Rangelands in the County consist of sagebrush, steppe, grasslands, desert shrublands, and wet meadows. The soil and climate make most of the land best-suited for grass and shrub production, rather than farming. The BLM requires public rangelands to meet or make substantial progress to meet standards, which were developed for

Wyoming as the 1997 Wyoming Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management [4].

The encroachment of juniper and pine trees into rangelands can reduce rangeland diversity and productivity. Similarly, the expansion of decadent and old sagebrush over thousands of acres in Niobrara County threatens multiple uses and the maintenance of healthy rangeland conditions. More aggressive or intensive management of these vegetation communities will enhance and sustain multiple uses and increase rangeland productivity.

### *Grasslands*

A small portion of the TBNG is in Niobrara County and managed by the USFS. The TBNG is a productive grassland that provides vegetation that is productive for livestock, wildlife, and other resource uses. The TBNG is managed for sustainable multiple uses as part of the National Forest System. Grasslands are rich in mineral, oil, and gas resources, and provide for diverse recreational uses such as hiking, hunting, fishing, photographing, birding, and sightseeing.

The TBNG is found along a transition zone between the Great Plains to the east and the sagebrush steppe to the west and occurs across a gradient of temperature, precipitation, and elevation. The area evolved with disturbance from drought, grazing, fire, and burrowing mammals. The TBNG includes both sagebrush and grassland plant communities which interact with a range of ecological disturbances to support diverse wildlife species. Historical wildfires on the TBNG do not promote the invasion of species such as cheatgrass as native species are adapted to fire and able to compete with annual invasive species.

Vegetation resources may be managed differently on private land, as compared with land managed by State or federal agencies.

Federal law requires the USFS to administer the national grasslands for the purposes for which they were acquired. When the federal government acquires land for a particular public purpose, only Congress has the power to change that purpose or dispose of the acquired land (*Reichelderfer v. Quinn*, 287 U.S. 315, 318–20 (1932)). Thus, federal agencies must manage and administer acquired lands according to the purpose for which the federal government acquired them unless Congress has authorized otherwise (*Id.*; *see also United States v. Three Parcels of Land*, 224 F.Supp. 873, 876 (D. Alaska 1963); *United States v. 10.47 Acres of Land*, 218 F.Supp. 730, 733 (D.N.H. 1962)).

The clear objective in acquiring lands within the TBNG was to create a sustainable forage cover that would protect the fragile soil, but at the same time keep the communities alive who had been promised use of the land during the homesteading years. The people who remained after the Dust Bowl years worked hard to put the land back in a healthy condition and have relied on the promises given to them that the land would be used for its best use. Congress and officials within the USFS and other agencies involved in the LUPs have historically acknowledged that grazing is the best use for these lands. Thus, when current USFS management principles in the TBNG serve to undermine its primary purpose, those management principles must be revised.

### 3.5.3 Rangeland and Grassland Management Resource Management Objectives:

A. Rangelands and grasslands within Niobrara County are managed under multiple use principles that promote grazing, fuels management, recreation, wildlife habitat, and benefits the economy, custom, and culture of Niobrara County.
B. Rangeland and grassland ecosystems within Niobrara County are maintained to ensure healthy and vibrant watersheds for current and future generations and to sustain the stability of ranching and agriculture.
C. A sustainable and continuous supply of forage, timber, wood products and biofuels, firewood, wildlife, fisheries, recreation, and water supplies utilizing multiple uses on public rangelands and grasslands is supported and promoted by Niobrara County.
D. Rangeland vegetation is enhanced by actively reversing the colonization and encroachment of rangelands by juniper and weed infestations.
E. Existing uses on rangelands and grasslands within Niobrara County continue and are enhanced.

### 2.5.4 Rangeland and Grassland Priority Statements:

1. Rangeland and grassland management on public lands shall adhere to the Multiple Use Sustained Yield Act, as well as the National Forest Management Act, National Environmental Policy Act, and the Endangered Species Act.
2. Niobrara County and the Niobrara Conservation District encourage federal agency policies that support and allow for the timber industry's continued economic benefit to the citizens of Niobrara County.
3. The Thunder Basin National Grassland shall be managed to serve its primary purpose of creating a sustainable forage cover that would protect the fragile soil and promoting grazing.
4. Access to rangeland and grassland products on public lands within Niobrara County shall be ongoing and access to these sites shall be through an open roads and cross-country travel system.
5. Federal agencies should coordinate with Niobrara County on vegetative treatments, prescribed burns, special management decisions on public lands in Niobrara County.
6. Niobrara County and Niobrara Conservation District encourage active management of rangeland and grassland resources on public lands to reduce invasion of unwanted species.
7. Federal agencies should support weed management and mitigation on rangeland and grassland federal lands within Niobrara County and support the creation and maintenance of Play, Clean, Go programs.
8. Federal agencies should support salvage harvest when necessary due to insect/disease epidemic, blowdown, or post-fire situations using appropriate categorical exclusions.
9. Niobrara County supports federal Payments in Lieu of Taxes to Niobrara County.

10. Federal agencies should notify and coordinate rangeland and grassland management projects with Niobrara County, Conservation District, state and local agencies, and private landowners to improve the scale and scope of each project.
11. Federal agencies should protect environmental capital assets reducing fuel loads on rangeland and grassland areas within Niobrara County.
12. Federal agencies should maintain and restore watershed health by demonstrating active rangeland and grassland management.
13. Federal land managers should continue to plant and develop a wide variety of trees, shrubs, and seedlings to the vegetation community for windbreaks and shelterbelts for aesthetic, wildlife, and agricultural value in coordination with the Conservation District.
14. Niobrara County requests to be involved in the designation or management decisions of areas that may require single-use or restrictive use.
15. Federal agencies should support excluding the maximum area of land possible from single-use or restrictive-use designations, so that excluded land is available for active and sound management.
16. Federal agencies should support site-specific management decisions based on sound science, compliance with the 1997 Wyoming Standards for Healthy Public Rangelands, and Best Management Practices.
17. Federal agencies should ensure that rangeland health assessments identify all the causal factors when there is a failure to meet the 1997 Wyoming Standards for Healthy Rangelands and that livestock grazing uses are not reduced to compensate for or mitigate the impacts of other causal factors.
18. Niobrara County and Niobrara Conservation District support cooperation with public land managers, local organizations, boards, and governments on the importance of public lands to local infrastructure maintenance.
19. Federal agencies should explore and use vegetation management and harvest methods, where applicable, that enhance wildlife habitat through vigorous new growth and a natural mosaic that reduces fuel loads.
20. Federal agencies should coordinate with Niobrara County and Niobrara Conservation District in the development of plans to reduce fuel loads in forest, rangeland, and grassland areas that are already insect-infested and manage the remaining forested areas to minimize further infestation.
21. Federal agencies should support and work to identify range management objectives based on site potential, climate, and land uses.
22. Niobrara County does not support President Biden's 30x30 Plan and any coercive management decisions aimed to take private or public land out of production will harm the custom and culture of the County and should therefore be avoided.

## 3.6 LAND TENURE, EXCHANGES, DISPOSITION, ACQUISITION

### 3.6.1 History, Custom, and Culture

The creation of Niobrara County began in early 1911. The County was annexed from the eastern portion of Converse County in early 1911. There were many citizens that did not agree with the proposal to create Niobrara County. This conflict generated several petitions and requests to delay the process for over a year before the County was officially approved in 1912. (Lebsack, 2014)

There are some intermingled ownership lands, areas where land ownership is intermingled between two or more owners (often public land and private land) that results in a checkerboard pattern). Much of the intermingled ownership lands occurred in the West due to railroad land grants in the 1860s and 1870s that granted the railroads every other section along a rail corridor (the railroads were given the odd-numbered plots and the federal government kept the even-numbered plots).

Intermingled ownership lands can create problems for access, ecological management, and unintended consequences to private, state, and public lands. This landscape pattern can also lead to landlocked situations for both public and private lands. The federal decisions made on the public lands in checkerboard can have more impact on the private landowners compared to areas where there are large tracts of public lands. These areas can also be beneficial to private landowners as in some cases it reduces the impact and authority of the federal agencies as these small sections of public lands are often lower priority.

### 3.6.2 Resource Assessment and Legal Framework

Land exchanges can be used to alter the intermingled lands of federal and private land, allowing lands to be consolidated by ownership type and reducing the amount of federal land that is isolated from other public ground. This allows for a more uniform management plan of USFS and BLM land and can create public access opportunities that were previously impossible due to the landlocked nature of such parcels and the lack of easements on neighboring private lands. Land exchanges can also be used to allow community development or other purposes that provide great value to the public interest. Exchanges usually take two to four years, but the process can be extended considerably if complications arise with NEPA, land valuation, or ESA. Private land comprises the County's tax base that supports most County services and private land is essential to local industry and residents. An important check on the exercise of governmental authority is the protection of private property rights as provided in the United States Constitution and the Wyoming State Constitution.

The Wyoming Eminent Domain Act, Wyo. Stat. § 1-26-501, authorizes the condemnation of land only for public use and only as set forth in state law. Nevertheless, eminent domain power may be used to acquire land needed by private corporations for projects deemed to serve the public good, such as electrical transmission lines. Condemnation authority can also arise from federal law when Congress has given certain federal agencies the authority to condemn, for example, natural gas pipelines have condemnation authority through the Federal Energy Regulatory Commission (FERC) under the Natural Gas Act of 1938 (*See* 15 U.S.C. § 717). Condemnation

should only be used as a last option after every attempt has been made to deal in good faith and a desirable outcome cannot be reached.

Exchanging private land for public is one way that agencies can improve their management of public lands and allow public access to said lands. FLPMA granted the USFS and BLM power to conduct land exchanges with private property owners and established five requirements for the process:

- Acquisitions must be consistent with the mission and land use plans of the agency.
- Public interests must be served by the land exchange.
- An agency may accept title to non-federal land if the land is located in the same state as the federal land for which it is being exchanged and the agency deems it proper to transfer the land out of federal care.
- The lands to be exchanged must be equal in value or equalized through the addition of a cash payment, but a cash payment may not exceed 25% of the total value of the federal land.
- Land may not be exchanged with anyone who is not a U.S. citizen or a corporation that is not subject to U.S. laws (BLM Handbook, 1-1, 1-2)

The process for land exchanges begins with a proposal (by an agency or private landowner) of an exchange by an agency to a private landowner. The proposal then goes through multiple analysis and review phases to assure its compliance with the laws and regulations controlling such an exchange. After the review process is complete, an agreement to initiate is signed by both parties which outlines the scope of the exchange and who will be responsible for what costs in the procedure. (USFS, 2004)

The parties are expected to share equally in the costs of a land exchange, but specific requirements may vary between agencies. The USFS requires private landowners to pay for title insurance, advertising, and land surveys at a minimum. The USFS usually pays for appraisals. However, the BLM may share in some of these specific expenses if the total costs are apportioned equitably. (USFS, 2004)

Next, an appraisal must be done on each parcel to determine their respective values and assure that the properties are capable of being exchanged. At this point the agency and private landowner sign a formal exchange agreement binding them to the exchange. The plan is then subject to final review before being completed. During the exchange process NEPA review must also be completed. The exchange must follow NEPA procedures to determine environmental impacts of the exchange, including scoping, environmental assessment, notice and comment, and appeals. (USFS, 2004)

The USFS can also perform land exchanges under Title III of the Bankhead-Jones Farm Tenant Act (BJFTA) for parcels situated in National Grasslands. These lands are commonly called “Title III Lands.” Title III requires the USFS to determine that an exchange will not conflict with the purposes of the BJFTA and that the values of the properties are “substantially equal.” If the USFS

can show through a determination of consistency that the exchange does not conflict with the purpose of the BJFTA, it "may be completed without a 'public purpose' reversionary clause." (USFS, 2004).

***Payments in Lieu of Taxes***

Land exchanges or acquisitions that eliminate or decrease private lands can be harmful to the County because the federal government does not pay property taxes, but still may create a demand for services, such as fire protection and police cooperation. One way to offset some of these losses are Payments in Lieu of Taxes (PILT) administered by the United States Department of Interior (31 U.S.C. §§ 6901-6907). The annual PILT payments to local governments are computed in a complex formula based on five variables 1) the number of acres of eligible land in the county; 2) the population of the county; 3) the previous year's payments for all eligible lands under other payment programs from federal agencies; 4) any state laws requiring payments to be passed through to other local government entities (such as school districts); 5) any increase in the Consumer Price Index for the 12 months ending the preceding June 30th. Generally, federal lands eligible under PILT include acreage within the National Forest and National Park Systems, those managed by the BLM, and those affected by U.S. Army Corps of Engineers and Bureau of Reclamation water resources development projects (31 U.S.C. § 6901). Individual county payments may increase or decrease from the prior year due to changes in computation variables and the amount allocated by Congress in its discretionary spending (31 U.S.C. § 6902). Niobrara County received $354,914 in PILT payments in 2020 (U.S. Department of the Interior, 2020). The Congressional Research Service offers an in-depth look at PILT and some of the issues surrounding the program, including, the uncertainty counties face regarding PILT funding because the funding is discretionary for Congress (Hoover, 2017).

### 3.6.3 Land Tenure, Exchanges, Disposition, Acquisition Resource Management Objectives:

A. Land exchanges that are mutually beneficial to private landowners, federal agencies, and the public in Niobrara County are completed in a timely and cost-efficient manner.
B. Any land tenure adjustments by a federal or state government agency are conditioned on no net loss of private land or private property rights in Niobrara County and fully compensate the landowner for the value of the property interest, including investment-backed expectations, and compensate Niobrara County for the lost property tax revenue.

### 3.6.4 Land Tenure, Exchanges, Disposition, Acquisition Priority Statements:

1. Niobrara County requests consultation, coordination, communication, and cooperation when land tenure adjustments to federal and state land are proposed within the County.
2. Federal agencies should proactively identify potential land exchanges within Niobrara County and conduct analysis on lands for disposal that will consolidate land ownership type and reduce isolated federal land parcels.
3. Federal agencies should never use coercive tactics to encourage landowners to either sell land, exchange land for lesser land, or take land out of production.

4. Federal agencies should prioritize land exchanges in areas where there may be resource or management conflicts between federal managers and neighboring private or state landowners.
5. Federal agencies should attempt to consolidate and combine land exchanges, when possible, to reduce overall costs. However, such consolidations should not be at the expense of causing undue delay on smaller land exchange proposals.
6. Whenever there is a net loss in private lands, the agency should use Payments in Lieu of Taxes and other federal funding mechanisms to offset the loss of local government tax revenue.
7. Private land, including isolated tracts, should only be acquired by state and federal government entities when it is consensual and there is clearly just and adequate compensation to the landowner and separate compensation to Niobrara County for the lost tax base.
8. Federal agencies should support voluntary land exchanges between the federal government and private landowners to adjust property lines and improve access and land management.
9. Federal agencies should support the acquisition by land exchange or voluntary sale of isolated tracts of state and federally managed lands to improve land use efficiency.
10. Local, state, and/or federal land agencies should not acquire any private lands or rights in private lands within the County without first ensuring that the proposed acquisition meets the Niobrara County Natural Resource Management Plan goals and objectives, that the acquisition is clearly for established public use, and that there is fair and just compensation.
11. Federal government entities should investigate and attempt to increase local economic development within Niobrara County and those citizens of the County suffer no adverse aggregate economic impacts from land ownership adjustments.
12. Niobrara County and the Niobrara Conservation District request that when federal and state land agencies propose changes in land use, impact studies on the proposal be conducted at the expense of the agency proposing the change, and that mitigation measures are adopted in coordination with the County and District.
13. The Bureau of Land Management should accurately identify land eligible for disposal under the Federal Lands Policy and Management Act or lease or conveyance under the Recreation and Public Purposes Act and act promptly to facilitate transfers when requested.

# CHAPTER 4: GEOLOGY, MINING, AND AIR

## 4.1 GEOLOGY

The exposed geology in Niobrara County is mostly sedimentary deposits that range from Cambrian to Quaternary age. Precambrian igneous and metamorphic rocks outcrop in the core of the Hartville uplift in the south-central part of the county. In general, throughout the county, these older Precambrian and Cambrian rocks are overlain by deposits of Late Cretaceous and Tertiary age. (Whitcomb, n.d.)

The Hartville uplift is a structural divide separating the Powder River Basin to the west from the Denver-Julesburg Basin to the east. The Hartville Uplift extends from the Laramie Range mountains near Glendo and Wheatland into the Black Hills to the northeast. Precambrian igneous and metamorphic rocks outcrop in the core of the Hartville uplift in the south-central part of the County. The Hartville uplift hosts a variety of minerals including iron, copper, gold, and silver. Iron was historically mined at the Sunrise Mine, south of Lusk (*Wyoming State Geological Survey*, n.d.). Lusk is located near the axis of the Hartville uplift at a point where surface features are minimal. Surface features, such as rolling hills, granite knobs, and sharp low canyons are present south of Lusk. To the north, east, and west of Lusk, the landscape is predominantly open plains. Both the Powder River Basin and the Denver-Julesberg Basin are prolific producers of oil and gas, however, most production is from Cretaceous deposits which typically deplete rapidly. (Lichtner et al., n.d.)

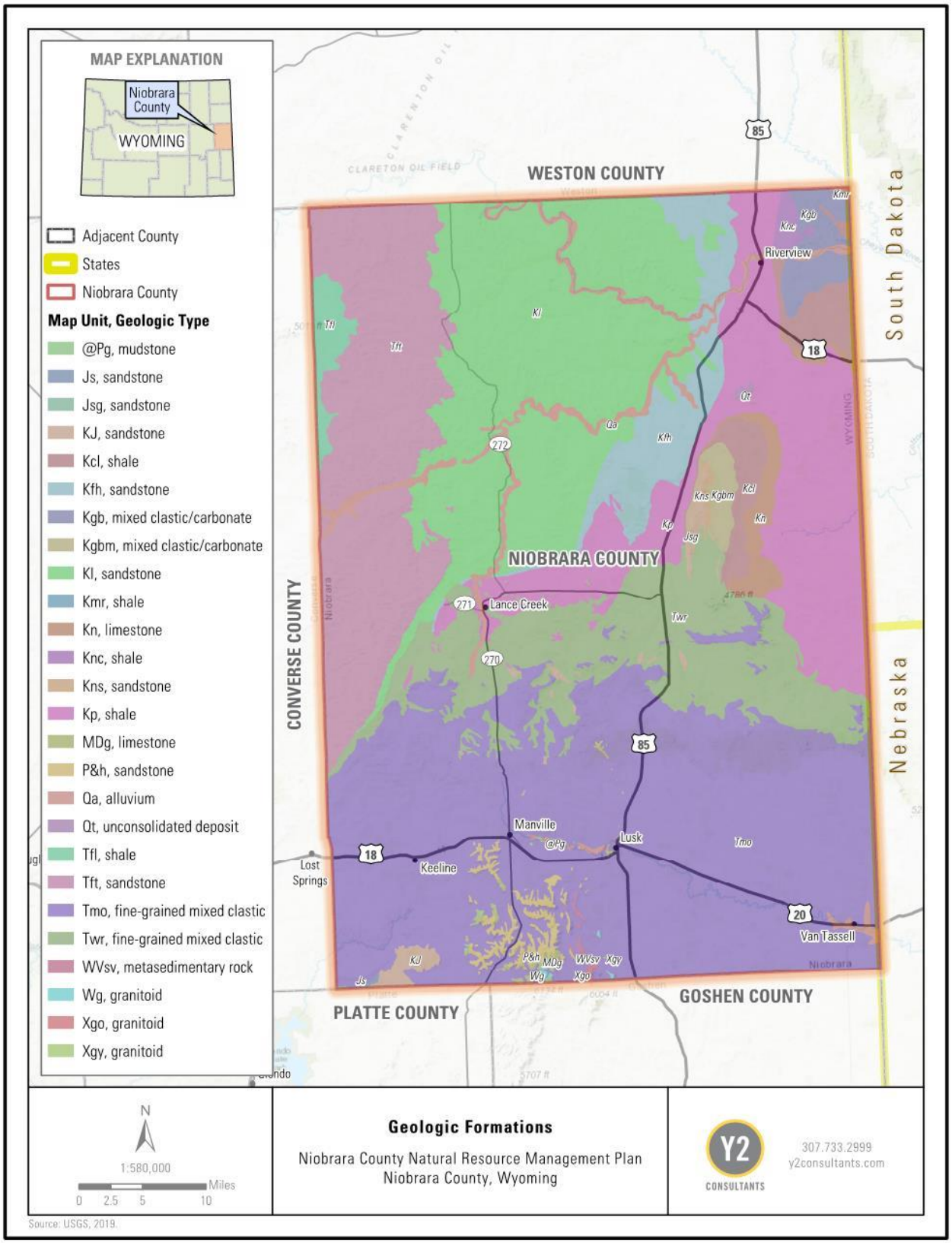



*Figure 4. Niobrara County geologic formations.*

## 4.2 SOILS

### 4.2.1 History, Custom, and Culture

Healthy soils sustain plant communities, keep sediment out of streams, and dust out of the air. Land managers of federal lands are mandated to manage soils and vegetation to ensure land-health standards are maintained and to safeguard sustainable plant and animal populations (NRCS, 2018). Soil type dictates the vegetation within an area, which determines the area's uses, productivity, resistance to disturbance, and scenic quality.

Human land disturbance, as well as wildfire, can influence soil quality. Soil issues arising from a variety of both human and natural causes include erosion, drainage, invasive species, soil compaction, salination, and loss of vegetation.

The Niobrara Conservation District works to promote the conservation of soil and water resources within district boundaries.

### 4.2.2 Resource Assessment and Legal Framework

There are limitations and hazards inherent in various soils that occur throughout Niobrara County. The type of soil present on any site can and will impact the existing and proposed land uses. The soils are variable in many of the major soil characteristics, such as depth, texture, and degree of profile development. The soils of Niobrara County vary in natural fertility. This natural fertility has been modified in many places by the way it has been used or managed. There are some drainage, salinity, and alkalinity problems along the flood plains.

***Soil Surveys***

Soil surveys provide detailed information on soil limitations and properties necessary for project planning and implementation. Soil surveys document soil properties and distribution to monitor and understand the impacts of various uses. There are five levels or "Orders" of soil surveys depending on the level of detail involved. Order three is typical for most federal lands projects which do require onsite investigations by expert soil scientists for site-specific project-related activities or projects.

Soil survey reports, which include the soil survey maps and the names and descriptions of the soils in a report area, are published by the USDA NRCS and are available online through Web Soil Survey[5]. The soil survey mapping of Niobrara County is current and published to Web Soil Survey (NRCS, n.d.). The general soil map units for Niobrara County are depicted in Figure 5 below.

### *Ecological Site Descriptions*

Ecological Sites provide a consistent framework for classifying and describing rangeland and forestland soils and vegetation. Ecological Site Descriptions (ESDs) are reports that provide detailed information about a particular type of land. ESDs are described using the soil mapping for a landscape and each 'site' has multiple characteristics that are tied to the soil traits present. ESDs are used for assessing vegetation states and are often used when designing reclamation and rehabilitation of an area. ESDs help determine how a site will react to disturbances and potential vegetation that could be used in reclamation of the site.

## 4.2.3 Soils Resource Management Objectives:

A. Soil quality and health are maintained and conserved through best management practices within Niobrara County.
B. Federal agencies consult and coordinate with surface users in Niobrara County regarding soil health and reclamation.

## 4.2.4 Soils Priority Statements:

1. Federal agencies should support projects and policies which improve soil quality and ecology within Niobrara County.
2. Federal agencies should support erosion control as a means of flood control.
3. For new soil disturbing projects or permits, federal agencies should support the implementation of best management practices to manage runoff, preservation, and maintenance of topsoil, and stabilize soils on site.
4. Niobrara County and Niobrara Conservation District do not support land use designations or management objectives that eliminate or reduce the opportunity for implementation of practices that can improve soil health.
5. Niobrara County and Niobrara Conservation District support and encourage the use of natural processes, including livestock grazing, in site reclamation for soil health and biodiversity.
6. Niobrara County and Niobrara Conservation District encourage the implementation of best management practices for watershed management.
7. Niobrara County and Niobrara Conservation District encourage the removal of drill mud from drill sites to designated waste sites.
8. Federal permitting that may cause soil disturbance or degradation should require a soil reclamation and remediation plan.
9. Federal agencies should consult with existing surface users, Niobrara County, the Natural Resource Conservation Service, and the Niobrara Conservation District when developing reseeding and reclamation requirements for permittees conducting soil disturbing or degradation activities.
10. Federal agencies should use the completed soil survey within Niobrara County.
11. Federal agencies should utilize the developed ecological site descriptions for management and restoration plans within Niobrara County.

12. Niobrara County and Niobrara Conservation District encourage private landowners, local, state, and federal agencies to cooperate in defining desired plant communities on private, state, and federal lands within the County to control soil erosion.
13. Niobrara County and Niobrara Conservation District encourage local, state, and federal agencies to cooperate in defining desired plant communities on state and federal lands within Niobrara County to control soil erosion.
14. Topsoil reclamation and management plans approved by the Niobrara Conservation District and the Natural Resource Conservation Services Office are required for all projects or actions that may disturb topsoil in Niobrara County.

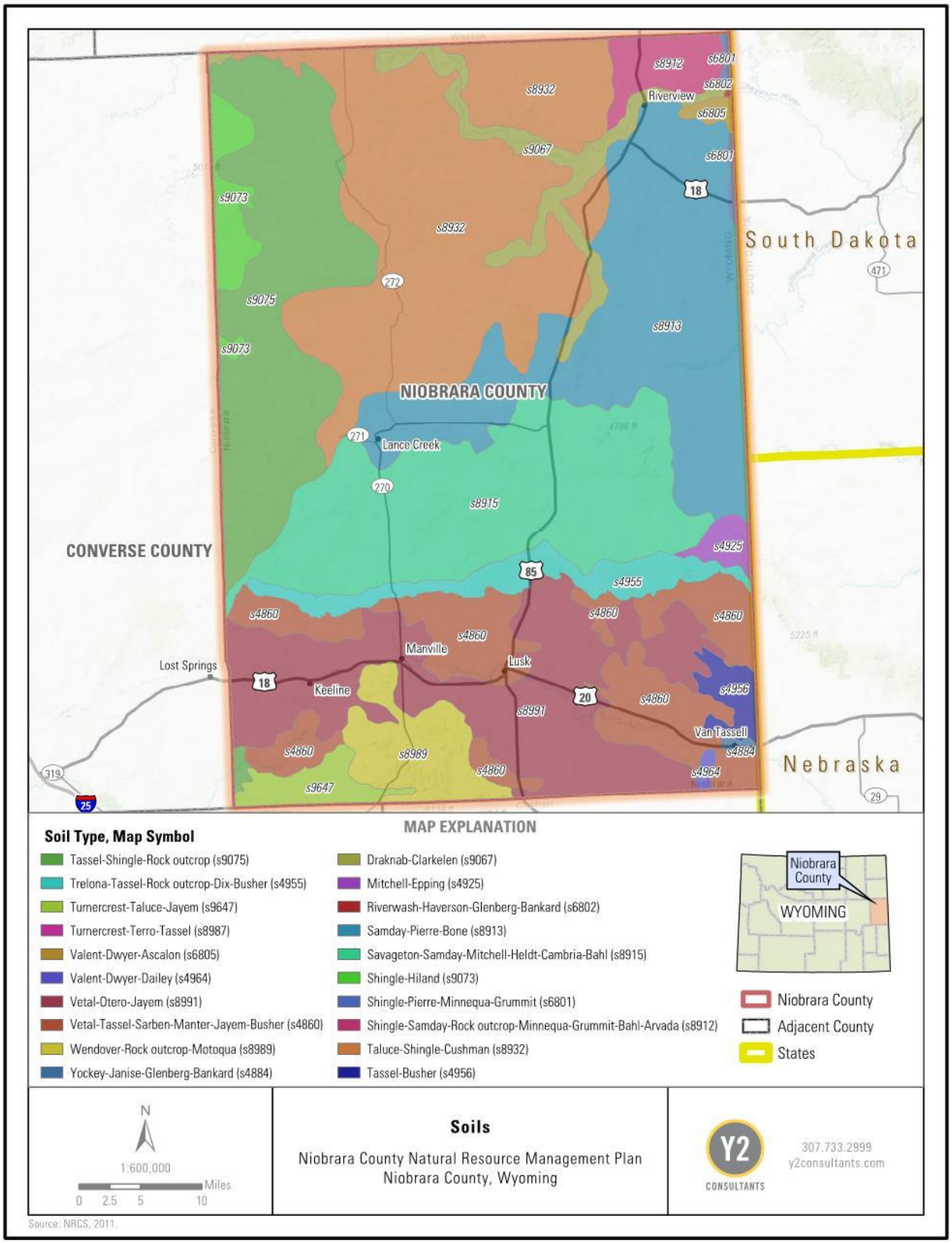



*Figure 5. Soil classification mapped for Niobrara County.*

## 4.3 SPLIT ESTATE OVERVIEW

Mineral ownership is heavily mixed within Niobrara County and there is a substantial amount of private land with federally held mineral estate (split estate). Given this land pattern, it is critical to evaluate the effects of federal and local management actions across all ownerships. Split estate is defined as a tract of land where title to the surface estate is separate from title to some or all the mineral rights. Split estates are common in the western United States because private land conveyed under the homestead or stock-raising homestead acts reserved the mineral rights to the United States. Under common law, the mineral estate is dominant and can be developed over the objections of the surface owner. Generally, and as set forth in Wyoming law, mineral rights often take precedence over other rights and the owner of the mineral estate has an overriding right to use the land to explore for and develop minerals. Many situations of split estate minerals in which the federal government owns the mineral estate originate back to the Stock Raising Homestead Act of 1916 in which the federal government reserved everything to the government besides what was necessary to farming and raising livestock (43 U.S.C. §§ 291 and 299; *see also Watt v. Western Nuclear Inc.,* 462 US 36, 53-55 (1983)). Thus, the federal government owns the minerals of any lands in which the patent is after 1916. Modern laws and case decisions have modified the rule but still recognize the right of the mineral owner to develop the mineral estate, even when the surface owner objects. If the United States owns the surface, it will require the mineral owner to reclaim the surface, secure permits to build roads and other facilities, and post reclamation bonds. If the surface is owned by a private landowner, then federal reclamation laws do not apply but state laws will.

The surface owner, where oil and gas operations occur, has the potential for significant impacts to their property if they do not also own the mineral rights. In this situation, there are very few options for the surface owner. Wyoming Statute (Wyo. Stat.) §§ 30-5-401 thru 30-5-410 includes provisions that the oil and gas operator and the surface owner shall attempt good faith negotiations to reach a surface use agreement for the protection of the surface resources, reclamation activities, timely completion of reclamation of the disturbed area, and payment for damages caused by the oil and gas operations. Additionally, Wyo. Stat. § 30-5-405 “Surface damage and disruption payments; penalty for late payment” outlines that these payments only cover land directly affected by oil and gas operations for damages sustained by the surface owner for loss of production and income, loss of land value, and loss of value of improvements caused by oil and gas operations.

For federal split mineral estates, the BLM manages all minerals owned by the federal government. Whenever an operator acquires a BLM lease to produce minerals from a split estate, they must negotiate a surface use agreement in good faith with the surface estate owner. The surface use agreement is confidential but must provide enough information in a Surface Use Plan to allow for the BLM to conduct NEPA review of the project. If the operator is unable to negotiate a surface use agreement with the landowner, they may elect to file a bond with the BLM to cover compensation for damages to the surface estate. *Id.*

## 4.4 MINING AND MINERAL RESOURCES

### 4.4.1 History, Custom, and Culture

Mineral production has been part of Niobrara County's culture for over 100 years. The Spanish Diggings being an example of prehistoric quarrying in the southwest corner of Niobrara County is believed to date back to the 1600s. Mining is one of the historical uses of federally managed lands, predating the establishment of the BLM and USFS. Maintenance of such use is statutorily compatible with multiple use principles. Energy (i.e., oil and gas) production is a large corner of industry in Niobrara County and provides jobs to hundreds of people throughout the region. This industry serves a crucial role in the development of the County.

### 4.4.2 Resource Assessment and Legal Framework

Niobrara County supports the production of all minerals in an environmentally responsible manner by providing infrastructure and services such as roads, bridges, medical services, and law enforcement. The existing governmental regulatory process has limited development due to the necessary collaboration between local and state authorities. Entities such as the Wyoming Oil and Gas Conservation Commission (WOGCC), BLM, USFS, and Wyoming Department of Environmental Quality (WDEQ) are critical to the development of hydrocarbon reserves but can potentially hinder the development of these resources. Improved relations with these agencies are a crucial element for increasing access to new reserves. To secure the economic longevity and prosperity of the County, these challenges and interface issues need to be streamlined.

Production of minerals, and associated economic and cultural activity, have historically followed demand and pricing, but mining remains an important industry of Niobrara County. There are 1,295 records of mining claims managed through the BLM and 77 records of mines listed under USGS. Of the listed claims, 7% are active (Diggings, n.d.).

In 2015, the mining sector in Niobrara County produced 908,239 million barrels of crude oil, 925,239 million cubic feet of natural gas, and 115,649 tons of sand and gravel. The mining production in the County had an assessed valuation of $34.7 million in 2016 (2016 assessed valuation for mineral production is based on 2015 production). This valuation represented 33 percent of the total assessed valuation for the County. Based on the County mill levy, the mineral industry generated $2.4 million in property tax revenue in 2016. Of this total, 64 percent went to K-12 schools ($1.5 million), 17 percent went to county government ($416,832), and 18 percent went to county special districts ($442,884). In 2015 the percent of total employment in mining for the county was nearly 10 times the national percentage (0.9 percent) indicating that mining was an area of specialization within the County's economy. In 2018, the mining industry in the County supported 148 jobs with labor earnings of $3.8 million. This represented 3.4% of total employment and nearly 5% of total labor earnings in the County. The earnings for mining in the County was $3.8 million in 2018, which was 4.7% of earnings across the County ($81.7 million). The mining industry ranked 3rd out of 23 sectors in the County's economy in terms of total employment and 5th out of 23 sectors in terms of total labor earnings. (Headwaters Economics, 2020)

The Congressional Act of July 26, 1866, and the General Mining Act of 1872 granted all American citizens the right to go into the public domain to prospect for and develop minerals. Every mining law or act enacted since then has contained a "savings clause" that guarantees that the originally granted rights will not be rescinded. These laws are applicable in Niobrara County. There are multiple categories of mineral resources that exist within the County.

### *Fluid Leasables*

The objective of fluid leasables (oil, coalbed methane, and natural gas, and geothermal) is to provide for leasing in exploration and development. State and BLM-administered lands not specifically withdrawn or closed to sale under the mineral leasing laws should be open to leasing and development.

### *Solid Leasables*

Solids resources in Niobrara County are subject to development in an orderly manner consistent with the regulation and policies governing its development, environmental integrity, national energy needs, and related demands.

With appropriate limitations and mitigation requirements for the protection of other resource values, all BLM-administered federal lands and federal coal lands in the County, except for those lands identified as withheld, should be open to coal resource inventory and exploration to help identify its resources and their development potential, commensurate with all interests in coal per se.

Split Estate lands where the United States owns the surface but the minerals are owned by the State or private entity or where the United States owns the minerals but the surface is in private or state ownership. Government-owned surface overlaying the State of Wyoming and privately-owned coal are subject to consideration for coal development with appropriate and necessary conditions and requirements for the protection of the public land surface and surface resource uses, including big game crucial winter range, sage-grouse leks, cultural values, geologic features, and rights-of-way. The Land Quality Division of the WDEQ issues mining permits, which address reclamation and surface resources. (WDEQ, n.d.-h)

### *Locatable Minerals*

Locatable minerals are those valuable mineral deposits which are not included under the mineral leasing acts and do not include common varieties of sandstone, gravel, cinders, pumice, and clay (Maley 1985). Mining claims either placer or lode are staked for locatable minerals. At the resource area level surface disturbing activities under the jurisdiction of the 43 C.F.R. § 3809 regulations are reviewed on a case-by-case basis. All surface disturbing activities on mining claims require a notice submitted to BLM for a cumulative disturbance of five acres or less and a plan of operations for disturbances of more than five acres. No notification is required for casual use non-mechanized for example pick and shovel. All operations casual use notice of intent or plan of operations must comply with all federal and state laws pertaining to air quality, water quality, solid wastes, fisheries, wildlife and plant habitat, cultural and paleontological resources, and protection of survey monuments (43 C.F.R. § 3809.2). Mining activities are regulated under 43 C.F.R. § 3809 to prevent undue degradation of surface resources and to ensure reasonable

reclamation of disturbed sites on federal lands. The BLM conducts regular, twice-yearly minimum, field monitoring inspections of mining activities on federal surface to ensure compliance and to check for unauthorized use. All public lands are open to exploration for locatable minerals except those withdrawn to protect other resource values and uses or those lands with acquired minerals status. Acquired minerals are subject to leasing under 43 CFR § 3500. The only areas under BLM jurisdiction in the Newcastle Resource Area which are currently closed to the operation of the mining laws are BOR lands at Keyhole Reservoir in Crook County.

BLM has limited management authority over mining claim operations conducted under the General Mining Law of 1872. These operations are managed using the surface regulations in 43 CFR § 3809. BLM is required to prevent unnecessary and undue degradation of public lands and provide for reasonable reclamation by applying the 43 CFR § 3809 regulations and any agreements made with the WDEQ pursuant to those regulations. There are approximately 1,800 active placer mining claims in the BLM Natural Resource Area (NRA) with bentonite, uranium, and gypsum being the principal locatable minerals.

### *Salable Minerals*

Salable minerals include, but are not limited to, common varieties of sandstone, gravel, pumice cinders, clay, and petrified wood. Disposal is authorized by the Mineral Materials Act of 1947 as amended. Historically, salable minerals have been used in the NRA for building materials, road surfaces, and tools. Today, mineral materials are used primarily for building and maintaining roads and other activities associated with the oil and gas industry. There are several different forms of stone aggregate materials that are used for construction projects including sand and gravel, sandstone, shale, limestone, dolomite, and igneous and metamorphic granite rocks. Few gravel deposits are present in terraces along drainages and some sandstone outcrops in the northern part of Niobrara County. In the southern part of the county, a large amount of limestone is present which could be quarried and crushed for aggregate use. A granite outcrop at Bald Butte in southern Niobrara County contains material that could be used as railroad ballast.

### *Hydrogen Sulfide*

In central Niobrara County, hydrogen sulfide is produced as natural gas in some petroleum reservoirs. Some wells have concentrations of 20% or more; gas from wells in the NRA is 48% hydrogen sulfide. The gas occurs in dangerous quantities in all oil and gas operations from drilling through plugging and abandonment. In central Niobrara County, where hydrogen sulfide is native, a contingency plan is required for all drilling, workover, and plugging operations that involve potentially hydrogen sulfide-bearing horizons on federal minerals.

### *Uranium*

The only other known significant locatable mineral in the NRA is uranium but there is no active mining of uranium currently taking place. Past commercial mining has occurred in Niobrara County. Commercial deposits of uranium were first discovered in 1918 in Niobrara County at the Silver Cliff Mine, located just over one-half mile west of Lusk. Several small shipments were made from this mine in 1918, 1922, and during the 1950s and 1960s (Elevatorski 1976). During the

1950s, two uranium mines were opened in the Lance Creek area, however, very little uranium was produced from either of these mines and they are presently inactive (USDI BLM 1981b).

### *Metals*

The Silver Cliff Mine, one-half mile west of Lusk, is in a highly mineralized area. The mine opened in 1880 for silver and copper on a small scale. Between 1918 and 1922, six carloads containing about 3% $U_3O_8$ were shipped to the Radium Company of Denver, CO. The mine was located along a high-angle reverse fault zone. Also, some relatively rich uranium-bearing ores have been found in the area. The Lance Creek area has occurrences of uranium and other metals.

### *Withdrawal*

Federal lands can be withdrawn from mineral eligibility of development under the mining laws (30 U.S.C. Ch. 2). Mineral withdrawal prohibits the location of new mining claims. Withdrawal also may require that any preexisting mining claims in the area demonstrate that valuable minerals have been found before the withdrawal before any activities can commence on those preexisting claims. Withdrawal of minerals cannot prohibit the use of a valid existing right. A valid existing right exists when the mining claim contains the discovery of a valuable mineral deposit that satisfies the "Prudent Person" test, as defined in *Castle v. Womble (US v. Cole*, 390 U.S. 599, 602 (1968)). To pass the "Prudent Person" test a person must demonstrate that "the discovered deposits must be of such a character that "a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success, in developing a valuable mine" *Id*. However, these minerals cannot be considered "of common variety" to be a considered a valuable mineral under the mining laws (*See id*.; 30 U.S.C. § 611).

Congress can withdraw lands from new mineral claims or leases by passing legislation withdrawing said lands (*See* North Fork Watershed Protection Act of 2013). Additionally, FLPMA gives the Secretary of Interior the authority to withdraw federal lands (43 U.S.C. § 1714). Secretarial withdrawals of over 5,000 acres may only last 20 years at most, but withdrawals may be renewed (43 U.S.C. § 1714(c)). The Secretary of Interior must inform Congress of any secretarial withdrawal of over 5,000 acres. *Id*. The withdrawal will expire after 90 days if both bodies of Congress draft concurrent resolutions that they do not approve the withdrawal within 90 days of being notified by the Secretary of Interior. *Id*. To allow for public involvement in the withdrawal process, public hearings and opportunities for public comment are required of all new secretarial withdrawals (43 U.S.C. § 1714(h)).

## 4.4.3 Mining and Mineral Resource Management Objectives:

A. The extraction of coal, bentonite, uranium and all other minerals within Niobrara County is continued and appropriately expanded in a sustainable and ecologically healthy way.
B. All mining operations in Niobrara County reclaim the land reasonably back to its original condition.
C. Niobrara County is given meaningful participation in the permitting process for all mining activities in the area.

D. Public lands in Niobrara County are available to explore, locate, and develop mining claims, building stone, sand, and gravel as needed while protecting other relative resource values.
E. The rights of landowners and surface owners are protected so that mineral development can proceed.
F. Mineral and energy resource exploration and development are continued on private, state, and federal land within Niobrara County; and continued development is seen as compatible with the principles of multiple use by federal agencies.
G. Suitable mineral exploration and development occurs in Niobrara County while conserving rangeland, soil, fish and wildlife habitat, air quality, visual, and water resources.
H. Federal agencies consult with Niobrara County and the Niobrara Conservation District before proposing any withdrawals.

### 4.4.4 Mining and Mineral Priority Statements:

1. Niobrara County and the Niobrara Conservation District support the open filing of mining claims and exploration for and development of locatable minerals, except for land withdrawn from mineral location.
2. The permitting processes for new activities within Niobrara County should be efficient and timelines should follow Council on Environmental Quality National Environmental Policy Act guidelines to allow for more exploratory drilling and mining and improved access to reserves.
3. Federal agency proposals to withdraw lands from mineral exploration or extraction shall be coordinated with Niobrara County prior to a decision to consider the impact of such withdrawal on the County's economic viability.
4. Federal agency decisions pertaining to mining and energy resources within Niobrara County affect the health, safety, and welfare of its citizens and the County requests to be notified and allowed to join as a cooperating agency for any proposed decision affecting mining and mineral resources as early in the process as is allowed by federal law.
5. Niobrara County requires that public lands be managed in a manner which recognizes the Nation's need for domestic sources of minerals, food, timber, and fiber from the public lands, including implementation of the Mining and Minerals Policy Act of 1970.
6. Federal agency land use and management plans shall contain a thorough discussion and evaluation of energy and mineral development, including the implications such development may have on surface land uses and Niobrara County's economy.
7. All exploration, development, and mining on public lands in Niobrara County with mineral or energy potential shall be governed by adherence to all laws which pertain to mining and energy development and production.
8. All public lands not lawfully withdrawn from mineral exploration and development shall remain available for their designated use. These lands should be developed in an orderly manner to accommodate exploration, development, and production.

9. All relevant federal agencies shall protect the rights of access, occupation, and property of anyone prospecting and/or developing minerals within Niobrara County as required by federal and state law so long as protection of such rights do not infringe upon the rights of surface owners through the Wyoming Split Estate Act.
10. Niobrara County shall be notified early of any proposed withdrawal of prospect and mining of mineral resources and any withdrawals shall be coordinated with the County as a cooperating agency.
11. Niobrara County and the Niobrara Conservation District encourage simultaneous or sequential mineral development with other resource uses in accordance with multiple use management principles in Niobrara County, weighing and balancing established mineral rights with other multiple uses in the development and coordination process.
12. Niobrara County and Niobrara Conservation District encourage proper mitigation of closed mines and reclamation practices throughout the County using existing ecological site descriptions to help determine mitigation and reclamation methods.
13. Weed management plans should be developed in consultation with the Niobrara County Weed and Pest District for mining and reclamation on public lands.
14. Niobrara County and Niobrara Conservation District shall be informed of proposed timelines for federal agency proposals and decisions involving minerals.
15. Niobrara County and Niobrara Conservation District support federal agencies following the July 2020 Council on Environmental Quality National Environmental Policy Act regulations and the timeline requirements for all NEPA decisions conducted by the agencies.
16. Federal agencies should ensure that existing air, water, and land quality be maintained and not substantively diminished because of new mineral development activities.
17. Niobrara County and Niobrara Conservation District encourage federal agencies to inform the County of all new and existing mining claims, exploration permits, and applications for permits to drill to the extent allowed by law.
18. All federal permits should require road management and repair agreements with Niobrara County.
19. In instances of split estate minerals where the federal agency has jurisdiction to participate in the development of a surface use plan, the federal agency should fully consider and defer to, when able, the surface owner's requests.
20. Niobrara County and Niobrara Conservation District encourage negotiation of surface use agreements on split estates and support siting of oil and gas facilities off private land unless otherwise agreed by the surface user.
21. Federal agencies should conduct a thorough investigation of future mineral development potential and the consequences of all land use decisions on development potential.
22. Niobrara County and Niobrara Conservation District encourage open access to, across, over, under, and through the state and federal lands for prospecting and exploration to provide incentives for private investment in mineral development.

23. Federal agencies should support mineral and mining company efforts to conduct science-based research applicable to mining and mineral processing, subsistence, expansion, and new development that is environmentally and economically viable.
24. All federal agency plans or management recommendations shall include a social and economic impact description that addresses the effects on energy and mining development within Niobrara County.
25. Federal agencies should enforce Federal Land Policy Management Act requirements that the Bureau of Land Management (BLM) review land withdrawals in the federal planning process or immediately thereafter to ensure the withdrawal remains necessary and that the BLM only withholds public lands from mining or mineral leasing pursuant to federal law or an official order of withdrawal that is published in the Federal Register with an explanation justifying the closure.
26. Niobrara County and Niobrara Conservation District recommend that regulatory agencies adopt bond release criteria for mine reclamation lands based on established criteria for habitat goals.

## 4.5 ENERGY RESOURCES

### 4.5.1 Oil and Gas

#### *4.5.1.1 History, Custom, and Culture*

Oil and gas operations occur on private, state, and federal land ownership within Niobrara County. These resources provide economic benefits and impacts for the citizens of Niobrara County and the State of Wyoming. The County recognizes that effective development of its abundant mineral resources is necessary to the economic well-being of the county, the state, and the nation. Energy and mineral resource extraction is also consistent with the local history, customs, and culture.

Wyoming's legacy as a major energy producer continues today. Be it coal, oil, natural gas, or wind, Wyoming has energy reserves in abundance. Wyoming sits on more than 919 million barrels of oil, 37 trillion cubic feet of natural gas, and 65 billion short tons of recoverable coal. As a result, Wyoming serves a critical role in domestic energy production and supplies more energy to the nation than any other state. (Nicholas & Lubnau, 2014)

In the past decade there have been developments in secondary and tertiary production methods that have made previously depleted fields economically feasible to re-produce and re-complete. From these advances, there has been an increase in statewide oil production in the past decade. Conversely, overall natural gas production has declined. These trends in decline and growth are tied to existing economic conditions at the County, state, and national levels (see Figures 6 and 7).

Wyoming Oil Production for 1978-2020

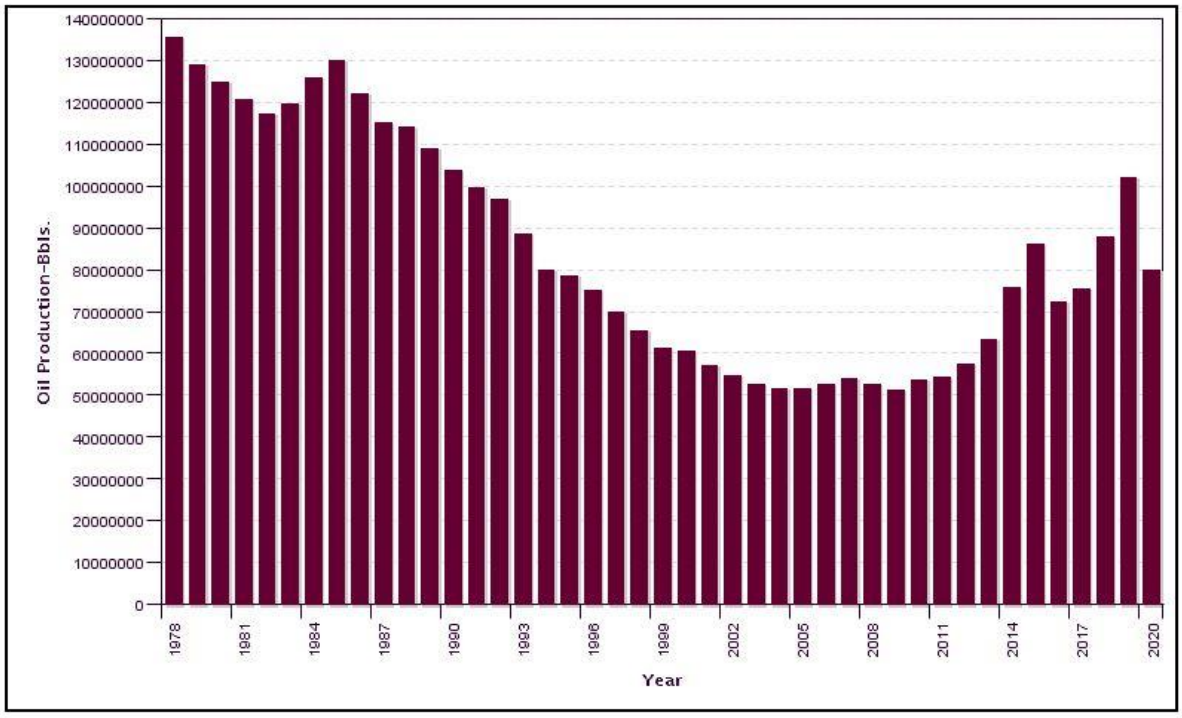



*Figure 6: State of Wyoming Oil Production Trends (1978-2020). (WOGCC, n.d.-a)*

Wyoming Gas Production for 1978-2020

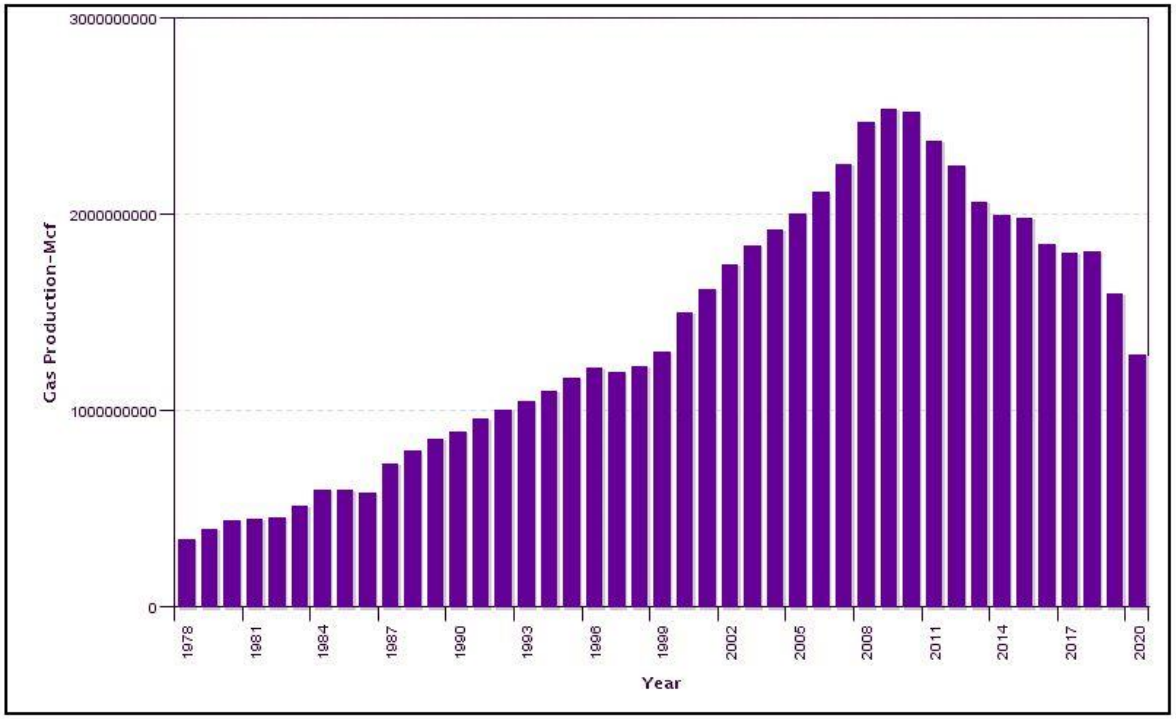



*Figure 7: State of Wyoming Gas Production Trends (1978-2020). (WOGCC, n.d.-b)*

The County has seen a gradually decreasing trend in overall oil production from 1980 to 2010. Between 2010 and 2020 oil production has fluctuated just below one million blue barrels. Prior to 2005, gas production in the County gradually declined. In 2007 gas production peaked at just over two million MCF (million cubic feet); after 2010 production declined and has fluctuated near one million MCF since (Figure 8). Refer to Figure 9 for a map of the oil and gas resources across Niobrara County. (Drilling Edge, 2020)

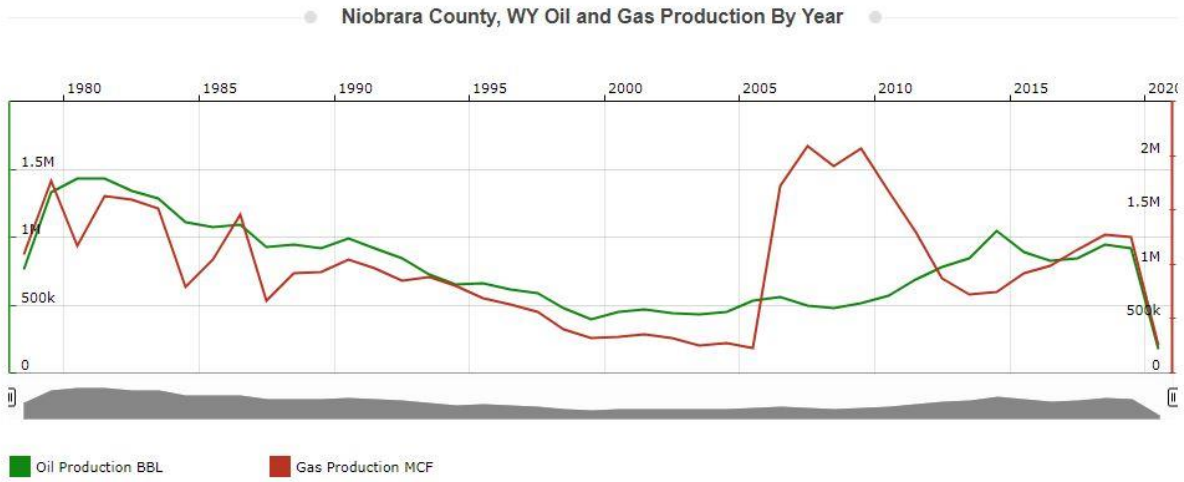



*Figure 8. Oil and gas production in Niobrara County from 1980 to 2020*

### *4.4.1.2 Resource Assessment and Legal Framework*

The mining sector, which includes oil and gas, directly supports nearly 25,000 jobs in Wyoming and indirectly drives tens of thousands of additional construction and service jobs throughout the state. Mineral production is the principal driver of tax and investment revenues in Wyoming, making up 75 percent of the state's income. Mineral production has also provided Wyoming with over $8 billion in savings in the Permanent Wyoming Mineral Trust Fund as of 2018 (Kenton, 2019). Utilities include all lines and facilities used to distribute, collect, transmit or control electrical power, natural gas, petroleum products, information (telecommunications), water and sewage. Inherently these are regulated by the Federal Energy Regulatory Commission (FERC) and is governed primarily by statutory provisions in Title 30, Chapter 5 Oil and Gas of the Wyoming Code (Wyo. Stat. Ann. § 30-5-100, et seq.) and rules promulgated by the Wyoming Oil and Gas Conservation Commission (WOGCC). The WOGCC also handles the drilling permit process and ensures industry compliance with statewide oil and gas laws and regulations. Air quality and water quality provisions of Wyoming's Environmental Quality Act (§ 35-11-100, et seq.) play important roles in regulating the environmental impacts of oil and gas development throughout the state as well. Additionally, the WOGCC and other state agencies, like the Wyoming Air Quality Division, issue various guidelines and policy statements to guide the future of oil and gas development in Wyoming and to assist regulated industries understand and comply with Wyoming's statutes and regulations.

The extraction of oil and natural gas from deposits is accomplished in three central phases of recovery: primary, secondary, and enhanced or tertiary recovery. Primary recovery relies on

initial underground pressure to drive the product to the surface. As pressure falls, artificial lift technologies are used to bring the product to the surface. Occasionally the need for artificial lift is eliminated in the case of the artesian, or over-pressured, reservoir. Typically, only 10% of a reservoir's original oil in place is produced through primary recovery. Secondary recovery methods, such as water or gas injection, can extend a field's productive life and result in the extraction of an additional 20-40% of the original oil in place. Enhanced oil recovery techniques offer the potential to produce 30-60% more oil. These techniques include thermal recovery, hydraulic fracturing, gas injection, chemical flooding, or horizontal development. (Office of Fossil Energy, n.d.)

The production of gas is like that of oil. The primary phase of production is driven by initial reservoir pressure and decreases as this pressure and reserves in place are reduced. The production of gas can be augmented in a manner like that of oil. Enhanced or tertiary recovery of gas can be further augmented through the utilization of fracturing and other stimulation methods. Enhanced recovery methods are limited by costs and unpredictable effectiveness. These methods have improved drastically over the past decade allowing for more cost-effective and efficient recovery. (Office of Fossil Energy, n.d.)

The Mineral Leasing Act of 1920, as amended, and the Mineral Leasing Act for Acquired Lands of 1947, as amended, give the BLM responsibility for oil and gas leasing on BLM, USFS, and other federal lands, and on private lands where mineral rights have been retained by the federal government (split estates). The BLM is a multiple-use agency and must balance the development of mineral resources in the best interest of the country. The BLM must manage for uses like livestock grazing, recreation, and development and conservation of wildlife habitat. The USFS regulates all surface-disturbing activities on USFS land (30 U.S. Code § 226 (g)). The USFS is the lead agency applying stipulations on leasing of USFS land and conducts environmental analysis for leasing and permitting activities on these lands. The Mineral Leasing Act makes the disposition of oil and gas in the form and manner provided by the Act a mandatory Act (30 U.S.C. § 181). Further, lease sales for each state where eligible lands are available must be held at least quarterly (30 U.S.C. § 226).

#### *4.5.1.3 Oil and Gas Resource Management Objectives:*

A. Oil and gas extraction is managed in a responsible way that promotes Niobrara County's economic viability along with the health of both ecosystems and citizens of the County.
B. Niobrara County and Niobrara Conservation District are given meaningful participation in the permitting process for all extraction activities in the area.
C. Suitable oil and gas exploration and development occurs in Niobrara County while conserving rangeland, soil, fish and wildlife habitat, air quality, visual resources, and water resources.
D. Surface owners and their existing uses are protected when there is a federal split estate minerals on private lands.
E. Lease sales for eligible lands in Niobrara County are held at least quarterly.

#### *4.5.1.4 Oil and Gas Priority Statements:*

1. The permitting process for new oil and gas drilling activities within Niobrara County should be efficient and timelines should follow Council on Environmental Quality National Environmental Policy Act guidelines to allow for more exploratory drilling and improved access to reserves.
2. The permitting processes for new activities within Niobrara County should be efficient and timelines should follow Council on Environmental Quality National Environmental Policy Act guidelines to allow for more exploratory drilling operations and improved access to reserves.
3. Federal agencies should update Niobrara County at least quarterly as to the status of all pending applications for permit to drill in Niobrara and explain to the County an expected timeline for a decision for each permit.
4. Niobrara County and Niobrara Conservation District should be informed of all potential uses of county roads and resources from oil and gas activities and associated impacts to those resources.
5. Niobrara County and Niobrara Conservation District encourage and support the nomination of more leases for sale.
6. Federal agencies are encouraged to prioritize approval of secondary and enhanced (tertiary) recovery methods where possible (e.g., fluid, gas, and steam injection) to extend the production life of a field, while maintaining air quality and available water for agricultural and domestic use.
7. Niobrara County and Niobrara Conservation District encourage the use of new technology and advanced production techniques to improve access to reserves in place, including long length horizontal wells and fracking.
8. Niobrara County and Niobrara Conservation District encourage coordination among federal agencies to facilitate hydrocarbon production permits in a timely manner, as prescribed in federal law.
9. Federal agencies should support the use of enhanced production techniques and the development of infrastructure to provide material supply and support to ensure further development throughout Niobrara County.
10. Niobrara County and Niobrara Conservation District encourage federal agencies to approve oil and gas leases in a timely manner and encourage justification when deferring lease applications.
11. Niobrara County and Niobrara Conservation District discourage the disposal of oil and gas produced water into surface waters of Niobrara County.
12. Niobrara County and Niobrara Conservation District encourage alternatives to flaring such as the use of pipelines, storage, etc.
13. Road agreements should be made with Niobrara County for all oil and gas permits within the County.
14. Dust mitigation plans should be made for all roads associated with oil and gas developments within Niobrara County.

15. So long as such activities will not harm private property rights, federal agencies should allow operators to capture, use, and/or store carbon dioxide during extraction activities on public lands.
16. In instances of split estate minerals where the federal agency has jurisdiction to participate in the development of a surface use plan, the federal agency should fully consider and defer to, when able, the surface owner's requests.
17. Federal agencies should facilitate reclamation and mitigation of lost or decreased forage resources that occur because of surface disturbance from oil and gas, utilities, and recreation.
18. Niobrara County and Niobrara Conservation District encourage land managers and landowners to seek technical assistance from the Natural Resource Conservation Service to mitigate surface disturbance activities, facilitate soil and water conservation, and re-establishment of native or other desired vegetation.
19. Federal agencies should discourage the use of informal policies or unofficial classifications by federal agencies to withhold high energy potential areas from leasing or development.
20. Niobrara County and Niobrara Conservation District encourage negotiation of surface use agreements on split estates and support siting of oil and gas facilities off irrigated lands, unless otherwise agreed by surface user.
21. The Bureau of Land Management should continue holding lease sales and awarding leases for Niobrara County lands on at least a quarterly basis as is required by the Mineral Leasing Act.
22. Federal agencies should work with local agricultural producers, the Niobrara Conservation District, and Niobrara County to ensure mitigation for oil and gas development is done properly and locally.

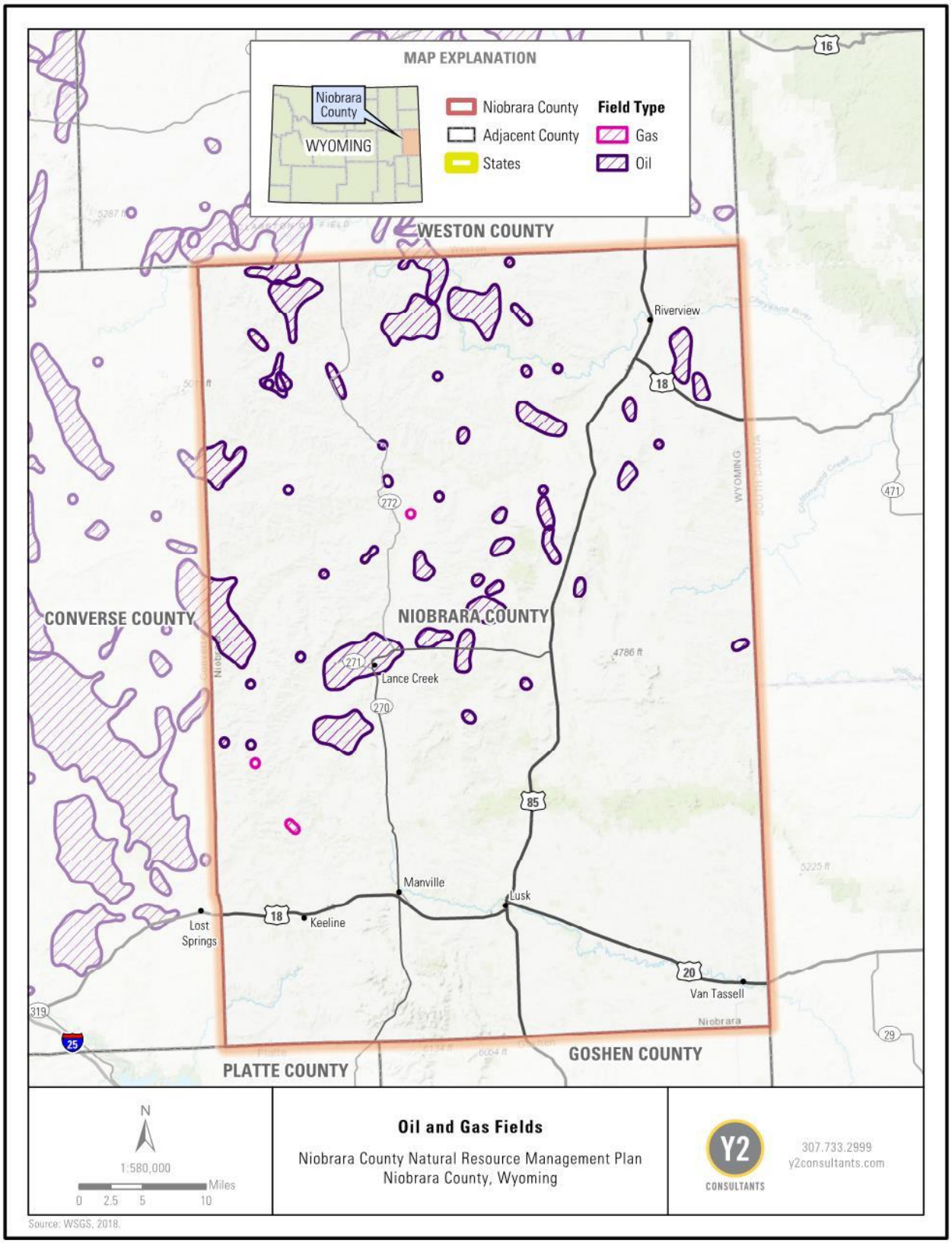



*Figure 9. Oil and gas fields mapped for Niobrara County.*

## 4.5.2 Alternative Energy

### *4.5.2.1 History, Custom, and Culture*

The term alternative energy generally refers to non-carbon-based energy. These include wind, geothermal, and solar, as well as nuclear power. Wyoming does not have any nuclear power plants, although it does have commercially viable uranium deposits. Wyoming and Niobrara County have a high potential for wind and solar energy. Even though alternative energy does not have carbon-based emissions, there are potentially significant environmental impacts associated with each. Wyoming does not currently have a renewable portfolio standard goal to generate a certain amount of the state's electricity from renewable energy (National Conference of State Legislatures, 2019).

### *4.5.2.2 Resource Assessment and Legal Framework*

*Wind Energy*

Wind energy requires the use of tall turbines that harness the high winds typical of Niobrara County. A wind energy site also requires additional transmission facilities to tie the wind energy system into the grid. These facilities require the use of surface federal, state, and private land. Identified impacts can include injury or death to migratory birds caught in either the wind turbines or lines, surface disturbance, roads for maintenance, and changes in the skyline due to the permanent construction. The sage-grouse conservation plan prohibits wind energy sites within core areas and imposes additional mitigation within sage-grouse core areas. There are currently no producing wind sites in Niobrara County that are contributing power to the grid.

*Solar Energy*

Solar energy requires a relatively large land area to install and maintain commercial-grade solar panels. Like wind energy, supplemental fuels, usually natural gas or coal, are necessary to keep the system operational when weather obscures the sun. There are currently no producing solar sites in Niobrara County that are contributing power to the grid.

*Geothermal Energy*

Geothermal energy has a long record of providing commercially viable power. It does require, however, the drilling of numerous shallow wells to harness geothermal power. A geothermal energy project also requires closely spaced wells and related transmission facilities.

The current federal policies to advance alternative energy development as a solution to the harm caused by carbon-based sources of energy, including coal, natural gas, and oil, need to be measured in terms of environmental impacts and costs. The development and use of virtually all sources of energy have significant environmental impacts. Wind and solar energy costs tend to outweigh the amount of electrical energy produced, even with significant federal funding and public support.

### *4.5.2.3 Alternative Energy Resource Management Objectives:*

A. The development and management of renewable energy within Niobrara County are done in a responsible manner that takes into consideration the economic viability,

custom, and culture of the County along with the health, safety, and welfare of the County's citizens and natural resources.

B. Alternative energy development is supported in Niobrara County where it is both commercially feasible and does not disproportionately harm the environment, existing uses, and the surrounding custom and culture.
C. The placement and development of alternative energy sites do not harm pre-existing uses in Niobrara County.

#### *4.5.2.4 Alternative Energy Priority Statements:*

1. Federal agencies should evaluate alternative energy projects proposed for Niobrara County based on the same criteria applied to other projects, including impacts of visual resources, wildlife habitat, soils and vegetation, and impacts on existing land uses.
2. Alternative energy structures on public lands must be coordinated with Niobrara County and Niobrara Conservation District regarding siting and protecting pre-existing uses.
3. Federal agencies should coordinate with Niobrara County regarding regulatory processes for renewable energy that may impact the cultural and economic stability of the County.
4. Federal agencies should consider the development of alternative energy in coordination with Niobrara County and stakeholders.
5. Niobrara County and Niobrara Conservation District support renewable energy to further develop energy infrastructure and energy independence without encumbering the underlying mineral estate.
6. A reclamation plan must be designed before alternative energy projects are approved on public lands within Niobrara County.
7. When conflicting with other uses, alternative energy projects should be a lower priority than other multiple uses in Niobrara County.
8. Federal agencies should consider the effects of renewable energy developments on other land uses and the potential nuisances to neighboring properties before approving any proposed projects.

### 4.5.3 Pipelines

#### *4.5.3.1 History, Custom, and Culture*

Transmission of hazardous liquids and gases by pipeline is an essential transportation mode for transporting these products. While pipelines offer an efficient and convenient method of transport, the potential for ruptures and uncontrolled leaks of products that are highly flammable, explosive, or toxic requires careful consideration of pipeline siting and protection of pipelines from third-party damage. Pipeline infrastructure plays a crucial role in the development and transmission of hydrocarbons at the national, state, and County levels. Pipelines offer a safe and effective means for delivering large amounts of hydrocarbons across extended distances with some risk for spills (Global Energy Institute, 2013).

In the past twenty years, Niobrara County, along with many of the eastern counties of Wyoming has turned into a major interstate pipeline corridor from the Bakken oil fields in North Dakota to

the southern states of Texas, Oklahoma, and Louisiana. Due to the numerous legal and regulatory obstacles of building pipelines on federal public lands, many of these pipelines construct their pipelines to avoid federal public lands and cross solely into private and state-owned lands. Because of eminent domain laws, landowners often cannot prevent a pipeline from being constructed on their property. Further, there are no laws in Wyoming that protect landowners from the risk of a pipeline being on their property. Due in part to the legal realities that a landowner ultimately cannot prevent a pipeline from being constructed on their property and also in response to the influx of pipeline construction across privates lands in the County, citizens of Niobrara County have begun partnering with other landowners across the states of Wyoming, Montana, Colorado, Kansas, North Dakota, and South Dakota to collectively bargain with these pipeline companies in order to negotiate easements that will protect the land, maintain the current use of the land, protect landowners from the industrial liability created through the existence of the pipeline, and provide competitive payments to landowners.

With the consistent success of these landowner groups, landowners in Niobrara County are accustomed to negotiating rights-of-way easements that are limited in scope, protect the land, maintain the current use of the land, protect landowners from the industrial liability created through the existence of the pipeline, and provide competitive payments. Also due to this success, creating landowner groups to collectively bargain right-of-way easements has become a part of the custom and culture of Niobrara County.

#### *4.5.3.2 Resource Assessment and Legal Framework*

Due to the development of oil and gas within Niobrara County and surrounding areas, there has been significant development of oil and gas transmission pipelines throughout the County. The County has long been a proponent of pipeline development. Refer to Figure 10 for a map of pipelines within the County.

Contrary to popular belief, there is actually very little federal regulation of most pipelines. Permitting for interstate natural gas pipelines and interstate liquified natural gas (LNG) pipelines fall under Section 7 of the Natural Gas Act and are reviewed by the Federal Energy Regulatory Commission (FERC), which also gives pipeline companies their national condemnation authority. However, the Natural Gas Act does not regulate oil or natural gas liquid (NGL).

The federal government has explicitly avoided drafting regulations concerning pipeline land-use issues. “Congress has failed to create a federal regulatory scheme for the construction of oil

pipelines and has delegated this authority to the states" (*Sisseton-Wahpeton Oyate v. U.S. Dep't of State*, 659 F. Supp. 2d 1071, 1081 (D.S.D. 2009)("Generally, state and local laws are the primary regulatory factors for construction of new hazardous liquid pipelines.")). Even for gas pipelines, the FERC requires gas pipeline companies to comply with state and local regulations as a condition of their federal certificates (*See NE Hub Partners, L.P. v. CNG Transmission Corp*., 239 F.3d 333, 339, 346 n. 13 (3d Cir.2001) (concluding that the field of natural gas regulation was occupied by federal law, but that FERC required the gas company to comply with local regulations through conditions in certificate)). Thus, unless pipelines cross federal lands and trigger NEPA review, most interstate pipelines remain mostly unregulated by the federal government.

One aspect of pipelines that is federally regulated outside of federal lands is pipeline safety. In 1994, Congress passed the Pipeline Safety Act "PSA," 49 U.S.C. § 60101–60137, recodifying without substantive changes the Natural Gas Pipeline Safety Act of 1968 and the Hazardous Liquids Pipeline Safety Act of 1979. Among other things, the PSA expressly preempts state law concerning "safety standards for interstate pipeline facilities or interstate pipeline transportation" and delegates the authority to draft pipeline safety regulations to the Pipeline and Hazardous Materials Safety Administration (49 U.S.C. § 60104(c)).

However, regulations that concern a county's purview (the general welfare of its constituents) are not necessarily preempted if they indirectly affect pipeline safety (*See, e.g., Tex. Midstream Gas Svcs., LLC v. City of Grand Prairie*, 608 F.3d 200, 212 (5th Cir. 2010) (holding a setback requirement for compressor stations was primarily motivated to preserve "neighborhood visual cohesion, avoiding eyesores or diminished property value")). So that the regulations are not preempted by the PSA, the regulations must affect aesthetics or other non-safety police powers. *Id*. at 212; *see also, e.g., Am. Energy Corp. v. Tex. E. Trans., LP*, 701 F. Supp. 2d 921, 931 (S.D. Ohio 2010) ("The PSA does not preempt Ohio property or tort law."). Regulations directly affecting reclamation, water crossings, cleanup, or other similar matters important to landowners that affect their environment would likely not be preempted by the PSA.

#### *4.5.3.3 Pipelines Resource Management Objectives:*

A. Pipeline development is managed responsibly and takes into consideration the health, safety, and welfare of Niobrara County's citizens and conserves the rangeland, soil, fish and wildlife habitat, air quality, visual, and water resources.
B. Niobrara County and Niobrara Conservation District are provided early notification of pipeline proposals in the County.
C. Reclamation is conducted in an efficient way that protects existing uses, utilizes best management practices, and should consider the use of nonnative seeding where appropriate and beneficial for soil stability and conservation.
D. Pipelines use the most efficient route and avoid the use of eminent domain within Niobrara County.
E. Pipeline and transmission line development primarily utilize existing utility corridors and areas previously disturbed regardless of land ownership, while sensitive habitats and conflicting existing uses are avoided.

#### *4.5.3.4 Pipelines Priority Statements:*

1. Federal agencies should support the development and improvement of future and existing pipeline infrastructure for the transmission of materials in and through Niobrara County when it will not affect pre-existing uses or rights.
2. Niobrara County and Niobrara Conservation District support the development of pipelines throughout the County as an alternative to flaring.
3. Niobrara County and Niobrara Conservation District supports streamlined decisions regarding pipelines so long as it does not harm pre-existing uses or rights.
4. Unless encouraged otherwise by private landowners, Niobrara County and Niobrara Conservation District encourage pipeline development to be in the most direct path regardless of land ownership, with a preference to placement on federal lands.
5. Niobrara County and Niobrara Conservation District encourage the reclamation of surface disturbance after pipeline construction using weed-free native or weed-free introduced seed mixes appropriate to the ecological site. Weed mitigation plans for reclamation sites are encouraged.
6. Federal agencies should coordinate with surface users when determining location and reclamation requirements for pipeline rights-of-way permits.
7. Niobrara County and Niobrara Conservation District do not support the use of eminent domain on private property owners to acquire rights-of-way for pipelines.
8. Pipelines should avoid water crossings and placement in river systems. Should a pipeline cross water bodies, boring and other methods that would reduce disturbance to the water body or riverbed should be required.
9. Federal agencies should coordinate with Niobrara County and Niobrara Conservation District at the earliest possible time whenever there is a proposal for a pipeline to cross the County.
10. Niobrara County supports the 2020 National Environmental Policy Act regulations which state that Environmental Impact Statements should be completed within 2 years from the issuance of a Notice of Intent and 150 pages or less excluding appendices, and Environmental Assessments be completed within 1 year from the issuance of a Notice of Intent and be no greater than 75 pages.

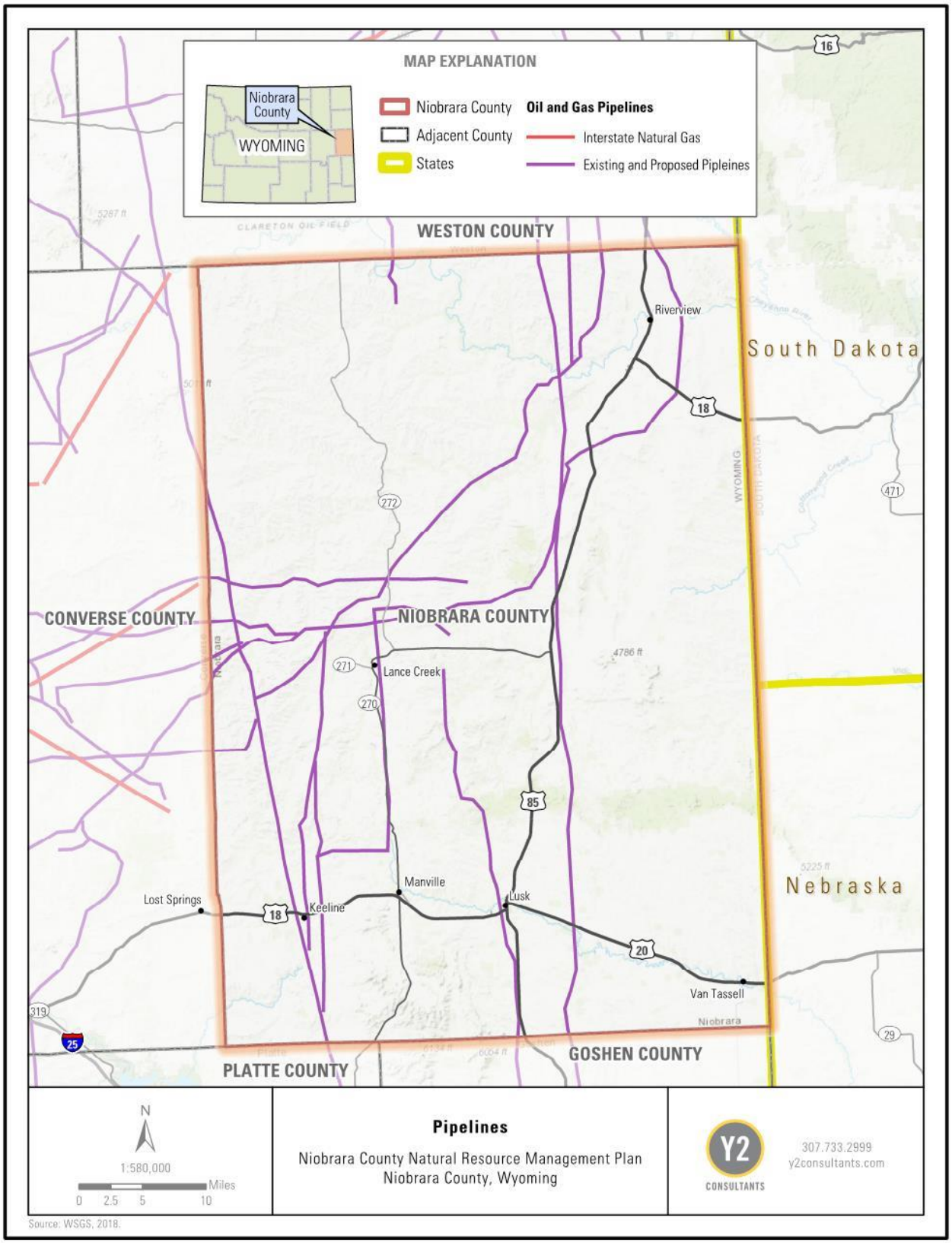



*Figure 10. Energy pipelines mapped for Niobrara County.*

## 4.6 AIR QUALITY

### 4.6.1 History, Custom, and Culture

Clean air in Niobrara County is important to citizens and visitors. Wildfires can create air quality issues in the summer and fall. Dust from roads, rangelands, and development projects can negatively impact air quality, mostly during drought conditions. Clean air is key to people living in the County and to those who visit and wish to live here.

The air quality of the County is one of the area's greatest resources. The Niobrara Commissioners and Niobrara Conservation District are committed to protecting the County's air resources. Air quality problems do exist but are usually site specific. The dust generated by unpaved access roads, mining operations, and oil and gas extraction is also marginal and site specific.

### 4.6.2 Resource Assessment and Legal Framework

Air quality is important to the health, safety, and welfare of Niobrara County's residents. Under the Clean Air Act of 1970 (42 U.S.C. §7401 et seq.), the U.S. Environmental Protection Agency (EPA) is responsible for setting and enforcing National Ambient Air Quality Standards (NAAQS). Standards were established for total suspended particulate matter, carbon monoxide, ozone, nitrogen dioxide, and sulfur dioxide. The EPA, working with states and tribes, identifies areas as meeting (attainment) or not meeting (nonattainment) the NAAQS standards. The Clean Air Act requires states to develop a plan to attain air quality standards in their state. These plans are called State Implementation Plans (SIPs) .

The State of Wyoming has the authority and responsibility to regulate air quality impacts within the state, including Class I air sheds. In accordance with Wyoming's Environmental Quality Act, the DEQ Air Quality Division is responsible for implementing the state's air quality standards and regulations, Wyo. Stat. §§35-11-201-214. The Division's air quality program is composed of three separate compliance areas:

1. A permit program for the construction of new sources and modification of existing sources. The primary purpose of this program is to assure compliance with ambient standards set to protect public health and to assure that the best available control technology is utilized to reduce and eliminate air pollution emissions.
2. A permit program for the construction of new sources and modification of existing sources. The primary purpose of this program is to assure compliance with ambient standards set to protect public health and to assure that the best available control technology is utilized to reduce and eliminate air pollution emissions.
3. A facility inspection and compliance program to assure facilities maintain pollution control equipment at high collection efficiencies and maintain compliance with emissions

standards and permit conditions. This includes compliance with state and federal asbestos removal standards, which protect the public from exposure to asbestos fibers in ambient air.

In Wyoming, local enforcement of many air pollutant regulations is delegated to the Wyoming Department of Environmental Quality (DEQ) (EPA, 2014). DEQ's Air Quality Division has established standards for ambient air quality necessary 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 (WDEQ, 2018b). 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
- Fuel-burning equipment
- Oil and gas operations
- Manufacturing operations

The degradation of air quality in Niobrara County comes from both natural and man-made sources:

- Wind-carried dust (especially during periods of drought)
- Wildfire emissions
- Emissions from the open burning of vegetation.
- Emissions from industrial operations
- Dust from unpaved roadway use

### 4.6.3 Air Quality Resource Management Objectives:

A. Clean air management and practices limit air pollution within Niobrara County without expansion of rules and policies that would act as an impediment to economic development.
B. Niobrara County and Niobrara Conservation District are cooperated, coordinated, and consulted with to reduce, eliminate, or mitigate any site-specific degradation of air quality.
C. Federal agencies actively manage for prevention of wildfires to improve air quality.
D. Beneficial uses, such as prescribed burning, wood-burning for heat, historical agricultural practices, and other established activities within the custom and culture of Niobrara County that may degrade air quality standards continue.

### 4.6.4 Air Quality Priority Statements:

1. Federal, state, and local agencies should work together to educate all stakeholders involved to develop best management practice concepts and plans to protect air quality in Niobrara County.
2. Federal agencies should support the development and implementation of educational programs to provide best management practices on burning to improve air quality in Niobrara County.
3. Niobrara County encourages federal agencies to implement best management practices and take aggressive range and grassland management actions to decrease the number of summer wildfires.
4. Federal agencies should acknowledge that wood-burning is a "necessity of life" for the health, safety, and welfare of Niobrara County's citizens and should be maintained as an acceptable activity.
5. Niobrara County and Niobrara Conservation District discourage the creation of permitting for wood burning.
6. Federal agencies should ensure there is a balance in which air quality is not compromised at the expense of economic development activities (i.e., mining, oil and gas development) without harming business within Niobrara County.
7. Federal agencies should require dust mitigation in all development and reclamation plans.
8. Niobrara County and Niobrara Conservation District support reasonable alternatives to flaring to decrease its impact on air quality within the County.
9. Federal agencies should consider the impact a permitted activity may have on private or public unpaved roads and require dust mitigation plans whenever the planned activity will cause dust disturbances.
10. Niobrara County and Niobrara Conservation District request to be notified of any present and future air quality designations within the County.
11. Niobrara Conservation District should aid business, industry, and land management agencies to plant windbreaks, plan living snow fences, or other ideas to reduce or eliminate dust.
12. Niobrara County requests to be notified of and participate, as appropriate, in any local, state, regional, and/or federal land planning process that impacts managing and monitoring air resources in and affecting the County.
13. Federal agencies should support compliance with local, state, and federal air quality laws and regulations.
14. Federal agencies should support air quality compliance programs that address the causal factors affecting air quality.

## 4.7 CLIMATE CHANGE

### 4.7.1 History, Custom, and Culture

Climate change has been defined as a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods. Climates are defined by long-term patterns of temperature, humidity, atmospheric pressure, precipitation, and airflow generally over years, decades, and/or centuries.

Paleoclimatology, the study of past climates via ice cores, tree rings, sediment cores, etc., has shown that climates vary naturally over time and are subject to the cyclical phenomena of El Niño-Southern Oscillation (ENSO), Pacific Decadal Oscillation (PDO), and North Atlantic Oscillation (NAO). These phenomena, among others, cause yearly variations in precipitation and temperatures.

### 4.7.2 Resource Assessment and Legal Framework

Niobrara County relies heavily upon the agriculture and energy industries to support the local economy. Climate change including increased temperatures, reduced precipitation, and changes in airflow has the potential to drastically affect the economy of Niobrara County. Niobrara County is committed to preserving the health of its citizens and its economy and, as such, is requiring cooperation and open communication with federal agencies when assessing the effects of proposed federal actions and climate change analysis policies within Niobrara County.

The climate of Niobrara County is classified as semi-arid. Temperatures show a wide range between summer and winter and between daily maximums and minimums. The average annual temperature is 46 degrees. The average daily temperature in the winter is 27 degrees and the average daily minimum temperature in the summer is 47 degrees with the average maximum temperature at 79 degrees. Abrupt changes in the weather are common. The lowest temperatures occur when cold air masses from Canada flow into the area. Winter snowfall is frequent. Blizzards occur several times each winter. Growing degree days are usually around 115 frost-free days.

NEPA-compliant documents may include the following analyses of the proposed action regarding climate change: (1) the extent to which the proposed action and all reasonable alternative(s) contribute to climate change through greenhouse gas (GHG) emissions; (2) the effect of a changing climate over the life of the project on the proposed project including flooding considerations and changes in precipitation; and (3) implications of climate change on the proposed project including cumulative impacts to resource availability (Exec. Order No. 13783, 3 C.F.R., 2017).

Federal agencies are required to consider direct, indirect, and cumulative effects when analyzing any proposed federal action and its environmental consequences. When assessing direct and indirect climate change effects, agencies should take account of the proposed action, including "connected" actions, subject to reasonable limits based on feasibility and practicality. In addition, emissions from activities that have a reasonable nexus to the federal action (e.g. cumulative

actions), such as those activities that may be required either before or after the proposed action is implemented, must be analyzed. (National Environmental Policy Act 1969, 1969)

### 4.7.3 Climate Change Resource Management Objective:

A. Climate change analysis is conducted on a regional level that does not give deference to potential long-term effects of climate change compared to immediate harms that the decision may have to the community.

### 4.7.4 Climate Change Priority Statements:

1. When analyzing the impact a decision may have on climate change, Federal agencies should include quantitative scientific data that meet the credible data criteria, even if the data was not produced by a federal agency.
2. When making decisions based on climate change analysis, the data relied upon by the agency should be cited to and made available for public review.
3. Any project discussion of climate change must reflect scientifically sound and balanced viewpoint of the scientific controversy.
4. The costs and benefits of any regulatory changes adopted to address climate change should be quantified.
5. Management decisions that are proposed primarily to regulate greenhouse gases through climate change analysis that could harm the local economy are not supported.
6. The collection, review, and evaluation of the economic effects of climate science data should be viewed and evaluated on a regional level rather than at a national level.
7. When climate change analysis is required to occur on a regional level, the region shall be identified through consultation and coordination with Niobrara County.
8. No project restriction for climate change should occur unless a direct link to global climate alteration is quantified through credible data.
9. Federal agencies, whenever making decisions within Niobrara County, or which may impact Niobrara, shall conduct a full analysis of the impact each “decision” will have on the local economy. If it is determined that the decision will have significant negative impact on the local economy, the alternative/decision is not supported.

# CHAPTER 5: WATER RESOURCES

## 5.1 OVERVIEW

Water and associated water rights in Niobrara County are integral to municipal, industrial, agricultural, and recreational uses. Local industry utilizes and controls substantial agricultural and industrial flow and storage water rights in the County. The agricultural uses of water from the tributaries are directly associated with the viability of agricultural operations throughout the County. Water resources are supplies of water that can be drawn upon for various uses.

The Niobrara Conservation District is charged with facilitating water conservation and utilization within the County. The District is authorized to aid farmers and ranchers with water projects, as well as addressing water supplies district-wide. The use of water resources in Niobrara County is necessary to meet the District's mandate to conserve rangeland, soil, wildlife, and water resources and is also necessary to local culture and community stability with particular emphasis on the economic stability of the community.

In Wyoming, water is "the water of the state" - a public resource for the benefit of all: public agencies, private citizens, and entities. A water right is a private property right to use this public resource.

Wyoming set up a unique system to allocate and closely monitor the waters of Wyoming, including satellite monitoring of lakes, reservoirs, rivers, and streams. Primary provisions detailing water use, rights, and management in Wyoming are found in the 1969 Water Rights and Administration Act and the 1965 Ground Water Management Act.

Niobrara County's watersheds are diverse and dynamic. They consist of a variety of vegetation and topography, including uplands, floodplains, wetlands, channels, springs, lakes, and reservoirs. These watersheds continue to evolve under the influence of climate, floods, landslides, erosion, and human land use. A successful management strategy for Niobrara County's watersheds must consider how the various watershed components and uses interrelate and influence each other from ridgeline to stream, and across adjacent watersheds. Most of Niobrara County falls within the Northeastern Wyoming River Basin Plan. A small portion of the southwest corner of the County falls within the Platte River Basin. This area includes a section of Muddy Creek, approximately 12 miles long, which drains in Glendo Reservoir in Platte County.

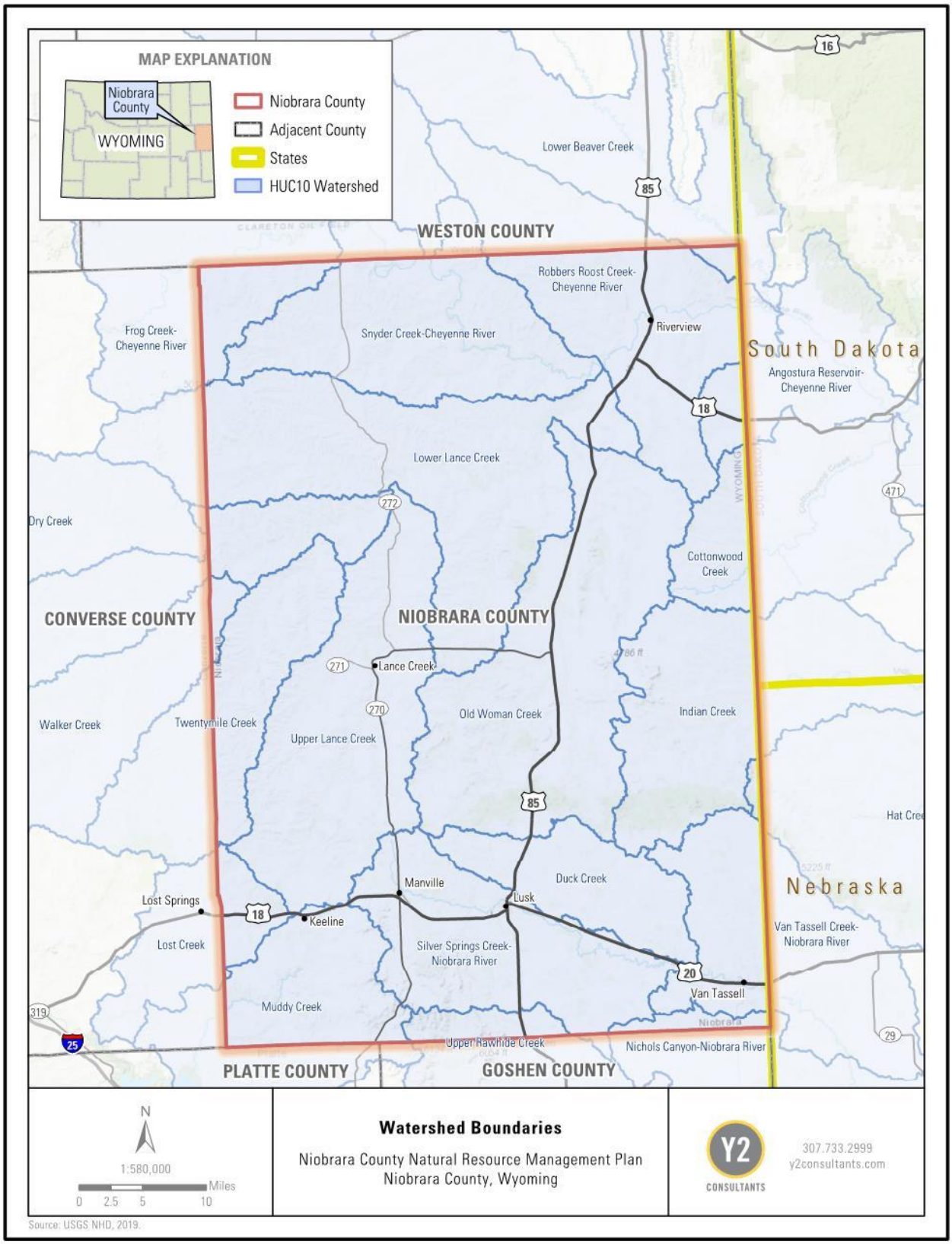



*Figure 11. Niobrara County watershed boundaries.*

## 5.2 WATER RIGHTS

### 5.2.1 History, Custom, and Culture

The Wyoming State Engineer's Office (WSEO) administers the system of water rights within the state and Wyoming's water-sharing agreements with other states. Wyoming has used water courts to determine the priority and quantity of water rights beginning in 1879. Water courts have jurisdiction over all water except certain "designated" groundwater. Water court decrees do not grant or create water rights; they merely confirm them. Only use of water creates a water right.

> *"Water being essential to industrial prosperity, of limited amount, and easy of diversion from its natural channels, its control must be in the state, which, in providing for its use, shall equally guard all the various interests involved."* (Wyoming State Constitution)

The WSEO cooperates with local management agencies, which includes water conservation districts, water conservancy districts, groundwater management districts, water and sanitation districts, towns and cities, and irrigation districts. These local agencies may contract with the Bureau of Reclamation to build reservoirs and other water storage projects.

Wyoming water laws and statutes are governed by Title 41. By Wyoming law, all surface and groundwater belong to the State. The Wyoming State Engineers Office is responsible for the management of these waters and protecting existing water rights and resources.

Early farmers and ranchers established water rights through the doctrine of prior appropriation. As subsequent efforts were made to control the water, landowners sued to protect their prior appropriation rights. Today, holders of water rights are still struggling to preserve their rights against encroachment.

### 5.2.2 Resource Assessment and Legal Framework

Wyoming is a Prior Appropriation Doctrine state, meaning that water rights are established by actual use of the water, and maintained by continued use and need (Wyo. Stat §41-3-101). Wyoming prioritizes water uses as "preferred uses" and all other uses (Wyo. Stat. § 41-3-102). Preferred uses include "rights for domestic and transportation purposes, steam power plants, and industrial purposes." *Id*. Preferred uses have the right of condemnation against all other water uses and those lesser preferred uses. *Id.* Wyoming ranks uses in the following order: (1) Water for drinking purposes for both man and beast; (2) water for municipal purposes; (3) Water for the use of steam engines and for general railway use, water for culinary, laundry, bathing, refrigerating (including the manufacture of ice), for steam and hot water heating plants, and steam power plants; and (4) industrial purposes. *Id*.

In Wyoming, a water right is a right to use the water of the state, when such use has been acquired by the beneficial application of water under the laws of the state relating thereto, and in conformity with the rules and regulations dependent thereon. Beneficial use shall be the basis, measure, and limit of the right to always use water. Thus, in Wyoming, a person must (1) obtain

a permit; (2) demonstrate a Beneficial Use and (3) use the water in conformity with the permit to have a valid water right (Wyo. Stat. § 41-3-101). Wyoming case law also generally holds that water rights appurtenant to land and the means of conveyance of the water (i.e., ditches, pipes, and conduits) pass with the transfer of the land. *See Toltec Watershed Improvement Dist. V. Associated Enterprises, Inc.*, 829 P.2d 819 (Wyo. 1992); *Frank v. Hicks*, 35 P. 475 (Wyo. 1894). Wyoming also allows for a temporary change in water use of a currently valid water right for up to two years with approval from the WSEO, so water right users may transfer their water rights for other uses on a temporary basis (Wyo. Stat. § 41-3-110).

Although all surface and groundwater in Wyoming belong to the state, water rights are considered a property right that can be conveyed or reserved in the same manner as real property. Thus, water rights are widely accepted as property of the holder and can be protected under the 5th and 14th Amendments of the United States Constitution when taken through regulation (*See Klamath Irrigation Dist. v. United States*, 113 Fed. Cl. 688, 691 (2013)).

### 5.2.3 Water Rights Resource Management Objectives:

A. Water resources stay under state control.
B. Wyoming water law and policy controls all water rights within Niobrara County and is supreme to any federal policy or regulation.
C. Beneficial uses of water as defined by Wyoming statutes are protected and prioritized in all water management.
D. Federal agencies never acquire water rights outside of Wyoming water law.
E. No new interstate water compacts are developed without Niobrara County's involvement.
F. No new trans-basin diversions or interstate water transfers occur within Niobrara County.
G. Federal agencies never use exactions to acquire water rights.

### 5.2.4 Water Rights Priority Statements:

1. Federal agencies should not purchase water rights from state or private water rights owners.
2. If a federal agency needs water for a particular beneficial use, the agency should lease water rights from the state or private water rights owners instead of acquiring a permanent water right.
3. Niobrara County and Niobrara Conservation District oppose all efforts by federal agencies to limit or control appropriations and use of water, such as through the denial of rights-of-way necessary to put the water to beneficial use.
4. Federal agencies should promote water policies and projects that ensure that the unappropriated water is put to beneficial use within the local watersheds, keeping Niobrara County water in Niobrara County.
5. Placing water rights in the name of any state or federal agency when the water right is applied for and proved upon by a private individual or corporation, or as the condition of any permit, is not supported by Niobrara County.
6. Water rights shall not be acquired through exactions as a condition precedent of any permit.

7. Federal agencies should support the prohibition of water right exactions for right-of-way and ditch permits.
8. It is the position of Niobrara County and Niobrara Conservation District that in-stream flow requirements are exactions.
9. Support recognition of water rights as a private property right that may be owned separately from federal land when allowed by Wyoming law.
10. Niobrara County and Niobrara Conservation District oppose over-reaching federal regulations on Wyoming waters; we support Wyoming control of Wyoming waters.
11. Niobrara County and Niobrara Conservation District oppose the use, sale, or lease by the State of any Wyoming basin water unless the water and storage need of the affected basin(s) have been met. Any sale or lease of water out of basin or out of state must be mitigated by storage before the transaction is approved.
12. Niobrara County and Niobrara Conservation District support policies and actions that will protect existing water rights and water use within the County for long-term conservation and enhancement of our natural resources while contributing to the economic stability of the County and its residents.
13. Niobrara County and Niobrara Conservation District support historic and customary beneficial uses under Wyoming State Law to take precedence over all in-stream flow use designations.
14. Federal agencies should work with local, state, and other federal agencies to encourage and support state control of water rights and to maintain opportunities for future water right allocations.

## 5.3 IRRIGATION AND RELATED INFRASTRUCTURE

### 5.3.1 History, Custom, and Culture

Irrigation and agricultural practices contribute to the economic base of Niobrara County and are integral to the stability of livestock production, wildlife habitat, and farming while maintaining the local custom and culture. Due to the location and additional water, cropland and irrigated fields often provide key winter habitat for big game and other wildlife.

The primary use of irrigated land in the Northeast Wyoming River Basin is for forage production. Many ranchers in the area have depended on irrigated forage production for winter feed since the early development of irrigation in the basin. By the late 1800s bottomland irrigation for forage production was relatively common. In 1972 over 80% of water use in northeast Wyoming was for irrigation. (HKM Engineering Inc., 2002)

### 5.3.2 Resource Assessment and Legal Framework

According to the U.S. Geological Survey (USGS) Water Resources Report, irrigation influences the flow rates and timing of both perennial and ephemeral streams in the County. Return flow from irrigation can maintain perennial flow in naturally ephemeral streams. During non-irrigation seasons both perennial and ephemeral streams in irrigated areas experience low flows. The use of reservoirs for retaining irrigation water can lower peak flow rates in systems downstream. This water retention can also extend how long spring and early summer runoff is held in the system

before being released downstream. This can extend the season prior to low flow and increase low flow rates during the non-irrigation season for downstream systems. The result is peak and low flows that are more moderated; this decreased flow fluctuation can influence the ecology of downstream fisheries and habitat. These effects are limited within the County due to the limited fishery resources present. Refer to section 6.4 Fisheries for additional information. (Plafcan et al., 1993)

Additional information regarding irrigation acres, conveyance, and capacity can be found in the Wyoming Water Development Commission Irrigation Survey System Reports located here[6]. (Wyoming Water Development Office, 2019)

In 2017 there were approximately 10,500 acres of irrigated land within Niobrara County. The Northeast Wyoming River Basin Report recorded 86,882 acres of irrigated land across northeastern Wyoming. Most of the irrigation water is sourced from surface waters; about 20% of irrigated lands in the Northeast Basin use groundwater. Within Niobrara County, most of the irrigation water comes from groundwater wells. Within the Northeast Wyoming River Basin forage crops dominated the active irrigated acres with grass and alfalfa making up 69% and 26% of irrigated crops respectively, while grain and corn production acres totaled 5% combined. A small section of the southwest corner of the County falls within the Platte River Basin. (HKM Engineering Inc., 2002) Additional information on crop production is available in Section 8.1 Agricultural Production.

### *1866 Act*

In 1866 Congress passed legislation that recognized a pre-existing right to construct, operate, and maintain water systems on federal lands. The granting of this ditch comes with a property right and the constitutional protections given to property rights. Therefore, the USFS, BLM, or any other agency generally cannot regulate the use of an 1866 Act ditch, so long as the right of way is operated and maintained in accordance with the scope of the original rights granted. *See Western Watershed Project v. Matejko*, 468 F.3d 1099, 1104-06 (9th Cir. 2006). The scope of the easement for an 1866 Act ditch is defined by the physical extent of the on-the-ground easement, plus adjacent lands. The extent of adjacent lands included in the easement is a question of state law. In Wyoming, it is whatever is reasonable and necessary to maintain the ditch. In order for a ditch to qualify under the 1866 Act, it must have been completed and used before the lands were set aside as a National Forest. No formal agency documentation is necessary, but there must be proof that a current water right exists in the ditch. *See* 43 U.S.C. § 661 (repealed in part Oct. 21, 1976) (1866 Act) (also known as R.S. 2339 and 2340). Similar to R.S. 2477, the 1866 Act was

repealed with the enactment of FLPMA, but the prior existing rights were explicitly retained by Congress. *Western Watershed Project*, 468 F.3d at 1106.

### *1891 Act*

In 1891 Congress again granted easement rights to ditch owners through federal lands that allows the ditch owner to construct, operate, and maintain water systems on federal lands. Act of March 3, 1891 ("1891 Act"), 26 Stat. 1095 (codified at 43 U.S.C. §§ 946–949) (repealed Oct. 21, 1976). Just like an 1866 Act ditch, the granting came with a property right and cannot be regulated, so long as the right of way is operated and maintained in accordance with the scope of the original rights granted. The scope of the ditch is defined by the physical extent of the on-the-ground system, plus fifty feet from the marginal limit thereof. Also, upon a satisfactory showing by the water company, the easement can include those adjacent lands deemed necessary for the proper operation and maintenance of the system. 1891 Act ditch rights are acquired through formal application and approval by the Secretary of Interior before October 21, 1976. *Pine River Irrigation Dist. V. US*, 656 F. Supp. 2d 1298, 1321 (D. Colo 2009). Also similar to the 1866 Act ditches, the 1891 Act was repealed with the enactment of FLPMA, but the prior existing rights were explicitly retained by Congress.

### *Colorado Ditch Bill Act*

The Colorado Ditch Bill Act of 1986 amended Title V of FLPMA to authorize the secretary of Agriculture to issue permanent easements without charge for water conveyance systems used for agricultural irrigation or livestock watering. The act requires applicants to submit information concerning the location and characteristics of the water conveyance system necessary to ensure proper management of National Forest System lands. Extensions or enlargements constructed after October 21, 1976, do not qualify for an easement and must be covered by other authorities (USFS, n.d.-a). In order to obtain a Ditch Bill easement, the ditch user had to relinquish any other easements the ditch user might have had under other federal statutes. Thus, a Ditch Bill applicant would have to waive any 1891 and 1866 rights they may have. Additionally, applications had to be submitted by December 31, 1996.

Granting easements under the Colorado Ditch Bill Act is not a USFS discretionary decision. If an applicant meets the Colorado Ditch Bill Act criteria, he or she is entitled to an easement and the decision to grant the easement does not constitute a federal action subject to NEPA analysis or review. Conditions of the easement, including operations and maintenance activities, may require NEPA analysis and review. (USFS, n.d.-a)

## 5.3.3 Irrigation and Related Infrastructure Resource Management Objectives:

A. Irrigation and water storage and conveyance systems are managed, developed, maintained, and improved to ensure current and future access to irrigation water and to promote the health, longevity, and sustainability of Niobrara County's water.
B. Productive watersheds are maintained and/or enhanced for the preservation of irrigated agriculture.
C. Water rights are protected from exactions and irrigation ditch easements are protected for the current and future viability of irrigation agriculture in Niobrara County.

D. Private property rights and interests in irrigation and water development structures on public lands are protected.
E. Upstream storage structures and water retention are used to enhance available water for appropriation and beneficial use, through a combination of on-stream storage, off stream storage, structural storage, and/or non-structural storage.

### 5.3.4 Irrigation and Related Infrastructure Priority Statements:

1. Federal agencies should support the update and improvement of irrigation infrastructure throughout Niobrara County to improve overall watershed health.
2. Federal agencies should support the development, improvement, and continued use of irrigation and related infrastructure.
3. Federal agencies should work with appropriate partners and agencies to promote the efficient delivery and use of irrigation water within Niobrara County.
4. Federal agencies should support the development of off channel storage facilities that would allow excess spring runoff to be captured and used later in the growing season with support from surrounding landowners and water users.
5. Federal agencies should allow consumptive water right owners to improve water quality and water-use efficiency to provide additional water for economic development and agriculture.
6. Federal agencies should support consideration of the effects of irrigation infrastructure while allowing for other multiple uses on federal lands within Niobrara County.
7. Federal agencies should support the continued use and protection of historical irrigation ditch rights-of-way in Niobrara County through federal lands whether those rights are permanent or require periodic renewal.
8. Any renewal of rights-of-way for irrigation ditches crossing federal lands should be done expeditiously with as little impact to the historical use as is allowed by law.
9. Niobrara County and Niobrara Conservation District do not support the imposition of in-stream flows as a condition precedent for renewal of historical irrigation ditch rights-of-way.
10. Federal agencies should use best management practices for erosion control on rangelands and irrigated cropland by local cooperators.
11. Federal agencies should support increased productivity of irrigated lands to increase and/or maintain animal unit months in Niobrara County.
12. Federal agencies should allow ditch users with valid 1866 and 1891 Act rights to access and maintain their ditches unimpeded, as is required by law.
13. Federal agencies should coordinate with the County and affected water rights users if it intends to enact rules, regulations, or management decisions that may interfere or affect a Federal Land Policy Management Act or 1986 Ditch Bill ditch right-of-way.

## 5.4 DAMS AND RESERVOIRS

### 5.4.1 History, Custom, and Culture

Dams and reservoirs are located across Niobrara County and are used for various functions, including storage for irrigation, industrial, municipal, and flood control. The Wyoming Water

Development Office's (WWDO) Dam and Reservoir Planning division works to promote dam and reservoir maintenance and improvement. Funding from the Dam and Reservoir Division account is available for the development of new reservoirs that are 2,000 acre-feet (AF) or larger, or the enlargement of currently existing reservoirs (minimum of 1,000 AF increased capacity). Funding is also available to Level I and Level II feasibility studies identifying possible water storage projects. (WWDC, n.d.)

The Niobrara County Multi-Hazard Mitigation Plan identifies a dam failure event that occurred in nearby Platte County in July of 1969. The dam failure had a substantial impact on Niobrara County, resulting in a wall of water that was 50 feet high that damaged crops, killed livestock, and forced evacuations. Property damage was estimated to be over $1 million. An additional dam failure event took place on July 21, 1973, and affected both Niobrara and Weston counties. Torrential rainfall accompanied by hail caused flash flooding that damaged bridges, made roads impassable, and caused several earthen dams to fail. Crop and property damaged were substantial with an estimated $225,000 in property damage. Refer to section 5.6 Flood Plains for additional information on flooding.

### 5.4.2 Resource Assessment and Legal Framework

The Northeast Wyoming River Basin Water Plan evaluated all reservoirs considered 'major reservoirs' within the surface water assessment, as well as other reservoirs that did not meet the 'major reservoir' designation. Major reservoirs are defined as reservoirs with equal to or greater storage capacity than 500 acre-feet. There are six major reservoirs listed in the plan, none of which are within Niobrara County. There are four reservoirs of importance to Niobrara County communities: Little Dike, Hoblit, Magoon, and McMaster Reservoir. These reservoirs are listed in Table 2 below with their associated waterway and WDEQ classification.

Table 2. Important reservoir resources in Niobrara County.

| Reservoir | Associated Waterway | WDEQ Classification* |
|---|---|---|
| Little Dike Reservoir | Lance Creek | 2ABWW |
| Hoblit Reservoir | Quigley Creek | 3B |
| Magoon Reservoir | Young Woman Creek | 3B |
| McMaster Reservoir | Niobrara River | 2AB |

*2AB –designations and uses include drinking water, game fish, non-game fish, fish consumption, other aquatic life, recreation, wildlife, agriculture, industry, and scenic value.
3B - designations and uses include aquatic life not including fisheries, recreation, wildlife, agriculture, industry, and scenic value.
WW – water designated as usable for warm water fish. (WDEQ, 2001)
**This list is not a complete list of waters of Niobrara County. Additional water bodies and classification may be found here[7].

There are three dams listed in the Niobrara County Emergency Operations Plan due to flood risk: Duel Reservoir on Cow Creek, Field Reservoir on Cottonwood Draw, and Pfister No. 2 Reservoir on Oat Creek. (HKM Engineering Inc., 2002)

### 5.4.3 Dams and Reservoirs Resource Management Objectives:

A. The quality of all dams and reservoirs within Niobrara County is preserved and water resources are developed responsibly to provide well maintained, accessible, and functional dams and reservoirs.
B. Water storage facilities are increased where applicable.
C. The primary use of all reservoirs within Niobrara County is maintained for the purpose for which they were originally intended.
D. Niobrara County and the Niobrara Conservation District are consulted and coordinated with regarding federal land management decisions that impact water quality, yields, and timing of those yields; impacts on facilities such as dams, reservoirs, delivery system, or monitoring facilities; and any other water-related concerns.

### 5.4.4 Dams and Reservoirs Priority Statements:

1. Niobrara County and Niobrara Conservation District shall be consulted regarding federal land management decisions for their potential impact on water quality, yields, and timing of those yields; impacts on facilities such as dams, reservoirs, delivery systems, or monitoring facilities; and any other water-related concerns.
2. Federal agencies should support the construction of water storage within Niobrara County.
3. Federal agencies should provide proper management, maintenance, and improvements of all dams, especially high-hazard dams.
4. Federal agencies should maintain the primary use of all reservoirs within Niobrara County for the purpose for which they were originally intended, with the understanding that such use must consider and maintain the highest and best use for citizens within the County and protect current water rights.
5. Niobrara County and Niobrara Conservation District support the recreational and consumptive use of water to enhance the local economy in a manner that maintains the quality and quantity of the resource.
6. Projects from the Small Water Development Projects Program, conducted by Wyoming Water Development Commission, should be implemented in Niobrara County to increase water storage capacity to meet the needs of agriculture, industry, recreation, and municipalities.
7. Privately held reservoir water rights shall be protected from federal and/or state encroachment and/or coerced acquisition or exaction, including but not limited to acquisition through exactions as a condition precedent of any permit.

## 5.5 WATER QUALITY

### 5.5.1 History, Custom, and Culture

Water quality is important to the health and quality of life of Niobrara County residents. The EPA and WDEQ establish, administer, and monitor standards, policies, rules, and regulations for ground and surface water quality. Niobrara County is in the southeast WDEQ District.

### 5.5.2 Resource Assessment and Legal Framework

***Surface Water Quality***

The Clean Water Act (CWA) is the federal regulatory mechanism that regulates surface water quality. The CWA gives the EPA and Army Corps of Engineers regulatory jurisdiction over all "navigable waters" also known as "Waters of the United States." The CWA makes it illegal to discharge a pollutant from a point source into a navigable water unless a permit is obtained. The definitions surrounding what a "navigable water", or "Water of the United States" has been a creature of controversy in the past several years and there is still some uncertainty as to what bodies of water constitute as Waters of the United States and what qualifies as a "point source." From the earliest rulemaking efforts following the adoption of the CWA in 1972 to the agencies' most recent attempts to define "Waters of the United States" in 2015, the lack of a tangible statutory definition has generated hundreds of cases spanning dozens of courts to ascertain the span of the EPA's jurisdiction. *See* Federal Register Vol. 85, No. 77 22255 (April 21, 2020).

In 2020, the EPA implemented new CWA regulations intended to clarify some of the definitions and clearly set forth the jurisdictional limits of the CWA. *Id*. The goal of the final regulations is to (1) include four simple categories of jurisdictional waters; (2) provide clear exclusions for many water features that traditionally have not been regulated; and (3) defines terms in the regulatory text that have never been defined before. The 2020 regulations were implemented nationwide, except for Colorado, on September 11, 2020. Plainly, under the new CWA regulations, (1) territorial seas and navigable waters, (2) tributaries of jurisdictional waters, (3) lakes ponds and impoundments that contribute surface water flow to a jurisdictional water in a typical year, and (4) wetlands adjacent to non-wetland jurisdictional waters all fall under the jurisdiction of the CWA. *Id*. at 2281.

Wyoming surface water quality standards (Water Quality Rules and Regulations, Chapter 1) are developed with the federal Clean Water Act (CWA) and the Wyoming Environmental Quality Act (WEQA). These standards include water quality criteria, antidegradation provisions, and designated surface water uses (WDEQ, 2018a). The Wyoming Water Quality Assessment Program prepares and submits the Integrated 305(b) and 303(d) *Report to the EPA* biennially to maintain compliance with the CWA (WDEQ, n.d.-f). Policies for antidegradation were last updated in September 2013; Surface Water Quality Standards were last updated in April 2018. Surface Water Quality Standards are reviewed triennially as per the requirements of the CWA (WDEQ, n.d.-d). Surface water designated uses are separated into classes and recreational designated uses. For more information on these classifications refer to the Wyoming Surface Water Classification List and the Recreation Designated Uses Web Map located here[8]. (WDEQ, n.d.-b, 2013).

The WDEQ's Wyoming Pollutant Discharge Elimination System (WYPDES) program provides permits that contain limitations and conditions that will assure that the state's surface water quality standards are protected. Through this program, operators of a point source discharge are required to receive coverage under a WYDPDES discharge permit (WYDEQ, n.d.).

*Energy Industry*

Extraction of oil from oil shale is not currently practiced on a production scale in Niobrara County. However, there are decommissioned extraction wells throughout the County from previous oil development. It is also important to note that the expansion of the oil industry to the west of the County, in Converse County, has the potential to expand into Niobrara County (BLM, 2020a).

If the technology and demand conditions ever supported full-scale production of oil shale in the future there could be a substantial increase in the demand for water for this industrial use, depending on the technology and production levels. There would also be an increased demand for water for domestic use should there be an influx of workers and their families. Impacts from oil and gas production and other industries can harm the surface and groundwater of Niobrara County. Issues associated with oil/gas development and other industrial uses include:

- Land disturbed for the construction of roads, well pads, pipelines, and compressor stations lead to erosion and sediment transport to surface waters during stormwater run-off.
- Well production can result in spills of drilling fluid, fracking fluid, and water with hydrocarbons and other chemicals which flow in runoff to contaminate surface water.
- Groundwater drilling can release contaminating fluids and chemicals directly into aquifers and groundwater.

To prevent these effects, industry is required to obtain a stormwater permit from the Water Quality Control Division. Permits require Stormwater Management Plans and Best Management Practices. (WDEQ, n.d.-e)

### *Groundwater Quality*

Groundwater is found in aquifers under the land. Generally, groundwater is allocated to the owner of the overlying land. The system governing Wyoming groundwater is administered and enforced by the WSEO, which operates and coordinates a network for monitoring groundwater levels throughout the state. Wells are measured to assist in projecting groundwater levels and to aid in the administration of groundwater. "Tributary groundwater" is water in an aquifer that is hydraulically connected to surface water, meaning if you pull water out of the ground you have an impact to the flows of the stream on the surface. All groundwater is presumed to be tributary unless proven otherwise. Tributary groundwater is regulated under the prior appropriation system.

Since perennial supplies of surface water are scarce in the area, the primary source of water for domestic agricultural livestock and industrial use is groundwater produced from wells. Water is available from several aquifers ranging from recent alluvial deposits to the Mississippian-aged

Madison Limestone Alluvium. Alluvium aquifers are locally important throughout the resource area for livestock and irrigation use.

Designated groundwater, non-tributary groundwater is not subject to the doctrine of prior appropriation. “Non-tributary groundwater” is water that is physically separated from surface water by impermeable layers in the aquifer. It is also considered non-tributary when the groundwater is at such a great distance from the surface water that it has little or no connection with the surface water. Outside Wyoming’s eight designated ground basins, pumping groundwater is presumed not to materially impact the stream or river on the surface. In a non-tributary aquifer, the landowner overlying the aquifer can pump the groundwater if it will not affect surface water levels at an annual rate greater than one-tenth of one percent of the annual rate of withdrawal within 100 years. Under this system of water management, obtaining and exercising non-tributary groundwater rights emulates the basic concepts of beneficial use, non-waste, and anti-speculation. (Niobrara County Commissioners & Niobrara Conservation District, 2019; RESPEC & WWDC, 2019)

“Designated groundwater” is defined as water that is not used to supplement or recharge continuously flowing surface streams under natural conditions. It is not hydraulically connected to the surface water system and by definition “in its natural course would not be available to or required for the fulfillment of surface rights.” A modified system of prior appropriation governs designated groundwater. (RESPEC & WWDC, 2019)

The Water Quality Division (WQD) Groundwater Program works to protect and preserve Wyoming’s groundwater by permitting facilities to prevent contamination and investigating and cleaning up known releases.

Many communities in Niobrara County rely on groundwater as a source of municipal water. According to the WWDC 2018 Public Water System Survey Report, Lusk draws from four wells at just over three million gallons per day with a treated water capacity of one million gallons. Lance Creek draws off two wells with a system capacity of about 170,000 gal/day (WWDC, 2018).

### *Arikaree Formation*

In parts of Niobrara County, the Arikaree Formation yields large quantities of up to 1,000 gallons per minute or more of water suitable for practically any use. However, the use of the Arikaree in parts of Wyoming and Nebraska has often exceeded the estimated 0.33 inches of annual recharge from surface infiltration resulting in groundwater mining. Because of this, additional uses of the water may be limited in the future. (RESPEC & WWDC, 2019)

### *Minnelusal Pahasapa Madison Formation*

The Minnelusa is generally too deep for economic development. A few deep wells have been drilled to the Minnelusa and Pahasapa or Madison and produce large quantities of good quality water. Large supplies of water could be used from these aquifers. Recharge to most of the aquifers underlying the area is through the outcrop areas except where the aquifers are exposed to the surface recharge from surface infiltration is insignificant. Water is historically extremely important in many communities in the western United States and so it has been in Niobrara County – particularly southern Niobrara County. (RESPEC & WWDC, 2019)

### *Groundwater Pollution Control Program*

The WQD Groundwater Pollution Control (GPC) Program tracks potential impacts to Wyoming's groundwater through evaluation of activities permitted at federal, state, and local levels. The GPC Program assists federal agencies with the NEPA process on large projects such as the Moneta Divide and the Pinedale Anticline. This program also assists private landowners with suspected contamination of their wells. The GPC Program also evaluates the adequacy of water supply sources and wastewater collection and treatment facilities during subdivision applications to ensure groundwater will not be impacted. (WDEQ, n.d.-a)

The Supreme Court recently opined that groundwater can be a point source to transfer pollutants to Waters of the United States when the groundwater is a "functional equivalent of a direct discharge..." (*County of Maui, Hawaii v. Hawaii Wildlife Fund*, 140 d. 1462, 1468 (2020)). To determine whether groundwater is a functional equivalent of a direct discharge, the Supreme Court clarified that "distance and time" to surface water are major factors in determining if a CWA permit is required for any groundwater discharges. *Id*. at 76-77. Thus, there can be some circumstances in which some groundwater discharges may require CWA permitting.

### *Impaired Waters*

As of the writing of this report, there are no impaired waters within Niobrara County.

### *Subdivision Review*

Subdivision reviews are governed by Water Quality Rules and Regulations, Chapter 23 and Wyoming Statutes 18-5-301 to 315. The WQD Water & Wastewater Program (W&WP) works to ensure safe and adequate supplies of drinking water and the proper disposal of wastewater. Subdivision review requires that all WQD, W&WP, and GPC standards are complied with during the review, for approval, and during the construction of subdivisions. The Conservation District is mandated to review subdivisions within the unincorporated areas within the district boundaries. A subdivision review provides recommendations to planning and zoning staff, Commission, and County Commissioners of natural resource concerns specific to the

development. The review is also an educational tool for land developers and future homeowners and can provide information from other agencies including Weed and Pest, Game and Fish, Office of Historic Preservation, and others. According to statute 18-5-306(b) a subdivision review should include soil suitability, erosion control, sedimentation, flooding concerns, and other issues that are a concern to the District (i.e. noxious weeds, small acreage grazing/livestock management, wildlife concerns). (Star Valley Conservation District & WDA, 2020; WDEQ, n.d.-c)

### 5.6.3 Water Quality Resource Management Objectives:

A. Surface and groundwater quality within Niobrara County is maintained or improved for current and/or future uses using legally obtained credible data.
B. Watersheds are managed and maintained for productivity and water quality.
C. The application of the "Credible Data Legislation," which provides the basis for surface water quality monitoring in Niobrara County is enforced (Wyo. Stat. §35-11-302(b)).

### 5.5.4 Water Quality Priority Statements:

1. Niobrara County and Niobrara Conservation District reserve the right to refer subdivision water quality reviews to the WDEQ in special circumstances.
2. Federal agencies should prioritize locally-led efforts to monitor and improve water quality, and where feasible, complete in conjunction with existing state and federal agencies with the same mandate.
3. Federal agencies should require baseline water quality sampling and cataloging of all collected data for wells (including injection wells) drilled on federal lands.
4. Federal agencies should consult Niobrara County and the Niobrara Conservation District regarding federal land management decisions for their potential impact on water quality, yields, and timing of those yields; impacts on facilities such as dams, reservoirs, delivery systems, or monitoring facilities; and any other water-related proposal.
5. All water quality data considered by federal agencies should be credible data as is specified in each of their agency handbooks.
6. Niobrara County and Niobrara Conservation District support the Wyoming Data Trespass Act and any data gathered via trespass should not be considered by agencies.
7. Any action, or lack of action, or permitted use that results in a significant or long-term decrease in water quality or quantity is not supported by Niobrara County.
8. Federal agencies should support the implementation of land management actions and practices that contribute to or maintain healthy drainages, watersheds, and aquifers.
9. Federal agencies should encourage good management and maintenance of watersheds to retain and slowly release water for the desired plant, animal, and human uses, and to reduce the risk of flash floods.
10. Federal agencies should coordinate with Niobrara County to ensure that the management of watersheds and aquifers, including municipal watersheds, meets the multiple needs of residents and promotes healthy forests and rangelands.
11. Federal agencies should support reclamation activities on mined lands that improve water quality and the function of streams channels, floodplains, and wetlands for better productivity.

12. Federal agencies should support the construction and management of roads, bridges, culverts, cut slopes, fill slopes, and artificial surfaces to minimize water concentration, erosion, and delivery of polluted water and sediment to streams.
13. Federal agencies should implement land use improvements and practices which promote healthy drainages and watersheds.
14. Federal agencies should implement already established state best management practices in coordination with Niobrara County, the Niobrara Conservation District, and other local governments to mitigate water pollution caused by heavy erosion and sedimentation from public lands under their management.
15. Federal agencies should implement policies and management decisions to encourage and allow consumptive water right owners to improve water quality and water-use efficiency to provide additional water for economic development and agriculture.
16. Federal agencies should implement policies to improve groundwater health for consumptive use.
17. Federal agencies should ensure any recovery plan, habitat management plan, critical habitat designation or any other plan proposing an "in-stream flow" requirement adequately considers local existing and anticipated future water uses, local custom and culture, local economic and individual needs, and is consistent with Wyoming water laws.
18. Federal agencies should ensure that land use inventory, planning, or management activities affecting point or nonpoint sources and water quality in Niobrara County, either directly or indirectly, are coordinated through the County and Niobrara Conservation District and are consistent with this plan.
19. Federal agencies should ensure that all management and watershed plan and land use practice modifications proposed by either local, state, or federal agencies premised on water quality issues are coordinated with Niobrara County and Niobrara Conservation District and are consistent with the protection of private property rights.
20. Federal agencies should recognize the economic and social benefits of customary land use activities in Niobrara County and balance against the social and economic value of the sources of pollution.
21. Baseline testing and water quality monitoring should be required as part of energy and right-of-way development projects to ensure groundwater and surface water quality are not degraded.
22. Niobrara County and Niobrara Conservation District support and facilitate water quality testing and monitoring programs that collect Credible Data according to Wyo. Stat. §35-11-302 data using a local steering committee according to the Watershed Strategic Plan.
23. Only credible data that, at a minimum, meet the standards set forth in this Plan and meet the Federal Data Quality Act and legally collected should be recognized when assessing data and making any management decisions within the county.
24. Federal agencies should be transparent in their decision-making and provide the source for all data relied upon for their analysis.
25. The Environmental Protection Agency should consult with Niobrara County when it is determining whether a groundwater discharge is a potential point source in the County.
26. Groundwater should only be considered a point source if there is a direct and visible connection between groundwater discharges and jurisdictional surface water.

## 5.6 FLOOD PLAINS

### 5.6.1 History, Custom, and Culture

Floodplains are relatively broad and smooth valley floors constructed by active rivers and periodically covered with floodwater during periods of overbank flow. Floodplains usually include riparian and wetland areas. The flood plain is a part of the active erosion and depositional activity of river channels.

River terraces (benches) are abandoned floodplains that formed when their associated rivers flowed at high levels in the past. Many alluvium-filled valleys in Niobrara County have terraces at their margins, which, when irrigated, are some of the most productive farmlands.

In June of 2015, torrential rain which produced anywhere from 4.7 to 7.1 inches within several hours across Niobrara County caused major flash flooding of the Niobrara River. The flash flooding caused harm to homes, businesses, and highways within Niobrara County.

#### *Federal Emergency Management Agency's (FEMA)*

When a natural disaster is declared, the Federal Government, led by the Federal Emergency Management Agency (FEMA), responds at the request of and in support of States, Tribes, Territories, and Insular Areas, and local jurisdictions impacted by a disaster. FEMA coordinates the federal government's role in preparing for, preventing, mitigating the effects of, responding to, and recovering from natural disasters. (Federal Register, n.d.)

At the time this document was written the town of Lusk in Niobrara County was participating in the National Flood Insurance Program (NFIP) (FEMA, 2020). Communities that participate in NFIP and implement the floodplain management regulations are eligible for the FEMA Community Assistance Program – State Support Services (CAP-SSE) (FEMA, n.d.-a)). The CAP-SSE provides support and funding for strategic planning, ordinance assistance, technical assistance, mapping coordination, state program and agency coordination assistance, and general outreach and training (FEMA, n.d.-a). Where CAP-SSE provides general preparedness funding, planning, and management, the Risk Mapping and Assessment Planning (Risk MAP) projects develop high-quality maps and data to assess the factors contributing to increased risk of flooding in an area, and then develop plans to reduce risk (FEMA, n.d.-d). There are currently no active Risk MAP projects within Niobrara County (FEMA, n.d.-c). For more information on flood hazard mapping within Niobrara County refer to FEMA's National Flood Hazard Layer (NFHL) viewer, accessible here[9] (FEMA, n.d.-b).

### 5.6.2 Resource Assessment and Legal Framework

Flood and floodplain management are important to the safety, economy, and ecological health of Niobrara County. Flooding is a significant natural hazard within the state of Wyoming and can cause significant damage. From 1905 to the present there have been approximately $126.7 million in damages across the state from flood damage (University of Wyoming, n.d.). Niobrara County is ranked as low risk for flooding in the Wyoming State Mitigation Plan (Wyoming Office of Homeland Security, n.d.). However, in June of 2015, torrential rain which produced anywhere from 4.7 to 7.1 inches within several hours across the County caused major flash flooding of the

Niobrara River. The flash flooding caused harm to homes, businesses, and highways. The estimated damage costs were more than $1 million.

The Niobrara County MHMP outlines the goals and objectives for the county regarding flooding. The MHMP can be found here[3].

### 5.6.3 Flood Plains Resource Management Objectives:

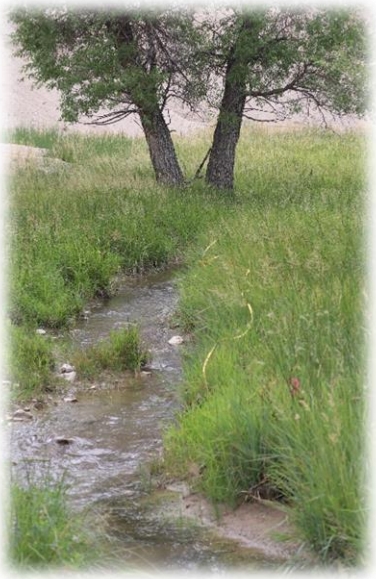
A. Stormwater is managed to ensure the health, safety, and welfare of all residents within Niobrara County.
B. Emergency response regarding flooding is coordinated with the Niobrara County Emergency Response Coordinator.
C. Niobrara County and Niobrara Conservation District are coordinated with when designating federal flood plains.

### 5.6.4 Flood Plains Priority Statements:

1. Federal agencies should support projects and encourage policies that manage stormwater, run-off, and flooding on public lands within Niobrara County.
2. Niobrara County and Niobrara Conservation District shall be consulted where flooding and stormwater run-off could impact the County.
3. Oil and gas facilities should be developed outside of the flood plains within Niobrara County.
4. Federal agencies should support the development of communication technologies (i.e., cell phone towers, internet, etc.) on public lands within Niobrara County to ensure communications are available during natural disaster events.
5. Federal agencies should consult and coordinate with Niobrara County and Niobrara Conservation District when designating federal flood plains.

## 5.7 RIVERS AND STREAMS

### 5.7.1 History, Custom, and Culture



Rivers and streams are important surface water resources for Niobrara County. The County's surface water quality and health are integral to multiple industries, including livestock and crop production, recreation, and tourism. Surface waters are especially integral to irrigation in Niobrara County. There are almost 400 miles of rivers and streams along the two major rivers, the Niobrara and Cheyenne Rivers, and the associated tributaries in the County. (HKM Engineering Inc., 2002) Rivers and streams have always been important to the custom and culture of the County as they are often the areas where settlements were developed and continue to exist today.

### 5.7.2 Resource Assessment and Legal Framework

Niobrara County is located within the Northeast Wyoming River Basin, containing a major portion of the Cheyenne River Basin, which is divided into the following sub-basins: Upper Cheyenne, Angostura Reservoir, Lance, Lightning, Glendo Reservoir, Niobrara, Hat, and Middle North Platte. There are numerous watersheds in each sub-basin.

#### *Niobrara River*

The Niobrara River begins in southern Niobrara County where it flows east past Lusk and into northwestern Nebraska, eventually flowing into the Missouri River. It is a relatively low flow river as it drains. In 1991, Congress designated 76 miles of the Niobrara River east of Valentine, Nebraska as part of the National Wild and Scenic River system. For important tributaries of the Niobrara River within Niobrara County refer to Table 3.

Upper Niobrara River Compact

The Upper Niobrara River Compact was entered into by the State of Wyoming and Nebraska on October 26, 1962. The major purposes of the Compact are to provide for an equitable division or apportionment of the available surface water supply of the Upper Niobrara River Basin between states; to provide for obtaining information on groundwater and underground water flow necessary for apportioning the underground flow by supplement to this compact; to remove all causes, present and future, which might lead to controversies; and to promote interstate comity. (Nebraska Legislature, 1962)

#### *Cheyenne River*

The Cheyenne River is formed by the confluence of Antelope Creek and Dry Fork Creek and flows through the northern boundary of Niobrara County before flowing into South Dakota and eventually into the Missouri River. For important tributaries of the Cheyenne River within Niobrara County refer to Table 3.

Table 3. Niobrara County rivers with associated tributaries and WDEQ classifications.

| Water Body | WDEQ Classification* |
|---|---|
| Cheyenne River | 2ABWW |
| Indian Creek | 3B |
| Alkali Creek | 3B |
| Mule Creek | 3B |
| Lance Creek | 2ABWW |
| Snyder Creek | 3B |
| Niobrara River | 2AB, 2ABWW, 3B |
| Van Tassell Creek | 3B |
| Duck Creek | 3B |
| Spring Creek | 3B |
| Quinn Creek | 3B |

*2AB –designations and uses include drinking water, game fish, non-game fish, fish consumption, other aquatic life, recreation, wildlife, agriculture, industry, and scenic value.
3B - designations and uses include aquatic life not including fisheries, recreation, wildlife, agriculture, industry, and scenic value.
WW – water designated as usable for warm water fish. (WDEQ, 2001)

**This list is not a complete list of waters of Niobrara County. Additional water bodies and classification may be found here[10].

### 5.7.3 Rivers and Streams Resource Management Objectives:

A. Rivers and streams are managed in Niobrara County to maintain water quality and to maintain proper ecologic function needs and managed for municipal use to control flooding and for recreational and industrial use including irrigation.
B. Rivers and streams are protected to allow continued historical uses that contributed to the custom and culture of Niobrara County.
C. No agreements or new interstate water compacts increasing Niobrara County's water obligations are agreed to without the County and District's approval.
D. Current uses, water compacts, and other water agreements and expectations are protected.
E. No trans-basin diversions taking water from Niobrara County are approved without consultation and coordination with the County.
F. Trans-basin diversion of lower water quality into Niobrara County is prevented.

### 5.7.4 Rivers and Streams Priority Statements:

1. Federal agencies should support management of rivers and streams to meet "in-stream" flow and water compact requirements.
2. Any new or changed management priorities or policies regarding in-stream flows within Niobrara County should be coordinated with the County and District.
3. Federal agencies should support the continued use of rivers and streams by all users.
4. Federal agencies should support the recreational and consumptive use of water to support the local economy.

5. Niobrara County and Niobrara Conservation District shall be consulted when impacts to rivers and streams are a potential outcome of federal action or decision.
6. Federal agencies should support projects and policies which improve or maintain the current ecological function of rivers and streams within Niobrara County.
7. Niobrara County and Niobrara Conservation District do not support any new interstate water diversions, transfers, or obligations outside of those originally agreed to in the Court Decree of the Upper Niobrara River Compact.
8. Federal agencies should support the recreational and consumptive use of water to support the local economy of Niobrara County.
9. Niobrara County and Niobrara Conservation District request coordination or involvement as a cooperating agency in any proposed amendments or discussions regarding the Upper Niobrara River Compact.

## 5.8 WETLANDS AND RIPARIAN AREAS

### 5.8.1 History, Custom, and Culture

Wetlands help regulate water levels within watersheds, improve water quality, and reduce flood and storm damages. Wetlands are most common in floodplains along rivers and streams (riparian wetlands). They also occur in isolated depressions surrounded by dry land (for example playas, basins, and "potholes"), along the margins of lakes and ponds, and other low-lying areas, where the groundwater intercepts the soil surface or where precipitation sufficiently saturates the soil (vernal pools and bogs). Wetlands include marshes and wet meadows dominated by herbaceous plants; swamps dominated by shrubs, and wooded swamps dominated by trees.

Riparian and wetland areas only make up 4% of the state, however, they support over 80% of Wyoming's wildlife (Bureau of Land Management, 2016c). These areas are very important to the health and quality of watersheds and their ecological function. Riparian areas are characterized by vegetation that is adapted to the wetter environments along bodies of water. These areas provide a buffer between open water and upland sites, protecting stream banks from erosion, maintaining stream channel morphology and water table access, filtering runoff sediment and nutrients, and improving stream habitat through lowering stream temperatures and increasing oxygen levels. Wetland areas filter sediment and nutrients that improve water quality and play an important role in maintaining habitat. Riparian and wetland areas play large roles in a stream's ability to release energy from floods onto surrounding floodplain areas, greatly reducing flood damage downstream. (WDEQ, n.d.-g)

### 5.8.2 Resource Assessment and Legal Framework

Riparian areas are zones bordering lakes, reservoirs, potholes, springs and seeps, wet meadows, vernal pools, and ephemeral, intermittent, or perennial streams. They are of prime importance to water quality, water quantity, stream stability, and fisheries and wildlife habitat. Abundant water, forage, and habitat attract a proportionately greater amount of use and conflict than their small area would indicate. They are vital to the livestock grazing industry, and many are also well suited for development as high-quality agricultural farmland.

A riparian area is an area along a watercourse or around a lake or pond. It also refers to a "corridor encompasses the stream channel and that portion of the terrestrial landscape from the high-water mark toward the uplands where vegetation may be influenced by elevated water tables, or flooding, or by the ability of soils to hold water." Citing Malcomb Hunter, Robert Naiman states: "At the smallest scale, the riparian zone is the immediate water's edge where some specialized plants and animals form a distinct community. On a larger scale, the riparian zone is the area periodically flooded by high water, including the stream banks and flood plain. At the largest scale, the riparian zone is the band of land that has significant influence on the stream ecosystem, and/or is significantly influenced by the stream.

BLM describes riparian areas as those terrestrial areas where the vegetation complex and microclimate conditions are products of the combined presence and influence of perennial and/or intermittent water, associated high water tables, and soils that exhibit some wetness characteristics. The term 'riparian area' often refers to the zone within which plants grow rooted in the water table of these rivers, streams, lakes, ponds, reservoirs, springs, marshes, seeps, bogs, and wet meadows.

Riparian areas are ecosystems that occur along watercourses or water bodies. They are distinctly different from the surrounding lands because of the unique soil and vegetation characteristics that are strongly influenced by free or unbound water in the soil. Riparian ecosystems occupy the transitional area between the terrestrial and aquatic ecosystems. Typical examples would include floodplains, stream banks, and lakeshores. Riparian and wetland areas are an integral part of the health and resilience of water resources within Niobrara County.

Multiple anthropogenic processes can harm riparian and wetland areas. A few examples of activities that can degrade these ecosystems and their ability to function properly are urban development along streams and on floodplains, diversion of water, improper timber harvest, and improper grazing practices. (WDEQ, n.d.-g; WGFD, n.d.-c)

The Association of State Wetland Managers maintains resources regarding voluntary wetland restoration work, wetland programs, and law and policy. Federally, wetlands are protected under the Clean Water Act (CWA). The definition of wetlands protected under CWA has been specified further through the supreme court rulings in 1985 *Riverside Bayview*, 2003 *SWANCC*, and 2008 *Rapanos* (ASWM, n.d.-a, n.d.-b). The U.S. Army Corps of Engineers (USACE) is also responsible for protecting aquatic resources and navigable capacity while allowing economic development through fair and balanced decisions. The USACE requires a permit process to minimize the environmental impact of construction and development activities in US waters to ensure the protection of these resources (ACOE, n.d.). The EPA and USACE published new CWA regulations that were adopted on September 11, 2020, that attempt to clarify what wetlands fall within the jurisdiction of the CWA. Under these newly published rules, only those wetlands adjacent to non-wetland jurisdictional waters fall under the CWA.

Projects that impact wetlands must follow Clean Water Act 404 regulations, which require outright avoidance of wetlands where possible. When wetlands cannot be avoided, regulations then require impacts to be minimized to the greatest extent practicable. Any remaining wetland

impacts must then be mitigated via creation, restoration, or rarely by enhancement. Currently, WYDOT mitigates wetlands "in-kind" on a project-by-project basis. There have been multiple mitigation projects within the County. The East Fork Buck Mitigation Site (2006), followed up with the Old Woman Creek Mitigation Site (2014), were both mitigation projects pursued by WYDOT that failed and required reassessment due to poor site selection. Wetland mitigation is a dynamic process that benefits from coordination with local governments and residents.

***Monitoring and Management***

Federal managing agencies monitor riparian-wetland areas using methods such as Proper Functioning Condition (PFC), Winward Greenline, Rosgen Stream Classification, Stream Visual Assessment Protocol (SVAP), Rapid Stream-Riparian Assessment (RSRA), PACfish/INfish Biological Opinion Monitoring Program (PIBO), Geomorphic Road Analysis and Inventory Package (GRAIP), and modified Multiple Indicator Monitoring (MIM). All these methods assess the condition and health of riparian and wetland areas and give federal agencies an indication of the change of species composition, streambank alterations, woody species present and available, along with other riparian health considerations.

Managing agencies are required to manage riparian-wetland areas in Proper Functioning Condition (PFC). PFC is the minimum state of resilience needed to withstand moderate flooding and make progress toward a desired condition that supports fish habitat, water quality, and wildlife needs. Riparian and wetland areas may be categorized as properly functioning (PFC), Non-Functioning (NF), Functioning at Risk (FAR) with upward, downward or nonapparent trends within a PFC assessment. Aquatic AIM monitoring is also used for riparian-wetland assessments and management (Bureau of Land Management, 2016d).

### 5.8.3 Wetlands and Riparian Areas Resource Management Objectives:

A. Wetlands and riparian areas within Niobrara County are managed to be healthy and function properly while maintaining a balance with other resource uses.
B. Niobrara County and Niobrara Conservation District are coordinated with and apprised of wetland mitigation plans and locations throughout Niobrara County.
C. Niobrara County and Niobrara Conservation District are involved in the determination of location and method of wetland mitigation. Regulation of wetlands is balanced where quality is protected but economic progress is not stifled.
D. Private landowners' rights are maintained regarding wetland jurisdictions.
E. The finalized September 11, 2020, Clean Water Act Regulations are implemented and used by the local regulating agencies.
F. Wetlands issues are based on a cooperative approach that conserves and protects soil and water resources and protects rangeland and agricultural uses.
G. A coordinated approach is used when establishing riparian and upland management plans.

### 5.8.4 Wetlands and Riparian Areas Priority Statements:

1. Federal agencies should support the management, maintenance, protection, and restoration of wetland and riparian areas within Niobrara County to proper functioning condition.
2. Federal agencies should coordinate any wetland project with Niobrara County and Niobrara Conservation District.
3. Federal agencies should support the use of responsible and appropriate grazing and vegetation management tools to maintain and/or improve wetlands and riparian areas.
4. Federal agencies should manage riparian areas damaged by non-native species (i.e., salt cedar and Russian olives) to decrease the impact of these species on the watershed, including water quality and to restore the areas to a proper functioning condition.
5. Federal agencies should use appropriate methods and practices to maintain and restore riparian areas to proper functioning condition.
6. Federal agencies should use credible data and scientific standards for wetland designation.
7. Niobrara County and Niobrara Conservation District do not support any Clean Water Act jurisdictional wetland designations for any wetlands not located immediately adjacent to a navigable water in the County.
8. Federal agencies should use Wyoming Forestry Best Management Practices for any treatments within wetland and riparian areas.
9. Niobrara County and Niobrara Conservation District should be notified of any planned Clean Water Act jurisdictional wetland designations within the County.
10. Niobrara County and Niobrara Conservation District do not support previous versions of Waters of the United States. Any definition of navigable water that includes ephemeral streams, irrigation ditches, manmade conveyances, bodies of water not connected to navigable waters, or anything not listed or defined in the September 11, 2020, Clean Water Act Regulations should not be recognized.
11. A consistent definition and accurate delineation of riparian areas wetlands and lands adjacent to wetlands or directly/indirectly influenced by permanent water in Niobrara County should be developed cooperatively.
12. Federal agencies should ensure that regulation of wetlands does not impair property rights in Niobrara County.

# CHAPTER 6: WILDLIFE AND FISHERIES RESOURCES

## 6.1 WILDLIFE MANAGING AGENCIES

### 6.1.1 U.S. Fish and Wildlife Service

The U.S. Fish & Wildlife Service (USFWS) is the agency within the Department of the Interior dedicated to the management of fish, wildlife, and their habitats, and charged with enforcing federal wildlife laws, including the Endangered Species Act (ESA). In addition to managing threatened and endangered species, they manage migratory birds, restore significant fisheries, conserve and restore wildlife habitat including wetlands, and distribute money to state fish and wildlife agencies. They also manage the National Wildlife Refuge (NWR) System created by President Theodore Roosevelt in 1903. (Wilson, 2014)

There are eight administrative regions for USFWS and approximately 700 field offices across the country. Wyoming is in the Mountain Prairie Region which consists of eight states - Colorado, Kansas, Montana, Nebraska, North Dakota, South Dakota, Utah, and Wyoming. The regional office for the Mountain Prairie Region is in Denver, CO. The closest field office is in Cheyenne, WY. There are seven National Wildlife Refuges totaling 86,681 acres in Wyoming, as of the 2018 Annual Lands Report (USFWS, 2018a). There are no Wildlife Refuges, Wetland Management Districts, and Waterfowl Production Areas in Niobrara County. (USFWS, 2018a).

#### *Wildlife Refuges in Niobrara County*

In 1903, President Theodore Roosevelt designated the first National Wildlife Refuge by executive order. It was not until 1966 that the refuges were put into the NWR and administered by the USFWS. The USFWS administers 89.1 million acres of federal land in the US, of which 76.6 million are in Alaska (Federal Land Ownership, 2018). The mission of the National Wildlife Refuges is to administer these designated lands for the conservation, management, and if appropriate, restoration of fish, wildlife, and plant resources, and their habitats within the US for the benefit of present and future generations. Many activities take place on Refuges including hunting, fishing, ice fishing, bird-watching, hiking, bicycling, and water recreation (USFWS, 2018c).

There are 7 National Wildlife Refuges in Wyoming, none of which are located in Niobrara County (USFWS, n.d.-a).

### 6.1.2 Wyoming Game and Fish Department

Wildlife in Wyoming is managed by the Wyoming Game and Fish Department (WGFD). Nearly a decade after Wyoming became a state in 1890, the legislature created the office of the State Game Warden in 1899. The Wyoming Game and Fish Commission was created in 1921 but did not receive the ability to actively manage Wyoming's game populations through opening and closing hunting until 1929. The WGFD was created in 1973. Prior to this time, all Game and Fish personnel were employed by the Wyoming Game and Fish Commission. (WGFD, n.d.-a)

The Wyoming Game and Fish Commission acts as the policy-making board of the WGFD. The Commission is responsible for the direction and supervision of the Director of the WGFD. Through the relationships with the Director, department, and citizens, the board provides a flexible

system of control, propagation, management, protection, and regulation of all wildlife in Wyoming. WGFDs commission is a board of seven citizens where not more than five can be from the same political party (WGFD, n.d.-b). The WGFDs mission is 'Conserving Wildlife, Serving People'.

The WGFD established and manages crucial priority areas through the 2020 Statewide Wildlife Habitat Plan. The plan addresses three major goals: to conserve and protect crucial aquatic and terrestrial wildlife habitats, to restore aquatic and terrestrial wildlife habitats, and to conserve, enhance, and protect fish and wildlife migrations. The plan also lays out strategies for managing priority areas. (WGFD, 2020a)

Additionally, the WGFD also assists in producing the Wyoming Wetland Program Plan,[11] building on the Wyoming Wetlands Conservation Strategy (WBHCP 2010). The Plan developed a framework for prioritizing actions to conserve and improve wetlands across the state. (Tessmann et al., 2018)

The WGFD utilizes a State Wildlife Action Plan (SWAP), revised in 2017, to provide a strategy for managing various wildlife groups including mammals, birds, reptiles, amphibians, fish, and mussels. This plan is not a legal document, a regulatory document, a recovery plan under the ESA, or a NEPA decision document (WGFD, 2017b). It is designed to complement existing and future planning and management programs. Wyoming's SWAP was partially funded by the State Wildlife Grants Program, which was created through federal legislation to provide federal funding to states to create a list of wildlife species that have the greatest conservation need. The state plan is built upon eight essential elements, identified by Congress, and implemented by the state game agency, with an overall focus on "species of greatest conservation need". The essential elements are:

- Information on the distribution and abundance of species of wildlife including low and declining populations.
- Descriptions of locations and relative condition of key habitats and community types.
- Problems affecting species and priority research, or survey efforts needed.
- Conservation actions needed to conserve the identified species.
- Plans for monitoring species and the effectiveness of conservation actions.
- Plans for reviewing the strategy.
- Coordinating with federal, state, and local agencies and Tribal government on the development and implementation of the strategy; and
- Involving broad public participation.

Wyoming's List of Species of Greatest Conservation Need (SGCN List) includes 229 total species including eighty birds, nine amphibians, twenty-four reptiles, fifty-one mammals, twenty-eight fish, eight crustaceans, and twenty-nine mollusks, each with a specific priority designation based on the essential elements listed above. (WGFD, 2017b)

Wyoming's SGCN List is divided into three tiers: Tier 1 – highest priority, Tier 2 – moderate priority, and Tier 3 – lowest priority. The Wyoming Game and Fish Commission has six approved variables to evaluate the conservation priority of each species. These variables include the Wyoming Game and Fish Department Native Species Status (NSS); Wyoming's contribution to the species' overall conservation; regulatory/monetary impacts of the species' listing under the Endangered Species Act; the urgency of conservation action; ability to implement effective conservation actions; and the species' ecological or management role as keystone, indicator, or umbrella species. The consideration of these variables in the species' priority tier designations are made by WGFD biologists who have considerable knowledge about the species. Individual designations may be reviewed annually if warranted by changing circumstances or new data. State Wildlife Grant Program funds are appropriated annually by Congress. In the appropriation process, individual states are evaluated based on their population and total geographical area. From these evaluations, states receive their apportioned funding amounts. Federal grants cover up to 75% of planning grants and 65% of plan implementation grants. (USFWS, n.d.-b; WGFD, 2017b)

The WGFD updates the species on the Conservation Priority List in conjunction with the State Wildlife Action Plan[12]. The current list of species at the writing of this plan is provided in Table 4 (pg. 196), Table 5 ( pg. 197), and Table 6 (pg. 201) in the appendices. The Wyoming Species of Conservation Priority List can also be found on the WGFD website (WGFD, 2017a).

***Wildlife Habitat Management Areas***

The WGFD maintains approximately 450,000 acres of land under deed, lease, or by agreement for wildlife habitat management areas (WHMA). There are no WHMAs within Niobrara County. (WGFD, 2020d)

### 6.1.3 Bureau of Land Management

The BLM's Wildlife Program manages wildlife habitat to help ensure self-sustaining, abundant, and diverse populations of native and desired non-native wildlife on public lands and federal mineral estate. To carry this out, the BLM must formally identify priority species; BLM-sensitive species; and other species. BLM then considers applicable conservation measures for these species and their habitats as part of their land-use planning process.

Special Status Species are designated by the BLM and include species that are federally listed or proposed for listing as threatened or endangered, candidate species, state protected and sensitive species, and other special-status species including federal and state "species of concern." The BLM designates special-status species where there is credible scientific evidence to document a threat to the continued viability of a species population. Moreover, Special Status Species are typically designated as sensitive by a BLM state director in cooperation with state agencies that are responsible for managing the species. State natural heritage programs are typically involved as well, where applicable. Species are usually those that fall in the following criteria:

- Could become endangered in or extirpated from a state or within a significant portion of its distribution;

- Are under status review by the USFWS;
- Are undergoing significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution;
- A federal listed, proposed, candidate, or state-listed status may become necessary;
- Typically have small and widely dispersed populations;
- Inhabit ecological refugia or other specialized or unique habitats; or
- Are state-listed but which may be better conserved through application of the BLM Sensitive Species Status. (Bureau of Land Management, 2015)

The Wyoming State BLM Office identifies 82 species as sensitive. These species are included in Table 7 (pg. 203) in the appendices.

### 6.1.4 U.S. Forest Service

Regulations in 36 C.F.R. § 219.19 and § 219.20 call for the selection, evaluation, and monitoring of management indicator species and their habitat. Management indicator species may be "plant or animal species and are selected because their population changes are believed to indicate the effects of management activities on other species of selected major biological communities or on water quality" (US Forest Service, 1982). These regulations do not imply that the population dynamics of management indicator species directly represent the population dynamics of other species. Criteria that direct management indicator species consideration include:

- Species is indigenous.
- Species is a year-long resident of the vicinity (non-migratory), or population trends of the species in the local or regional vicinity are closely tied to habitat conditions resulting from land uses on National Forest System (NFS) lands in the same area.
- Species is considered a keystone species or habitat specialist.
- Species is sensitive to management activities on NFS lands in the local or regional vicinity.
- Population trends of the species are assumed to be related to changes in habitat composition, structure, ecological processes, and/or human activities.
- Species is appropriate for the scale that best represents the key issues or management concerns.
- Biologically and economically feasible to monitor populations and habitat of the species at similar spatial scales.
- Populations are of sufficient size or density to be reasonably detected and monitored. Accepted survey protocols exist. Analysis and interpretation of inventory data should produce meaningful and reliable trend information. Species that require high investment for low returns or suspect results should be avoided.
- Species where the scientific literature supports the assumed limiting factors and habitat associations. (USDA Forest Service, 2001)

The 2012 Planning rule direction (36 CFR § 219) sets out the planning requirements for developing, amending, and revising land management plans for the National Forest System, as required by the Forest and Rangeland Renewable Resources Planning Act of 1974, as amended by NFMA. The regulations in 36 CFR § 219.9 explain that the Forest Plan components must

provide for the diversity of plant and animal communities and keep common native species common; contribute to the recovery of federally listed threatened and endangered species; conserve proposed and candidate species, and maintain a viable population of each species of conservation concern (SCC) within the plan area. Previously the 1982 planning rule direction and used the terms Forester's Sensitive Species (RFSS) and Management Indicator Species (MIS), those terms are no longer applicable in the 2012 planning rule direction.

***Thunder Basin National Grassland***

Approximately 832 acres of the TBNG lie within Niobrara County. In recent years, the TBNG has been developing a Grassland Land and Resource Management Plan Amendment to address prairie dog management on the TBNG. Prairie dog colonies grow significantly in short periods of time and can cause significant resource damage. The plan was finalized on December 2, 2020. 85 F.R. 7426-27 (Dec. 2, 2020). The new plan removed 56,000 acres of "Black-footed Ferret Reintroduction Habitat" management area and designated 42,000 acres for "Short-Stature Vegetation Emphasis." *Id*. at 7427. The plan also set an objective of 10,000 acres of prairie dog colonies for conservation of wildlife and established prairie dog management zones along boundaries of the TBNG and private or state properties. *Id*. Finally, the plan allowed for broader application of tools for prairie dog colony control and an increased emphasis for managing sylvatic plague. *Id*.

***Thunder Basin Grasslands Prairie Ecosystem Association Conservation Agreement***

In 2017 the Thunder Basin Grasslands Prairie Ecosystem Association (TBGPEA) finalized a conservation agreement (CCAA/CCA/CA) spanning 13.2 million acres of sagebrush and shortgrass prairie. The agreement spans five counties, including Niobrara County, promoting landscape management and proactive habitat conservation with economic growth in mind. The species included in the agreement are the sagebrush sparrow, Brewer's sparrow, sage thrasher, black-tailed prairie dog, mountain plover, burrowing owl, ferruginous hawk, and greater sage-grouse. For additional information on TBGPEA's work refer to their website[13]. (TBGPEA, 2020; USFWS, 2019)

## 6.2 THREATENED AND ENDANGERED SPECIES

### 6.2.1 History, Custom, and Culture

***Endangered Species Act (ESA)***

The keystone of good environmental stewardship lies in a healthy resource base. Endangered and threatened species, as well as all plants and all animals, depend on the intricate balance of stable ecological, economic and social functions of the immediate local community.

USFWS administers the Endangered Species Preservation Act, passed by Congress in 1966, which provided limited protection for species listed as endangered. The Departments of the Interior, Agriculture, and Defense were to seek to protect listed species and to the extent possible, preserve the habitats of listed species. In 1969, Congress amended the Act to provide additional protection for species at risk of "worldwide extinction" by prohibiting their import and sale in the

United States. This amendment called for an international meeting to discuss conservation of endangered species and changed the title of the act to the Endangered Species Conservation Act. In 1973, 80 nations met to sign the Convention on International Trade in Endangered Species of Wild Fauna and Flora (Commission of the European Communities, 1986). As a follow-up, Congress passed the Endangered Species Act of 1973 (ESA). The ESA:

- Defined "endangered" and "threatened" species.
- Made plants and all invertebrates eligible for protection.
- Applied "take" prohibitions to all endangered animal species and allowed the prohibitions to apply to threatened animal species by special regulation; such "take" prohibitions also include "adverse modification" of critical habitat.
- Required federal agencies to use their authorities to conserve listed species and consult on "may affect" actions.
- Prohibited federal agencies from authorizing, funding, or carrying out any action that would jeopardize a listed species or destroy or adversely modify its "critical habitat".
- Made matching funds available to States with cooperative agreements.
- Provided funding authority for land acquisition for foreign species; and
- Implemented protection in the United States. (USFWS, 1973)

The ESA was amended in 1976, 1978, 1979, 1982, 1988, and 2003. Funds are annually appropriated for the implementation of the ESA and have been since 1993.

Candidate species are "any species being considered for listing as an endangered or threatened species, but not yet the subject of a proposed rule" (50 C.F.R. § 424.02(b)).

USFWS is responsible for the identification of critical habitat. Critical habitat is a specific geographic area that contains features essential to the conservation and recovery of a listed species and may require special management or protection. Critical habitat can only be areas that qualify as "habitat." *Weyerhaeuser Co. v. US Fish and Wildlife Service,* 139 S. Ct. 361, 368 (2018). The ESA does define "habitat." *Id*. However, the USFWS recently passed regulations defining "habitat," for the purpose of designating critical habitat only, as "the abiotic and biotic setting that currently or periodically contains the resources and conditions necessary to support one or more life processes of a species." 50 C.F.R. § 424.02. Thus, only those settings that currently contain the resources may be designated as critical habitat, and those settings that would require additional modification could not qualify as habitat. *See Id*.; 85 FR 81411. Thus, under the proposed definition, "habitat" may only exist under the ESA when a listed species could currently survive within the habitat as of the day of the listing. *Id*. Land not currently occupied by an endangered species can only be designated as critical habitat when the Secretary of the Fish and Wildlife Service determines that the land is "essential for the conservation of the species." 16 USC 1532(5)(A). "Essential for the conservation of the species" is also not defined in either the ESA or USFWS regulations. Although economic impacts are not considered during the species listing process, the economic impacts of a critical habitat designation must be analyzed in the designation process. The USFWS may choose to exclude any area from critical habitat if the

agency determines that the benefits of such exclusion outweigh the benefits of designating the area unless such exclusion would result in the extinction of the species. 16 U.S.C § 1533(b)(2). A decision not to exclude critical habitat for economic reasons is reviewable by courts under an abuse of discretion standard. *Weyerhaeuser*, 139 S. Ct. at 370.

On December 18, 2020, in response to the *Weyerhaeuser* Court's decision allowing decisions not to exclude critical habitat to be reviewed under the Administrative Procedure Act, the Fish and Wildlife Service proposed rules regarding the exclusion of critical habitat. 85 FR 82376. There are five major items developed in the new rule.

1. The rule gives local governments expert status when discussing the economic and other nonbiological local impacts of critical habitat designation within their jurisdiction.
2. The rule also reversed the USFWS's former policy and will allow federal land to be excluded from critical habitat designation.
3. The rule set a meaningful standard as to when critical habitat should be excluded.
4. The rule encourages the USFWS to exclude critical habitat for more than just economic consideration, including whether the critical habitat may harm community development or.
5. The rule also allows lands that have proven conservation agreements to be excluded from critical habitat. These agreements can even be agreements created by local governments or the state and not just the USFWS. 50 C.F.R. § 1790.

The ESA created several additional planning tools, including:

- Recovery plans (population and viability goals; define when delisting may be possible; what is required for delisting to begin).
- Reintroduction plans.
- Habitat conservation plans (define when "take" may occur, defines mitigation options).
- Conservation plans or agreements.
- Candidate Conservation Agreements (CCA) and CCAs with Assurances (CCAA) (private landowner arrangements for the protection of Candidate species that provides the landowner with protection if the species is listed) and Species of Concern. (USFWS, 2018b)

### *Bald and Golden Eagle Protection Act*

The Bald and Golden Eagle Protection Act (BGEPA) (16. U.S.C § 668-668c) was enacted in 1940, with several amendments since, and prohibits anyone from "taking" bald or golden eagles, including their parts, nests, or eggs without a permit issued by the Secretary of the Interior. (USFWS, 2018b)

### *Migratory Bird Treaty Act*

The Migratory Bird Treaty Act (MBTA) is a federal law that carries out the United States' commitment to four international conventions with Canada, Japan, Mexico, and Russia. Those conventions protect birds that migrate across international borders.

The MBTA prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests except as authorized under a valid permit (50 CFR § 21.11). The USFWS published the 'Regulations Governing Take of Migratory Birds' on January 7, 2021, further defining the parameters of 'unlawful take'. The rule defines 'take' as 'to willfully pursue, hunt, shoot, wound, kill, trap, capture, or collect'. 'Take' of migratory birds no longer includes the incidental or accidental killing of migratory birds. The rule came into effect on February 7, 2021. (86 FR § 1134 and 50 C.F.R. § 10). The MBTA also authorizes and directs the Secretary of Interior to determine if, and by what means, the take of migratory birds should be allowed and to adopt suitable regulations permitting and governing take (i.e., hunting seasons for ducks and geese). (USFWS, 2020)

### 6.2.3 Resource Assessment and Legal Framework

***Candidate, Threatened, and Endangered Species in Niobrara County***

Currently listed threatened and endangered species can be found on the USFWS Environmental Conservation Online System[14] (ECOS) (U.S. Fish and Wildlife Service, n.d.). At the writing of this report, there are three endangered, threatened, candidate, and proposed species and habitats that have been identified for Niobrara County. Those species are:

- Piping Plover (*Charadrius melodus*)-Threatened
- Ute Ladies'-tresses (*Spiranthes diluvialis*)- Threatened
- Western Prairie Fringed Orchid (*Platanthera praeclara*) - Threatened

### 6.2.4 Threatened and Endangered Species Resource Management Objectives:

A. Threatened and endangered species are managed using credible data and in conjunction with multiple use mandates in coordination with Niobrara County and other stakeholders.
B. Niobrara County and Niobrara Conservation District participate in local, state, and federal rulemaking and planning regarding the designation and management of any species designated in any category or classification for protection or consideration of protection, under the Endangered Species Act in and adjacent to Niobrara County.
C. Niobrara County and Niobrara Conservation District participate fully with local, state, and federal agencies to prepare an analysis of local economic and social impacts that any such critical habitat designation will have on the County.
D. Federal agencies work with Niobrara County and Niobrara Conservation District to explore alternatives to listing, which may include conservation plans and related conservation agreements with local, state, and federal agencies to address possible threats to species and their habitat and avoid official listing.
E. Critical habitat designations are excluded in areas in which the harm to Niobrara County outweighs the benefit of designating the habitat.

F. Critical habitat exclusion analysis is completed for all lands within Niobrara County during the Endangered Species Act listing process and critical habitat is only considered in those lands where the endangered species could currently survive.
G. Immediate and expedited delisting of a species occurs when the benchmarks of the species recovery plan are met.

### 6.2.5 Threatened and Endangered Priority Statements:

1. Federal agencies should comply with the applicable state and federal statutes, including preparation of an environmental impact statement when critical habitat is designated.
2. Federal agencies should consider local information from the socio-economic impacts when developing a coordinated management plan for any species designated for protection under the Endangered Species Act in and affecting Niobrara County.
3. Niobrara County and Niobrara Conservation District oppose the introduction or transplant of threatened and endangered species within the boundaries of the County unless the District and County consent and it is done pursuant to specific terms and conditions that avoid disrupting existing land uses and none shall be introduced without NEPA compliance and public input.
4. Should any introductions or re-introductions of threatened or endangered species occur in Niobrara County or on lands adjacent to the County the population should be designated as non-essential experimental populations.
5. Niobrara County and Niobrara Conservation District encourage cooperation between private landowners and local, state, and federal governments to achieve protection of endangered and threatened species most effectively, rather than imposing land-use restrictions and penalties.
6. Niobrara County and Niobrara Conservation District request more effective management of special management species, including but not limited to, grizzly bear and gray wolf, populations within the region in which the species is designated.
7. Niobrara County and Niobrara Conservation District recommend that proponents of protection, recovery activities, and other threatened and endangered, and sensitive species programs finance the activities, including public involvement and compensation to the affected landowners.
8. Federal agencies should not manage special status species as if they were listed under the Endangered Species Act.
9. Federal agencies should coordinate with Niobrara County and Niobrara Conservation District in planning decisions directing the management of threatened and endangered species and state-sensitive species.
10. Federal agencies should delist a species once population goals set out in recovery plans are achieved, in accordance with the Endangered Species Act.
11. Federal agencies should work with Niobrara County and Niobrara Conservation District to explore alternatives to listing, which may include conservation plans and related conservation agreements with local, state, and federal agencies to address possible threats to species and their habitat and avoid official listing.
12. Niobrara County and Niobrara Conservation District support the use of candidate conservation agreements with assurances for private land and candidate conservation

agreements for federal lands as a mechanism to provide habitat for candidate species while allowing current land uses to continue.

13. Niobrara County and Niobrara Conservation District support recovery efforts for threatened and endangered species, which consider local interests and impacts, and evaluate, mitigate, and support Niobrara County's custom and culture and economic viability and community stability.
14. Any black-footed ferret management and introductions should be coordinated with local governments and accomplished pursuant to the black-footed ferret introduction plan developed for the Thunder Basin National Grassland.
15. Endangered wildlife introduction and existing populations on public lands that "spill over" or migrate to non-public lands should be removed, unless agreed to by the landowners.
16. Endangered fish recovery plans should consider a balance of scientific justification, conserving past and future adjudicated water rights, economic viability, and community stability of Niobrara County.
17. Federal agencies should delist any species with insufficient, unsupported, or questionable data not meeting the minimum criteria for its listing or protection level.
18. Critical habitat should be only those areas where the listed species could currently survive and should not include any areas that are missing an essential feature for the survival of the species or would require some degree of modification to support a sustainable population of the species.
19. Federal agencies should conduct a robust and full local economic analysis of all proposed critical habitat designations in Niobrara County. Should an economic analysis on critical habitat indicate economic harm to the County and its citizens the U.S. Fish and Wildlife Service should immediately exclude such habitat from critical habitat designation.
20. Niobrara County, Niobrara Conservation District, and other local governments should be notified of all decisions and proposed actions which affect the County regarding sensitive, threatened, or endangered species; critical habitat designation and exclusion; the reintroduction or introduction of listed species; habitat conservation plans; conservation agreements or plans; and candidate conservation agreements and should be given the earliest opportunity to participate as a cooperating agency.
21. Support the development of recovery plans within 18 months of listing that include clear objectives to reach for delisting to occur; for species already listed support the development of a recovery plan within 18 months of this document.
22. Single-species management shall be avoided in all federal planning efforts. Multiple uses and sustained yield of lands and resources are supported and shall be implemented as required by federal law.
23. The data used in any listing decision shall meet the minimum criteria defined in the Federal Data Quality Act.
24. Federal agencies should control predators negatively impacting special status, candidates, or listed species before restricting other multiple uses that could be conflicting.
25. Federal agencies should support proven and efficient control of zoonotic and vector-borne diseases negatively impacting special status, candidate, or listed species before restricting other multiple uses that could be conflicting.

26. Management actions which increase the population of any listed species in Niobrara County without an approved recovery plan is not supported.
27. Federal agencies should support the continued use of existing valid permits and lease rights on lands with listed species wherever possible.
28. At a minimum, copies of legal descriptions showing the exact boundaries of all designated critical habitat shall be provided to local governments in Niobrara County.
29. The designation of potential habitat as critical habitat is not supported unless quantifiable data showing when and how features necessary for species recovery will be achieved on the property.

## 6.3 WILDLIFE RESOURCES

### 6.3.1 History, Custom, and Culture

Niobrara County enjoys a diverse and abundant game and non-game wildlife populations. This resource provides a variety of recreational opportunities and potential economic benefits. Wildlife interests should be considered in all public land use/resource development decisions and support responsible wildlife management practices that complement other County interests.

The term "wildlife" describes animals living in nature that are not domesticated or tamed. As per this Plan, activities in the County that depend on wildlife, include but are not limited to hunting (elk, deer, antelope, mountain lion, coyotes, grouse, rabbits, waterfowl, etc.); aquatic wildlife (fishing, managing endangered fishes, etc.); passive recreation (bird watching, wildlife viewing, etc.); and species of concern (bald eagle, black-footed ferret, mountain plover, sage grouse).

Hunting big game, waterfowl, and upland game birds have been a traditional part of life in the County even before the first settlers. In the early days, hunting was necessary for survival and, though today it is less essential, it still provides a food resource and recreation for many people. As such, it is a component of the custom and culture of the County. The County is renowned for its big game hunting and provides excellent hunting for County residents and visitors. Employment as guides, selling supplies and equipment, meals, fuel, and lodging to hunters provide income for County residents and contribute to the overall county economy.

### 6.3.2 Resource Assessment and Legal Framework

***Big Game Habitat***

Virtually all of Niobrara County is habitat of some importance. Niobrara County's big and trophy game species include black bear (*Ursus americanus*), elk (*Cervus canadensis*), mountain lion (*Puma concolor*), mule deer (*Odocoileus hemionus*), pronghorn antelope (*Antilocapra americana*), and white-tailed deer (*Odocoileus virginianus*).

## *Elk*

Elk (*Cervus canadensis nelsoni*) are found throughout most of the County though elk habitat is only mapped in the southeast corner of the County. Elk are primarily grazers, or bulk foragers, though they will occasionally browse on willows and aspen. Most of the elk habitat within the County is listed as yearlong habitat and spans 5% (88,512 acres) south of Lusk. Elk in the County winter on both public and private land. High densities of elk can pose a disease risk to livestock operations and can be destructive to winter feed reserves and crops. See Figure 12 for mapped habitat designations.

## *Mule Deer*

Mule deer (*Odocoileus hemionus*) are found throughout all of Niobrara County. Mule deer have readily adapted to the urban environment and have begun to encroach into developing areas within the County. Mule deer are considered primarily browsers but will use forbs as well. Mule deer will consume grass early in the season while the nutritive value is high, but senescent grasses do not meet their dietary requirements. Most of the County is designated as mule deer habitat. Nearly 66% (1,104,854 acres) of the County is designated as yearlong mule deer habitat. Winter yearlong habitat comprises just over 33% (574,188 acres) of the County. See Figure 13 for mapped habitat designations.

## *Pronghorn*

Pronghorn (*Antilocapra americana*) are common throughout the County. Pronghorn prefer the open shrublands that the southern portion of the county provides. They are intermediate foragers, eating grasses, forbs, and shrubs. Pronghorn use most of the county year-long at some level except for the developed areas and the upper elevations. Most of the County, outside of the mountain ranges, is designated as pronghorn habitat. Most of the County is designated as pronghorn habitat. Designated yearlong range occupies about 86% (1,446,374 acres) of the County, while winter yearlong range spans 10% (173,060 acres) of the County. See Figure 14 for mapped habitat designations.

### *White-tailed deer*

White-tailed deer (*Odocoileus virginianus*) prefer riparian habitats often associated with irrigated lands. Approximately 20% of the County (339,714 acres) provides yearlong habitat, primarily along low valley areas and the southern portion of the County. Whitetails, like mule deer, are browsers, supplementing their diet with forbs and occasionally grass. In agricultural areas they will feed more on field and hay crops. There is some habitat overlap with mule deer. See Figure 15 for mapped habitat designations.

### *State of Wyoming Migration Corridor Protections*

In February 2020 Wyoming released the Wyoming Mule Deer and Antelope Migration Corridor Protection Executive Order 2020-1, outlining the State's strategy for managing migration corridors and habitats. The order designated three separate mule deer corridors and a process by which to designate additional corridors in the future. The executive order addresses surface disturbance, state-permitting, and recreation activities within designated mule deer and antelope migration corridors, as well as the cooperation between WYDOT and WGFD (and other related state agencies) to minimize roadway collisions and facilitate big game movement across roadways. (State of Wyoming, 2020)

Executive Order 2020-1 promotes Counties to revise or update land use plans to be consistent with the state-designated migration corridor protections. There are currently no migration corridors designated within Niobrara County. (WGFD, 2020b)

### *Wildlife Diseases*

#### *Chronic Wasting Disease (CWD)*

Chronic Wasting Disease (CWD) is a fatal disease of the central nervous system that is known to occur in mule deer, white-tailed deer, and Rocky Mountain elk. CWD has been found throughout most of the state of Wyoming. CWD is one of several diseases known as transmissible spongiform encephalopathies that are thought to be caused by abnormal proteins or "prions". Ungulates affected by CWD experience progressive loss of body condition, reluctance to move unless approached closely, increased drinking, depression, and eventual death. As of present, CWD is not known to transfer to or affect humans. Many federal and state agencies have been working on research to learn more about CWD and its effects on ungulate populations.

Chronic Wasting Disease (CWD) has been a concern for ungulate populations in and surrounding Niobrara County since the early 2000s. A 2016 CWD study in east-central Wyoming discovered that between 2003 and 2010 32- 43% of all harvested deer were positive for CWD. The study also found that from 2003-2010 the whitetail deer populations declined 10% annually because of CWD related mortality, potentially leading to the loss of local populations within 50 years. The WGFD statewide 2020 CWD Management Plan outlines surveillance, monitoring, and management strategies at the local or herd unit level to better manage the prevalence of CWD

in conjunction with the current herd and population objectives in each herd unit. (Edmunds et al., 2016; WGFD, 2020e)

For additional information on the monitoring and management of CWD in Wyoming refer to the CWD Management Plan[15].

### *Brucellosis*

Brucellosis is a highly contagious bacterial disease that can occur in wildlife, cattle, and humans. There are several *Brucella* species but *Brucella abortus* is the bacterium that infects elk, bison, and cattle. Infection affects the reproductive tract and in females results in abortion but can also affect the male reproductive tract. Bone or joint membranes can also be infected and result in lameness that may make animals more susceptible to predation. The most common route of transmission is orally through licking or ingestion. Niobrara County does not fall within the designated surveillance area for brucellosis in Wyoming, however it is something that the County should stay apprised of to protect the agricultural industry within the County.

### *Greater Sage-Grouse*

The Greater sage-grouse is a state-managed species that is dependent on sagebrush steppe ecosystems. These ecosystems are managed in partnership across the range of the sage-grouse by federal, state, and local authorities. Efforts to conserve the species and its habitat date back to the 1950s. Over the past two decades, state wildlife agencies, federal agencies, and many others in the range of the species have been collaborating to conserve sage-grouse and its habitat.

BLM has broad responsibilities to manage federal lands and resources for the public benefit. Nearly half of sage-grouse habitat is managed by the BLM. Habitat is managed based on the designation of Priority Habitat or General Habitat. Priority Habitat spans areas that have a high probability of use or are more critical to populations and therefore are managed with higher priority and restrictions than general habitat. General habitat spans areas of isolated habitat with low use (USFS, 2016). Wyoming began sage-grouse management efforts in 2000, forming the Wyoming Sage-Grouse Working Group (WSGWG). In 2003 WGFD released the Wyoming Greater Sage-Grouse Conservation plan, and the 'core area' strategy for population and habitat management was released via executive order in 2008 (later updated in 2011 and 2015). Local working groups were established throughout the early 2000s to facilitate and implement conservation plans for the sage-grouse. There are eight local sage-grouse working groups in the state. Niobrara County spans the Northeast and the Bates Hotel/Shirley Basin working groups. Further information on the projects and meetings for the local working groups can be found here[16] (GFD, 2020; University of Wyoming Extension, 2016; WGFD, 2019).

In September 2015, the USFWS determined that the Greater sage-grouse did not warrant listing under the Endangered Species Act of 1973 (ESA). In its "not warranted" determination, the USFWS based its decision in part on regulatory certainty from the conservation commitments and management actions in the BLM and USFS Greater sage-grouse land use plan amendments (LUPAs) and revisions, as well as on other private, state, and federal conservation efforts. Since 2015 the BLM, in discussion with partners, recognized that several refinements and policy

updates would help strengthen conservation efforts while providing increased economic opportunity to local communities.

The BLM issued its Record of Decision for the Wyoming Greater Sage-Grouse Approved Resource Management Plan Amendment (ARMPA) in March 2019 to update Greater sage-grouse management. This document partially supersedes the 2015 Final Bighorn Resource Management Plan revisions. The 2019 Plan Amendment is currently being litigated in the United States District Court for the District of Idaho and is blocked from implementation under an injunction issued by that court.

The USFS developed standards and guidelines for sage-grouse conservation in 2015. After two years of monitoring, amendments were developed; the new EIS spans Colorado, Idaho, Nevada, Utah, and Wyoming. The FEIS was released in the fall of 2019. Monitoring reports on GRSG populations and habitat within USFS Region 4 are released annually. (USFS, 2020)

In 2019, the Wyoming Governor's Office issued Sage-Grouse Executive Order 2019-3. The Executive Order is the State of Wyoming's primary regulatory mechanism to protect the Greater sage-grouse and its habitat. The order outlines procedures that seek to minimize disturbance and incentivize development outside of designated core population areas. The 2019 Executive order can be found here[17].

Sage-grouse habitat spans approximately two-thirds of the County. There are approximately 147,669 acres of sage-grouse core area, a portion of the Thunder Basin Sage-Grouse Core Area, designated within Niobrara County (Figure 16).

### 6.3.3 Wildlife Resources Resource Management Objectives:

A. Wildlife is managed sustainably using credible data and management plans that are developed in coordination with Niobrara County, Niobrara Conservation District, and other stakeholders.
B. Wildlife species and their habitat are not managed above their legal designation.
C. Hunting, fishing, and outdoor recreation involving wildlife are protected uses within Niobrara County.
D. Non-Endangered Species Act listed wildlife populations are exclusively managed by the Wyoming Game and Fish Department.
E. Niobrara County and Niobrara Conservation District are coordinated with to ensure a sustained harvest of game birds, fish, and mammals, which is beneficial to these game populations.
F. Habitats are maintained and improved to sustain viable and harvestable populations along with a diversity of non-game species without sacrificing forage for range and agricultural interests, further ensuring that wildlife management and habitat objectives reduce and/or avoid conflicts with other multiple uses within Niobrara County.

### 6.3.4 Wildlife Resources Priority Statements:

1. Federal agencies should support wildlife management objectives and numbers based on what the range conditions and habitat can support.

2. Wildlife habitat should be managed for sustainable wildlife populations that consider obligations for livestock grazing and competing resource management objectives.
3. Federal agencies should support reasonable and science-based protection and restoration of critical winter range habitat, while respecting private property and considering the economic effects.
4. Federal agencies should research and provide funding opportunities and compensation to landowners for resource enhancement that benefits wildlife.
5. Niobrara County and Niobrara Conservation District request the inclusion of at least one representative from the County Commissioners and District as cooperating agencies for any decision-making or management decision which may affect wildlife resources in the County.
6. Federal agencies should support mitigation measures when conflicts between wildlife and livestock occur. If reductions in grazing are required, allocations to wildlife and livestock should be reduced proportionately.
7. Niobrara County and Niobrara Conservation District oppose closure or restrictions in traditional winter range areas for livestock permittees and oil and gas operators.
8. Federal agencies should coordinate with Niobrara County, Niobrara Conservation District, and Wyoming Game and Fish Department to ensure that all affected landowners, lessees, and permittees are consulted when developing specific Wildlife Management Plans for the County.
9. Federal agencies should conduct rangeland and forest studies to monitor wildlife relationships to the available habitat and impacts of wildlife on vegetation enhancement projects.
10. Federal agencies should assist in funding cooperative studies with willing private landowners regarding wildlife damage to rangeland resources and related concerns.
11. Federal agencies should coordinate with local, state, and other federal agencies adjacent to the State of Nebraska and in counties adjacent to Niobrara County on plans and regulations regarding wildlife to ensure consistency between all plans.
12. Niobrara County and Niobrara Conservation District encourage cooperation between local, regional, state, and federal governments and private landowners in the management of big game and non-game wildlife species.
13. Federal agencies should promote wildlife management practices that sustain wildlife resources and habitat without measurably degrading other multiple-use activities or private property rights.
14. Niobrara County and Niobrara Conservation District recommend that regulatory agencies adopt bond release criteria for mine reclamation lands based on established criteria for habitat goals.
15. Federal agencies should not release, through introduction or re-introduction, non-domesticated exotic wildlife species.
16. Niobrara County and Niobrara Conservation District oppose the conversion of livestock AUMs to wildlife AUMs.
17. Season-of-use conflicts between livestock and wildlife should be addressed by revisiting the wildlife population objectives and in annual allotment operating pans to provide for maximum flexibility to allow permittees to best utilize forage allocations for livestock.

18. Federal agencies should partner to monitor the fragmentation of wildlife habitat.
19. Niobrara County and Niobrara Conservation District support federal agencies creating a unified (cross-agency) definition for "species of concern."
20. Federal agencies should use credible data as a basis for a decision that a species shall be designated a "species of concern" or "sensitive" beyond criteria provided in their respective handbooks.
21. The management of non-ESA listed species (e.g., species of concern, species of special concern, or any other non-ESA designation) as though they are protected by the rules of the ESA is not supported by Niobrara County and Niobrara Conservation District.
22. Niobrara County and Niobrara Conservation District support the State of Wyoming's Sage-Grouse Conservation Strategy.
23. Management plans shall be generated to protect the overall health of all-natural resources, using multiple-use principles, not specifically managed for one individual species.
24. Federal agencies should provide timely responses when requested by Niobrara County or Niobrara Conservation District for resource concerns, management plans, and other sensitive, candidate, or listed species.
25. Niobrara County and Niobrara Conservation District shall be consulted and coordinated within the continued management of Greater sage-grouse, and any other species for which a single-species management plan is developed.
26. Federal agencies should create management objectives based on the carrying capacity of the habitat including all multiple use mandates (livestock grazing, mineral extraction, etc.) on federal lands.
27. Federal agencies should conduct habitat monitoring efforts and refine available habitat data.
28. Consultation and coordination shall occur with Niobrara County and Niobrara Conservation District where federal monies or resources are committed for the development of management plans, population objectives, wildlife introductions (i.e., bighorn sheep, pronghorn, etc.), or other decisions that may affect the economic viability of the communities within the County.
29. Peer-reviewed science, and/or those data meeting the 'credible data' agency specifications, shall be used in the management of disease spread between native and domestic species, with consultation and coordination of local government.
30. Niobrara County and Niobrara Conservation District shall be consulted and coordinated within the establishment of recovery objectives for species of concern and the development of management actions to delist species of concern.
31. Niobrara County and Niobrara Conservation District support State management of wildlife.
32. Wildlife should be consistently managed according to the State of Wyoming policies and standards, including designated pests on federal lands.
33. Niobrara County and Niobrara Conservation District support research and management of mule deer, white-tail, and elk for reduction of chronic wasting disease, vehicle collisions, and migration corridors.

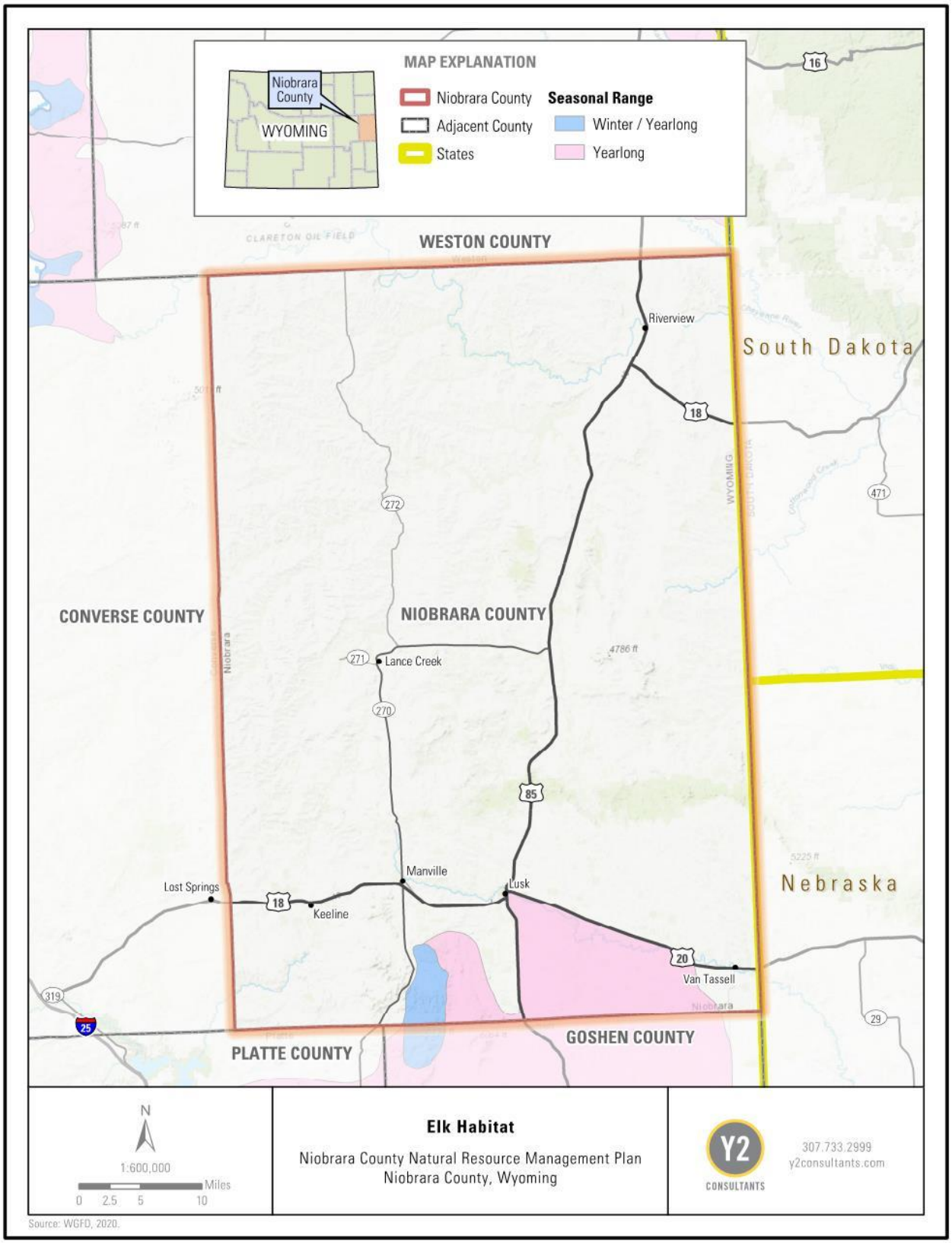



*Figure 12. Elk habitat in Niobrara County.*

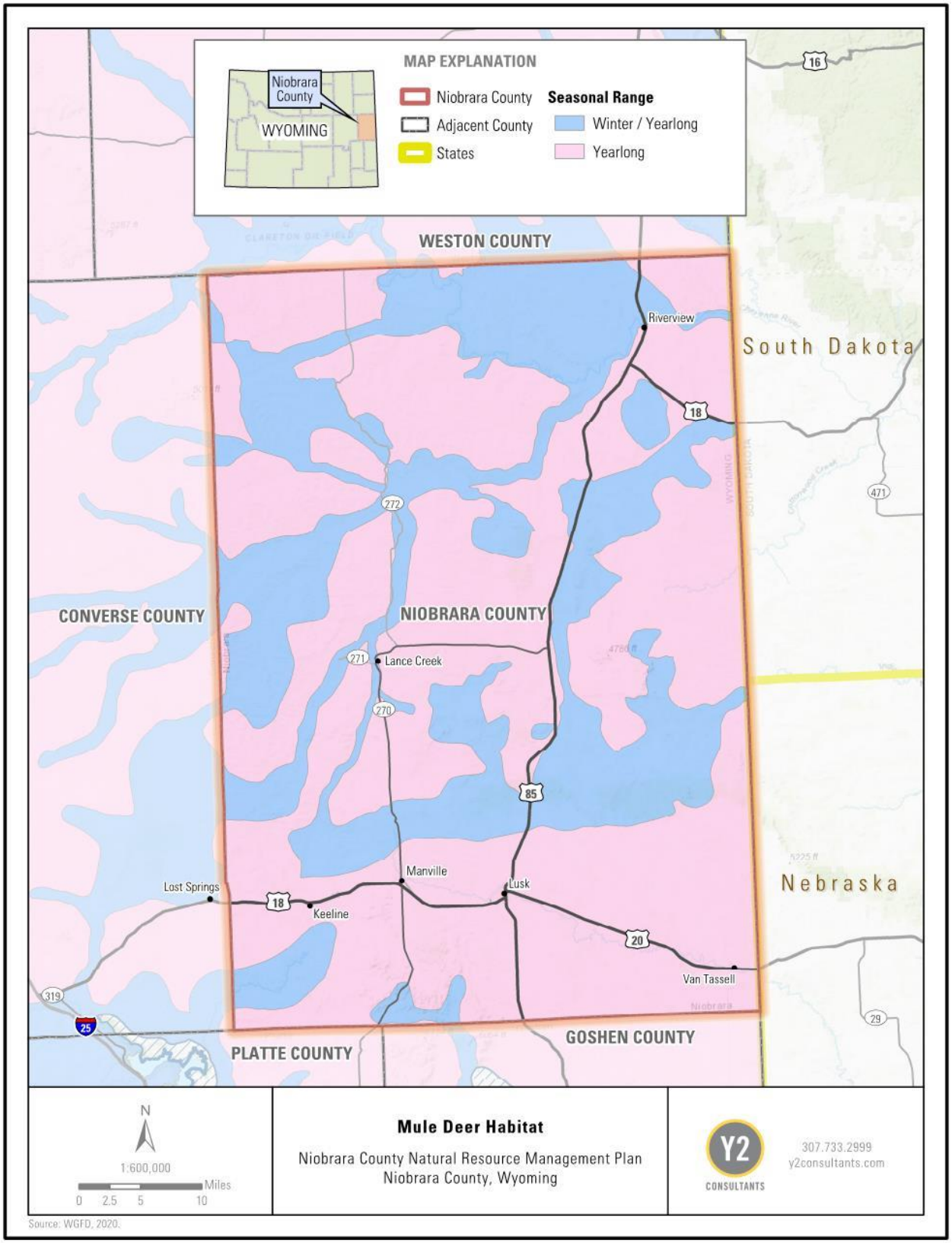



*Figure 13. Mule deer habitat in Niobrara County.*

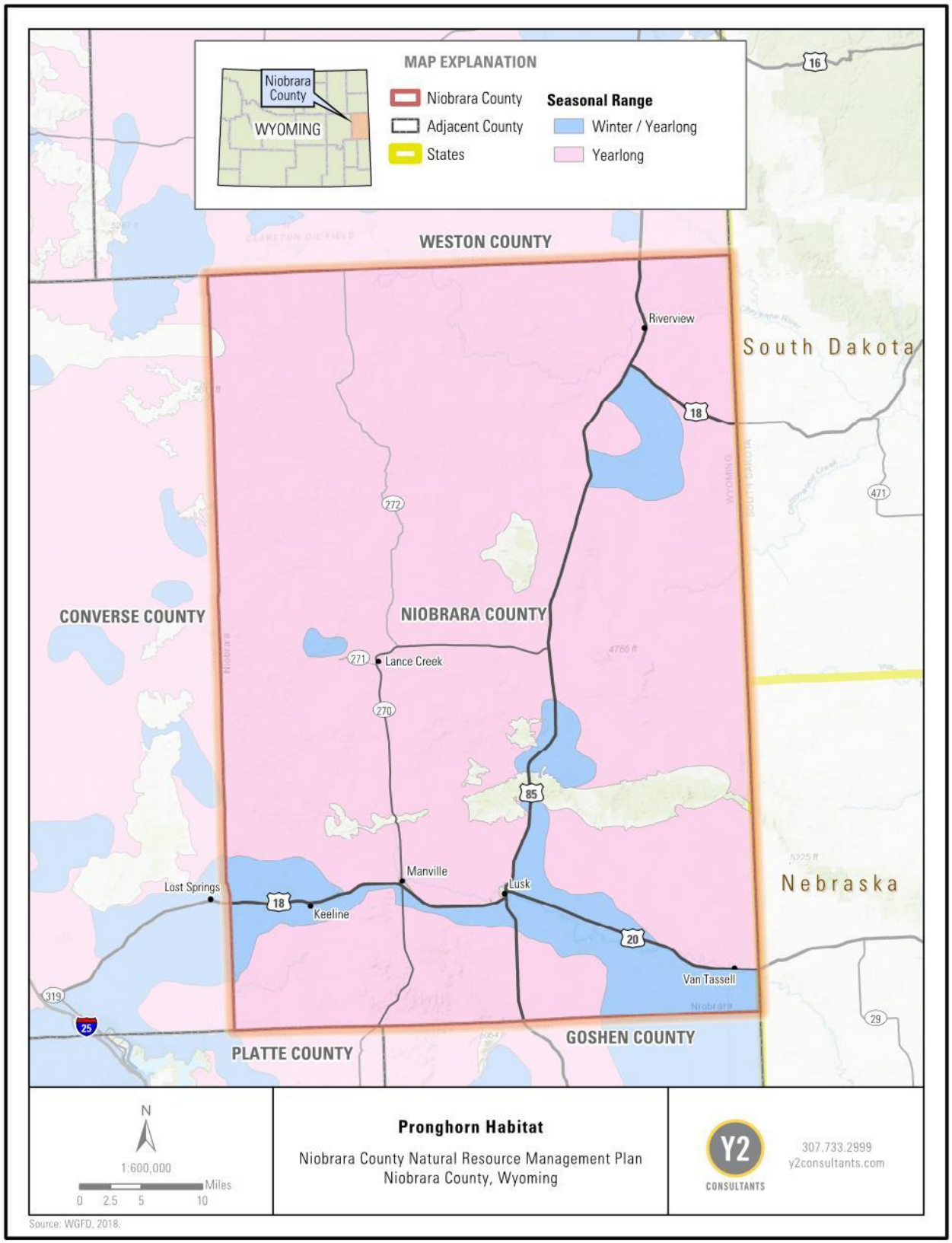



*Figure 14. Pronghorn habitat in Niobrara County.*

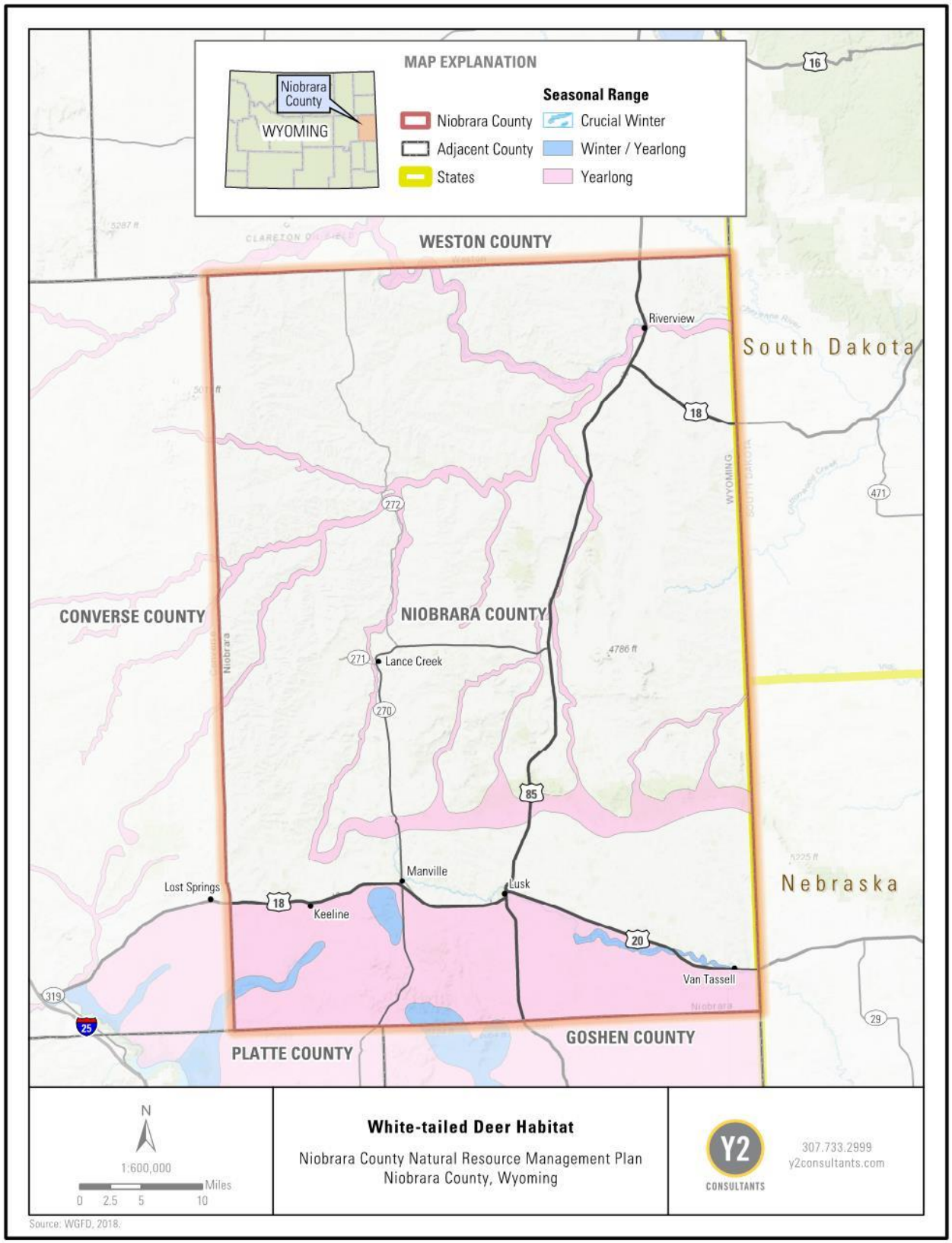



*Figure 15. White-tailed deer habitat in Niobrara County.*

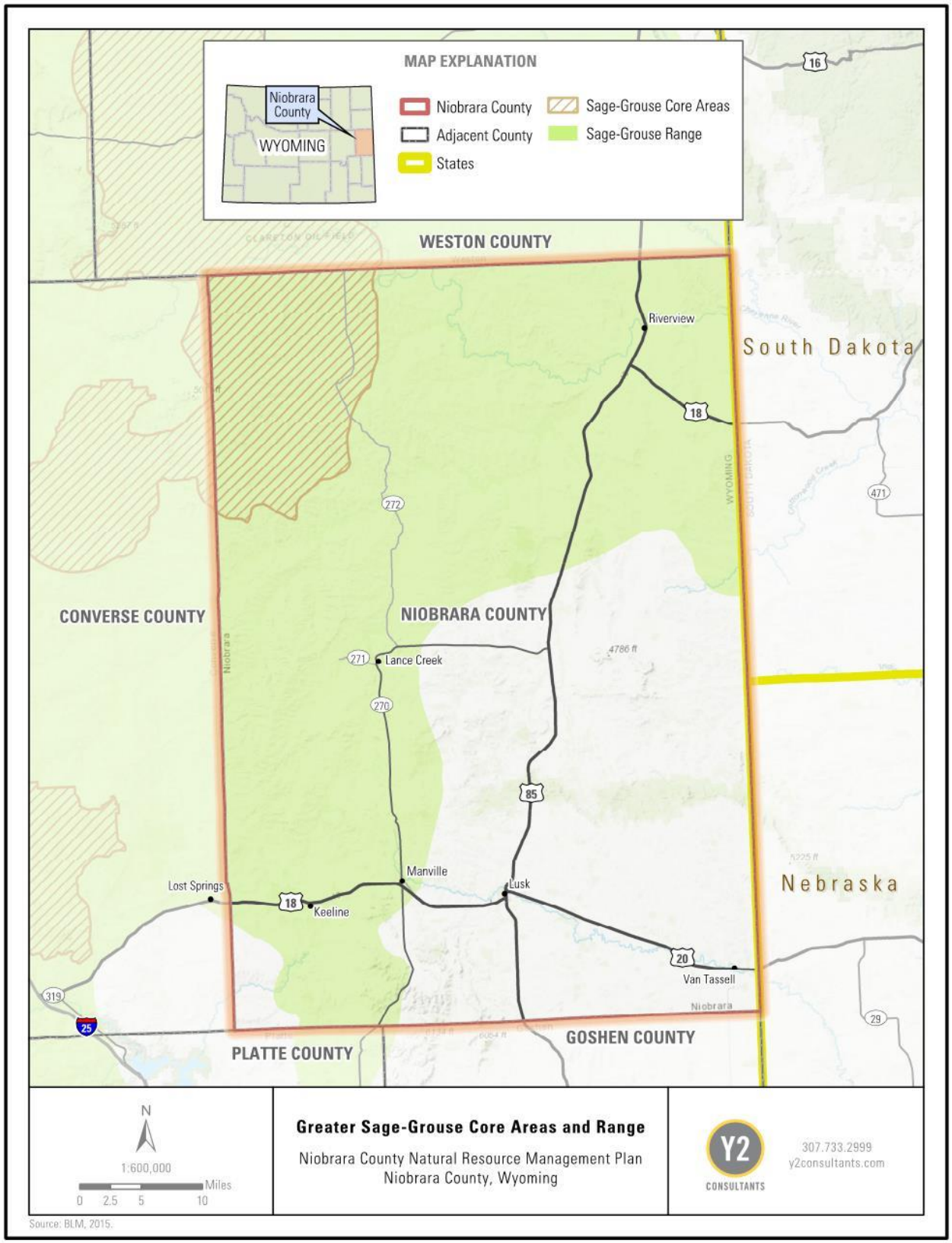



*Figure 16. Greater sage-grouse mapped core area within Niobrara County.*

## 6.4 FISHERIES RESOURCES

### 6.4.1 History, Custom and Culture

The water resources within Niobrara County support minimal fishery resources but contribute to healthy ecosystems and additional fisheries downstream. Fishing in the county primarily occurs in small streams and ponds. Niobrara County is primarily located within the Northeast Wyoming River Basins Plan Final Report, though a small portion of the southwest corner of the County also falls within the Platter River basin. (Wyoming State Geologic Survey, 2020)

### 6.4.2 Resource Assessment

The WGFD manages and monitors fishing activity throughout the state. The State of Wyoming classifies trout streams into five separate designations listed below.

- Blue Ribbon (national importance) - >600 pounds per mile
- Red Ribbon (statewide importance) – 300 to 600 pounds per mile
- Yellow Ribbon (regional importance) – 50 to 300 pounds per mile
- Green Ribbon (local importance) - <50 pounds per mile

There are no current stream classifications by WGFD within Niobrara County. An interactive map of current stream classification can be found here[18].

WGFD develops aquatic management plans for the state. The 2020 Statewide Wildlife Habitat Plan addresses three major goals: to conserve and protect crucial aquatic and terrestrial wildlife habitats, to restore aquatic and terrestrial wildlife habitats, and to conserve, enhance, and protect fish and wildlife migrations. The plan also lays out strategies for managing priority areas. (WGFD, 2020a)

Currently, WFGD has designated 64 Crucial Priority Areas for aquatic habitats throughout Wyoming. These areas are managed or protected to maintain viable and healthy populations of wildlife. Within Niobrara County these designations span the southern portion of the County surrounding Lusk. Refer to Figure 17 for a map of the priority areas within Niobrara County. For more information on Priority Area designations throughout the state refer here[19]. (WGFD, 2015, 2020c)

Productive well-managed watersheds within the County are integral to healthy fishery populations within and downstream of the County.

### 6.4.3 Fisheries Resources Resource Management Objectives:

A. Aquatic resources within Niobrara County are managed for healthy and biodiverse fisheries that support watershed and ecosystem health and resilience.
B. The introduction and control of aquatic invasive species that can cause significant harm to an ecosystem, if introduced, is managed appropriately.

### 6.4.4 Fisheries Resources Priority Statements:

1. Federal agencies should assist in the improvement of irrigation structures to ensure sufficient water flows during critical times for fisheries.
2. Fisheries management plans shall be generated to protect the overall health of all fisheries resources within an area, not specifically managed for one individual fish species.
3. Fisheries management plans will use independent scientific data, peer-reviewed science, and/or those data meeting the 'credible data' agency specifications to generate fisheries plans.
4. Federal agencies should conduct fisheries habitat monitoring efforts and refine available fisheries habitat data.
5. Federal agencies should conduct water quality monitoring before, during, and after all projects that may have impacts on aquatic resources.
6. Federal agencies should support all river restoration, fish passage, and aquatic/riparian area enhancement projects.
7. Niobrara County and Niobrara Conservation District encourage interagency and inter-government enhancement projects.
8. Federal agencies should assist in the promotion of boat inspection locations for the prevention of aquatic invasive species.

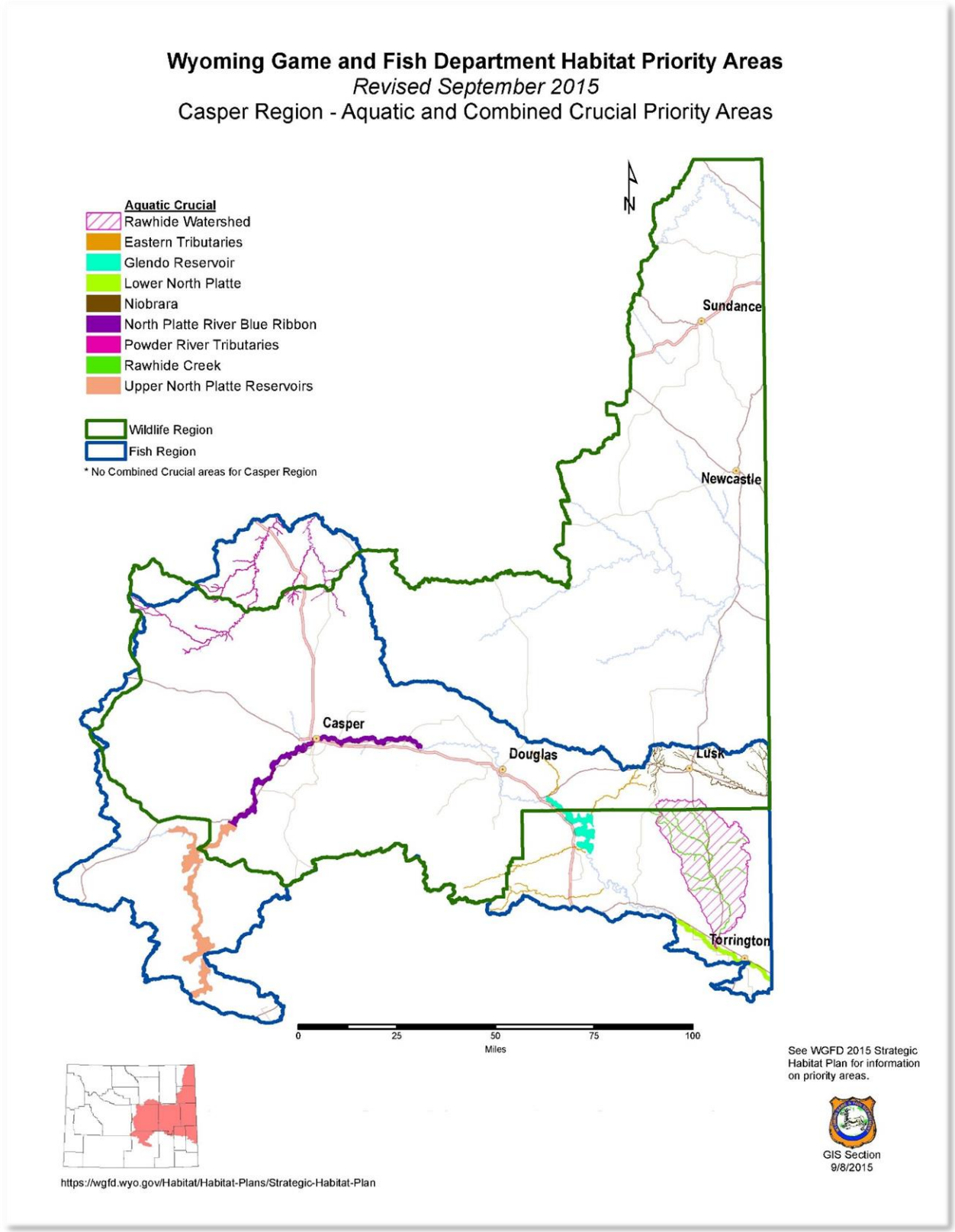



*Figure 17. Aquatic and combined crucial priority areas for the Casper region.*

## 6.5 WILD HORSE AND ESTRAY LIVESTOCK

### 6.5.1 History, Custom, and Culture

***Wild Horses***

The Wild-Free Roaming Horses and Burros Act (WFRHBA) was passed by Congress in 1971 and declared wild horses and burros to be "living symbols of the historic and pioneer spirit of the West" (16 U.S.C. § 1331). The law requires the BLM and USFS to manage and protect herds in their jurisdiction in areas where wild horses and burros were found roaming in 1971. Under WFRHBA, "wild free-roaming horses and burros" on BLM land are under the Secretary of the Interior's jurisdiction for the purpose of management (16 U.S.C. § 1333(a)). The act requires that the Secretary and BLM must inventory and determine appropriate management levels (AMLs) of wild horses and burros, determine if overpopulation exists, and "shall immediately remove excess animals from the range so as to achieve AMLs" (16 U.S.C. §§ 1333(b) (1) and (2) and 43 C.F.R. § 4720.1). "Excess animals" are defined as those that must be removed in order to preserve and maintain a thriving natural ecological balance and to preserve the "multiple use relationships" in an area. *See* 16 U.S.C. § 1332 (f). When the WFRHBA was passaged the BLM's population survey methods indicated a population of 17,300 wild horses and 8,045 burros, as compared to the 2020 estimated populations of 79,568 horses and 15,546 burros. (BLM, n.d.-b)

The removal of wild horses from public rangelands is carried out to ensure rangeland health in accordance with land-use plans that are developed in an open, public process. These land-use plans are how the BLM carries out its core mission, which is to manage the land for multiple uses while protecting the land's resources. Livestock grazing on BLM-managed land has declined by about 29% (12.2 million Animal Unit Months (AUMs) to 8.7 million AUMs in Fiscal Year 2019) since 1971 when the WFRHBA was passed. (BLM, n.d.-b)

Wild horses, as they are now perceived, are not native to America's rangelands; they are feral animals. Their vulnerability to predators is limited and their population growth rate is high. BLM estimates the growth rate of the wild horse population to be 20 percent annually.

According to the Tenth Circuit, the BLM must make two determinations before the BLM's duty to remove excess animals is triggered. *Wyoming v. United States Department of the Interior,* 839 F.3d 938 (10th Cir. 2016). The first determination is that an overpopulation exists in a given area of the public lands. *Id.* at 944. This is shown when an area exceeds its AMLs as discussed above. The second determination is that "action is necessary to remove excess animals." *Id.* If a determination has not been made by the agency that an action is necessary, then the agency does not have a duty to remove those excess horses. *Id.*

Although there is no federal statute requiring private landowners to allow wild horses to graze on their private lands, private landowners cannot remove the horses; the BLM must be notified of any trespass horses. The WFRHBA mandates that the BLM, once notified, must "immediately" remove trespass wild horses from state and private land.

There are no wild horse areas on USFS lands in Wyoming, but there are several on BLM lands.

### 6.5.2 Resource Assessment and Legal Framework

***Herd Areas (HAs)***

Herd areas are areas in which wild horses and burros were found in 1971 and are the only areas BLM may manage horses by law. Herd areas are not currently managed for equines by the BLM, but some may have feral horses or burros. There are no HAs within Niobrara County (BLM, 2011, 2020b)

***Herd Management Areas (HMAs)***

Herd management areas (HMAs) are the areas selected within each herd area that were evaluated by BLM to have adequate food, water, cover, and space to sustain healthy and diverse "wild" horse and burro populations over the long term and were calculated using geographical information system (GIS). (National Horse & Burro Rangeland Management Coalition, 2015)

Herd management areas (HMAs) are lands under the supervision of the BLM that are managed for the primary but not exclusive benefit of free-roaming wild horses and burros. There are 16 wild horse HMAs covering nearly five million acres of the state of Wyoming. There are no HMAs within Niobrara County. (BLM, n.d.-c)

***Estray***

"Estray" means any animal found running at large upon public or private lands, fenced or unfenced, in Wyoming whose owner is unknown, whose owner cannot be found, or that is branded with two or more disputed brands for which neither party holds a bill of sale. An estray includes any animal for which there is no sufficient proof of ownership found upon inspection (Wyo. Stat. § 11-24-101 through 11-24-115).

### 6.5.3 Wild Horse and Estray Livestock Resource Management Objectives:

A. No Herd Management Areas or Herd Areas will be designated or created in Niobrara County.
B. Niobrara County and Niobrara Conservation District will be notified and coordinated with if there are any intentions to designate or create Herd Management Areas or Herd Areas in the County.
C. Any estray livestock from public or private lands are immediately gathered and removed per Wyo. Stat. § 11-24-101.

### 6.5.4 Wild Horse and Estray Livestock Priority Statements:

1. Federal agencies should notify and coordinate with Niobrara County and Niobrara Conservation District if there are any intentions to designate or create Herd Management Areas or Herd Areas within the County.
2. Niobrara County opposes any proposed creation, enlargement, or expansion of the current herd management area (HMA) or herd area (HA) boundaries and the designation of any additional new HMAs or HAs within the County.
3. Any equine animal released from private individuals, tribes, or neighboring lands onto public lands after 1971 shall be considered as estray and be removed immediately.

# CHAPTER 7: ECONOMICS & SOCIETY

## 7.1 TOURISM AND RECREATION ON PUBLIC LANDS

### 7.1.1 History, Custom, and Culture

The history behind Niobrara County leads many to visit. The county seat of Lusk is a trading center for the farming, ranching, and oil and gas production district. South of Lusk, Native Americans obtained paint materials from the red-colored cliffs. The Cheyenne and Black Hills Stage Line route ran through this area and to the east is a marker showing a segment of the Texas Trail.

Niobrara County offers a variety of recreational opportunities, many of which generate revenue for the local economy. In 2019, tourism to Niobrara County earned $3.6 million and employed 120 people (Dean Runyan Associates, 2020). Recreationalists enjoy access to activities on public lands in Niobrara County but are expected to demonstrate ethical behavior that respects and maintains the sustainability of the County's natural resources. There is no charge for some of these activities and, consequently, the costs to provide these services are picked up by local taxpayers.

### 7.1.2 Resource Assessment and Legal Framework

Niobrara County has a wide array of recreational and tourism opportunities for residents and visitors. Visitors to these areas have a direct impact by drawing on county-provided infrastructure such as law enforcement, emergency medical, and waste disposal services and have a major impact on the area economy and tax base. Store owners, restaurants, hotels and motels, outfitters, and many more interests depend on seasonal recreation and tourism for their livelihoods. Activities that traditionally define recreation and tourism in the County, include, but are not limited to big game hunting, trapping, fishing, off-road vehicle use, mountain biking, hiking, camping, bird and wildlife watching. Outdoor recreation can occur in all four seasons.

One of the biggest events of the year in Niobrara County is the Legend of Rawhide which is an outdoor show of western history that includes a pageant with covered wagons, uniformed cavalry troops, and Sioux Indian Nation performers. The Legend of Rawhide is a fast-paced, live reenactment of a story that allegedly took place just south of Lusk. The Legend is based on an episode that occurred during the settlement of the west. The story is about Clyde Pickett, who falls in love with Kate Farley. Clyde hates Native Americans and vows to kill the first one he sees to impress Kate. The festival started in 1946, after the war. Niobrara County was not in a great economic

state and wanted to improve the county fairgrounds. The idea was to put on a show reenacting the battle and it became a huge success that still occurs today. The show is action-packed with mounted calvary, Native Americans, and a wagon train. The reenactment involves over 200 volunteer actors. (Simmons, 2017)

***Land and Water Conservation Fund***

The Land and Water Conservation Fund (LWCF) Act of 1964 was permanently reauthorized in March 2019 and "…supports the protection of federal public lands and waters – including national parks, forests, wildlife refuges, and recreation areas – and voluntary conservation on private land. LWCF investments secure public access, improve recreational opportunities, and preserve ecosystem benefits for local communities." (US Department of the Interior, 2015) The Great American Outdoors Act, signed in August 2020, secured permanent funding for the LWCF. Through the FAST Act, the Recreational Trails Program (RTP) was reauthorized and "provides funds to the States to develop and maintain recreational trails and trail-related facilities for both nonmotorized and motorized recreational trail uses." (Office of Federal Lands Highway, 2018). The LWCF and RTP can be reliable sources of funding through grants and loans.

### 7.1.3 Tourism and Recreation Resource Management Objectives:

A. Recreational resources are managed to promote access and availability to the public for both tourism and recreational uses, while maintaining benefit to Niobrara County's economy across important industries including agriculture and mineral development.
B. New and current recreational activities are developed and protected to benefit Niobrara County's economy.
C. Polices are implemented that will evaluate the viability and impacts of various recreation opportunities, while ensuring protection of other resources and resource use within Niobrara County.

### 7.1.4 Tourism and Recreation Priority Statements:

1. Niobrara County shall be notified and given the opportunity to participate as a cooperating agency at the earliest time possible for proposed federal agency actions or decisions affecting recreational and tourism opportunities in Niobrara County.
2. Federal agencies shall notify and provide opportunity for Niobrara County to participate at the earliest time possible in any proposed decision to close recreation areas on public lands.
3. Federal agencies should support access to recreational opportunities on public lands within Niobrara County.
4. Federal agencies are encouraged to promote responsible tourism through educational outreach that explains the historical significance of areas, sites, and roads.
5. Niobrara County and Niobrara Conservation District support and encourage a year-round multiple use management approach for use on public lands as a means of continuing and enhancing recreation opportunities within the County while supporting other approved uses and associated private land rights.

6. Federal agencies should coordinate with Niobrara County and Niobrara Conservation District when implementing land use fees and/or fee increases, or the creation of new fees for the recreational use of federal lands or State Parks within the County.
7. Federal agencies should support improved accessibility, maintenance, and development of motorized and non-motorized trails to facilitate recreation and access to natural resources for residents and visitors, in coordination with adjacent landowners.
8. Federal agencies should coordinate and consult with Niobrara County and Niobrara Conservation District to manage tourist and recreational activities based on the ability of natural resources to sustainably handle the level of impact.
9. Federal agencies should coordinate and consult with Niobrara County and Niobrara Conservation District to minimize the impact from dispersed camping, especially in riparian areas.
10. Federal agencies should coordinate with Niobrara County and Niobrara Conservation District when new special recreation permits are requested.
11. Federal agencies should coordinate with Niobrara County and Niobrara Conservation District to actively manage recreation uses to ensure resource protection.
12. Federal agencies should encourage a broad spectrum of public land recreational opportunities in Niobrara County.
13. Federal agencies should encourage recreational activities that enhance opportunities for economic development and maintain the custom and culture of Niobrara County.
14. Federal agencies should encourage recreational activities on the lands in Niobrara County that increase the capacity for federal and state land resources to provide more economic return to the County.
15. Federal agencies should encourage implementation of plans and programs that provide a balance of motorized and non-motorized recreational opportunities in Niobrara County.
16. Federal agencies should support recreation in the management of state and federal lands that are consistent with the multiple uses of these lands, and to promote the continuation of historical access on state and federal lands, unless roads and/or use are damaging to the land or wildlife resources.
17. Niobrara County supports the Bureau of Land Management's Tread Lightly program as part of efforts to conserve soil resources.
18. Unless otherwise approved by Niobrara County and the Niobrara Conservation District, federal agencies should not favor one type of recreation to the exclusion of others.

## 7.2 CULTURAL, HISTORICAL, GEOLOGICAL, & PALEONTOLOGICAL RESOURCES

### 7.2.1 History, Custom, and Culture

Niobrara County contains many special features, which due to their remote and rugged nature, are largely self-protected. Most archeological sites found in the County are open-lithic scatters with a few tools and flakes not likely to be noticed by the general public.

### 7.2.2 Resource Assessment and Legal Framework

Niobrara County offers a unique expression of human occupation which can be divided into two categories: prehistoric and historic. Included in the prehistoric resources are game and Indian trails, individual tepee rings, petroglyphs, camp and chipping sites, and game traps.

Historic sites add further evidence of Niobrara County's long and significant history. They include cemeteries, stage station sites, ghost towns, and rock quarrying sites. Niobrara County's traditional lifestyle has centered on agricultural pursuits and resource-based industries for generations. Preservation of remaining historic sites is important to maintain and preserve the cultures of historic and present Niobrara County. Historic preservation of property enhances economic values and provides the basis for heritage tourism.

***Historic and Archeological Resources***

Many historical and cultural resources are sensitive and protected by law. Two acts primarily protect these historic and archeological resources. The Archeological Resources Protection Act (ARPA) and the National Historic Preservation Act (NHPA).

The ARPA was passed in 1979 and provides regulations on the management of historic sites on federal land and the issuance of permits to excavate archeological discoveries.

The NHPA was passed in 1966 and authorizes the Secretary of the Interior to maintain and expand a National Register of Historic Places. This act established policy for the protection and preservation of sites (e.g., districts, buildings, structures, and objects) that are placed on the National Register of Historic Places. The National Register of Historic Places is managed by the National Park Service. Under NHPA, federal agencies are required to evaluate the effects of actions on any designated 'historic properties' and follow the regulations set by the Advisory Council on Historic Preservation (ACHP) (36 C.F.R. § 800). (National Preservation Institute, 2020)

For listing in the National Register, a property or site typically must be at least 50 years old and have historic significance within one or more of the four criteria for evaluation. The criteria relate to a property's association with important events, people, design or construction, or information potential. The National Register criteria recognize these values embodied in buildings, structures, districts, sites, and objects. The four criteria include properties or sites:

1) That are associated with events that have made a significant contribution to the broad patterns of our history; or
2) That are associated with the lives of persons significant in our past; or

3) That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
4) That have yielded or may be likely to yield, information important in prehistory or history. (Wyoming SHPO, n.d.)

The Secretary of the Interior has the ultimate decision-making authority when deciding whether a site is listed in the National Register. However, local governments, including counties, can significantly influence the process. Local governments certified by the State Historic Preservation Officer (SHPO) are entitled to prepare a report stating whether a site nominated in its jurisdiction is, in its opinion, eligible for listing in the National Historic Register (see NHPA Section 101(c).

Perhaps most influential on federal actions, Section 106 of the NHPA grants legal status to historic preservation in federal planning, decision making, and project execution. Section 106 applies when two thresholds are met:

1) There is a federal or federally licensed action, including grants, licenses, and permits; and
2) That action has the potential to affect properties listed in or eligible for listing in the National Register of Historic Places.

Section 106 requires all federal agencies to consider the effects of their actions on historic properties. The responsible federal agency must consult with appropriate state and local officials, Indigenous tribes, applicants for federal assistance, and members of the public to consider their views and concerns about historic preservation issues when making final project decisions.

Although all agencies must follow the NHPA when it has a degree of control over a project, the NHPA does not impose general obligations on federal agencies to affirmatively protect preservation interests. *Waterford Citizens' Ass'n v. Reilly,* 970 F.2d 1287, 1291 (4th Cir. 1992). Rather, the NHPA only requires that federal agencies keep the Advisory Council informed of the effect of federal undertakings and allow the Committee to make suggestions to mitigate adverse impacts on the historic sites under its protection. *Id*. In turn, the NHPA ultimately was created to discourage federal agencies from "ignoring preservation values in projects they initiate, approve funds for, or otherwise control." *Id*.

Effects are resolved by mutual agreement, usually among the affected state's SHPO or the Tribal Historic Preservation Officer, the federal agency, and any other involved parties. The ACHP may participate in controversial or precedent-setting situations.

In 2014 the NHPA was amended, and the codified law was moved from Title 16 to Title 54 and retitled the Historic Preservation Act. However, the substance of the act remained the same, including the listing criteria for placement of sites in the National Historic Register and the requirements under Section 106.

Currently, Niobrara County has six sites listed in the National Register (Wyoming SHPO, n.d.). Those sites are:

- Agate Basin Site (Private Land)
- Bridge over Cheyenne River
- C and H Refinery Historic District (Private Land)
- Cheyenne-Black Hills Stage Route Historic District
- Ferdinand Branstetter Post No. 1, American Legion
- Lusk Water Tower

Further information on these sites can be found here[20].

The Archaeological Resources Protection Act (ARPA) of 1979 provides regulations on the management of historic sites on federal land and the issuance of permits to excavate archeological discoveries.

The Spanish Diggings is an extensive landscape of pre-historic quarries named for an expedition from New Mexican in the 1600s. Numerous chert and quartzite quarries and Native American habitations cover an area from roughly Manville, on the north, to Guernsey, on the south, to the North Platte River, on the west, and Highway 85, on the east. The exact history of the quarries is not known, and the area has never been fully surveyed or evaluated for cultural resources as a landscape. There have been multiple formal investigations of individual quarries directed toward the discovery of artifacts for museums and study. George A. Dorsey, the curator of the Anthropology department at the Field Museum in Chicago, is well known for his investigations in the early 1900s.

The BLM- Newcastle Field Office hired Alpine Archeological Consultants, Inc. to survey the Spanish Diggings landscape in 2015. The survey spanned over 1,800 acres, including 83% private property. The survey recorded evidence of five major lithic procurement sites within the landscape including the Adele Quarry system, the Black Agate Quarry area, the M. H. Everett Quarry/Manville Quarries District, and the Spanish Diggings periphery. While further research is needed to understand the pre-historic use of this landscape, the 2015 survey provided important groundwork in identifying areas where additional information is needed. (Wyoming State Archeology Office, 2016)

### *Paleontological Resources*

There are multiple paleontological resources within Niobrara County. The largest known resource is the Cretaceous Lance Creek Formation, where hundreds of *Triceratops* fossils have been found including at least one hundred skulls. The *Triceratops* genus was defined in 1889 using materials pulled from this formation within the County and new discoveries continue to be made due to finds in this area. The Pierre Shale Formation is exposed north of Lusk and is known for its marine fossils. This formation has produced numerous fish skeletons as well as a new species of Plesiosaur. Additional formations in the area include the Fox Hills and Cody Formations (quarried near Glenrock), the Morrison Formation, and the White River Formation (quarried near Douglas). (Clearinghouse, n.d.; Paleon Foundation, 2019)

The Paleon, a museum in Glenrock to the west of Niobrara County, collects fossils from several established quarries on both private and public land in the surrounding area of Wyoming. The Paleon also acts as an educational and tourist location, hosting digs for 'paleo-vacationers' (Paleon Foundation, 2019). Fossils are considered the property of the property owner of the site the fossil was found. For this reason, when there is a substantial find the paleontology museum and/or foundation will often draft up legal paperwork agreeing to recover and preserve the fossil in exchange for the specimen to then be donated to the museum. On public land paperwork must be filed with the managing agency prior to recovery (Paleon Foundation, 2019). Paleo Park is an example of paleontological resources present in northern Niobrara County. Paleo Park provides tours and fossil prospecting opportunities along the exposed Lance Creek Formation for those that come to visit the ranch. In addition to the many fossils displayed at the ranch lodge, there have been several large finds, including two near-complete *Triceratops* specimens, that have been donated to museums. All fossils found at Paleo Park belong to the owners of the Zerbst Ranch, however, as part of the tour, they allow visitors to take some of their finds home (*History of Paleo Park*, n.d.).

The Paleontological Resource Preservation Act (PRPA) was enacted in 2009, directing multiple federal agencies to establish comprehensive management plans for paleontological resources. PRPA applies to the USFS, BLM, BOR, NPS, and the USFWS. For information concerning each agency's plan regarding paleontological resources refer to their websites below. (Bureau of Land Management, 2016b; National Park Service, 2020)

- Forest Service, fossils and paleontology[21]
- Bureau of Reclamation, fossil resources[22]
- U.S. Fish and Wildlife Service, historic preservation[23]
- Bureau of Land Management, paleontology[24]
- National Park Service, fossils and paleontology[25]

Fossils on public lands are managed according to internal BLM guidance and manuals. BLM Manual 8270 and the BLM Handbook H-8270-1 contain the BLM's policy and guidance for the management of paleontological resources on public land. The manual presents information on the authorities and regulations related to paleontological resources. The handbook gives procedures for permit issuance, requirements for qualified applicants, and information on paleontology and planning. Important guidance for the protection of paleontological resources on BLM managed land is contained in IM 2009-011 which provides guidelines for the assessment and mitigation of impacts to paleontological resources. Other BLM IMs include WO-IM-2012 140 and 141. Federal legislative protection for paleontological resources stems from the Antiquities Act of 1906 (P.L. 59-209; 16 USC 431 et seq.; 34 Stat. 225), which calls for the protection of historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest on federally administered lands. Federal protection for scientifically important paleontological resources would apply to construction or other related project impacts that would occur on federally owned or managed lands. This act provides for funding of mitigation of paleontological resources discovered during federal-aid highway projects, provided that "excavated objects and

information are to be used for public purposes without private gain to any individual or organization."

### 7.2.3 Cultural Resources Resource Management Objectives:

A. Cultural, historical, geological, and paleontological resources are preserved and protected for current and future public education and enjoyment in Niobrara County.
B. Existing property rights are considered when managing cultural, historical, geological, and paleontological resources.
C. Niobrara County and Niobrara Conservation District are coordinated with concerning the designation and management of all cultural, historical, geological, and paleontological resources.
D. Rights-of-ways are maintained for access to cultural, historical, geological, and paleontological resources in Niobrara County.

### 7.2.4 Cultural Resources Priority Statements:

1. Federal agencies should cooperate with state and federal authorities in identifying significant cultural resources in Niobrara County and evaluate the significance of proposed land use actions and their impact on cultural resources.
2. All federal agencies should communicate with Niobrara County and Niobrara Conservation District on known or potential significant cultural resources within the County and allow the County and District to participate in the management and protection of the resource.
3. Niobrara County and Niobrara Conservation District support and encourage making significant local cultural resources available for research and education, and strongly urges the protection of those cultural resources.
4. Niobrara County and Niobrara Conservation District do not support excessive buffer zones around historical and cultural resources. Buffer zones should be determined on a case-by-case basis and should not exceed one-quarter mile in width in most circumstances.
5. Niobrara County and Niobrara Conservation District support private property rights as paramount for cultural, historical, geological, and paleontological resources thought to be on private lands.
6. Niobrara County and Niobrara Conservation District require a full analysis by the federal agencies on the impact each proposed decision or federal action will have on the local economy. If it is determined that the decision will have significant negative impact on the local economy, the alternative/decision is not supported.
7. Federal agencies should support expansion of opportunities for scientific study, education, and interpretive uses of cultural and paleontological resources.
8. Niobrara County and Niobrara Conservation District support responsible stewardship on cultural sites on federal lands balancing resource protection with multiple uses.
9. Federal agencies should balance the protection of cultural sites on federal land and current and future land uses dictated by custom and culture.
10. Niobrara County and Niobrara Conservation District recommend that local, state, and federal agencies not jeopardize existing land uses, such as oil and gas exploration, mining,

road maintenance, grazing, and recreation through the protection of cultural and archeological sites.

11. Niobrara County and Niobrara Conservation District request to be recognized by federal agencies as a consulting party under Section 106 of the National Historic Preservation Act and subsequent amendment whenever changes are considered that may affect Niobrara County and its citizens.
12. Sites eligible for or listed on the National Register of Historic Places should be managed to ensure against adverse effects through proper mitigation if disturbance or destruction is not avoidable.
13. Federal agencies should support development including roads, pipelines, and powerlines that may cross trails in areas where previous disturbance has occurred and/or where the trail segment has lost the characteristics that contribute to its National Register significance.
14. Niobrara County and Niobrara Conservation District oppose historical trail management of roads that are used by the public and were established by public use.

## 7.3 LAW ENFORCEMENT AND EMERGENCY RESPONSE

### 7.3.1 History, Custom, and Culture

Law enforcement is critically important to the citizens of Niobrara County. Law enforcement includes the Sheriff's Department, Lusk Police Department, emergency services, and search and rescue. The Wyoming Livestock Board partners with the Niobrara County Sheriff's Department to aid in cases that transcend County and state boundaries. In general, cases regarding livestock theft are prosecuted through the County attorney's office.

### 7.3.2 Resource Assessment and Legal Framework

***Law Enforcement***

Law enforcement is critically important to the citizens of Niobrara County. Law enforcement in Niobrara County includes actions on both public and private lands. Public lands within Niobrara County are subject to law enforcement coordination when issues related to natural resource management and public lands arise, such as livestock theft or search and rescue operations. State law enforcement officials operating in Niobrara County include Wyoming Highway Patrol, Wyoming Livestock Board, Wyoming Game and Fish Department Game Wardens, Wyoming Department of Criminal Investigation, and State Park Rangers. Federal law enforcement officials operating in Niobrara County include BLM, USFWS, USFS, U.S. Marshals, and the EPA. As the use of public lands has increased, so has the need for law enforcement and coordination of federal law enforcement agents with the County Sheriff. The Niobrara County sheriff's office has MOUs with both the BLM and USFS to clearly lay out the roles, responsibilities, and coordination of these federal agencies with the County in law enforcement situations.

The Property Clause of the United States Constitution sets out the jurisdictional powers of state, local, and federal law enforcement officers on federal lands. Generally, federal lands have either proprietary or concurrent jurisdiction, meaning that local law enforcement is either the exclusive law enforcement agency in the area or that both local law enforcement and federal agency law enforcement share jurisdiction together to enforce laws on federal lands. Other federal lands,

such as post offices or military bases have exclusive jurisdiction, and only the federal government may enforce federal laws within those areas (United States Constitution Article IV, Section 3, Clause 2). The Assimilative Crimes Act allows federal law enforcement agencies who lack an appropriate federal charge to use an appropriate state law in federal court whenever necessary (18 U.S.C. § 13).

FLPMA gives the BLM authority to retain BLM law enforcement officers who enforce federal law within BLM jurisdiction. Those officers have the authority to enforce federal laws but do not have the authority to enforce state laws without written authorization from the local law enforcement agency in charge. FLPMA and the BLM's regulations specifically give BLM law enforcement officers traditional police powers such as enforcing federal laws, carrying firearms, serving search warrants, making arrests with or without a warrant, and conducting searches of places or people with or without a warrant in accordance with applicable laws and seizing evidence. (BLM, n.d.-a)

NFMA gives the USFS similar law enforcement authority. USFS law enforcement officers also have the authority to enforce federal laws and regulations within the national forests, but not state laws. Many of the USFS law enforcement regulations can be found in 36 C.F.R. Part 261. Their primary responsibility is "the protection of natural resources, protection of Forest Service employees and the protection of visitors." (USFS, n.d.-b)

The Wyoming Livestock Board is responsible for the protection of livestock interests in the State from disease and theft. Seven members are appointed by the Governor and approved by the Senate for six-year terms. The State is divided into "appointment districts" as set by the Legislature. The Livestock Board Law Enforcement have several benefits that help with law enforcement regarding livestock in the county. These include:

- They are livestock law specialist.
- They can conduct casework across county lines.
- They collaborate with other states livestock investigators.
- They partner with county Sheriff Departments on cases
- They provide training for other state law enforcement agencies.

### *Emergency Management*

#### *Natural Disasters*

When a natural disaster is declared, the Federal Government, led by FEMA, responds at the request of and in support of States, Tribes, Territories, and Insular Areas, and local jurisdictions impacted by a disaster. FEMA coordinates the federal government's role in preparing for, preventing, mitigating the effects of, responding to, and recovering from natural disasters. (Federal Register, n.d.)

In 2018, the Wyoming Region 2 (Converse, Natrona, and Niobrara counties) Hazard Mitigation Plan[3] was updated. The plan assesses risk potential for different hazards including avalanche, drought, earthquake, flooding, geologic, severe thunderstorms (hail, lightning), tornado,

wildland fire, wind/windblown deposits, winter storm/blizzards, communicable and infectious disease, dam failure, hazardous material release, and terrorism. The plan also ranks communities for each identified hazard.

### *Search and Rescue*

Wyoming law requires the Sheriff of each county to maintain a search and rescue (SAR) team. Search and Rescue (SAR) is defined as the employment, coordination, and utilization of available resources and personnel in relieving distress, preserving life, and removing survivors from the site of a disaster, emergency, or hazard to safety in case of lost, stranded, entrapped, or injured people. The Wyoming Office of Homeland Security serves as the account manager for SAR programs and operates using guidance from Wyo. Stat. 19, Chapter 13, Article 3, and the Wyoming Search and Rescue Council. The Wyoming Search and Rescue Council was established to assist Wyoming sheriffs, who are charged by state statute to conduct SAR operations. Council members are appointed by the governor.

### *Fire*

Wildland fire within Niobrara County is discussed in Section 3.4 Wildfire Management. Niobrara County has a county fire warden and there are two fire departments throughout the County.

- Lusk Fire Department
- Niobrara County Rural Fire District

### *Floods*

Flood and floodplain management are important to the safety, economy, and ecological health of Niobrara County. Flooding is a significant natural hazard within the state of Wyoming and can cause significant damage. From 1905 to 2015 there have been an estimated $1.46 billion in damages across Wyoming from flood damage (University of Wyoming, n.d.). Between 1960 and 2015, Niobrara County experienced 4 flood events which incurred $1.9 million in property damage. In June 2015, flash flooding in Niobrara County damaged homes, businesses, and a highway bridge in Lusk and surrounding areas. Heavy rains over a short period of time sent the Niobrara River over its banks and down the main street of Lusk. The flooding closed major roads in and out of Lusk, including about 130 miles of U.S. 85 from Lingle to Newcastle and U.S. 18-20 from Orin Junction to the Nebraska state line. (Wyoming Office of Homeland Security, n.d.).
The major sources of flooding in Niobrara County are the Niobrara River in the south and the Cheyenne River in the north. Numerous creeks and streams feed into these rivers including the Bergreen Creek, which drains into the Niobrara River, and Lance Creek, Lightning Creek, Twenty Mile Creek, and Black Thunder Creek which all drain into the Cheyenne River. Muddy Creek, located in the southwest corner of the County, drains into Glendo Reservoir, in Platte County.

According to the National Flood Insurance Program (NFIP) Community Status Book, Niobrara County has not been mapped since June of 2015. The only participating community is the town of Lusk, which has current effective Flood Insurance Rate Map dated March 19, 1986. The map shows only approximate Zone A and Zone C. No detailed elevations of the 100-year floodplain are provided. According to FEMA records, as of March 2015, there are no floodplain insurance

policies in place in the County. Further information on flooding and flood resources in Niobrara County can be found in the 2015 Niobrara County Multi-Hazard Mitigation Plan[3].

*Communication and Technology*

Communications and associated technology are essential to the long-term viability of Niobrara County. Construction of communication and technology infrastructure requires rights-of-way across federal land. Recent proposals to restrict new rights-of-way across public land threaten the ability of the County to develop the necessary technological infrastructure necessary to support communication and technological services.

Communication infrastructure maintenance and development is vital to Niobrara County for the health and safety of its citizens, economic development, business development, and equal education opportunities.

In January of 2019, Executive Order 13821[26] was signed which ordered the promotion of better broadband services in rural America. The order sought to accelerate the deployment and adoption of affordable, reliable, modern high-speed broadband connectivity in rural America for rural homes, farms, small businesses, manufacturing and production sites, tribal communities, transportation systems, healthcare facilities, and education facilities. Agencies should seek to reduce barriers to capital investment, remove obstacles to broadband services, and more efficiently employ government resources.

### 7.3.3 Law Enforcement and Emergency Response Resource Management Objectives:

A. Public lands are managed for orderly use in coordination with the Niobrara County Sheriff's office.
B. Law enforcement and emergency services have unfettered access to public lands to protect the health, safety, and welfare of residents and visitors of Niobrara County.
C. Communication infrastructure is developed on public lands within Niobrara County to ensure emergency communications services exist throughout the County and citizens and visitors to the County can seek emergency assistance throughout the entire County.

### 7.3.4 Law Enforcement and Emergency Response Priority Statements:

1. All federal law enforcement actions within Niobrara County shall be coordinated through the Niobrara County Sheriff's Office.
2. Promote federal agency recognition of the Niobrara County Sheriff as the primary law enforcement official in the County.
3. The Niobrara County Sheriff's Office shall be notified immediately when there is a life-threatening situation, criminal act, project structure failure, resource contamination, natural phenomenon (landslide, flood, or fire), and/or cultural resources site disturbance on public lands.
4. Niobrara County requires that federal agencies allow safe and unrestricted access to federal land for law enforcement and emergency services.

5. Federal agencies should work and coordinate with Niobrara County and other surrounding counties and agencies within the region to ensure that the County's telecommunications and informational highway interests are heard and addressed to protect and promote the health, safety, and general welfare of the citizens of the County.
6. Federal agencies should support increasing the number of adequate broadband T1-lines available within the community to enhance emergency response and protect the health, safety, and welfare of Niobrara County.
7. Federal agencies should encourage the introduction of the newest technology for accessibility from all areas within Niobrara County.
8. Federal agencies should recognize and provide for the fact that some communication equipment is site-sensitive and should have priority over other uses.

## 7.4 ECONOMIC CONSIDERATIONS

### 7.4.1 History, Custom, and Culture

Natural resource products have always been at the heart of the economics in Niobrara County. In its early settlement, people came to Niobrara County to utilize its rich grassland and rangeland resources for livestock grazing. Later, exploration of minerals and oil and gas led to a boom in the energy sector of the County. The railroad industry also had an economic impact on the county as it provided a means to export resources out of the state and boost supply and demand of natural resource products such as livestock, coal, and other materials.

### 7.4.2 Resource Assessment and Legal Framework

Niobrara County is 7% federally owned land with 124,736 acres of land under federal management. The livestock and mining/oil and gas industries account for a substantial portion of Niobrara County's income, the oldest continuing industries in the county, and are still the single largest users of public lands within the County. The service industry continues to grow in Niobrara County and contributes to the area's culture. This industry provides services to citizens and visitors. One of the main drivers of Niobrara County economy is agriculture. Some cattle and sheep ranchers use grazing leases on federal lands to maintain healthy and productive land and stock. Mineral and oil and gas are another long-standing sector of the Niobrara County Economy.

Detailed economic information for Niobrara County can be found in Appendix E: Economic Information for Niobrara County of this document. A socioeconomic study specific to Niobrara County is just getting underway and that information will be incorporated into the NRMP of this document once the study is final.

#### *National Environmental Policy Act*

NEPA can play a crucial role in the economic and socio-economic well-being of a community. NEPA applies to "every major Federal action significantly affecting the quality of the human environment" (42 U.S.C. § 4332(1)(C)). The courts have interpreted this to generally mean that every time the federal government decides for almost any action that may have an environmental impact, NEPA compliance is required. Some courts have even required agencies to follow NEPA when the agency spends a small amount of money on a project or program that

they are not the lead agency. *See e.g., Citizens Alert Regarding the Environment v. United States Environmental Protection Agency*, 259 F.Supp.2d 9, 20 (D.D.C. 2003).

On July 16, 2020, the Council on Environmental Quality (CEQ) announced major regulation reforms to NEPA, including new rules trying to clarify what is a "major federal action." *See* 85 F.R. 43304 (July 16, 2020). The CEQ regulations define a "Major Federal Action" as "an activity or decision subject to Federal control and responsibility" (40 C.F.R. § 1508.1(q)). However, those activities and decisions are limited to those decisions that are discretionary or in which the federal government has sufficient control and responsibility over the outcome of the project. *See id*. This means that those projects that the government has a minor role in are not included. Further, minor actions that do not typically have a significant effect on the human environment (such as allowing certain range improvements on a grazing allotment) are categorically exempt from NEPA (40 C.F.R. § 1508.1(d)). It is also important to note that the "human environment," as defined in NEPA, does not consist solely of ecological or environmental concerns, but also consists of the aesthetic, historic, cultural, economic (such as the effects on employment), social, or health effects in the human environment. 40 C.F.R § 1508.1 (g) and (m). Thus, decisions that may affect the historic, cultural economic, or social stability of a community must also comply with NEPA and take those things into consideration.

NEPA requires that agencies undertake an environmental analysis to determine whether a federal action has the potential to cause significant environmental effects. If a proposed major federal action is determined to significantly affect the quality of the human environment, federal agencies are required to prepare an EIS. The regulatory requirements for an EIS are more detailed and rigorous than the requirements for an EA. NEPA does not mandate results or substantive outcomes. Instead, NEPA's purpose is to "provide for informed decision making and foster excellent action" (40 C.F.R. § 1500.1(a)). Thus, NEPA ultimately does not require a specific result, but should be utilized to ensure that federal agencies "conduct environmental reviews in a coordinated, consistent, predictable, and timely manner, and to reduce unnecessary burdens and delay." *Id*. at (b). Therefore, for an agency to be NEPA compliant, they need to make timely and coordinated decisions that are based on informed decision-making.

Potentially one of the greatest economic harms for a local community is the typical several-year delay of an important project due to NEPA. Since 2010, the average EIS completion time was approximately 4.5 years and averaged more than 600 pages. Even more disturbing, over a quarter of the EISs during that time span took more than 6 years to complete (Council on Environmental Quality, 2010). CEQ regulations now require that EAs not exceed 75 pages and one year to complete unless a senior agency official of the lead agency approves a longer period in writing and establishes a new time and page limit (40 C.F.R. § 1501.5, 1501.10). Similarly, CEQ regulations now require that EISs not exceed 150 pages (300 for proposals of unusual scope or complexity) and two years to complete, unless a senior agency official of the lead agency approves a longer period in writing and establishes a new time and page limit (40 C.F.R. § 1502.7).

To increase efficiency in the NEPA process, agencies are supposed to include cooperating agencies at the earliest time practicable to participate. Additionally, agencies are supposed to

eliminate duplication of efforts by cooperating with local governments and form (1) joint planning processes; (2) joint environmental research and studies; (3) joint public hearings; (4) joint environmental assessments (40 C.F.R. § 1506.2(b)). Further, agencies, unless specifically prohibited by law, allow local governments to be joint lead agencies in certain NEPA decisions and cooperate in fulfilling local government requirements that may not conflict with federal law. *Id*. at (c).

#### *Environmental Justice*

In February of 1994, Executive Order 12898 "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" was signed and directed each federal agency to "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations" including tribal populations. Environmental justice mitigation measures must be outlined or analyzed in EA, Findings of no significant impact (FONSIs), EISs, and RODs. (EPA, 2015)

### 7.4.3 Economic Resource Management Objectives

A. The socioeconomic and economic viability of Niobrara County is prioritized, protected, and enhanced in all federal actions or decisions.
B. Federal agencies follow the timing and page limit requirements set forth in the July 16, 2020, Council on Environmental Quality NEPA regulations.
C. Niobrara County and Niobrara Conservation District are included early in the scoping process whenever an agency action or decision may impact the economic or socioeconomic viability of the County.

### 7.4.4 Economic Priority Statements:

1. Niobrara County and Niobrara Conservation District require consultation and coordination from federal agencies at the earliest time possible for any proposed action, change of existing activities, newly permitted activities, or changes in regulations that may affect the economic basis of the County.
2. Federal agencies should support continued access to natural resources development/use on federal lands to maintain economically viable communities in Niobrara County.
3. Niobrara County and Niobrara Conservation District supports "no net loss" in the County's economic base due to federal agency decisions.
4. Federal agencies should support and prioritize granting access for communication towers and broadband T1 lines where possible within Niobrara County.
5. Federal agencies should include Niobrara County and Niobrara Conservation District in all discussions regarding mitigation, if necessary, to protect the economic base of the County.
6. Niobrara County and Niobrara Conservation District strongly support the expansion of high-speed internet and cell service to all underserved areas of the County.
7. Federal agencies should support the analysis of social and economic factors at the lowest possible level, such as on a County-wide basis, in addition to consideration on a state-wide or national scale.
8. Federal agencies should promote the economic and socioeconomic growth of Niobrara County and engage in consultation and coordination between federal agencies and the

County regarding any issues and activities on public land that affect or influence the County's economic and socioeconomic viability.

9. Local, state, and federal agency plans, or management recommendations shall include an appropriately detailed socio-economic impact description that addresses the effects on natural resources, economies, and the health and welfare of Niobrara County and its citizens.
10. Niobrara County and Niobrara Conservation District support impact assistance opportunities and funding (i.e., sewer, water, fire, law enforcement, emergency, natural resource mitigation etc.) as early in the industrial development process as possible.
11. Niobrara County and Niobrara Conservation District support the achievement of a sustainable balance between economic, recreational, and conservation use of lands for economic growth and quality of life.
12. Niobrara County and Niobrara Conservation District support the July 16, 2020, National Environmental Policy Act regulations which state that EIS's should be completed within 2 years from the issuance of a Notice of Intent and 150 pages or less excluding appendices and 1 year from the issuance of a Notice of Intent and 75 pages or less excluding appendices for Environmental Assessments.
13. Niobrara County and Niobrara Conservation District require a full analysis by the federal agencies of the impact each proposed decision or federal action will have on the local economy. If it is determined that the decision will have significant negative impact on the local economy, the alternative/decision is not supported.
14. Public stakeholders should be included in managed procedures and decision-making processes to maintain traditional economic structures.
15. New economic opportunities should be supported through reliance on free markets and the regulatory climate does not prohibit these opportunities.

# CHAPTER 8: AGRICULTURE

## 8.1 AGRICULTURAL PRODUCTION

### 8.1.1 History, Custom, and Culture

Agricultural lands contribute to Niobrara County's landscape and scenic beauty and provide food production, wildlife habitat, open space, and recreational opportunities for residents and visitors alike for food distribution, hunting, fishing, snowmobiling, and other tourism-related activities. Agriculture is an invaluable source of employment, affordable food, raw materials, and open space to the County. In addition to jobs and income, agriculture also provides important natural resource amenities such as open space. Open space offers landscapes, lifestyles, and wildlife habitat that can have value to both residents and visitors. Agriculture also provides numerous opportunities for environmental stewardship to benefit local ecosystems and serves as a key component of the County's sustainable economy.

Public land grazing is essential to maintaining the agricultural industry in Niobrara County. Public lands provide livestock forage during the summer months which allows private lands to grow hay that is used as forage in the winter months. Without this hay production ranchers would have to purchase winter feed which can be expensive and may not be economically feasible for the operator. Agricultural land also provides open space that is valuable for wildlife habitat, aesthetics, and in some area's recreational opportunities.

### 8.1.2 Resource Assessment and Legal Framework

In 2017, there were 242 agricultural operations in Niobrara County operating on approximately 1.3 million acres of land with an average farm size of 5,279 acres and 94 of those farms being family farms. Of this land, 94% is in pastureland, 4% is in cropland, and 1% is in woodland. A total of 10,470 acres of these agricultural lands are irrigated. Most sales (92%) are for livestock, poultry, and products while the remaining 8% are for crops. The most abundant crop grown in the County is hay with 24,153 acres, this is followed by wheat for grain with 2,796 acres in production, and oats for grain at 641 acres. Niobrara County in 2017 had approximately 59,317 cattle and calves, 3,895 sheep and lambs, 932 horses and ponies, 404 laying hens, and 37 meat chickens. Niobrara County is ranked 10$^{th}$ in Wyoming for the production of livestock, poultry, and products and 16$^{th}$ in crop production. (National Agricultural Statistics Service, 2017)

Agriculture is important economically to Niobrara County. The total market value of products sold according to the 2017 Ag Census was $49.6 million and a net cash farm income of $13.5 million. Per farm, the market value of products sold was approximately $205,303 and the net cash farm income was approximately $56,097. Farms in Niobrara County also provide

employment, with approximately 38 jobs hired as farm labor. (National Agricultural Statistics Service, 2017)

A recent survey sponsored by the Wyoming Stock Growers Association, the Wyoming Stock Growers Land Trust, the Nature Conservancy, and the University of Wyoming found that nearly 80% of Wyoming residents felt that they personally benefit from the presence of farms and ranches in Wyoming. In addition, 76% of respondents were concerned with the loss of family farms and ranches in the State. Other issues of serious concerns to respondents included the availability of water for farming and ranching (71%), and natural areas and ranchland being split up by new development (66%). (Wyoming Stock Growers Association et al., n.d.)

The climate of the region provides for a short growing season that is often dry and cold. Irrigated agriculture relies on the distribution of water from rivers and reservoirs through canals and pipelines. Some or all of these may reside on or pass through federal and state lands where permitting issues are triggered for maintenance and expansion. According to the U.S. Census of Agriculture, Niobrara County had 10,470 acres of irrigated land for crops and pasture. This makes the retention and proper management of water rights a priority for the citizens of Niobrara County.(Census of Agriculture et al., 2012; NASS, 2017)

### *Right to Farm Laws*

Rights to farm laws have been enacted in all fifty states. These laws seek to protect qualifying farmers and ranchers from nuisance lawsuits filed by individuals who move into a rural area where normal farming operations exist, and who later use nuisance actions to attempt to stop those ongoing operations. Wyoming's right to farm laws are known as the "Wyoming Right to Farm and Ranch Act."

The basis for these priority statements in this NRMP is to carry out the state mandate to protect agriculture practices through the 'Right-to-Farm' statutes as listed below.

> *"To protect agriculture as a vital part of the economy of Wyoming, the rights of farmers and ranchers to engage in farm or ranch operations shall be forever guaranteed in this state."* (Wyo. Stat. § 11-44-104(a))

### 8.1.3 Agricultural Production Resource Management Objectives:

A. Agricultural production is maintained as a viable and major component of the economy, custom, and culture of Niobrara County.
B. Federal actions affecting agriculture are made in consultation with Niobrara County and the Niobrara Conservation District.
C. Ranching and agriculture are retained as the preferred land uses in rural areas within Niobrara County.
D. The agriculture custom and culture - value opportunities, resources, and communities are preserved in Niobrara County.
E. Private and state agricultural operations neighboring federal lands in Niobrara County are protected from impacts resulting from federal actions, decisions, and regulations.

### 8.1.4 Agricultural Production Priority Statements:

1. Federal agencies should support development of all plans and policies that directly or indirectly affect agriculture with the intent of increasing the stability and expansion of the industry as well as encouraging innovative techniques that improve the efficiency of crop and livestock production.
2. Federal agencies should quickly process permits on federal lands for the construction, maintenance, or expansion of water distribution systems to private lands, and allow maintenance where those rights already exist through a range improvement agreement.
3. Federal agencies consider Right to Farm laws and their actions should be consistent with those laws, to the extent applicable.
4. Federal agencies should support production agriculture and the responsible use of natural resources to sustain agricultural enterprises.
5. Any agricultural property damage or crop loss caused by an escaped prescribed burn, fire suppression efforts, or damage caused by government agency action, resulting in economic loss in Niobrara County shall be considered justification for economic compensation and restoration by the responsible agency to the property owner at current market values.
6. Wildlife and federal lands managers are expected to coordinate with private property owners to minimize impacts to private property and property rights.
7. Federal agencies should streamline the application process for range improvements and applications should be approved in six months or less.
8. The individual that files for an improvement/development permit on the Bureau of Land Management shall be allowed to manage the resource and the permit shall be in their name if it is approved.
9. The individual that files for an improvement/development permit on U.S. Forest Service should be allowed to manage the resource and the permit should be in their name if it is approved.
10. Niobrara County and Niobrara Conservation District discourage the conversion of arable, productive agricultural lands from agricultural production into rural residential housing.
11. Niobrara County does not support 30x30 (America the Beautiful Campaign) and federal agencies should not attempt to either purchase private lands to take them out of production or take currently producing public lands out of production.

12. Federal agencies should expand appropriate and good grazing practices on federal lands.
13. Federal agencies should encourage agricultural operations within Niobrara County and promote their sustainability.
14. In conjunction with ranch owners/managers, local, state, and federal planning partners, develop economically sustainable strategies to maintain working ranches in Niobrara County.
15. Federal planning-level and project-level National Environmental Policy Act documents should properly characterize and analyze the area, recognizing the benefit of ecosystem services provided by working ranches to adjacent or nearby public lands.
16. Federal agencies should notify those impacted by a National Environmental Policy Act decision and allow them to participate in the scoping process.

## 8.2 LIVESTOCK GRAZING

### 8.2.1 History, Custom, and Culture

The vegetation in Niobrara County evolved under tens of thousands of years of grazing and periodic fire. Grazing in the region began to shape the modern vegetation we see today around 18,000 years ago in the Pleistocene Epoch. Eventually, these species were replaced by the wildlife we know today. Wildlife, wildfire, and early humans continued to shape the vegetation of the area. In the late 1600s to mid-1700s, Native Americans obtained the horse and became pasture managers as well as wildlife managers, manipulating the vegetation and animal populations.

The natural vegetation on the predominate upland range sites consists of western wheatgrass (*Pascopyrum smithii*), green needlegrass (*Nassell viridula*), needle and thread (*Hesperostipa comata*), prairie Junegrass (*Koeleria macrantha*), blue grama (*Bouteloua gracilis*), threadleaf sedge (*Carex filifolia*) and small amounts of buffalo grass (*Bouteloua dactyloides*). In the sandier areas of soil associations, prairie sandreed (*Calamovilfa longifolia*), little bluestem (*Schizachyrium scoparium*) and sand bluestem (*Andropogon hallii*) are found. Forbs include scarlet globemallow (*Sphaeralcea coccinea*), lupine (*Lupinus* spp.), milkvetches (*Astragalus* spp.), scurfpea (*Psoralidium tenuifolrum*) and asters (*Erigeron* spp). Woody species include silver sage (*Artemis cana)*, big sagebrush (*Artemisia tridentata*), fringed sagewort (*Artemisisa frigida*), broom snakeweed (*Gutierrezia sarothrae*), and perennial buckwheats (*Eriogonum* spp.). When properly managed, the native vegetation is adequate for soil protection. Some geological erosion will occur naturally on the less productive sites.

The production of livestock in Niobrara County is necessary to the area economy, tax base, and the livelihood of the ranching/farming businesses and related industries and it is also vital to the well-being and continued health of natural resources on federal, state, and private lands. The range production of livestock and livestock grazing are management tools that are used to maintain and enhance the rangeland resource. Improving the rangeland resource through livestock grazing benefits watersheds, wildlife, water quality, and recreation, as well as providing needed forage for sustaining livestock production and wildlife habitat.

Permitted grazing on federal lands is a critical piece of livestock operations in Niobrara County. The intermingled BLM, TBNG, and private lands allow ranching to continue in the County. Access to federal lands is critical to the continued ability to maintain the ranching community and the viability of the County. Livestock grazing has been a major industry in Niobrara County since early settlement. It continues to be a vital part of the custom and culture of the County as well as an economic driver.

### 8.2.2 Resource Assessment and Legal Framework

When federal land management policies are enacted, they influence the management of the associated private land. Many management challenges accompany closely associated federal and private lands, including access, land use, water rights, and grazing rights. The federal agencies manage a small portion of the rangeland within the County; however, ranchers do rely on obtaining federal grazing leases to maintain their operations. Grazing allotments season and density of use are pre-determined and cannot be unilaterally changed per federal law. There are 143 BLM and 16 USFS grazing allotments (TBNG) in Niobrara County (Figure 18).

The vegetation in the County varies from lower producing sagebrush areas with highly productive grasslands. Low-productivity rangelands make for a narrow profit margin. When agencies make a management decision without considering the economic impact on a rancher or a group of ranchers, operations and the community can be significantly impacted. When federal agencies reduce permitted livestock numbers for any operator, their entire operation is impacted, especially economically. Any reduction in livestock on federal lands directly affects the economy and culture of Niobrara County.

Reduction in livestock numbers on federal lands can be a result of natural factors, including wildfire and drought. The primary factor in determining livestock grazing capacity on public land is the availability of the resources. Proper grazing management is an important tool for management of rangeland resources, and can be used to mitigate invasive species impact, wildfire impact, and can improve rangeland health. In addition to the widescale reduction of fuels that grazing can induce, the BLM has also shown success in using targeted grazing as a management tool to slow down and stop range fires, as well as reduce the size of fires in grazed areas (Idaho Rangeland Resource Commission, 2016).

Livestock grazing, irrigated farming, and other intensive agriculture are integral to this County's ability to remain viable with a diverse and sustainable economy. Ranching and agricultural operations maintain open space and large landscapes to support multiple uses.

### *Taylor Grazing Act*

The Taylor Grazing Act (TGA) of 1934 (43 U.S.C. 315) established the Grazing Service, which eventually became known as the BLM. Local BLM grazing advisory boards created an adjudication process to determine where, when, and what type of livestock grazing could occur on public rangelands. To receive an allotment through this process, the stockman had to have (1) "commensurate base property" on which he could graze his livestock when they were not using the federal lands, (2) have an economically viable livestock operation, and (3) be members of the local community and support the local stability of the community(43 U.S.C. § 315b). The TGA gives individuals the right to apply for grazing permits on federal lands based upon the ownership of qualified base property (43 U.S.C. § 315(b)). The purpose of the TGA is "to stabilize, preserve, and protect the use of public lands for livestock grazing purposes…" *Barton v. United States*, 609 F.2d 977 (10th Cir. 1979). As the court in *Public Lands Council v. Babbitt*, explained, "Congress enacted the [TGA], establishing a threefold legislative goal to regulate the occupancy and use of the federal lands, to preserve the land and its resources from injury due to overgrazing, and 'to provide for the orderly use, improvement, and development of the range'" (154 F.3d 1160, 1161 (10th Cir. 1998)). Once a grazing district is established, grazing must occur on the land. *See generally, Mountain States Legal Foundation v. Andrus*, 499 F.Supp. 383 (D. Wyo. 1980) (holding that the intent of FLPMA was to limit the ability of the Secretary of the Interior to remove large tracts of public land from the operation of the public land laws). Further, Congress intended that once the Secretary established a grazing district under the TGA, the primary use of that land should be grazing (*Public Lands Council v. Babbitt*, 167 F.3d 1287, 1308 (10th Cir. 1999) *aff'd on other grounds*, 529 US 728 (2000)). The Secretary can modify the boundaries of a grazing district, but unless land is removed from designation as grazing, or the TGA designation is terminated, the Secretary must use it for grazing (43 U.S.C. § 315).

When modifying the boundaries of a grazing district or terminating the TGA designation of an allotment, the Secretary must classify the land as no longer "chiefly valuable for grazing." May 13, 2003, Solicitor's Memorandum to the Assistant Secretaries for Policy, Management and Budget, Land and Minerals Management and the Director, Bureau of Land Management, clarifying the Solicitor's Memorandum M-37008 (issued October 4, 2002). Thus, a permittee may relinquish a permit but, barring the Secretary determining that there is a better use for the land through land use planning, the forage attached to the permit must be available for grazing. Thus, except upon the showing that the land is no longer "chiefly valuable for grazing," the Secretary does not have the discretion to bar grazing within a grazing district and must therefore review applications for grazing permits and make a final decision in a timely fashion when they are filed.

### *Grazing Flexibility*

Flexibility for grazing is allowed under 43 CFR § 4130.3-2 (f) which states "Provision for livestock grazing temporarily to be delayed, discontinued or modified to allow for the reproduction, establishment, or restoration of vigor of plants, provide for the improvement of riparian areas to achieve proper functioning condition or for the protection of other rangeland resources and values consistent with objectives of applicable land use plans, or to prevent compaction of wet soils, such as where delay of spring turnout is required because of weather conditions or lack of plant growth;"

The BLM recently implemented an initiative known as Outcome-Based Grazing Authorizations (OBGAs). The initiative is designed to offer a more collaborative approach between the BLM and its partners within the livestock grazing community when issuing grazing authorizations. The purpose behind OBGAs is to improve BLM's management of grazing on public lands by offering livestock operators greater flexibility to respond more readily to changing on-the-ground conditions, such as drought or wildfire. This will better ensure their ability to manage ranching operations that are economically sustainable while also providing healthy rangelands and high-quality wildlife habitat. Decreasing the response time to changing field conditions is one of the primary goals of the demonstration project. The program highlights BLM's commitment to partnerships, vital to managing sustainable, working public lands.

The flexibility outcome-based grazing provides is to support:

- Enhanced partnerships for managing livestock grazing.
- Implement grazing based on conservation performance and ecological outcomes rather than hardline metrics.
- Improvement, management and/or protection of public lands within a grazing allotment or specified geographic area; and,
- Continued achievement or attainment of positive economic and social outcomes.

As part of the initial implementation program, eleven ranches across the west were selected as pilot projects for OBGAs. The projects on these specific ranches are being used to share experience and demonstrate or develop best practices to be considered in other BLM grazing permit renewals. As part of the process, the pilot projects developed goals and objectives as part of their permit (often including goals and objectives for ecological, social, and economic aspects of the operation). A monitoring plan was also required for the pilot projects that laid out short-term and long-term monitoring objectives to capture the results of the increased flexibility. Range improvements were also identified as part of the OBGA pilot projects to help with the ability to become more flexible on the different operations. Several of the pilot projects are into the implementation phase, while several others are still working through the NEPA process for approved grazing permits. The information acquired through these pilot projects will allow for recommendations for regulatory modifications that could better provide for the ability to issue OBGAs that maximize and normalize the use of flexibility to address changing conditions. The

BLM and its partners will not only share the responsibility for reaching the mutual objectives of this project but also for monitoring its success.

***Range Improvements***

*BLM Range Improvements*

All range improvements on BLM lands must be authorized by the agency. There are two options for authorization: A Cooperative Range Improvement Agreement or a Range Improvement Permit. The Cooperative Range Improvement Agreement identifies how the costs of labor, materials, and maintenance are divided between the agency and the permittee. Range Improvement Funds can be used for labor, materials, and final survey and design of projects to improve rangelands. The Range Improvement Permit requires the permittee or lessee to provide full funding for the construction and maintenance of the improvement. NEPA analysis is not required for normal repair and maintenance of range improvements that are listed on a term grazing permit; permission of the authorized officer is also not required. However, for the reconstruction of a range improvement or construction of new improvements, NEPA analysis and a decision by the authorized officer are required. Range improvements such as water developments benefit wildlife in addition to livestock (43 C.F.R. Part 4100).

*USFS Range Improvements*

All range improvements on USFS lands must be authorized by the agency. The USFS allows structural improvements (e.g., fencing) and non-structural improvements (e.g., change in management practices). Any requirements for permittee construction or development of range improvements are identified in the grazing permit with credits for improvements (if any) to be allowed toward the annual grazing fee. It is a common practice for the USFS to furnish materials and the permittee to provide labor for structural improvements. If significant costs are expected, the permittee can assume responsibility for the improvement (maintenance) but the USFS generally holds title to the improvement. Should the improvement not be adequately maintained, the USFS can take action against the permittee for non-compliance with their grazing permit. Range Betterment Funds are available for planning and building rangeland improvements. (USFS, 2005)

### 8.2.3 Livestock Grazing Resource Management Objectives:

A. Livestock grazing is maintained as a viable major component of the economy, custom, and culture of Niobrara County.
B. Wyoming Standards for Healthy Rangelands are used as the basis for administering livestock grazing on Bureau of Land Management managed lands.
C. Range improvement projects are approved in a timely manner.
D. Niobrara County and Niobrara Conservation District are consulted early in the scoping process whenever a proposed decision will impact grazing, local agriculture producers, or the economy.
E. Federal lands within Niobrara County are managed for multiple-use and sustained yields, which includes continued grazing as intended by Congress in the passage of the Taylor Grazing Act, Federal Land Policy and Management Act, Multiple Use-Sustained Yield Act, and the National Forest Management Act.

F. Federal decisions affecting grazing use best available scientific information and with localized baseline and monitoring data given heavier weight than regional, state, or national data.
G. Grazing flexibility and outcome-based grazing for all grazing permit renewals and allotment decisions are implemented where appropriate within Niobrara County.
H. The full amount of animal unit months on Bureau of Land Management and U.S. Forest Service lands within Niobrara County are available.

### 8.2.4 Livestock Grazing Priority Statements:

1. Federal grazing allotments that are not officially closed or not actively being used shall be grazed.
2. Federal agencies should support the recognition and protection of the right to graze livestock on public lands through legal recognition of grazing preference rights.
3. Federal agencies should support range livestock production that is environmentally and economically viable.
4. Federal agencies should recognize locally-led and coordinated resource management planning to resolve management conflicts and to ensure involvement of all interests.
5. Federal agencies should coordinate with the Wyoming Game and Fish Department to ensure that wildlife and big game numbers do not outstrip habitat and to reduce conflicts between rangeland resources for livestock grazing and wildfire forage and habitat needs.
6. Federal agencies should promptly notify the Wyoming Game and Fish Department and request immediate adjustment in wildlife numbers when habitat capacity is exceeded.
7. Federal agencies should manage rangelands to maintain and enhance desired plant communities for the benefit of watersheds, wildlife, water quality, recreation, and livestock grazing.
8. Federal agencies should comply with all applicable state and federal rangeland and livestock grazing laws, with state law being applied when there is no clear federal preemption.
9. Federal agencies should use coordinated range management plans for each grazing allotment that allows for the flexibility and updating of management during the ten-year term of the grazing permit.
10. Federal agencies should utilize rangeland standards and guidelines that are scientifically proven and peer-reviewed.
11. Federal agencies should facilitate range improvement projects and enhancement of habitat to benefit rangeland, soil, water, livestock, and wildlife.
12. Federal agencies should make range improvement management decisions on an allotment basis.
13. Niobrara County and Niobrara Conservation District oppose federal agency efforts to restrict the development of livestock water or other rangeland improvements.
14. Federal agencies should work cooperatively with the local ranchers and other interested parties to address resource concerns on a site-specific basis.
15. Federal agencies should facilitate the use of prescribed fire and other approved methods to manage sagebrush, control weeds and tree encroachment, and to enhance, maintain, or increase current grazing levels.

16. As required by the Federal Lands Management and Policy Act and the Taylor Grazing Act's, federal agencies should recognize livestock grazing as one of the primary multiple uses and that any decision to end livestock grazing must be reported to Congress and the Bureau of Land Management must revise its land use plan to reflect the elimination of grazing.
17. Federal agencies should work with producers to increase productivity of rangeland to increase and/or maintain AUMs to maximum sustainable levels on rangelands in Niobrara County.
18. Federal agencies should use mechanisms to allow flexibility for grazing allotments or grazing lease agreements.
19. Niobrara County and Niobrara Conservation District request cooperative agency status with respect to amendments or revisions of land use plans, activity plans, or allotment management plans.
20. National Environmental Policy Act documents addressing the impacts from field development should also provide for mitigation ad compensation to the affected ranchers for loss of grazing and disruption.
21. Livestock grazing management decisions shall be made based on the best available scientific information that is applicable to the rangeland resources in Niobrara County.
22. Federal agencies should work in coordination with Niobrara County, the Niobrara Conservation District, local grazing boards, and grazing permittees to develop and employ best management practices for the purpose of improving rangeland health so that suspended AUM's can be returned to active status.
23. Grass banks are supported as an acceptable management practice.
24. Allotment retirements are not supported by Niobrara County or Niobrara Conservation District.
25. The Bureau of Land Management and U.S. Forest Service should prioritize bringing grass banks back into production and returning retired grazing allotments to part of the actively managed grazing system.
26. Federal agencies should develop management plans generated for the overall health of all-natural resources. Plans specifically managing for one species are not supported. Federal agencies should open Conservation Reserve Program lands for grazing and haying in times of drought, economic need, or other emergencies as allowed by statute.
27. Site-specific reviews conducted with the permittee shall be used to determine the appropriate grazing suspension period post-fire.
28. Full site-specific economic and resource analysis of suspending grazing for allotment closures must be completed within one-year of closure.
29. Federal agencies should create adaptive grazing management guidelines that allow permittees to respond to changes in resource conditions. These shall include focused monitoring, triggers and responses, and alternative management.
30. The reduction of domestic livestock grazing animal unit months to provide additional forage for another species or strictly for conservation purposes is not supported.
31. Animal unit months (AUMs) on federal lands shall not be reduced unless a documented resource condition indicates a need for temporary reduction to improve the condition.

Any reduction shall include a plan to reinstate AUMs when the resource condition has been addressed.

32. Timely processing of all term grazing permit renewals is a priority of Niobrara County and Niobrara Conservation District.
33. Development of the grazing term permit renewal process must consider actions proposed by the permittee.
34. All federal and state land management agencies shall use the most current ecological site descriptions developed by the Natural Resource Conservation Service to create appropriate objectives for livestock and wildlife management.
35. Native seed mixes consistent with the Ecological Site Description and free of noxious weeds and invasive species are encouraged for all reclamation efforts and must be beneficial to both livestock and wildlife and developed collaboratively with the permittee.
36. Federal agencies shall collaboratively develop and implement rangeland monitoring programs in cooperation with the permittee using currently accepted scientifically based monitoring methods and return intervals utilizing properly trained rangeland personnel with an understanding of rangeland and its management to ensure proper collection and analysis of data.
37. Federal agencies should review and incorporate legal and credible data collected by a permittee, contractors or subcontractors of a permittee, qualified team, or local government for use in management decisions.
38. Federal agencies should consult, cooperate, and collaborate with Niobrara County, Niobrara Conservation District, and permittee to ensure that overall rangeland health is being maintained through monitoring and implementation of well-designed livestock grazing management plans on all public land allotments.
39. Federal agencies should use range improvement and noxious weed control funds on grazing allotments within two years.
40. Federal agencies should develop additional rangeland improvements when the opportunity arises.
41. Grazing rest prescriptions related to either wildfires or prescribed burns should be determined on a site-specific basis. Post-fire grazing will not be limited when unbiased post-fire monitoring and evaluation produces relevant, accurate data demonstrating that grazing will not unduly harm the range. Return livestock grazing to pre-fire levels when post-fire monitoring data shows established objectives have been met or have been achieved to an extent allowed by the site potential. Require the use of credible data as previously defined to make these determinations.
42. Niobrara County does not support 30x30 (America the Beautiful Campaign) and federal agencies should not attempt to either purchase private lands to take them out of production or take currently producing public lands out of production.

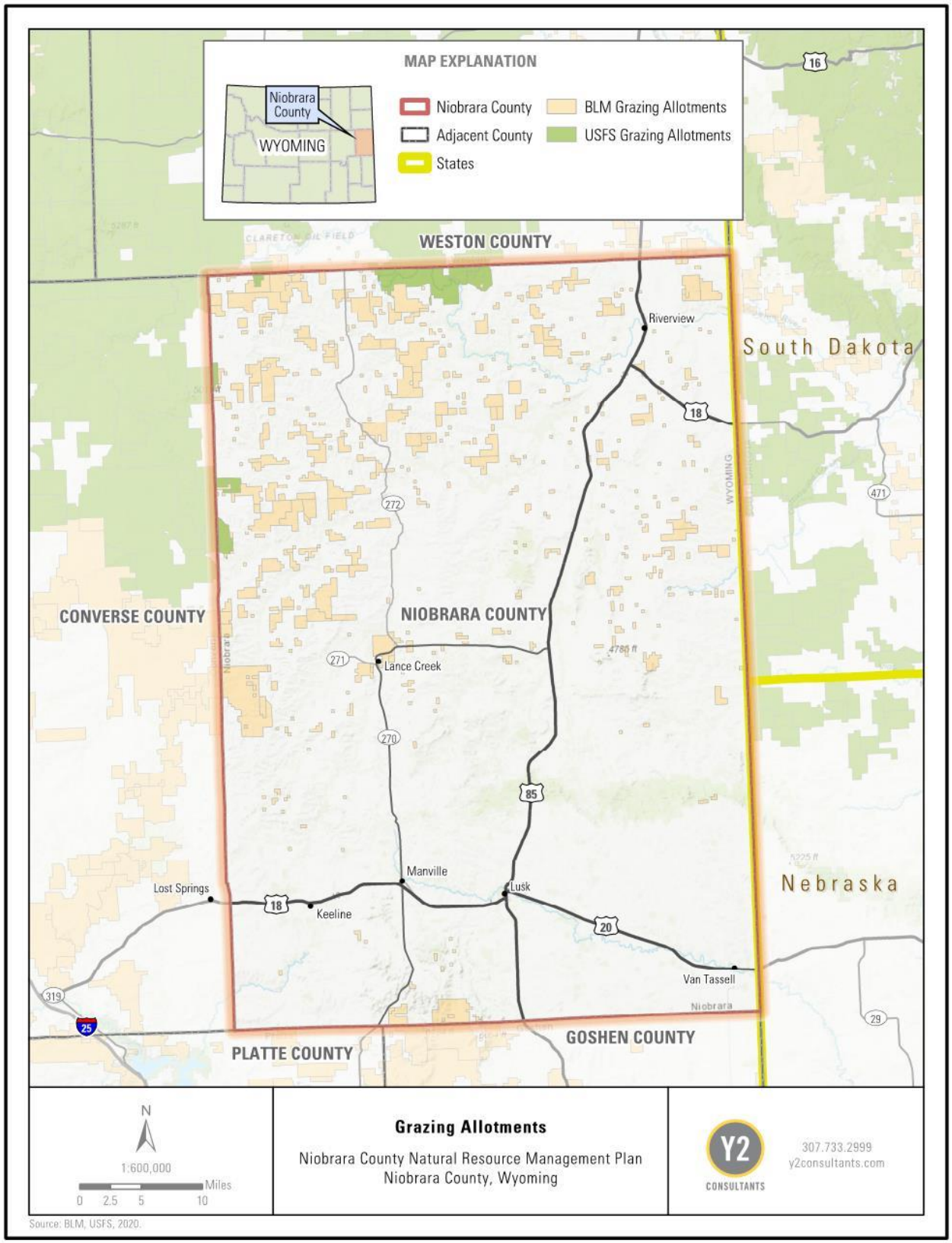



*Figure 18. Niobrara County Grazing Allotments.*

## 8.3 PREDATOR CONTROL AND LIVESTOCK PREDATION

### 8.3.1 History, Custom, and Culture

Predatory wildlife is important to the ecology of an ecosystem. However, predators can have negative impacts on livestock operations, developing communities, sensitive wildlife species, and other agriculture operations. For these reasons, it is important to properly manage predators to ensure safe communities and stock, and healthy functioning ecosystems.

During the settlement of the western states, depredation was an issue across livestock operations. Predators were controlled on an individual basis until the early 1900s when stockgrowers began asking for government assistance. By the 1960s, with the release of the Leopold Report, the importance of proper management of predators became known (deCalesta, n.d.). The common public mindset began to shift to the control of predators threatening stock operations and communities while allowing natural predator populations to exist (deCalesta, n.d.).

### 8.3.2 Resource Assessment and Legal Framework

The Animal and Plant Health Inspection Service (APHIS) is located within the Department of Agriculture and provides a Wildlife Damage Program and a Pests and Diseases Program. The Wildlife Damage Program researches and develops wildlife damage management methods and provides resources to the public upon request (APHIS, n.d.). Currently the Niobrara Predator Management Department works with APHIS for aerial hunting on public lands.

In 1999, the Wyoming legislature established the Animal Damage Management Board (ADMB), which administers animal damage control in Wyoming, Wyo. Stat. § 11-6-303-307. The Animal Damage Management Board is composed of state officials, representatives of the livestock industry, Wyoming Game and Fish Commission, non-consumptive users of wildlife, and one urban representative. The Wyoming Animal Damage Management Board may coordinate with the county predator districts if they choose to participate. The Predator Management District of Niobrara County does participate with the ADMB by receiving grant funding.

The statutes also designate district predator management boards to develop and implement a management program that best managed or controls damaged by predators and predacious birds and provide for general provisions for funding. Funding primarily comes from predator management fees on all sheep and cattle brand inspection within the district Wyo. Stat. § 11-6-201-210.

Predator control in Wyoming centers primarily on preventive control of coyotes and foxes, which have hit unprecedented numbers in the last 15 years. The coyote control program also tracks sylvatic plague, since the virus antibodies of the plague can be found in coyote blood. Wyoming Game and Fish currently tests blood samples and reports the data to the National Center for Disease Control.

Within the County, the Niobrara County Predator Control Board directly administers the Wildlife Damage Program. Wildlife population management through sportsman hunting and trapping

also occurs throughout the County. Predator control within the County affects the economic stability of the livestock industry and the sport hunting/fishing industry. Predator control has been used to protect the health and safety of the public by reducing human-wildlife conflict and the spread of diseases commonly carried by predators. Article 3 of Wyoming statute 11-6 defines predatory animals within the state as any coyote, jackrabbit, porcupine, raccoon, red fox, skunk, or stray cat; and gray wolves except where they are designated as trophy game animals. The more common predators in Niobrara County and the surrounding area include coyote, jackrabbit, porcupine, raccoon, red fox, skunk, and multiple predacious birds. It is important to recognize that changes in wildlife population dynamics and management in surrounding areas are likely to influence wildlife populations and behavior in the County.

Pursuant to State statute, the Niobrara County Predator Management Board establishes and implements a cooperative plan for predator control that incorporates coordination with APHIS and County resources where available.

### 8.3.3 Predator Control and Livestock Predation Resource Management Objectives:

A. Predator populations are managed to maintain healthy ecological levels, while still prioritizing reducing or eliminating the occurrence of livestock depredation and protecting the health and welfare of citizens of Niobrara County.
B. Control of predatory animals is supported to reduce property damage and to protect wildlife and the local economy and tax base, including the viability of the agriculture community.

### 8.3.4 Predator Control and Livestock Predation Priority Statements:

1. Federal agencies should support trapping as a historic and environmentally-sound method of controlling predatory animals.
2. Federal agencies should protect private lands bordering federal and state lands from predatory animals.
3. Federal agencies should retain and expand animal damage control plans for the protection of livestock and crops through the Niobrara County predator boards and the control of disease-carrying animals.
4. Federal agencies should support predator control based on a balance between the best science available, economics, and logistics, evaluated by utilizing currently recognized methods of predator control that remain as viable options for predator control.
5. Federal agencies should support the management of predator populations at levels consistent with the optimum utilization of forage by wild and domestic ungulates.
6. Niobrara County and Niobrara Conservation District encourage formal agreements with local, state, and federal agencies to reduce the predation on wildlife and livestock and promote interstate cooperation in the tri-state area by initiating agreements with Nebraska and South Dakota and counties that border Niobrara County.
7. Predatory animals and predacious birds, which are disease-bearing vectors that are recognized as threats to public health should be controlled.
8. Coordination, communication, and cooperation between local, state, and federal health officials, along with veterinarians, weed and pest authorities, and predator boards is

encouraged regarding pest and predator control action and regulations affecting Niobrara County.

9. Reintroduction and introduction plans for predators should provide for compensation to livestock operators for actual value of loss, including replacement cost, and direct and incidental expenses relating to the loss and prompt payment thereof.
10. Predator control measures are supported on all lands within Niobrara County.
11. Federal agencies should recognize proactive efforts such as aerial hunting, snares, and leg traps to control predator populations.
12. Niobrara County opposes restrictions to current predator control methods.
13. Predator species as defined under Wyoming State law shall be deterred from migrating or re-locating to areas that impact the health, safety, and welfare of the people.
14. When addressing a decline in sensitive species, predator control shall be employed prior to placing any restrictions on resource-based industries like livestock grazing or oil and gas. Only when predation is determined to not be the cause of decline shall restrictions on the resource industries be considered prior to predator management.
15. Federal agencies should coordinate with Niobrara County in the determination of any impact of management of predator species when related to the management of Endangered Species Act listed species or the use of APHIS funds, as required by federal agency mandates. This includes impacts on the economy, culture, custom, and safety of the residents of Niobrara County.
16. Federal agencies should support predator control as an effective method for protecting Endangered Species Act listed species and game bird populations.
17. Predator control should be supported as a valid method of increasing the productivity of the public lands upon which the economy of Niobrara County is dependent.
18. Wildlife management agencies should dedicate financial and personnel resources to predator management in Niobrara County.

## 8.4 NOXIOUS AND INVASIVE WEEDS AND PESTS

### 8.4.1 History, Custom, and Culture

Niobrara County has traditionally practiced weed and pest control to increase the productivity of the lands within the County and as a means of promoting the health, safety, and general welfare of the residents of the County. The Niobrara County Weed & Pest was established per the Wyoming Weed & Pest Control Act of 1973, which stated that all private, state, federal, and municipally owned lands are included in the District with the boundaries of the District the same as those of the County.

The spread of noxious and invasive weeds on all lands is a national problem that threatens rangeland and farmland productivity. Niobrara County has an aggressive weed control program in place, including full-time County Weed Supervisors and a five-member Weed and Pest Board.

Noxious and invasive species can be plants, animals, diseases, or insects. Invasive species and pest management is defined as the ability to control species and pests that interfere with management objectives. An invasive species can be a native or non-native species that is

occurring where it is not wanted or in unwanted numbers that may result in negative economic impacts. A noxious weed is any plant designated by federal, state, or local government officials as injurious to public health, agriculture, recreation, wildlife, or property. Once a weed is classified as noxious, authorities can implement quarantines and take other actions to contain or destroy the weed and limit its spread. (Weed Science Society of America, 2016)

Current control tactics for noxious and invasive species include but are not limited to:

- Education (plant identification, life cycles, mapping infestations, etc.);
- Prevention (cleaning equipment, buying quality seed, rangeland management, early control, etc.);
- Mechanical & physical controls (burning, mowing, cultivation, rotating land uses, establishment of desirable competitive plants, etc.);
- Biological (grazing, parasites, pathogens, etc.);
- Chemical (herbicides, weed oils, plant growth regulators, etc.);
- Law enforcement (remedial requirements, hearings, etc.);
- Training (commercial applicator training and certification, etc.);
- Rodent control (minimize disease threats and control losses);
- Board of County Commissioners actions (emergency declarations, budgeting, public meetings, etc.) (Wyoming Weed and Pest Council, n.d.).

### 8.4.2 Resource Assessment and Legal Framework

The Wyoming Weed and Pest Act of 1973, as enacted by the legislature of Wyoming, created Weed and Pest Control Districts and the regulations which govern the districts. Within the Act, the composition of districts is defined at Wyo. Stat. § 11-5-103:

> *"All land within the boundaries of Wyoming including all Federal, State, private and municipally owned lands, is hereby included in the weed and pest districts within the County in which the land is located."*

The act also specifically defines which weeds and pests are designated as weeds and pests in Wyo. Stat. § 11-5-102. The Weed and Pest Act of 1973 in Wyo. Stat. § 11-5-109 also spells out enforcement provisions which could result in heavy fines if persons are convicted.

> *"A landowner who is responsible for an infestation and fails or refuses to perform the remedial requirements for the control of the weed or pest [...] may be fined. [...] Any person accused under this act is entitled to a trial by jury."* (Wyo. Stat. §11-5-109e)

Another state statute, the Special Management Program (SMP), formally known as the Leafy Spurge Law, provides for a Weed and Pest District to request an additional mill levy from the County Commissioners to implement an integrated management system on up to two undesirable plants, pests, or combination thereof. However, leafy spurge shall receive priority in the program. The Niobrara Weed and Pest District had carried out SMPs on leafy spurge and salt cedar until recently when the mill values started to decline. Additionally, the Niobrara Weed and

Pest District had been able to reduce salt cedar infestations to the point where that species could be adequately funded through the Weed and Pest District's General Fund under the first mill. Accordingly, 100% of the funding generated under the SMP mill levy goes towards leafy spurge control in the County. Under this Statute, all state or federal agencies owning or administering lands which are untaxed, for the purpose of this Act, shall contribute the total cost of the treatment program on those lands, obviously within the limitations of their respective budgets.

Funding for a long-term strategy implementing weed and pest control tactics has been lacking. Various state and federal agencies support weed and pest management by utilizing funds from discretionary or general fund sources. This only secures short-term funding for specific weed and pest infestations that generally last no more than one season.

Niobrara County works to suppress and eradicate all federally designated, State of Wyoming designated, and Niobrara County declared weeds and pests. Additionally, the County pursues efforts to educate the public about invasive species and pests that are a threat to Niobrara County.

The declared Niobrara County noxious weeds as of 2019 are:

- Buffalobur (*Solanum rostratum*)
- Showy milkweed (*Asclepias speciosa*)
- Wild licorice (*Glycyrrhiza lepidota*)
- Douglas fir tussock moth *(Otgyia pseudotsugaata*)
- Sulphur cinquefoil (*Potentilla recta*)
- Marestail (*Erigeron canadensis*)
- Deptford pink (*Dianthus armeria*)
- Hoary alyssum (*Berteroa incana*)

The current federal noxious weeds list is maintained on the USDA Plants Database[27] (NRCS, 2019).

While not listed as a noxious species in the state due to its widespread distribution, cheatgrass (*Bromus tectorum*) and other annual bromes lumped under this common name are a serious threat in the county. This annual grass has reduced the productivity of native range plants and accelerated fire cycles within the county. While widespread control of the species is impossible all efforts should be made to minimize its potential to take new footholds. Juniper encroachment is also of concern within the County as juniper are expanding into the sagebrush ecosystem. This can reduce important sagebrush habitat for species such as sage-grouse and mule deer.

In addition to these plants, aquatic plants like hydrilla (*Hydrilla verticillata*), Eurasian watermilfoil (*Myriopyllum spicatum*), curly pondweed (*Potamogeton crispus*), and didymo (rock snot) (*Didymosphenia geminate*) are of concern. Several animal species are also of concern such as aquatic invasive species like zebra and quagga mussels (*Dreissena polymorpha, Dreissena bugensis*), New Zealand mudsnail (*Potamopyrgus antipodarum*), Asian carp (*Cyprinus* spp.), and rusty crayfish (*Orconectes rusticus*). Almost all of these species can have a negative impact on irrigation structures if they become established and they can clog up or break down irrigation

structures (ISAC, 2016). Several agricultural pests exist that can negatively impact the agricultural regions of the County.

*Prairie Dogs*

Prairie dog colonies grow significantly in short periods of time and can cause significant resource damage. Niobrara County and the Niobrara Conservation District recognize prairie dogs, as a state-designated pest, represent a production and economic concern for the landowner and the County, a hazard to livestock production, as well as a serious threat to overall rangeland health into the future. In 2020, the TBNG finalized a Grassland Land and Resource Management Plan Amendment[28] to address prairie dog management on the TBNG. The TBNG lies in a small portion of Niobrara County. Refer to Section 3.1.4 U.S. Forest Service for additional information.

***Bureau of Land Management***

The BLM has a Record of Decision (ROD) for a Final Programmatic EIS for National Vegetation Treatments using Aminopyralid, Fluroxypyr, and Rimsulfuron on BLM lands[29] completed in 2016 and tiers to the 2007 Final Programmatic EIS for Vegetation Treatments Using Herbicides on BLM Lands in 17 Western States[30]. The BLM administers the National Invasive Species Information Management System (NISIMS) database which provides a comprehensive tool for managers to use to standardize the collection of invasive species and treatment data. The database can be found here[31].

The BLM also recognizes the PlayCleanGo Campaign which is an educational outreach program with the goal to protect valuable natural resources while encouraging the public to enjoy the great outdoors. PlayCleanGo promotes awareness, understanding, and cooperation by providing a clear call to action to be informed, attentive, and accountable for stopping the spread of all invasive species. (NAISMA, n.d.)

***U.S. Forest Service***

The USFS has a National Strategic Framework for Invasive Species Management[32] that provides broad and consistent strategic direction across all USFS Deputy Areas and agency programs. It also describes how the National and Regional Invasive Species Issue Teams will coordinate activities with the USFS and with Federal, State, and local partners. It lays out the framework for prevention, detection, control and management, and restoration and rehabilitation on USFS lands. (USFS, 2013)

### 8.4.3 Noxious and Invasive Weeds and Pests Resource Management Objectives:

A. Noxious weeds and invasive species and pests (plants and animals) are managed within Niobrara County to maintain healthy ecological levels using best management practices.
B. Federal agency projects include actions for the prevention, early identification, detection, and aggressive treatments for noxious and invasive species throughout Niobrara County.
C. Federal agencies coordinate and communicate all invasive, noxious, pest, or weed management actions and plans with the Niobrara County Weed and Pest District.

### 8.4.4 Noxious and Invasive Weeds and Pests Priority Statements:

1. Niobrara County and Niobrara Conservation District encourage the cooperation of local, state, and federal governments for procurement of additional funding for Niobrara County Weed and Pest for the control of weeds on all lands in the County.
2. Federal agencies should support Niobrara County Weed and Pest District's current and future efforts to identify the location of all designated or declared noxious weeds and initiate management and/or control.
3. Federal agencies should cooperate in noxious weed control to improve the productivity of federally managed rangelands consistent with local, state, and federal law and policies to control noxious and invasive weeds and to enhance native vegetation.
4. Federal agencies should support cooperative agreements to assure the protection of all lands from noxious weed invasion or occupation.
5. Federal agencies should communicate, coordinate, and consult with local and state governments on education about the control of potential invasive alien species.
6. Federal agencies should recognize the State of Wyoming Noxious Weed Act (Wyo. Stat. §11-5-102(a)(xii)) and assist Niobrara County Weed and Pest in monitoring efforts of invasive plant species and noxious weed infestations throughout Niobrara County.
7. Federal agencies should control designated or declared plants and pests, by scientific methods including integrated pest management.
8. Niobrara County and Niobrara Conservation District encourage protection of private property bordering federal and state lands from noxious weeds, prairie dogs, grasshoppers, and insects, including the use of preventative management and control such as quarter-mile buffer zones along borders on federal and state lands.
9. Federal agencies should work closely with local, state, and federal health agencies to manage and monitor zoonotic and vector-borne diseases, including mosquitoes that transmit viruses, such as West Nile.
10. State and federal agency participation cooperative programs for Designated and Declared species are supported by Niobrara County and Niobrara Conservation District.
11. Promote coordination with other local, state, and federal agencies to allow Niobrara County Weed and Pest access to and across public lands as may be necessary to carry out active control measures on both public and private lands.
12. Federal agencies should evaluate prescribed burns and capitalize on wildfires as an opportunity to control weed species and enhance rangeland health to support and expand multiple use.
13. Federal agencies should find ways to utilize prescriptive grazing techniques to control or manage noxious or invasive plant species and work with State and Federal land managers to provide flexibility for permittees to utilize this control option.
14. Federal agencies should control invasive species using bio-agents specific to the target weed.
15. Federal agencies should elevate the awareness and priority of controlling any new or existing infestations of Ventenata and/or Medusahead rye in Niobrara County.
16. Federal agencies should support the ongoing efforts and additional research to control cheatgrass populations in Niobrara County.

17. Niobrara County and Niobrara Conservation District do not support the listing of cheatgrass as a noxious weed.
18. Niobrara County and Niobrara Conservation District support habitat enhancement projects that have a defined and funded weed control and monitoring plan over the anticipated life of the enhancement.
19. Federal agencies should consider how their activities might have an adverse effect on any historical or cultural sites in Niobrara County.
20. Niobrara County supports the use of pesticides.
21. Federal agency processes should consider adaptive or new control techniques and pesticides.
22. Niobrara County and Niobrara Conservation District support and encourage programs to mitigate prairie dogs; and encourages state and federal agencies to adopt policies to allow for prairie dog control as good neighbors and responsible stewards of the lands they are entrusted to manage.
23. Niobrara County and Niobrara Conservation District support weed control practices that include mapping as an integrated management tool.
24. Federal agencies should work with partners to prevent and manage aquatic nuisance species, although not listed Designated or Declared, (i.e., zebra mussels, quagga mussels) on all waters within Niobrara County.
25. Niobrara County and Niobrara Conservation District support the Play, Clean, Go initiative and other education/awareness programs for public and private land users in weed identifications and understanding vectors of weed spread.
26. Federal agencies should use aerial equipment such as drones, helicopters, or fixed-wing as a tool for weed monitoring and control.
27. Federal agencies should manage and control annual grasses (i.e., cheatgrass) on public lands to lessen spread and detrimental effects to landscapes.
28. Federal agencies should support ongoing research and experimental options for the management of noxious and invasive weeds and pests.

## REFERENCES


ACOE. (n.d.). *Regulatory*. Retrieved June 10, 2020, from https://www.iwr.usace.army.mil/Missions/Value-to-the-Nation/Regulatory/

APHIS. (n.d.). *USDA APHIS | Wildlife Services*. Retrieved September 18, 2019, from https://www.aphis.usda.gov/aphis/ourfocus/wildlifedamage/SA_Program_Overview

ASWM. (n.d.-a). *Law & Policy*. Associate of State Wetland Managers. Retrieved March 10, 2020, from https://www.aswm.org/wetlands-law

ASWM. (n.d.-b). *Wetland Programs*. Associate of State Wetland Managers. Retrieved March 10, 2020, from https://www.aswm.org/wetland-programs

BLM. (n.d.-a). *Programs: Public Safety and Fire: Law Enforcement: Laws and Regulations | Bureau of Land Management*. Retrieved November 20, 2020, from https://www.blm.gov/programs/public-safety-and-fire/law-enforcement/laws-and-regulations

BLM. (n.d.-b). *Programs: Wild Horse and Burro: About the Program: Myths and Facts | Bureau of Land Management*. Retrieved December 18, 2020, from https://www.blm.gov/programs/wild-horse-and-burro/about-the-program/myths-and-facts

BLM. (n.d.-c). *Wyoming—Herd Management Areas | Bureau of Land Management*. Retrieved March 17, 2020, from https://www.blm.gov/programs/wild-horse-and-burro/herd-management/herd-management-areas/wyoming

BLM. (2010). *BLM Wyoming Sensitive Species Policy and List*. https://www.blm.gov/download/file/fid/20067

BLM. (2011, April). *HA and HMA Index Map Wyoming*. https://www.blm.gov/sites/blm.gov/files/wildhorse_maps_doc10.pdf

BLM. (2016a). *1626-Travel and Transportation Management Manual*. https://www.blm.gov/sites/blm.gov/files/uploads/mediacenter_blmpolicymanual1626.pdf

BLM. (2016b, September 11). *Programs: Planning and NEPA: Planning 101: Special Planning Designations: Areas of Critical Environmental Concern* [Text]. https://www.blm.gov/programs/planning-and-nepa/planning-101/special-planning-designations/acec

BLM. (2020a). *EIS for Converse County Oil and Gas Project: Volume I and II*. https://eplanning.blm.gov/public_projects/66551/200129860/20023673/250029877/Converse_County_FEIS_Volume_I_and_II.pdf

BLM. (2020b, March 1). *Herd Area and Herd Management Area Statistics*. https://www.blm.gov/sites/blm.gov/files/wildhorse_2020_HAHMA_Stats_508.pdf

Budd-Falen. (2017). *Memorandum: Overview of the BJFTA*.

Budd-Falen, K. (2018). *Local Government Participation in Federal Agency Decision Making*.

Bureau of Land Management. (2012a). *1283 Data Administration and Management Handbook*. https://www.blm.gov/sites/blm.gov/files/uploads/mediacenter_blmpolicymanual1283.pdf

Bureau of Land Management. (2012b). *A Desk Guide to Cooperating Agency Relationships and Coordination with Intergovernmental Partners*. Bureau of Land Management Division of

Decision Support, Planning and NEPA. https://www.ntc.blm.gov/krc/uploads/623/BLM_DeskGuide_CA_Relationships_2012.pdf

Bureau of Land Management. (2015). *Environmental Assessment DOI-BLM-MT-C030-2014-189-EA*. https://www.blm.gov/sites/blm.gov/files/MT-DAKs%20NDFO_July2015_LeaseSaleEA_DRAFT_9Feb2015.pdf

Bureau of Land Management. (2016a, August 15). *About: History of BLM: National Timeline* [Text]. https://www.blm.gov/about/history/timeline

Bureau of Land Management. (2016b, August 18). *Programs: Cultural Resources: Paleontology* [Text]. https://www.blm.gov/paleontology

Bureau of Land Management. (2016c, October 21). *Programs: Natural Resources: Wetlands and Riparian: Riparian Health: Wyoming* [Text]. https://www.blm.gov/programs/natural-resources/wetlands-and-riparian/riparian-health/wyoming

Census of Agriculture, Vilsack, T., & Clark, C. Z. F. (2012). *2012 Census of Agriculture* (Wyoming State and County Data). https://www.nass.usda.gov/Publications/AgCensus/2012/Full_Report/Volume_1,_Chapter_2_County_Level/Wyoming/wyv1.pdf

Clearinghouse, P. in T. (n.d.). *Microvertebrate Fossils*. Passport in Time. Retrieved February 5, 2021, from http://www.passportintime.com/microvertebrate-fossils.html

Commission of the European Communities. (1986). *Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES): EC Annual Report*. Office for Official Publications of the European Communities.

Council on Environmental Quality. (2010). *Fact Sheet: CEQ Report on Environmental Impact Statement Timelines (2010—2018)*. 1.

Dean Runyan Associates. (2020). *Wyoming Travel Impacts Calendar Year 2019*. https://ss-usa.s3.amazonaws.com/c/308476362/media/22765e8c93a7c87be89825314693547/WY19_Impacts%20%281%29.pdf

deCalesta, D. S. (n.d.). *Predator Control: History and Policies*. Oregon State University Extenstion Service.

Diggings. (n.d.). *Mining In Niobrara County, Wyoming*. The Diggings™. Retrieved November 9, 2020, from https://thediggings.com/usa/wyoming/niobrara-wy027

Drilling Edge. (2020). *Johnson County, WY Permits, Production, Wells & Operators*. Drilling Edge. http://www.drillingedge.com/wyoming/johnson-county

Edmunds, D. R., Kauffman, M. J., Schumaker, B. A., Lindzey, F. G., Cook, W. E., Kreeger, T. J., Grogan, R. G., & Cornish, T. E. (2016). Chronic Wasting Disease Drives Population Decline of White-Tailed Deer. *PLOS ONE*, *11*(8), e0161127. https://doi.org/10.1371/journal.pone.0161127

EPA. (2015). *Environmental Justice and National Environmental Policy Act* [Other Policies and Guidance]. US EPA. https://www.epa.gov/environmentaljustice/environmental-justice-and-national-environmental-policy-act

EPA, R. 08. (2014, February 25). *Delegations of Authority for NSPS and NESHAP Standards to States and Tribes in Region 8* [Announcements and Schedules]. US EPA. https://www.epa.gov/region8/delegations-authority-nsps-and-neshap-standards-states-and-tribes-region-8

*Federal Land Ownership: Overview and Data*. (2018, March 22). https://www.everycrsreport.com/reports/R42346.html#_Toc476565242

Federal Land Policy and Management Act, Pub. L. No. 94–579 (1976).

Federal Register. (n.d.). *Agencies—Federal Emergency Management Agency*. Federal Register. Retrieved August 13, 2020, from https://www.federalregister.gov/agencies/federal-emergency-management-agency

FEMA. (n.d.-a). *Community Assistance Program—State Support Services Element*. Retrieved December 16, 2019, from https://www.fema.gov/community-assistance-program-state-support-services-element

FEMA. (n.d.-b). *FEMA's National Flood Hazard Layer (NFHL) Viewer*. Retrieved December 16, 2019, from https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd

FEMA. (n.d.-c). *Risk Map Progress—Mapping Information Platform Studies Tracker*. ArcGIS. Retrieved February 15, 2019, from http://www.arcgis.com/home/webmap/viewer.html?webmap=6331cc6b45734c4eabfde6102d5fc0b1&extent=-148.9197,13.1588,-46.0876,55.5312

FEMA. (n.d.-d). *Risk Mapping, Assessment and Planning (Risk MAP)*. Retrieved December 16, 2019, from https://www.fema.gov/risk-mapping-assessment-and-planning-risk-map

FEMA. (2020). *Federal Emergency Management Agency Community Status Book Report: Wyoming Communities Paticitpating in the National Flood Program*. https://www.fema.gov/cis/WY.html

*Follow The Money: Bankhead-Jones/Other*. (n.d.). Retrieved January 15, 2018, from http://followthemoney.stanford.edu/pages/Bankhead_Jones_Other.html

GFD. (2020). *Sage-Grouse Local Working Groups*. Wyoming Game and Fish Department. https://wgfd.wyo.gov/Habitat/Sage-Grouse-Management/Sage-Grouse-Local-Working-Groups

Global Energy Institute. (2013, February 1). *Benefits of Keystone XL*. Global Energy Institute. https://www.globalenergyinstitute.org/benefits-keystone-xl

Headwaters Economics. (2020). *Socioeconomic Trends for Niobrara County, WY*.

*History of Paleo Park*. (n.d.). Retrieved February 8, 2021, from http://www.paleopark.com/History.html

HKM Engineering Inc. (2002). *Northeast Wyoming River Basins Plan Final Report*.

Hoover, K. (2017). *PILT (Payments in Lieu of Taxes): Somewhat Simplified*. 27.

Idaho Rangeland Resource Commission. (2016). *Targeted grazing with cattle to create fire breaks*. https://idrange.org/range-stories/southwest-idaho/targeted-grazing-with-cattle-to-create-fire-breaks/

ISAC. (2016). *Invasive Species Impacts on Infrastructure*. https://www.doi.gov/sites/doi.gov/files/uploads/isac_infrastructure_white_paper.pdf

Kenton, W. (2019). *Permanent Wyoming Mineral Trust Fund (PWMTF)*. Investopedia. https://www.investopedia.com/terms/p/permanent-wyoming-mineral-trust-fund.asp

Lebsack, N. (2014, November 8). *Niobrara County, Wyoming | WyoHistory.org*. https://www.wyohistory.org/encyclopedia/niobrara-county-wyoming

Lichtner, D. T., Toner, R. N., Wrage, J. M., & Lynds, R. M. (n.d.). *Upper Cretaceous Strata in the Powder River Basin: Formation Tops Database, Structure and Thickness Contour Maps, and Associated Well Data*. 55.

Multiple-Use Sustained-Yield Act of 1960 As amended through December 31, 1996, Pub. L. No. 104–333, 10 (1960).

NAISMA, P. |. (n.d.). *About PlayCleanGo*. Retrieved October 26, 2020, from https://www.playcleango.org/about

NASS. (2017). *Niobrara County Wyoming Census of Agriculture County Profile*. https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/County_Profiles/Wyoming/cp56027.pdf

National Agricultural Statistics Service. (2017). *2017 Ag Census Niobrara Summary*. https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/County_Profiles/Wyoming/cp56027.pdf

National Horse & Burro Rangeland Management Coalition. (2015). *Terms and Definitions*. National Horse and Burro Rangeland Management Coalition. http://www.wildhorserange.org/terms-and-definitions.html

National Park Service. (2020, March). *Laws, Regulations, & Policies—Fossils and Paleontology*. https://www.nps.gov/subjects/fossils/fossil-protection.htm

Nebraska Legislature. (1962). *Wyoming-Nebraska Compact on Upper Niobrara River*. https://nebraskalegislature.gov/laws/appendix.php?section=1-112

National Environmental Policy Act 1969, Pub. L. No. 91–190 (1969).

Nicholas, P., & Lubnau, T. (2014). *Wyoming's energy sector fuels our future*. Casper Star-Tribune Online. https://trib.com/opinion/columns/lubnau-nicholas-wyomings-energy-sector-fuels-our-future/article_26b16c3d-47d4-55eb-9232-7b9c5c0a9cda.html

Niobrara County Commissioners. (2017). *Niobrara County Profile: Socioeconomics*.

Niobrara County Commissioners, & Niobrara Conservation District. (2019). *Niobrara County Land & Resource Use Plan and Policies*. 148.

NRCS. (n.d.). *Soil Surveys by State | NRCS Soils*. Retrieved December 16, 2019, from https://www.nrcs.usda.gov/wps/portal/nrcs/surveylist/soils/survey/state/?stateId=WY

NRCS. (2018, March 17). *Soil Health | NRCS Soils*. https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/

NRCS. (2019, August). *Welcome to the PLANTS Database | USDA PLANTS*. https://plants.sc.egov.usda.gov/java/

Office of Federal Lands Highway. (2018, July). *Office of Federal Lands Highway- About*. US Department of Transportation Federal Highway Administration. https://flh.fhwa.dot.gov/about/

Office of Fossil Energy. (n.d.). *Enhanced Oil Recovery*. Energy.Gov. Retrieved January 22, 2021, from https://www.energy.gov/fe/science-innovation/oil-gas-research/enhanced-oil-recovery

Office of Management and Budget. (2004). *Memorandum: Issuance of OMB's "final Information Quality Bulletin for Peer Review."* https://www.cio.noaa.gov/services_programs/pdfs/OMB_Peer_Review_Bulletin_m05-03.pdf

Olson, E. (1997). *National Grasslands Management: A Primer*. US Department of Agriculture.

Paleon Foundation. (2019). *Dig Locations – Paleon Museum Wyoming*. https://www.dinosaurswyoming.com/digs/dig-locations/

Plafcan, M., Cassidy, E. W., & Smalley, M. L. (1993). *Water Resources of Big Horn County, Wyoming*. 148.

RESPEC, & WWDC. (2019). *Niobrara Lower North Platte Watershed-Level I Management Plan Final Report*.

Simmons, S. (2017). *Lusk, Wyoming's Legend of Rawhide CavvySavvy.com—We Know Working Horses*. CavvySavvy.Com. https://cavvysavvy.tsln.com/blog/lusk-wyomings-legend-rawhide/

Star Valley Conservation District, & WDA. (2020). *Subdivision Review Training Presentation*. http://www.conservewy.com/wp-content/uploads/Training_2020/4-Subdivision-Review-2_2020.pdf

State of Wyoming. (2020, February 13). *Wyoming Mule Deer and Antelope Migration Corridor Protection Executive Order 2020-01*. Google Docs. https://drive.google.com/file/d/1TLuj1UGcRTjOvBklmP4qwjehSVmGjch8/view?usp=sharing&usp=embed_facebook

TBGPEA. (2020). *Thunder Basin Grasslands Prairie Ecosystem Association, Douglas, Wyoming—Thunder Basin Grasslands Prairie Ecosystem Association*. https://www.tbgpea.org/

Tessmann, S., Tator, I., Boulevard, B., Grenier, M., Smith, N., & Collins, F. (2018). *Wyoming Wetland Program Plan 2018-2023*. 14.

University of Wyoming. (n.d.). *Wyoming Floods*. Retrieved December 16, 2019, from http://wyofloods.wrds.uwyo.edu/

University of Wyoming Extension. (2016, August 18). *Wyoming Greater Sage-Grouse Conservation Efforts*. Sage-Grouse Conservation. https://www.wyoextension.org/sagegrouseconservation/wyoming-greater-sage-grouse-conservation-efforts/

US Department of the Interior. (2015, May 31). *Land and Water Conservation Fund* [Government]. U.S. Department of the Interior. https://www.doi.gov/lwcf

U.S. Department of the Interior. (2020). *Fiscal Year 2020 Payments in Lieu of Taxes*. https://www.doi.gov/sites/doi.gov/files/uploads/fiscal-year-2020-payments-in-lieu-of-taxes-national-summary-annual-report.pdf

U.S. Fish and Wildlife Service. (n.d.). *Environmental Conservation Online System*. Retrieved January 30, 2020, from https://ecos.fws.gov/ecp0/reports/species-by-current-range-county?fips=08077

US Forest Service. (1982, September 30). *National Forest System Land and Resource Management Planning 1982 Rule*. https://www.fs.fed.us/emc/nfma/includes/nfmareg.html

US Forest Service. (2013). *FSH 1909.12—Proccess Supporting Land Managment Planning*. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5409879.pdf

U.S. Forest Service. (2017). Chapter 2670—Threatened, endangered, and sensitive plants and animals. In *FSM 2600—Wildlife, fish, and sensitive plant habitat management*. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd553653.docx

USDA Forest Service. (2001). *Final Environmental Impact Statement for the Northern Great Plains Management Plan Revision*. https://www.fs.usda.gov/detail/mbr/landmanagement/planning/?cid=fsbdev3_025111

USFS. (n.d.-a). *Colorado Ditch Bill Act*. Retrieved April 21, 2021, from https://www.fs.usda.gov/wps/portal/fsinternet/cs/detail/!ut/p/z1/04_Sj9CPykssy0xPLMnMz0vMAfljo8zijQwgwNHCwN_DI8zPyBcqYKAfjlVBmA9cQRQx-g1wAEci9eNREIXf-HD9KKxWIPuAkBle-lHpOflJkOByzEsytkjXjypKTUstSi3SKy0CCmeUlBQUW6kaqBqUl5frpefnp-ek6iXn56oaYNOSkV9coh-BqlK_IDc0NMIgyzSnzMcRAIRE-zk!/dz/d5/L2dBISEvZ0FBIS9nQSEh/?position=Not%20Yet%20Determined.Html&pname=Region%202-%20Planning&navtype=BROWSEBYSUBJECT&ss=1102&pnavid=160000000000000&navid=160100000000000&ttype=detail&cid=stelprdb5199578

USFS. (n.d.-b). *Enforcement—What We Do—LEI | USDA Forest Service*. Retrieved November 20, 2020, from https://www.fs.fed.us/lei/enforcement.php

USFS. (2004). *Forest Service Handbook 5409.13—Land Acquisition Handbook*. https://www.resolutionmineeis.us/sites/default/files/references/usfs-land-acquisition-handbook-2004.pdf

USFS. (2005). *Forest Service Handbook 2209.13*. https://www.fs.fed.us/cgi-bin/Directives/get_dirs/fsh?2209.13!..

USFS. (2013). *Forest Service National Strategic Framework for Invasive Species Management | US Forest Service*. https://www.fs.usda.gov/managing-land/invasive-species-management/strategic-framework

USFS. (2016). *Greater Sage Grouse Habitat*. https://hub.arcgis.com/datasets/c436a3d49b204edbbab5ac14e9216d8f

USFS. (2020). *Greater Sage-Grouse Home Page*. USDA Forest Service Intermountain Region (Region 4). https://www.fs.usda.gov/detail/r4/home/?cid=stelprd3843381

USFWS. (n.d.-a). *Refuge List by State*. Retrieved March 19, 2019, from https://www.fws.gov/refuges/profiles/ByState.cfm?state=WY

USFWS. (n.d.-b). *USFWS-WSFR State Wildlife Grant Program*. Retrieved March 12, 2019, from https://wsfrprograms.fws.gov/subpages/grantprograms/swg/swg.htm

USFWS. (1973). *Endangered Species Act of 1973*. https://www.fws.gov/laws/lawsdigest/esact.html

USFWS. (2018a). *2018 Annual Report of Lands Data Tables*.

USFWS. (2018b, March 16). *Endangered Species | What We Do | Listing and Critical Habitat | Critical Habitat | FAQ*. https://www.fws.gov/endangered/what-we-do/critical-habitats-faq.html

USFWS. (2018c, March 22). *About: Mission | National Wildlife Refuge System*. https://www.fws.gov/refuges/about/mission.html

USFWS. (2019, July 8). *Wyoming ES | CCAA Thunder Basin*. https://www.fws.gov/wyominges/ccaa_ThunderBasin.php

USFWS. (2021, January 7). *Regulations Governing Take of Migratory Birds*. Federal Register. https://www.federalregister.gov/documents/2021/01/07/2021-00054/regulations-governing-take-of-migratory-birds

WACD. (n.d.). *About WACD*. Retrieved September 26, 2019, from http://www.conservewy.com/ABOUT.html

WDEQ. (n.d.-a). *Groundwater Pollution Control (GPC) Program | Wyoming Water Quality*. Retrieved December 16, 2019, from http://deq.wyoming.gov/wqd/gpc/

WDEQ. (n.d.-b). *Recreation Designated Uses Web Map: ArcGIS Viewer*. Retrieved December 16, 2019, from https://gis.deq.wyoming.gov/maps/recreation/

WDEQ. (n.d.-c). *Subdivision Review | Wyoming Water Quality*. Retrieved December 16, 2019, from http://deq.wyoming.gov/wqd/subdivision-review/

WDEQ. (n.d.-d). *Surface Water Quality Standards*. Retrieved December 16, 2019, from http://deq.wyoming.gov/wqd/surface-water-quality-standards-2/

WDEQ. (n.d.-e). *Water and Wastewater | Permitting*. Retrieved February 10, 2021, from http://deq.wyoming.gov/wqd/permitting-2/

WDEQ. (n.d.-f). *Water Quality Assessment | Water Quality*. Retrieved December 16, 2019, from http://deq.wyoming.gov/wqd/water-quality-assessment/

WDEQ. (n.d.-g). *Why are Riparian Areas Important?* Retrieved December 19, 2019, from http://deq.wyoming.gov/wqd/non-point-source/resources/why-are-riparian-areas-important/

WDEQ. (n.d.-h). *Wyoming Department of Environmental Quality|Land Quality*. Retrieved January 22, 2021, from http://deq.wyoming.gov/lqd/

WDEQ. (2001). *Wyoming Surface Water Classification List* (WDEQ - 2001 - Wyoming Surface Water Classification List.pdf; pp. 1–525). http://deq.wyoming.gov/media/attachments/Water%20Quality/Surface%20Water%20Quality%20Standards/2013-0726_wqd-wpp-surface-water-standards_Wyoming-Surface-Water-Classification-List.pdf

WDEQ. (2013). *Wyoming Surface Water Classification List*.

WDEQ. (2018a). *Water Quality Rules and Regulations Chapter 1: Wyoming Surface Water Quality Standards*.

WDEQ. (2018b). *Wyoming Department of Environmental Quality Air Quality Division Standards and Regulations- Chapter 2: Ambient Standards*. WY Department of Environmental Quality.

Weed Science Society of America. (2016). *WSSA Fact Sheet*. http://wssa.net/wp-content/uploads/WSSA-Weed-Science-Definitions.pdf

WGFD. (n.d.-a). *Wyoming Game and Fish Department—About the Department*. Retrieved March 27, 2019, from https://wgfd.wyo.gov/About-Us/About-the-Department

WGFD. (n.d.-b). *Wyoming Game and Fish Department—Game and Fish Commission*. Retrieved March 27, 2019, from https://wgfd.wyo.gov/about-us/game-and-fish-commission

WGFD. (n.d.-c). *Wyoming Game and Fish Department—Riparian Information*. Retrieved December 19, 2019, from https://wgfd.wyo.gov/Habitat/Habitat-Information/Riparian-Information

WGFD. (2015). *Wyoming Game and Fish Department Habitat Priority Areas: Aquatic and Combined Crucial Areas* [Map]. https://wgfd.wyo.gov/WGFD/media/content/PDF/Habitat/Habitat%20Priority%20Areas/Statewide_AandC_Crucial.pdf

WGFD. (2017a). *Species of Greatest Conservation Need: Wyoming State Wildlife Action Plan*. https://wgfd.wyo.gov/WGFD/media/content/PDF/Habitat/SWAP/SGCN-Introduction.pdf

WGFD. (2017b). *Wyoming State Wildlife Action Plan*. https://drive.google.com/open?id=0B1iN5AyJdrYPa2JMMjh6Q2RseVE

WGFD. (2019, October 12). *Sage Grouse Local Working Groups Map*. https://wyoming-wgfd.opendata.arcgis.com/datasets/de10419d193a4210ad3fa14a3c8bebe3_0

WGFD. (2020a). *Statewide Habitat Plan*. https://wgfd.wyo.gov/getmedia/8ba62756-6d1c-4257-8644-82383dfa605a/SHP2020_Final

WGFD. (2020b). *Wyoming Game and Fish Department—Corridor Maps and Data*. https://wgfd.wyo.gov/wildlife-in-wyoming/migration/corridor-maps-and-data

WGFD. (2020c). *Wyoming Game and Fish Department—Statewide Habitat Priority Areas*. Wyoming Game and Fish Department. https://wgfd.wyo.gov/Habitat/Habitat-Plans/Habitat-Priority-Areas/Statewide-Maps

WGFD. (2020d). *Wyoming Game and Fish Department—WHMA*. https://wgfd.wyo.gov/Public-Access/WHMA

WGFD. (2020e). *Wyoming Chronic Wasting Disease Management Plan*. https://wgfd.wyo.gov/WGFD/media/content/PDF/Get%20Involved/CWD/Final-WGFD-CWD-Management-Plan-7-2020-with-appendices.pdf

Whitcomb, H. A. (n.d.). *Ground-Water Resources and Geology of Niobrara County Wyoming*. 106.

Exec. Order No. 13783- Promoting Energy Independence and Economic Growth, Pub. L. No. Exec. Order No. 13783, 3C.F.R., 16093 (2017). https://www.federalregister.gov/documents/2017/03/31/2017-06576/promoting-energy-independence-and-economic-growth

Wilson, R. K. (2014). *America's Public Lands: From Yellowstone to Smokey Bear and Beyond*. Rowman & Littlefield.

WOGCC. (n.d.-a). *Oil Graph*. Retrieved February 7, 2019, from http://pipeline.wyo.gov/StateOilGraph.cfm?oops=ID42052

WOGCC. (n.d.-b). *State Gas Production Graph*. Retrieved February 7, 2019, from http://pipeline.wyo.gov/StateGasGraph.cfm?oops=ID42052

WWDC. (n.d.). *Wyoming Water Development Commission Dam and Reservoir Planning*. Retrieved December 19, 2019, from http://wwdc.state.wy.us/dam_reservoir/dam_reservoir.html

WWDC. (2018). *State of Wyoming Public Water System Survey Report.* https://wwdc.state.wy.us/watsys/2018/raterept.pdf

WYDEQ. (n.d.). *WYPDES | Water Quality*. Retrieved July 7, 2020, from http://deq.wyoming.gov/wqd/wypdes/

Wyoming Office of Homeland Security. (n.d.). *Wyoming State Mitigation Plan 2016-2021*. Google Docs. Retrieved December 16, 2019, from https://drive.google.com/file/d/1zuwfOHq_sVsUWzA8c14n_YYV3cuxAoYv/view?usp=embed_facebook

Wyoming State Archeology Office. (2016, September 15). *Spanish Diggings Survey*. https://wyoarchaeo.wyo.gov/index.php/wyoming-archaeology/wyoming-archaeology-awareness-month/project-a-day/70-september-15-spanish-diggings

Wyoming State Geologic Survey. (2020). *Wyoming River Basin Plans*. https://www.wsgs.wyo.gov/water/river-basin-plans.aspx

*Wyoming State Geological Survey*. (n.d.). Retrieved November 30, 2020, from https://www.wsgs.wyo.gov/public-info/guide-hartville-uplift

Wyoming Stock Growers Association, Wyoming Stock Growers Land Trust, The Nature Conservancy, & University of Wyoming. (n.d.).

Wyoming Water Development Office. (2019). *Wyoming Water Development Commission 2019 Wyoming Irrigation Systems Report*. http://wwdc.state.wy.us/irrsys/2019/raterept.html

Wyoming Weed and Pest Council. (n.d.). *Management Programs – Wyoming Weed & Pest*. Retrieved March 21, 2019, from https://wyoweed.org/noxious-species/management-programs/

## APPENDIX A: WEBSITE REFERENCES

1. https://www.archives.gov/federal-register/codification/executive-order/12630.html
2. https://www.fs.usda.gov/detail/mbr/landmanagement/?cid=stelprd3802740
3. https://drive.google.com/drive/folders/1AtBZLm3C1S4g19hc9TdbYC1Cz_QrsA4d
4. https://www.blm.gov/sites/blm.gov/files/documents/files/PublicRoom_Wyoming_StandardsandGuidelinesforHealthyRangelands1997.pdf
5. https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm
6. https://wwdc.state.wy.us/dam_reservoir/dam_reservoir.html
7. http://deq.wyoming.gov/wqd/surface-water-quality-standards-2/
8. http://deq.wyoming.gov/wqd/surface-water-quality-standards-2/
9. https://www.fema.gov/flood-maps/national-flood-hazard-layer
10. http://deq.wyoming.gov/wqd/surface-water-quality-standards-2/
11. https://www.epa.gov/sites/default/files/2018-02/documents/wy_wpp_1-26-2018_final.pdf
12. https://wgfd.wyo.gov/Habitat/Habitat-Plans/Wyoming-State-Wildlife-Action-Plan
13. https://www.tbgpea.org/
14. https://ecos.fws.gov/ecp/
15. https://wgfd.wyo.gov/WGFD/media/content/PDF/Vet%20Services/Approved-CWD-Mgmt-Plan-July-16-2020.pdf
16. https://wgfd.wyo.gov/Habitat/Sage-Grouse-Management/Sage-Grouse-Local-Working-Groups
17. https://wgfd.wyo.gov/WGFD/media/content/PDF/Habitat/Sage%20Grouse/Governor-Gordon-Greater-Sage-Grouse-EO-2019-3_August-21-2019_Final-Signed_2.pdf
18. https://wgfd.maps.arcgis.com/apps/MapTools/index.html?appid=31c38ed91cf04fb7bb8aebd29515e108
19. https://wgfd.wyo.gov/Habitat/Habitat-Priority-Areas/Statewide-Maps
20. https://wyoshpo.wyo.gov/index.php/nr-by-county-test/17-niobrara-county
21. https://www.fs.usda.gov/science-technology/geology/paleontology
22. https://www.usbr.gov/cultural/
23. https://www.fws.gov/historicPreservation/crp/index.html
24. https://www.blm.gov/paleontology
25. https://www.nps.gov/subjects/fossils/fossil-protection.htm
26. https://www.federalregister.gov/documents/2018/01/11/2018-00553/streamlining-and-expediting-requests-to-locate-broadband-facilities-in-rural-america
27. https://plants.sc.egov.usda.gov/java/noxiousDriver
28. https://www.fs.usda.gov/detail/mbr/landmanagement/?cid=stelprd3802740
29. https://eplanning.blm.gov/eplanning-ui/project/70301
30. https://eplanning.blm.gov/eplanning-ui/project/70300/510
31. https://webmaps.blm.gov/Geocortex/Html5Viewer/index.html?viewer=NISIMS_Publication.NISIMS_Publication_HTML51
32. https://www.fs.fed.us/foresthealth/publications/Framework_for_Invasive_Species_FS-1017.pdf

## APPENDIX B: GLOSSARY OF TERMS

**Access** – A way of admittance, approach, entrance, passage, or ingress and egress.

**Activity Plans** – Allotment Management Plans ("AMPs"), Habitat Management Plans ("HMPs"), Watershed Management Plans ("WMPs"), Wild Horse Management Plans ("WHMPs"), and other plans developed at the local level to address specific concerns and accomplish specific objectives.

**Agriculture** – The art and science of growing crops and raising and breeding livestock. As per this Plan, activities which traditionally define agriculture in Niobrara County include, but are not limited to, cattle and sheep ranching; hay, grain and other small and large grain crop production; and alternative livestock (domestic and wild).

**Air Quality** – The amount of pollutants in the atmosphere determine the area's air quality. Federal and state law regulate as pollutants particulates, carbon dioxide, sulfur dioxide, nitrogen oxide, ozone, particulates, and other toxic air pollutants. National ambient air quality standards or "NAAQs" set maximum levels of pollutants. Management systems include abatement and other measures to improve air quality, and to maintain air quality within a defined range. Ultimately the desired levels of air quality and the measures to be implemented are a political choice. This choice is usually based on subjective assessments of economic and social costs, benefits, feasibility, and other considerations. Air quality management strategies are not linear processes. Feedback is important to refine the strategy and help align it with circumstances, capabilities and needs.

**Airshed** – A geographic area that, due to topography, meteorology and climate share the same air.

**Animal Unit Month** ("AUM") – The quantity of forage required by one mature cow and her calf (or equivalent, in sheep or horses, for instance) for one month. The amount of forage needed to sustain one cow, five sheep, or five goats for a month. In the United States, a full AUMs fee is charged for each month of grazing by adult animals if the grazing animal (1) is weaned, (2) is 6 months old or older when entering public land, or (3) will become 12 months old during the period of use.

**Archeology** – The art and science of studying history from the remains of early human cultures as discovered chiefly by systemic excavations. Cultural resources are evidence of patterns from a way of life of a specific period, race or people. As per this Plan, items and activities which traditionally define archeological and cultural resources in the County include, but are not limited to, arrowheads, petroglyphs, pictographs, medicine wheels, bone hunting, rock hounding and historic trails.

**Archeological and Historic Preservation Act 1974** – Provides for "the preservation of historical and archeological data (including relics and specimens) which might otherwise be irreparably lost or destroyed as the result of (1) flooding, the building of access roads, the erection of workmen's communities, the relocation of railroads and highways, and other alterations of the terrain caused by the construction of a dam by any agency of the United States, or by any private person or corporation holding a license issued by any such agency or (2) any alteration of the terrain caused as a result of any Federal construction project or federally licensed activity or program." 16 U.S.C. §469.

**Areas of critical environmental concern or ACEC** – Defined as "areas within the public lands where special management attention is required (when such areas are developed or used or where no development is required) to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems or processes, or to protect life and safety from natural hazards." 43 U.S.C. §1702(a).

Archeological Resources Protection Act 1979 – Protects "archaeological resources and sites which are on public lands and Indian lands." The Act also promotes cooperation and information sharing between federal and state governments, the professional archaeological community, and individuals. 16 U.S.C. §470aa(b).

**Archeological Resources** – "Any material remains of past human life or activities which are of archaeological interest, as determined under uniform regulations promulgated pursuant to this chapter. Such regulations containing such determination shall include, but not be limited to, pottery, basketry, bottles, weapons, weapon projectiles, tools, structures or portions of structures, pit houses, rock paintings, rock carvings, intaglios, graves, human skeletal materials or any portion or piece of any of the foregoing items. Non-fossilized and fossilized paleontological specimens, or any portion or piece thereof, shall not be considered archaeological resources under the regulations under this paragraph, unless found in archaeological context. No item shall be treated as an archaeological resource under regulations under this paragraph unless such item is at least 100 years of age." 16 U.S.C. §470bb(1).

**Candidate Conservation Agreement** – The USFWS by policy may enter into an agreement with a state agency, local government or private landowner to protect or manage habitat for a species that is proposed for listing but is not yet listed. Under the terms of the agreement, generally an agreed upon amount of land is set aside or earmarked to be conserved for the candidate species. The landowner may also receive compensation and assurances that if the species is listed, the landowner will not be required to adopt additional conservation measures.

**Communication** – The exchange or transfer of information using the technology of transmission systems.

**Community Stability** – Combination of factors to promote and sustain the viability of a community, including local economy, custom, and culture.

**Conservation Plan** – This term refers to situations when a state or states develop a management plan to protect a species that is proposed for listing under the ESA to persuade the USFWS not to list a species. The plan may be based on memorandum of agreement between federal and state agencies and may involve more than one state.

**Cooperation** – "To act jointly or concurrently toward a common end." Black's Law 5th Ed. at 302.

Coordinated Resource Management ("CRM") – A group of people working together to develop common resource goals and resolve natural resource concerns. CRM is a people process that strives for win-win situations through consensus-based decision-making.

**Coordination** – "Adjusted to, in harmony with." Id. at 303.

**Consistency** – "Having agreement with itself or something else; harmonious; congruous; compatible; not contradictory." Id. at 279.

**Consultation** – A conference between two or more people to consider a particular question.

**Culture** – The body of customary beliefs, social forms, and material traits including the traditions of racial, religious and social groups; their morals, knowledge, customs, religions, law, beliefs, superstitions and art.

**Custom** – As used in this Plan, custom is defined as the usage or practice of the people, which by common adoption and acquiescence, and by long and unvarying habit, has become compulsory, and has acquired the force of a law with respect to the place or subject-matter to which it relates, and a habitual practice, widespread, which prevails within a geographic or sociological area. Customs – The way people implement their culture—the way they traditionally use the land, make a living and act toward each other. Customs are the visible and tangible manifestations of the shared beliefs that bind a group of people into a community. In law, customs consist of "long established practice or usage, which constitutes the unwritten law, and long consent to which gives it authority. Customs are general, which extend over a state or kingdom, and particular, which are limited to a city or district."

**de facto Wilderness Management** – Land management policy that is imposed without congressional direction or authority that mirrors or is like the management of areas designated by Congress as wilderness pursuant to the 1964 Wilderness Act. The management restrictions and prohibitions include: the prohibition of construction of new roads; restriction or prohibition on reconstruction or maintenance of existing roads; prohibition of mining or mineral development; restrictions on activities that would require permanent structures or facilities, or restrictions on motorized vehicle use or the use of mechanical tools or means of travel.

**Desired Plant Community** – A plant community which produces the kind, proportion and amount of vegetation necessary for meeting or exceeding the land use plan/activity plan objectives established for an ecological site(s). The desired plant community must be consistent with the site's capability to produce the desired vegetation through management, land treatment, or a combination of the two.

**Disruptive Activities** - Human activities that directly interfere with key biological processes such as breeding, and which will have measurable and long-term impacts.

**Ditch Easement** – A right-of-way across land granting the right to construct and maintain a ditch. On public land, a right-of-way was granted across unreserved public lands when a ditch or a canal was constructed pursuant to R.S. 2339 and 2340, Act of July 26, 1866, ch. 262, Sec. 9, 14 Stat. 253,254. These laws were repealed when Congress enacted FLPMA in 1976.

**Ecological Site** – An area of land with specific physical characteristics that differs from other areas both in its ability to produce distinctive kinds and amounts of vegetation and in its response to management.

**Economics** – Pertaining to the development and management of the material wealth of a government or community.

**Erosion** – (v.) Detachment and movement of soil or rock fragments by water, wind, ice, or gravity. (n.) The land surface worn away by running water, wind, ice or other geological agents, including such processes as gravitational creep.

**Flora** – The wild plants of a particular region, district or geographical period; a description of such plants.

**Forestland** – Land that is now, or can become, at least 10% stocked with forest trees and that has not been developed for non-timber use ("BLM"). As defined by the USDA Forest Service is land that is at least ten percent covered with trees (Forested Landscapes in Perspective, 1998).

**Forest Health** – A measure of the robustness of forest ecosystems. Aspects of forest health include biological diversity; air and water productivity; natural disturbances; and the capacity of the forest to provide a sustaining flow of goods and service for people. This term is often used to

express a collection of concerns – with respect to the alleged deterioration in the forest conditions, including both current problems and (e.g. – insect and disease infestations, wildfires, and related tree mortality) and risks of future problems (e.g. – too many small-diameter trees) (overstocking), excess biomass in an unnatural mix of tree species in mixed stands.

**Forms of Production** – The forms of production component include the things you have or need to produce to retain or attain the desired quality of life. The derived forms of production statement of the District reads as follows: "The quality of life we strive for will be achieved by continuing to maintain and enhance sustainable and optimum production of renewable and non-renewable resources and to encourage and support the motive and means to enhance economic opportunity and education."

**Future Resource Base** – The future resource base component includes the people, land and community we live in and the services available, and what we will need to sustain and enhance our quality of life and forms of production. The derived future resource base statement of the District reads as follows: "Through the efforts of cooperation and communication among the local people, our community will have a beneficial impact on sustaining a strong and viable multiple-use of our lands, including agricultural, industrial, mineral production, commercial, recreational and historical uses, which together will provide the continued ability to generate wealth and growth and needs of our community."

**Geophysical Exploration** – The use of geological and geochemical techniques, including, but not limited to, core and test drilling, well logging techniques, and various sampling methods; in order to produce information and data in support of possible mineral resource exploration and development activities, including pipelines. It also includes any operation using gravity, magnetic and seismic survey methods to produce geologic information and data in support of possible mineral resource exploration and development activities.

**Grazing Management Practices** – Grazing management practices include such things as grazing systems (rest-rotation, deferred rotation, etc.), timing and duration of grazing, herding, salting, etc. They do not include physical range improvements.

**Guidelines (For Grazing Management)** – Guidelines provide for, and guide the development and implementation of, reasonable, responsible, and cost-effective management actions at the allotment and watershed level which move rangelands toward statewide standards or maintain existing desirable conditions. Appropriate guidelines will ensure that the resultant management actions reflect the potential for the watershed, consider other uses and natural influences, and balance resource goals with social, cultural/historic, and economic opportunities to sustain viable local communities. Guidelines, and, therefore, the management actions they engender, are based on sound science, past and present management experience and public input.

**Habitat Conservation Plan** – The USFWS will approve a plan to protect habitat for a species listed under the ESA located on private land. The habitat conservation plan allows private landowners to use or develop the land, even though the activities may adversely affect a listed species. The plan will also include a "takings permit" which will permit the incidental loss of habitat or potential harm to a listed species.

**Habitat Fragmentation** – An event that creates a greater number of habitat patches that are smaller in size than the original contiguous tract(s) of habitat.

**Habitat Loss** – The permanent or effectively permanent removal of habitat cover needed by a particular wildlife species.

**Highway** – Includes, but is not limited to, pedestrian trails, horse paths, livestock trails, wagon roads, jeep trails, logging roads, homestead roads, mine-to-market roads, alleys, tunnels, bridges, dirt or gravel roads, paved roads and all other ways and their attendant access for maintenance, reconstruction and construction.

**Indicator** – An indicator is a component of a system whose characteristics (e.g., presence, absence, quantity and distribution) can be measured based on sound scientific principles. An indicator can be measured (monitored and evaluated) at a site- or species-specific level. Measurement of an indicator must be able to show change within timeframes acceptable to management and be capable of showing how the health of the ecosystem is changing in response to specific management actions. Selection of the appropriate indicators to be monitored in a particular allotment is a critical aspect of early communication among the interests involved on the ground. The most useful indicators are those for which change or trend can be easily quantified and for which agreement as to the significance of the indicator is broad based.

**Intention** – A determination to act in a certain way: resolve. Synonyms for intention/intent are: purpose, design, aim, end, objective, goal, mean or what one proposes to accomplish or attain.

**Irreversible and Irretrievable Commitment of Resources** – NEPA requires that each EIS address the resources that will be permanently lost or committed as a result of the project. When oil is produced from a well it is lost or committed and cannot be later developed. Vegetation resources associated with a well pad are not irreversible committed because the site can be reclaimed.

**Jeopardy Review** – The USFWS, pursuant to the ESA, must evaluate all federal actions that may adversely affect a species that is listed under the ESA to determine whether the proposed action is likely to jeopardize the continued existence of the species. 16 U.S.C. §1536. As part of the jeopardy review, which is also called a "Section 7 review," USFWS prepares a biological opinion, makes a determination regarding jeopardy, and recommends additional conservation measures that would mitigate the impacts on the species. If the USFWS makes a finding of jeopardy, the proposed federal action may not proceed.

**Land Designation** – The classification of tracts of land by Congress or a land managing agency to recognize distinctive and unique characteristics or uses.

**"Let it Burn"** – A land management policy (and philosophy) that limits or ends fire suppression to reintroduce the role of natural wildfire into an ecosystem. This policy is most often used in wilderness areas, where the use of firefighting equipment and tools is generally prohibited, or in the more remote areas of the National Park System. It also substitutes wildfire for logging or grazing to recreate pre-settlement environments.

**Litter** – The uppermost layer of organic debris on the soil surface, essentially the freshly fallen or slightly decomposed vegetal material.

**Locatable Minerals** – Minerals subject to exploration, development and disposal by staking mining claims as authorized by the Mining Law of 1872 (as amended). This includes valuable deposits of gold, silver and other uncommon minerals not subject to lease or sale.

**Management Actions** – Management actions are the specific actions prescribed by the BLM to achieve resource objectives, land use allocations or other program or multiple use goals. Management actions include both grazing management practices and range improvements.

**Memoranda of Understanding ("MOU")** – An instrument setting forth the terms of an informal agreement, most often between a state or local government and a federal agency to establish operational arrangements or information sharing. It may also regulate technical or detailed

matters, such as terms for mutual maintenance of roads or other facilities. It is typically in the form of a single instrument and may not require ratification.

**Memorandum of Agreement ("MOA")** – It is very similar to an MOU but will be worded as agreement rather than general understanding. Like an MOU, it will document an informal agreement between federal agencies, or divisions/units within an agency or department, or between a federal and state agency or unit of local government and will delineate tasks, jurisdiction, standard operating procedures or other matters which the agencies or units are duly authorized and directed to conduct.

**Minerals** – Naturally occurring homogeneous substances formed by organic or inorganic processes found on the surface or in the earth; deposits having some resource values such as coal, sand and gravel, precious and semi-precious metals, fossils and gemstones.

**Multiple Land Use** – Use of land for more than one purpose, for example, grazing of livestock, recreation and timber production. The term may also apply to the use of associated bodies of water for recreational purposes, fish and water supply. (UN).

**Multiple-use** – Multiple uses of the national forests means the "harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output." Multiple Use and Sustained Yield Act of 1960 (P.L. 86-517, June 12, 1960) as amended. Multiple use implies a sustained yield of outdoor recreation, range, timber, watershed and wildlife and fish values. Multiple use of the public lands managed by the Bureau of Land Management means: "the management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; the use of some land for less than all of the resources; a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output." Federal Land Policy and Management Act, 43 U.S.C. §1702(c).

**Multiple-use land** – A combination of balanced and diverse resource uses that considers long term needs for renewable and nonrenewable resources including recreation, rangeland, timber, minerals, water shed and wildlife along with scenic, scientific and cultural values.

**Multiple-use Management** – The management of all the various renewable surface resources of national forest lands, for a variety of proposes such as recreation, range, timber, wildlife and fish habitat, and watershed.

**Non-impairment management** – The standard for determining whether to allow actions or activities on public lands that have been classified as wilderness study areas either by Congress or the Bureau of Land Management. The action or activity may be allowed so long as the impacts

will not impair the areas suitability for wilderness or will not degrade the wilderness values to preclude its inclusion in the National Wilderness Preservation System.

**No surface occupancy ("NSO")** – This term refers to a condition attached to a mineral lease which prohibits surface occupancy or development activities on the land. NSO is not a recognized term for other land uses or permits.

**Objective** – An objective is a site-specific statement of a desired rangeland condition. It may contain qualitative (subjective) elements, but it must have quantitative (objective) elements so that it can be measured. Objectives frequently speak to change. They may measure the avoidance of negative changes or the accomplishment of positive changes. They are the focus of monitoring and evaluation activities at the local level. Objectives may measure the products of an area rather than its ability to produce them, but if they do so, it must be kept in mind that the lack of a product may not mean that the standards have not been met. Instead, the lack of a particular product may reflect other factors such as political or social constraints. Objectives often focus on indicators of greatest interest for the area in question.

**Open Space** – Any parcel or area of land or water that is essentially unimproved and is set aside, dedicated or reserved for public or private use for the enjoyment or for the use and enjoyment of owners and occupants of land adjoining or neighboring such open space, provided that such areas may be improved with only those buildings, structures, streets, and off-street parking and other improvements that are designed to be incidental to the natural openness of the land. An area of a lot either left in a natural state or receiving permeable vegetative landscape treatment such as ponds and lakes, either natural or manmade, and water features, grass shrubs, flowers, trees, ground cover, etc.

**Prescribed burn** – The deliberate use of fire to improve vegetation conditions or to reduce fuel loads in forests, grassland or rangeland areas.

**Public lands** – The term "public lands" means "any land and interest in land owned by the United States within the several States and administered by the Secretary of the Interior through the Bureau of Land Management, without regard to how the United States acquired ownership, except- (1) lands located on the Outer Continental Shelf; and (2) lands held for the benefit of Indians, Aleuts, and Eskimos." 43 U.S.C. §1702(e).

**Range** – Rangelands, forests, woodlands and riparian zones that support and understory or periodic cover of herbaceous or shrubby vegetation amenable to rangeland management principals or practices. Land on which the principal natural plant cover is composed of native grasses, forbs, and shrubs that are valuable as forage for livestock and big game. Any land supporting vegetation suitable for wildlife or domestic livestock grazing, including grasslands, woodlands, shrublands and forest lands.

**Range Condition** – The current productivity of a rangeland relative to what the land could naturally produce based on the site's soil type, precipitation, geographic location and climate.

**Range Improvements** – Range improvements include such things as corrals, fences, water developments (reservoirs, spring developments, pipelines, wells, etc.) and land treatments (prescribed fire, herbicide treatments, mechanical treatments, etc.).

**Range Management** – The art and science of planning and directing range use intended to use the sustained maximum animal production and perpetuation of the natural resources.

**Rangeland** – Land on which the native vegetation (climax or natural potential) is predominantly grasses, grass-like plants, forbs or shrubs. This includes lands revegetated naturally or artificially

when routine management of that vegetation is accomplished mainly through manipulation of grazing. Rangelands include natural grasslands, savannas, shrublands, most deserts, tundra, alpine communities, coastal marshes and wet meadows.

**Rangeland Health** – The degree to which the integrity of the soil and ecological processes of rangeland ecosystems are sustained.

**Recovery Plan** – The ESA requires the USFWS to prepare a plan to improve the status of a listed species to the point where the species need no longer be listed. A recovery plan typically sets population goals, identifies tasks to reverse or arrest the decline of a species and criteria for delisting the species.

**Recreation** – An action or lack thereof, which results in relaxation, entertainment, and is enjoyed by those who participate.

**Reintroduction Plan** – Under the ESA, a reintroduction plan is a specialized recovery plan designed to restore a threatened or endangered species to its historical habitat. A reintroduction plan will document the habitat area to be occupied and specific management actions to be taken to ensure the successful reintroduction of the listed species. Alternatively, a reintroduction plan by a state wildlife agency will return fish, game or other wildlife to an area where they have been extirpated.

**Research Natural Area ("RNA")** – A type of area of critical environmental concern or ACEC under BLM land use planning process where natural ecological and physical processes are allowed to occur, and human activities are prohibited if they will interfere with the natural processes. Under Forest Service land use policy, an RNA is an area identified as a reference area to evaluate the impacts of management in similar environments, including areas for research and areas to be protected for biodiversity or threatened, endangered and sensitive species.

**Resource Advisory Committee** – As used in this Plan, the Resource Advisory Committee will refer to any committee established by the District to provide advice regarding various land and conservation issues. The term also refers to advisory committees established by the Bureau of Land Management to provide the BLM with advice regarding public land management issues, especially relating to livestock grazing pursuant to 43 C.F.R. Subpart 1784.

**Rights-of-way** – This term generally refers to "an easement, lease, permit, or license to occupy, use, or traverse lands" and such right may be created by federal or state statute, deed, contract or agreement, or permit. A right-of-way may also include: Any road, trail, access or way upon which construction has been carried out to the standard in which public rights-of-way were built within historic context. These rights-of-way may include, but not be limited to, horse paths, cattle trails, irrigation canals, waterways, ditches, pipelines or other means of water transmission and their attendant access for maintenance, wagon roads, jeep trails, logging roads, homestead roads, mine to market roads, and all other ways.

**Riparian** – An area of land directly influenced by permanent water. It has visible vegetation or physical characteristics reflective of permanent water influence. Lakeshores and streambanks are typical riparian areas. Excluded are such sites as ephemeral streams or washes that do not have vegetation dependent on free water in the soil.

**Riparian Area** – An area along a watercourse or around a lake or pond. "Riparian areas are ecosystems that occur along watercourses or water bodies. They are distinctly different from the surrounding lands because of unique soil and vegetation characteristics that are strongly influenced by free or unbound water in the soil. Riparian ecosystems occupy the transitional area

between the terrestrial and aquatic ecosystems. Typical examples would include floodplains, stream banks, and lakeshores." USDA LRACS. "Riparian areas have one or both of the following characteristics: 1) distinctively different vegetative species than adjacent areas, and 2) species like adjacent areas but exhibiting more vigorous or robust growth forms. Riparian areas are usually transitional between [river or] wetland and upland." Riparian landscapes occur in the saturated soils along the streams of the County. Riparian or streamside areas are a valuable natural resource and impacts to these areas should be avoided whenever possible. Riparian vegetation plays an important role in protecting streams, reducing erosion and sedimentation as well as improving water quality, maintaining water table, controlling flooding, and providing shade and cover.

**Riparian Zone** – Those terrestrial areas where the vegetation complex and microclimate conditions are products of the combined presence and influence of perennial and or intermittent water, associated high water tables and soils which exhibit some wetness characteristics. Normally used to refer to the zone within which plants grow rooted in the water table of these rivers, streams, lakes, ponds, reservoirs, springs, marshes, seeps, bogs and wet meadows. (BLM). "At the smallest scale, the riparian zone is the immediate water's edge where some specialized plants and animals form a distinct community. At a larger scale, the riparian zone is the area periodically flooded by high water, the stream banks and floodplain. At the largest scale, the riparian zone is the band of land that has significant influence on the stream ecosystem, and/or is significantly influenced by the stream." Malcomb Hunter.

**Significantly** – This term is used in the National Environmental Policy Act regulations, 40 C.F.R. §1508.27, to define when a proposed action may significantly affect the human environment. Significantly as used in NEPA requires considerations of both context and intensity:

1) Context. This means that the significance of an action must be analyzed in several contexts such as society (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world. Both short- and long-term effects are relevant.
2) Intensity. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following should be considered in evaluating intensity:
3) Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.
4) The degree to which the proposed action affects public health or safety.
5) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.
6) The degree to which the effects on the quality of the human environment are likely to be highly controversial.
7) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.
8) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

9) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.
10) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.
11) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.
12) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

**Site Condition** – This term describes existing soil, vegetation, wildlife and the physical site, in the context of precipitation and climate.

**Special Land Use Designations** – Refers to the classification or designation tracts of land by Congress or a federal agency to recognize and protect distinctive or unique characteristics. Designations by Congress are permanent and may include national monuments, national parks, national park preserves, national wildlife refuges, national recreation areas, national seashores, wild, scenic or recreation rivers, national forests and wilderness. The President may also establish national monuments, which are permanent unless modified by another President or Congress. Federal law may delegate the authority to various federal agencies to make special land use designations. The Interior Department Secretary may designate wildlife refuges; the Bureau of Land Management through its land use plans may establish special recreation areas, areas of critical environmental concern, resource natural areas, and until 1991, wilderness study areas. The Forest Service through its land use plans establishes special interest areas and research natural areas. There are more than 40 recognized special land designations exist nationwide. Pursuant to this Plan, multiple use is not a special land designation, rather it is a concept and management practice for most lands in Niobrara County not assigned a special land designation.

**Species of Concern or Special Status Species** – This term includes species that have been proposed for listing under the Endangered Species Act or have already been listed as threatened or endangered, as well as species that are on the candidate list published in the Federal Register. The term also includes any state-listed species, or any "sensitive species" identified by the BLM State Director, which includes the above categories and might also include species undergoing downward trends due to changes in habitat capability or populations or which occupy specialized habitats.

**Spill Over** – This term refers to the movement of introduced or reintroduced wildlife into areas where they were not intended to be in the plan. The presence of such species will greatly limit land uses, especially when the species is protected under the ESA or other federal and state laws.

**Split Estate** – A tract of land where title to the surface estate is separate from title to some or all the mineral rights. Split estates are common in the western United States because private land conveyed under the homestead or stock raising homestead acts reserved the mineral rights to the United States. Under common law, the mineral estate is dominant and can be developed over the objections of the surface owner. Modern laws and case decisions have modified the rule but still recognize the right of the mineral owner to develop the mineral estate, even when the

surface owner objects. If the United States owns the surface, it will require the mineral owner to reclaim the surface, secure permits to build roads and other facilities and post reclamation bonds. If the surface is owned by a private landowner, then federal reclamation laws do not apply but state laws will.

**Standards** – Standards are synonymous with goals and are observed on a landscape scale. Standards apply to rangeland health and not to the important by-products of healthy rangelands. Standards relate to the current capability or realistic potential of a specific site to produce these by- products, not to the presence or absence of the products themselves. It is the sustainability of the processes, or rangeland health, which produces these by-products.

**Surface disturbing activity** – Refers to development activities that involve the removal of vegetation, topsoil, or overburden where there is a physical change to the surface, such as activities associated with mineral or energy development, rights-of-way, road construction or reconstruction. It does not include incidental disturbances associated with the construction, reconstruction, or maintenance of fences or corrals or stock tanks, livestock or wildlife grazing, or recreation uses.

**Sustainable Yield** – The yield from a renewable resource that can produce continuously at a given intensity of management.

**Sustained Yield** – A "high-level" output of renewable resources that does not impair the productivity of the land. The continuation of a healthy desired plant community.

**Takings in context of Endangered Species Act** – Includes harm to a protected species when an act kills or injures wildlife. Such act may include significant habitat modification or degradation where it kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering. 50 C.F.R. §17.3.

**Takings in context of property and right to compensation** – A 'taking' of property is generally defined as to deprivation of the right of use and enjoyment of the property. The ownership of property is often described as a "bundle of sticks" which includes mineral rights, rights of access, rights to use the surface, and rights to use the fruits raised from the surface, such as crops or grass. When land use regulation by federal, state or local government interferes with one of those rights in the bundle of sticks, a taking occurs only if it deprives the owner of all his bundle of sticks or "investment- backed expectations." More recent decisions will find a taking when the deprivation is total but temporary or when the deprivation precludes an essential element of the property right, such as the right to exclude others. Federal land agencies enjoy a much greater presumption of authority to limit the exercise of private property rights and successful takings cases more often involve disputes with a local government or state agency.

**Terms and Conditions** – Terms and conditions are very specific land use requirements that are made a part of the land use authorization to assure maintenance or attainment of the standard. Terms and conditions may incorporate or reference the appropriate portions of activity plans (e.g., Allotment Management Plans). In other words, where an activity plan exists that contains objectives focused on meeting the standards, compliance with the plan may be the only term and condition necessary in that allotment.

**Thoroughfare** – Term means according to its derivation, a street or passage through which one can fare (travel); that is, a street or highway affording an unobstructed exit at each end into another street or public passage. If the passage is closed at one end, admitting no exit it is called a "cul de sac."

**Title V of FLPMA** – In 1976, Congress repealed almost all laws granting rights-of-way for various purposes and established a single title under which rights-of-way would be granted across public lands for any purpose, including power transmission lines, roads and pipelines.
**Trails** – A trace is pathway made by passage of man-animal routing of extended travel. Vestiges of an established pathway by which man has persistently walked or trailed game or sought the easiest traverse of land establishing right-of-way access of natural law by horseback, travois, etc.
**Trailhead** – This term refers to the elements of managing historic trails and includes the linear landscapes, visual resources or viewshed, historic context and the corridor of the trail itself.
**Tread** Lightly – A BLM program to encourage recreation users to avoid damage to natural resources by leaving no or little evidence of recreation use.
**Undue and unnecessary degradation** – This term applies to activities on public lands managed by the Bureau of Land Management which is required to ensure that surface activities do not cause 'undue or unnecessary degradation.' BLM defines those impacts as being greater than those that would normally be expected from an activity being accomplished in compliance with current standards and regulations and based on sound practices, including use of the best reasonably available technology.
**Upland** – Those portions of the landscape which do not receive additional moisture for plant growth from run-off, streamflow, etc. Typically, these are hills, ridgetops, valley slopes and rolling plains. Visibility Protection Plan – A plan that implements the requirements of the Clean Air Act.
**Visibility or Visibility Impairment** – Visibility refers to amount or lack of haze that obscures the ability to see great distances. Visibility impairment measures the extent of haze composed of various air pollutants which manifest as a white or brown haze. This is a major issue with respect to national parks and wilderness areas, which are Class I air quality areas and are given the highest level of protection.
**View** – The sight or prospect from a particular point, typically an appealing sight.
**Viewshed** – The geographic area surrounding the visual area to be inventoried and managed.
**Visual Condition Class** – The Clean Air Act recognizes four air quality classes with Class I applying to national parks and wilderness areas and Class II applying to all other federal land areas, such as National Forests, National Wildlife Refuges, and public lands. Visual conditions are affected by particulates, emissions including ozone, sulfur oxide, nitrogen oxide, carbon dioxide and the chemical reactions caused by humidity and sunshine.
**Visual Quality or Visual Resource Management Objective** – Standards established in land use plans prepared by the Forest Service or the Bureau of Land Management to apply to specific land areas based on the scenic qualities and land uses. The land use plans may require modifications to facilities to reduce the visual impacts.
**Visual Resource** – A part of the landscape important for its scenic quality. It may include a composite of landforms, water features, cultural features, terrain, geologic features OR vegetative patterns which create the visual environment. 2. The visible physical features of a landscape. (BLM).
**Visual Resource Management ("VRM")** – The designation of BLM surface lands for visual resource protection and management as part of the land use planning process. The VRM classification considers scenic values, sensitivity based on land uses permitted and distance or remoteness. See BLM H8410-1.

**Visual Resource Management Classes** – The BLM handbook recognizes four VRM classes: Class I, to preserve nationally designated wilderness areas; Class II, to preserve scenic values, including areas of critical environmental concern, Class III, to permit some change in landscape character and Class IV, to allow moderate to major changes in the landscape.

**Waste** – Refuse; worthless or useless matter.

**Water** – All streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems and all other bodies of water above or below ground which are partially or wholly in the state, border on the state or are within the jurisdiction of the state. Private waters that do not combine or have a junction with natural surface or underground waters are not included (for example, and isolated farm pone that does not infiltrate to ground water or connect to surface water). All springs, streams and bodies of surface or ground water, whether natural or artificial, within the boundaries of the State are subject to its jurisdiction.

**Watershed** – The total land area, regardless of size, above a given point on a waterway that contributes runoff water to the flow at that point. It is a major subdivision of a drainage basin. The United States is generally divided into 18 major drainage areas and 160 principal river drainage basins containing about 12,700 smaller watersheds. The entire region or land area that contributes water to a drainage system or stream, collects and drains water into a stream or stream system or is drained by a waterway (or into a lake or reservoir). More specifically, a watershed is an area of land above a given point on a stream that contributes water to the streamflow at that point. A region or area where surface runoff and groundwater drain to a common watercourse or body of water. The area drained by a river or river system enclosed by drainage divides. An area of land that drains to a single water outlet. A watershed is also known as a sub-basin.

**Weed** – Any plant growing where it is not desired; a plant out of place, or unwanted plants, which, may be growing in a magnitude of situations.

**"Declared weed"** – Any plant, which 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. Wyo. Stat. § 11-5-102 (viii).

**Noxious weed** – A weed that is recognized as a threat to native plants due to its invasive character.

**Wetlands** – Permanently wet or intermittently water-covered land areas, such as swamps, marshes, bogs, muskegs, potholes, swales and glades. Areas that are inundated by surface or ground water with a frequency sufficient to support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, wet meadows, river overflows, mud flats and natural ponds. Although federal agencies, states and textbook authors vary in the way in which they define wetlands, in general terms, wetlands are lands where water covers the soil or is present either at or near the surface of the soil or within the root zone, all year or for varying periods of time during the year, including during the growing season. The recurrent or prolonged presence of water (hydrology) at or near the soil surface is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface. Wetlands can be identified by the presence of those plants (hydrophytes) that are adapted to life in the soils that form under flooded or saturated conditions (hydric soils) characteristic of wetlands (NAS 1995; Mitsch and Gosselink 1993). There also are wetlands that

lack hydric soils and hyrdrophytic vegetation but support other organisms indicative of recurrent saturation (NAS 1995). The federal regulations implementing Section 404 of the Clean Water Act define wetlands as: Those areas that are inundated or saturated by surface or ground water (hydrology) at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation (hydrophytes) typically adapted for life in saturated soil conditions (hydric soils). Wetlands generally include swamps, marshes, bogs, and similar areas (40 C.F.R. §232.2(r)). Jurisdictional wetlands, which are regulated by the U.S. Army Corps of Engineers ("US COE" or "Corps") under Section 404, must exhibit all three characteristics: hydrology, hydrophytes and hydric soils (US ACOE 1987). It is important to understand that some areas that function as wetlands ecologically, but exhibit only one or two of the three characteristics, do not currently qualify as Corps jurisdictional wetlands and thus activities in these wetlands are not regulated under the Section 404 program. Such wetlands, however, may perform valuable functions.

Another federal agency, the U.S. Fish and Wildlife Service defines wetlands as: lands that are transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water, and that have one or more of the following attributes:

1) At least periodically, the land supports predominantly hydrophytes.
2) The substrate is predominantly undrained hydric soil; and
3) The substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season of each year (Cowardian et al. 1979).

This definition differs from the EPA and U.S. Army Corps of Engineers definition used for jurisdictional wetlands, which requires that all three attributes (hydrophytes, hydric soils and hydrology) be evident. The 1987 Corps of Engineers Manual on wetland delineation does not consider unvegetated aquatic sites such as mudflats and coral reefs or vegetated shallow water to be wetland areas, whereas the Cowardin classification does (US ACOE 1987).

**Wilderness Act of 1964** – Congress established the National Wilderness Preservation System to protect and preserve those areas deemed to be wilderness, which is defined as: A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this chapter an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value. 16 U.S.C. §1131(a).

**Wilderness Area** – Tracts of land designated by an act of Congress to be part of the National Wilderness Preservation System.

**Wilderness Study Area or WSA** – An area of land identified by Congress or a federal agency pursuant to Congressional direction to be evaluated for its suitability for designation by Congress as part of the National Wilderness Preservation System. With respect to public lands managed

by the Bureau of Land Management, it refers to tracts of public lands determined to meet the definition of wilderness based on the wilderness inventory and review conducted by the Bureau of Land Management pursuant to Section 603 of the Federal Land Policy and Management Act, 43 U.S.C. §1782. A WSA typically meets the definition of wilderness in that it is "an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value." 16 U.S.C. §1131(c.).

**Wildlife** – Populations, variety, and distribution of birds, mammals, reptiles, amphibians, invertebrates and plants.

**Woodland Products** – Harvestable items from Piñon – Juniper woodlands. These include fuel wood, posts, pine nuts and Christmas trees.

**Woody** – Consisting of wood plants such as trees or bushed– i.e., sage brush.

**Wood Fiber Production** – The growing, tending, harvesting and regeneration of harvestable trees.

## APPENDIX C*:* TABLES

**Table 4: Wyoming Tier 1 Species of Conservation Priority. (WGFD, 2017b)**

| **Species** | Common Name | Priority Tier |
|---|---|---|
| *Amphibians* | | |
| *Anaxyrus baxteri* | Wyoming toad | I |
| *Anaxyrus boreas* | western toad | I |
| *Birds* | | |
| *Accipiter gentilis* | Northern Goshawk | I |
| *Athene cunicularia* | Burrowing Owl | I |
| *Charadrius montanus* | Mountain Plover | I |
| *Gavia immer* | Common Loon | I |
| **Fish** | | |
| *Catostomus discobolus* | bluehead sucker | I |
| *Catostomus latipinnis* | flannelmouth sucker | I |
| *Gila robusta* | roundtail chub | I |
| *Nocomis biguttatus* | hornyhead chub | I |
| *Rhinichthys osculus thermalis* | Kendall Warm Springs dace | I |
| *Mammals* | | |
| *Lynx canadensis* | Canada lynx | I |
| *Mustela nigripes* | black-footed ferret | I |
| *Thomomys clusius* | Wyoming pocket gopher | I |
| **Reptiles** | | |
| *Crotalus oreganus concolor* | midget faded rattlesnake | I |
| *Mollusks* | | |
| *Lampsilis cardium* | plain pocketbook | I |
| *Fluminicola coloradoensis* | Green River pebblesnail | I |
| | mountainsnails (many species) | I |

**Table 5: Wyoming Tier 2 Species of Conservation Priority. (WGFD, 2017b)**

| Species | Common Name | Priority Tier |
|---|---|---|
| **Amphibians** | | |
| *Anaxyrus cognatus* | Great Plains toad | II |
| *Lithobates pipiens* | northern leopard frog | II |
| *Lithobates sylvaticus* | wood frog | II |
| *Rana luteiventris* | Columbia spotted frog | II |
| *Spea bombifrons* | plains spadefoot | II |
| *Spea intermontana* | Great Basin spadefoot | II |
| **Birds** | | |
| *Aechmophorus clarkii* | Clark's Grebe | II |
| *Aechmophorus occidentalis* | Western Grebe | II |
| *Aegolius funereus* | Boreal Owl | II |
| *Ammodramus bairdii* | Baird's Sparrow | II |
| *Ammodramus savannarum* | Grasshopper Sparrow | II |
| *Aphelocoma woodhouseii* | Woodhouse's Scrub-jay | II |
| *Aquila chrysaetos* | Golden Eagle | II |
| *Archilochus alexandri* | Black-chinned Hummingbird | II |
| *Ardea herodias* | Great Blue Heron | II |
| *Artemisiospiza nevadensis* | Sagebrush Sparrow | II |
| *Asio flammeus* | Short-eared Owl | II |
| *Baeolophus ridgwayi* | Juniper Titmouse | II |
| *Bartramia longicauda* | Upland Sandpiper | II |
| *Botaurus lentiginosus* | American Bittern | II |
| *Bubulcus ibis* | Cattle Egret | II |
| *Buteo regalis* | Ferruginous Hawk | II |
| *Buteo swainsoni* | Swainson's Hawk | II |
| *Calcarius ornatus* | Chestnut-collared Longspur | II |
| *Centrocercus urophasianus* | Greater Sage Grouse | II |
| *Chlidonias niger* | Black Tern | II |
| *Coccyzus americanus* | Yellow-billed Cuckoo | II |
| *Coccyzus erythropthalmus* | Black-billed Cuckoo | II |
| *Cygnus buccinator* | Trumpeter Swan | II |
| *Dolichonyx oryzivorus* | Bobolink | II |
| *Egretta thula* | Snowy Egret | II |
| *Falco peregrinus* | Peregrine Falcon | II |
| *Geothlypis tolmiei* | MacGillivray's Warbler | II |
| *Glaucidium gnoma* | Northern Pygmy Owl | II |
| *Haliaeetus leucocephalus* | Bald Eagle | II |

| | | |
|---|---|---|
| *Histrionicus histrionicus* | Harlequin Duck | II |
| *Hydroprogne caspia* | Caspian Tern | II |
| *Icterus parisorum* | Scott's Oriole | II |
| *Lanius ludovicianus* | Loggerhead Shrike | II |
| *Leucophaeus pipixcan* | Franklin's Gull | II |
| *Leucosticte atrata* | Black Rosy-finch | II |
| *Leucosticte australis* | Brown-capped Rosy-finch | II |
| *Loxia curvirostra* | Red Crossbill | II |
| *Melanerpes erythrocephalus* | Red-headed Woodpecker | II |
| *Melanerpes lewis* | Lewis's Woodpecker | II |
| *Myiarchus cinerascens* | Ash-throated Flycatcher | II |
| *Nucifraga columbiana* | Clark's Nutcracker | II |
| *Numenius americanus* | Long-billed Curlew | II |
| *Nycticorax nycticorax* | Black-crowned Night-Heron | II |
| *Oreoscoptes montanus* | Sage Thrasher | II |
| *Oreothlypis virginiae* | Virginia's Warbler | II |
| *Pelecanus erythrorhynchos* | American White Pelican | II |
| *Picoides arcticus* | Black-backed Woodpecker | II |
| *Plegadis chihi* | White-faced Ibis | II |
| *Psaltriparus minimus* | Bushtit | II |
| *Rhynchophanes mccownii* | McCown's Longspur | II |
| *Selasphorus calliope* | Calliope Hummingbird | II |
| *Selasphorus rufus* | Rufous Hummingbird | II |
| *Setophaga nigrescens* | Black-throated Gray Warbler | II |
| *Sitta pygmaea* | Pygmy Nuthatch | II |
| *Sphyrapicus thyroideus* | Williamson's Sapsucker | II |
| *Spiza americana* | Dickcissel | II |
| *Spizella breweri* | Brewer's Sparrow | II |
| *Sterna forsteri* | Forster's Tern | II |
| *Strix nebulosa* | Great Gray Owl | II |
| *Tympanuchus phasianellus columbianus* | Columbian Sharp-tailed Grouse | II |
| *Vireo olivaceus* | Red-eyed Vireo | II |
| *Vireo vicinior* | Gray Vireo | II |
| **Fish** | | |
| *Chrosomus neogaeus* | finescale dace | II |
| *Etheostoma exile* | Iowa darter | II |
| *Etheostoma spectabile* | orangethroat darter | II |
| *Fundulus kansae* | Northern Plains killifish | II |
| *Fundulus sciadicus* | plains topminnow | II |

| | | |
|---|---|---|
| *Hiodon alosoides* | goldeye | II |
| *Hybognathus argyritis* | western silvery minnow | II |
| *Hybognathus placitus* | plains minnow | II |
| *Lepidomeda copei* | northern leatherside chub | II |
| *Lota lota* | burbot | II |
| *Macrhybopsis gelida* | sturgeon chub | II |
| *Margariscus nachtriebi* | northern pearl dace | II |
| *Oncorhynchus clarkii bouvieri* | Yellowstone cutthroat trout | II |
| *Oncorhynchus clarkii pleuriticus* | Colorado River cutthroat trout | II |
| *Oncorhynchus clarkii spp.* | Snake River cutthroat trout | II |
| *Oncorhynchus clarkii utah* | Bonneville cutthroat trout | II |
| *Phenacobius mirabilis* | suckermouth minnow | II |
| *Sander canadensis* | sauger | II |
| *Scaphirhynchus platorynchus* | shovelnose sturgeon | II |
| **Mammals** | | |
| *Alces americanus* | moose | II |
| *Antrozous pallidus* | pallid bat | II |
| *Brachylagus idahoensis* | pygmy rabbit | II |
| *Corynorhinus townsendii* | Townsend's big-eared bat | II |
| *Cynomys leucurus* | white-tailed prairie dog | II |
| *Cynomys ludovicianus* | black-tailed prairie dog | II |
| *Geomys lutescens* | Sand Hills pocket gopher | II |
| *Glaucomys sabrinus* | northern flying squirrel | II |
| *Gulo gulo* | wolverine | II |
| *Lemmiscus curtatus* | sagebrush vole | II |
| *Lontra canadensis* | northern river otter | II |
| *Microtus richardsoni* | water vole | II |
| *Myotis ciliolabrum* | western small-footed myotis | II |
| *Myotis lucifugus* | little brown myotis | II |
| *Myotis septentrionalis* | northern long-eared myotis | II |
| *Myotis thysanodes* | fringed myotis | II |
| *Ochotona princeps* | American pika | II |
| *Ovis canadensis* | bighorn sheep | II |
| *Peromyscus crinitus* | canyon deermouse | II |
| *Peromyscus truei* | piñon deermouse | II |
| *Reithrodontomys montanus* | plains harvest mouse | II |
| *Sorex nanus* | dwarf shrew | II |
| *Spilogale putorius* | eastern spotted skunk | II |
| *Tamias dorsalis* | cliff chipmunk | II |

| | | |
|---|---|---|
| *Thomomys idahoensis* | Idaho pocket gopher | II |
| *Vulpes velox* | swift fox | II |
| *Zapus hudsonius preblei* | Preble's meadow jumping mouse | II |
| **Reptiles** | | |
| *Apalone spinifera spinifera* | eastern spiny softshell | II |
| *Charina bottae* | northern rubber boa | II |
| *Lampropeltis triangulum multistriata* | pale milksnake | II |
| *Pituophis catenifer deserticola* | Great Basin gophersnake | II |
| *Urosaurus ornatus wrighti* | northern tree lizard | II |
| *Crustaceans* | | |
| *Branchinecta constricta* | constricted fairy shrimp | II |
| *Orconectes neglectus* | ringed crayfish | II |
| *Pacifastacus gambelii* | pilose crayfish | II |
| *Streptocephalus mackini* | Mackin fairy shrimp | II |
| **Mollusks** | | |
| *Anodonta californiensis* | California floater | II |
| *Anodontoides ferussacianus* | cylindrical papershell | II |
| *Oreohelix pygmaea* | pygmy mountainsnail | II |
| *Oreohelix strigosa cooperi* | Cooper's rocky mountainsnail | II |
| *Oreohelix yavapai* | yavapai mountainsnail | II |
| *Physa spelunca* | cave physa | II |
| *Pyrgulopsis robusta* | Jackson Lake springsnail | II |
| | aquatic snails (many species) | II |
| | land snails (many species) | II |

**Table 6: Wyoming Tier 3 Species of Conservation Priority. (WGFD, 2017b)**

| Species | Common Name | Priority Tier |
|---|---|---|
| **Amphibians** | | |
| *Ambystoma mavortium* | western tiger salamander | III |
| **Birds** | | |
| *Anthus rubescens* | American Pipit | III |
| *Catherpes mexicanus* | Canyon Wren | III |
| *Charadrius nivosus* | Snowy Plover | III |
| *Chordeiles minor* | Common Nighthawk | III |
| *Empidonax traillii* | Willow Flycatcher | III |
| *Falco columbarius* | Merlin | III |
| *Falco sparverius* | American Kestrel | III |
| *Geothlypis trichas* | Common Yellowthroat | III |
| *Passerina caerulea* | Blue Grosbeak | III |
| *Polioptila caerulea* | Blue-gray Gnatcatcher | III |
| *Progne subis* | Purple Martin | III |
| *Psiloscops flammeolus* | Flammulated Owl | III |
| *Rallus limicola* | Virginia Rail | III |
| *Thryomanes bewickii* | Bewick's Wren | III |
| **Fish** | | |
| *Hybognathus hankinsoni* | brassy minnow | III |
| *Luxilus cornutus* | common shiner | III |
| *Notropis dorsalis* | bigmouth shiner | III |
| *Platygobio gracilis* | flathead chub | III |
| **Mammals** | | |
| *Bassariscus astutus* | ringtail | III |
| *Chaetodipus hispidus* | hispid pocket mouse | III |
| *Euderma maculatum* | spotted bat | III |
| *Lasiurus borealis* | eastern red bat | III |
| *Mustela nivalis* | least weasel | III |
| *Myotis evotis* | long-eared myotis | III |
| *Myotis volans* | long-legged myotis | III |
| *Myotis yumanensis* | yuma myotis | III |
| *Perognathus fasciatus* | olive-backed pocket mouse | III |
| *Perognathus flavescens* | plains pocket mouse | III |
| *Perognathus flavus* | silky pocket mouse | III |
| *Perognathus mollipilosus* | Great Basin pocket mouse | III |
| *Sciurus aberti* | Abert's squirrel | III |
| *Sorex haydeni* | Hayden's shrew | III |

| | | |
|---|---|---|
| *Sorex hoyi* | American pygmy shrew | III |
| *Sorex preblei* | Preble's shrew | III |
| *Spilogale gracilis* | western spotted skunk | III |
| *Tamias amoenus* | yellow-pine chipmunk | III |
| *Tamias umbrinus* | Uinta chipmunk | III |
| *Xerospermophilus spilosoma* | spotted ground squirrel | III |
| *Zapus hudsonius* | meadow jumping mouse | III |
| **Crustaceans** | | |
| *Cambarus diogenes* | devil crayfish | III |
| *Orconectes immunis* | calico/papershell crayfish | III |
| *Thamnocephalus platyurus* | beavertail fairy shrimp | III |
| | fairy, tadpole, and clam shrimp (many species) | III |
| **Mollusks** | | |
| *Gyraulus parvus* | ash gyro | III |
| *Ferrissia rivularis* | creeping ancylid | III |
| *Fossaria dalli* | dusky fossaria | III |
| *Discus whitneyi* | forest disc | III |
| *Pyganodon grandis* | giant floater | III |
| *Planorbella trivolvis* | marsh rams-horn | III |
| *Vallonia gracilicosta* | multirib vallonia | III |
| *Physa acuta* | pewter physa | III |
| | pill or fingernail clams (many species) | III |
| *Fossaria bulimoides* | prairie fossaria | III |
| *Zonitoides arboreus* | quick gloss | III |
| *Oreohelix strigosa* | Rocky Mountain mountainsnail | III |
| | stagnicola pond snails (many species) | III |
| *Oreohelix subrudis* | subalpine mountainsnail | III |
| *Physa gyrina* | tadpole physa | III |
| *Promenetus umbilicatellus* | umbilicate sprite | III |
| *Vitrina pellucida* | western glass-snail | III |

**Table 7: BLM's Sensitive Species List for Wyoming. (BLM, 2010)**

| Species | Common Name |
|---|---|
| **Amphibians** | |
| *Bufo boreas boreas* | Boreal Toad (Northern Rocky Mountain Population) |
| *Rana pipiens* | Northern Leopard Frog |
| *Rana luteiventris* | Columbia Spotted Frog |
| *Spea intermontana* | Great Basin Spadefoot |
| **Birds** | |
| *Accipiter gentilis* | Northern Goshawk |
| *Ammodramus bairdii* | Baird's Sparrow |
| *Amphispiza belli* | Sage Sparrow |
| *Athene cunicularia* | Burrowing Owl |
| *Buteo regalis* | Ferruginous Hawk |
| *Centrocercus urophasianus* | Greater Sage-grouse |
| *Charadrius montanus* | Mountain Plover |
| *Coccyzus americanus* | Yellow-billed Cuckoo |
| *Cygnus buccinator* | Trumpeter Swan |
| *Falco peregrinus* | Peregrine Falcon |
| *Haliaeetus leucocephalus* | Bald Eagle |
| *Lanius ludovicianus* | Loggerhead Shrike |
| *Numenius americanus* | Long-billed Curlew |
| *Oreoscoptes montanus* | Sage Thrasher |
| *Plegadis chichi* | White-faced Ibis |
| *Spizella breweri* | Brewer's Sparrow |
| *Tympanuchus phasianellus columbianus* | Columbian Sharp-tailed Grouse |
| **Fish** | |
| *Catostomus discobolus* | Bluehead Sucker |
| *Catostomus latipinnis* | Flannelmouth Sucker |
| *Lepidomeda copei* | Northern Leatherside Chub |
| *Gila robusta* | Roundtail Chub |
| *Oncorhynchus clarkii bouvieri* | Yellowstone Cutthroat Trout |
| *Oncorhyncus clarkii ssp. (O. c. behnkei)* | Fine-spotted Snake River Cutthroat Trout |
| *Oncorhynchus clarkii pleuriticus* | Colorado River Cutthroat Trout |
| *Oncorhynchus clarkii Utah* | Bonneville Cutthroat Trout |
| *Nocomis biguttatus* | Hornyhead Chub |
| **Mammals** | |
| *Brachylagus idahoensis* | Pygmy Rabbit |
| *Corynorhinus townsendii* | Townsend's Big-eared Bat |
| *Cynomys leucurus* | White-tailed Prairie Dog |
| *Cynomys ludovicianus* | Black-tailed Prairie Dog |

| | |
|---|---|
| *Euderma maculatum* | Spotted Bat |
| *Myotis evotis* | Long-eared Myotis |
| *Myotis thysanodes* | Fringed Myotis |
| *Thomomys clusius* | Wyoming Pocket Gopher |
| *Thomomys idahoensis* | Idaho Pocket Gopher |
| *Vulpes velox* | Swift Fox |
| *Zapus hudsonius preblei* | Preble's Meadow Jumping Mouse |
| **Reptiles** | |
| *Crotalus viridis concolor* | Midget Faded Rattlesnake |
| **Plants** | |
| *Antennaria arcuata* | Meadow Pussytoes |
| *Aquilegia laramiensis* | Laramie Columbine |
| *Artemisia porteri* | Porter's Sagebrush |
| *Astragalus diversifolius* | Meadow Milkvetch |
| *Astragalus gilviflorus var. purpureus* | Dubois Milkvetch |
| *Astragalus jejunus var. articulatus* | Hyattville Milkvetch |
| *Astragalus proimanthus* | Precocious Milkvetch |
| *Astragalus racemosus var. treleasei* | Trelease's Milkvetch |
| *Boechera (Arabis) pusilla* | Small Rock Cress |
| *Botrychium lineare* | Slender Moonwort |
| *Cirsium aridum* | Cedar Rim Thistle |
| *Cirsium ownbeyi* | Ownbey's Thistle |
| *Cleome multicaulis* | Many-stemmed Spider-flower |
| *Cryptantha subcapitata* | Owl Creek Miner's Candle |
| *Cymopterus evertii* | Evert's Wafer-Parsnip |
| *Cymopterus williamsii* | Williams' Wafer-Parsnip |
| *Descurainia torulosa* | Wyoming Tansymustard |
| *Elymus simplex var. luxurians* | Dune Wildrye |
| *Ericameria discoidea var. winwardii* | Winward's narrow leaf goldenweed |
| *Lepidium integrifolium var. integrifolium* | Entire-Leaved Peppergrass |
| *Lesquerella arenosa var. argillosa* | Sidesaddle Bladderpod |
| *Lesquerella fremontii* | Fremont Bladderpod |
| *Lesquerella macrocarpa* | Large-fruited Bladderpod |
| *Lesquerella prostrata* | Prostrate Bladderpod |
| *Penstemon absarokensis* | Absaroka Beardtongue |
| *Penstemon acaulis var. acaulis* | Stemless Beardtongue |
| *Penstemon gibbensii* | Gibbens' Beardtongue |
| *Phlox pungens* | Beaver Rim Phlox |
| *Physaria condensata* | Tufted Twinpod |
| *Physaria dornii* | Dorn's Twinpod |

| | |
|---|---|
| *Physaria saximontana var. saximontana* | Rocky Mountain Twinpod |
| *Pinus albicaulis* | Whitebark Pine |
| *Pinus flexilis* | Limber Pine |
| *Rorippa calycina* | Persistent Sepal Yellowcress |
| *Shoshonea pulvinata* | Shoshonea |
| *Sphaeromeria simplex* | Laramie False Sagebrush |
| *Thelesperma caespitosum* | Green River Greenthread |
| *Thelesperma pubescens* | Uinta Greenthread |
| *Townsendia microcephala* | Cedar Mtn. Easter Daisy |
| *Trifolium barnebyi* | Barneby's Clover |

**Table 8: Regional Forester's Sensitive Animal Species List for the Rocky Mountain Region. (U.S. Forest Service, 2017)**

| Species | Common Name |
|---|---|
| **Amphibians** | |
| *Anaxyrus boreas boreas* | boreal toad |
| *Lithobates blairi* | plains leopard frog |
| *Lithobates pipiens* | northern leopard frog |
| *Lithobates sylvaticus* | wood frog |
| *Rana luteiventris* | Columbia spotted frog |
| **Birds** | |
| *Accipiter gentilis* | Northern Goshawk |
| *Aegolius funereus* | Boreal Owl |
| *Ammodramus savannarum* | Grasshopper Sparrow |
| *Artemisiospiza nevadensis* | Sagebrush Sparrow |
| *Asio flammeus* | Short-eared Owl |
| *Athene cunicularia* | Burrowing Owl |
| *Botaurus lentiginosus* | American Bittern |
| *Buteo regalis* | Ferruginous Hawk |
| *Calcarius ornatus* | Chestnut-collared Longspur |
| *Centrocercus urophasianus* | Greater Sage-Grouse |
| *Charadrius montanus* | Mountain Plover |
| *Chlidonias niger* | Black Tern |
| *Circus cyaneus* | Northern Harrier |
| *Contopus cooperi* | Olive-sided Flycatcher |
| *Cygnus buccinator* | Trumpeter Swan |
| *Cypseloides niger* | Black Swift |
| *Falco peregrinus anatum* | Peregrine Falcon |
| *Haliaeetus leucocephalus* | Bald Eagle |
| *Histrionicus histrionicus* | Harlequin Duck |
| *Lagopus leucura* | White-tailed Ptarmigan |
| *Lanius ludovicianus* | Loggerhead Shrike |
| *Melanerpes lewis* | Lewis's Woodpecker |
| *Numenius americanus* | Long-billed Curlew |
| *Peucaea cassinii* | Cassin's Sparrow |
| *Picoides arcticus* | Black-backed Woodpecker |
| *Progne subis* | Purple Martin |
| *Psiloscops flammeolus* | Flammulated Owl |
| *Rhynchophanes mccownii* | McCown's Longspur |
| *Spizella breweri* | Brewer's Sparrow |
| *Tympanuchus cupido* | Greater Prairie-Chicken |
| *Tympanuchus phasianellus columbianus* | Columbian Sharp-tailed Grouse |

| **Fish** | |
|---|---|
| *Catostomus discobolus* | bluehead sucker |
| *Catostomus latipinnis* | flannelmouth sucker |
| *Catostomus platyrhynchus* | mountain sucker |
| *Catostomus plebeius* | Rio Grande sucker |
| *Chrosomus eos* | northern redbelly dace |
| *Chrosomus erythrogaster* | southern redbelly dace |
| *Chrosomus neogaeus* | finescale dace |
| *Couesius plumbeus* | lake chub |
| *Fundulus sciadicus* | Plains topminnow |
| *Gila pandora* | Rio Grande chub |
| *Gila robusta* | roundtail chub |
| *Hybognathus placitus* | plains minnow |
| *Macrhybopsis gelida* | sturgeon chub |
| *Margariscus nachtriebi* | northern pearl dace |
| *Nocomis biguttatus* | hornyhead chub |
| *Oncorhynchus clarkii bouvieri* | Yellowstone cutthroat |
| *Oncorhynchus clarkii pleuriticus* | Colorado River cutthroat |
| *Oncorhynchus clarkii virginalis* | Rio Grande cutthroat |
| *Platygobio gracilis* | flathead chub |
| **Insects** | |
| *Bombus occidentalis* | western bumble bee |
| *Capnia arapahoe* | Arapahoe snowfly |
| *Danaus plexippus plexippus* | monarch |
| *Hesperia ottoe* | Ottoe skipper |
| *Ochrotrichia susanae* | Susan’s purse-making caddisfly |
| *Somatochlora hudsonica* | Hudsonian emerald |
| *Speyeria idalia* | regal fritillary |
| *Speyeria nokomis nokomis* | Nokomis fritillary, Great Basin silverspot |
| **Mammals** | |
| *Conepatus leuconotus* | American hog-nosed skunk |
| *Corynorhinus townsendii* | Townsend’s big-eared bat |
| *Cynomys gunnisoni* | Gunnison’s prairie dog |
| *Cynomys leucurus* | white-tailed prairie dog |
| *Cynomys ludovicianus* | black-tailed prairie dog |
| *Euderma maculatum* | spotted bat |
| *Gulo gulo* | North American wolverine |
| *Lasiurus cinereus* | hoary bat |
| *Lontra canadensis* | river otter |
| *Martes americana* | American marten |
| *Microtus richardsoni* | water vole |

| | |
|---|---|
| *Myotis thysanodes* | fringed myotis |
| *Ovis canadensis canadensis* | Rocky Mountain bighorn sheep |
| *Ovis canadensis nelsoni* | desert bighorn sheep |
| *Sorex hoyi* | pygmy shrew |
| *Thomomys clusius* | Wyoming pocket gopher |
| *Vulpes macrotis* | kit fox |
| *Vulpes velox* | swift fox |
| **Molluscs** | |
| *Acroloxus coloradensis* | Rocky Mountain capshell |
| *Oreohelix pygmaea* | pygmy mountainsnail |
| *Oreohelix strigosa cooperi* | Cooper's Rocky Mountainsnail |
| **Reptiles** | |
| *Sistrurus catenatus edwardsii* | desert massasauga |
| *Storeria occipitomaculata pahasapae* | Black Hills redbelly snake |

**Table 9: Regional Forester's Sensitive Plant Species List for the Rocky Mountain Region. (U.S. Forest Service, 2017)**

| Species | Common Name |
|---|---|
| **Non-Vascular** | |
| *Sphagnum angustifolium* | sphagnum |
| *Sphagnum balticum* | Baltic sphagnum |
| **Ferns & Allies** | |
| *Botrychium ascendens* | trianglelobe moonwort |
| *Botrychium campestre* | Iowa moonwort, prairie moonwort |
| *Botrychium paradoxum* | peculiar moonwort |
| *Lycopodium complanatum* | groundcedar |
| *Selaginella selaginoides* | club spikemoss |
| **Angiosperms - Monocots** | |
| *Calochortus flexuosus* | winding mariposa lily |
| *Carex alopecoidea* | foxtail sedge |
| *Carex diandra* | lesser panicled sedge |
| *Carex livida* | livid sedge |
| *Cypripedium montanum* | mountain lady's slipper |
| *Cypripedium parviflorum* | lesser yellow lady's slipper |
| *Eleocharis elliptica* | elliptic spikerush, slender spikerush |
| *Epipactis gigantea* | stream orchid, giant helleborine |
| *Eriophorum chamissonis* | Chamisso's cottongrass |
| *Eriophorum gracile* | slender cottongrass |
| *Festuca hallii* | plains rough fescue |
| *Galearis rotundifolia* | roundleaf orchid |
| *Kobresia simpliciuscula* | simple bog sedge |
| *Liparis loeselii* | yellow widelip orchid |
| *Malaxis monophyllos var. brachypoda* | white adder's-mouth orchid |
| *Platanthera orbiculata* | lesser roundleaved orchid |
| *Ptilagrostis porteri* | Porter's false needlegrass |
| *Schoenoplectus hallii* | Hall's bulrush |
| *Triteleia grandiflora* | largeflower triteleia |
| **Angiosperms - Dicots** | |
| *Aliciella sedifolia* | stonecrop gilia |
| *Aquilegia chrysantha* | Rydberg's golden columbine |
| *Aquilegia laramiensis* | Laramie columbine |
| *Armeria maritima ssp. sibirica* | Siberian sea thrift |
| *Asclepias uncialis* | wheel milkweed |
| *Astragalus barrii* | Barr's milkvetch |
| *Astragalus iodopetalus* | violet milkvetch |
| *Astragalus leptaleus* | park milkvetch |

| | |
|---|---|
| *Astragalus missouriensis var. humistratus* | Missouri milkvetch, Archuleta milkvetch |
| *Astragalus proximus* | Aztec milkvetch |
| *Astragalus ripleyi* | Ripley's milkvetch |
| *Braya glabella* | smooth northern-rockcress |
| *Chenopodium cycloides* | sandhill goosefoot |
| *Cuscuta plattensis* | prairie dodder, Wyoming dodder |
| *Descurainia torulosa* | mountain tansymustard |
| *Draba exunguiculata* | clawless draba |
| *Draba grayana* | Gray's draba |
| *Draba smithii* | Smith's draba |
| *Draba weberi* | Weber's draba, Weber’s whitlowgrass |
| *Drosera anglica* | English sundew |
| *Drosera rotundifolia* | roundleaf sundew |
| *Eriogonum brandegeei* | Brandegee's buckwheat |
| *Eriogonum exilifolium* | dropleaf buckwheat |
| *Eriogonum visheri* | Visher's buckwheat, Dakota buckwheat |
| *Gutierrezia elegans* | Lone Mesa snakeweed |
| *Ipomopsis aggregata ssp. weberi* | scarlet gilia |
| *Lesquerella fremontii* | Fremont's bladderpod |
| *Lesquerella pruinosa* | Pagosa Springs bladderpod |
| *Mimulus gemmiparus* | Rocky Mountain monkeyflower, budding monkeyflower |
| *Neoparrya lithophila* | Bill's neoparrya |
| *Oreoxis humilis* | Pike’s Peak alpineparsley |
| *Packera mancosana* | Mancos shale packera |
| *Parnassia kotzebuei* | Kotzebue's grass of Parnassus |
| *Penstemon absarokensis* | Absaroka Range beardtongue |
| *Penstemon caryi* | Cary's beardtongue |
| *Penstemon degeneri* | Degener's beardtongue |
| *Penstemon harringtonii* | Harrington's beardtongue |
| *Physaria didymocarpa var. lanata* | common twinpod |
| *Physaria pulvinata* | cushion bladderpod |
| *Physaria scrotiformis* | west silver bladderpod |
| *Potentilla rupincola* | rock cinquefoil, Rocky Mountain cinquefoil |
| *Primula egaliksensis* | Greenland primrose |
| *Pyrrocoma carthamoides var. subsquarrosa* | largeflower goldenweed |
| *Pyrrocoma clementis var. villosa* | tranquil goldenweed |
| *Pyrrocoma integrifolia* | many-stemmed goldenweed |
| *Ranunculus grayi* | ice cold buttercup |
| *Rubus arcticus ssp. acaulis* | dwarf raspberry |

| | |
|---|---|
| *Salix arizonica* | Arizona willow |
| *Salix barrattiana* | Barratt's willow |
| *Salix candida* | sageleaf willow, sage willow |
| *Salix myrtillifolia* | blueberry willow |
| *Salix serissima* | autumn willow |
| *Sanguinaria canadensis* | bloodroot |
| *Shoshonea pulvinata* | Shoshone carrot |
| *Thalictrum heliophilum* | Cathedral Bluff meadow-rue |
| *Townsendia condensata var. anomala* | cushion Townsend daisy |
| *Utricularia minor* | lesser bladderwort |
| *Viburnum opulus var. americanum* | American cranberrybush, mooseberry |
| *Viola selkirkii* | Selkirk's violet |
| *Xanthisma coloradoense* | Colorado tansyaster |
| *Gymnosperms* | |
| *Pinus albicaulis* | whitebark pine |

## APPENDIX D*:* REVIEW COMMITTEE MEMBERS

**Table 10. Reviewing members for the 2021 Niobrara Conservation District Natural Resource Management Plan.**

| Member | Affiliation |
|---|---|
| Patrick Wade | Niobrara County Commission |
| John Midkiff | Niobrara County Commission |
| Elaine Griffith | Niobrara County Commission |
| Lisa Shaw | Niobrara Conservation District |
| Kevin Gaukel | Niobrara Conservation District Board Member |
| Matt Dockery | Niobrara Conservation District Board Member |
| Odessa Mathis | Niobrara Conservation District Board Member |
| Heidi Sturman | Niobrara Conservation District |
| Rod Nelson | Niobrara Conservation District Board Member |
| Bree Burton | Y2 Consultants |
| Danielle Walker | Y2 Consultants |
| Conner Nicklas | Falen Law Offices |

## APPENDIX E: ECONOMIC INFORMATION FOR NIOBRARA COUNTY

Economic information provided in this appendix for Niobrara County in 2021 in from the Headwaters Economics database. As economic information is updated for the county this appendix will be updated to reflect that information with the appropriate and most reliable source.

### SUMMARY OF EMPLOYMENT

From 1970 to 2018, population in Niobrara County decreased from 2,920 to 2,388 people, a 18% decrease. In this same time period employment grew from 1,573 to 1,829, a 16% increase and personal income grew from $77.3 million to $124.8 million, a 62% increase (Figure 19, Figure 20, and Figure 21). (Headwaters Economics, 2020)

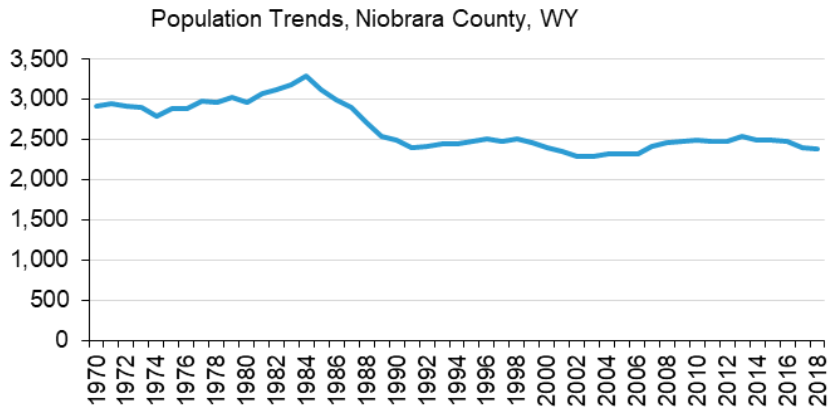



*Figure 19. Population trends in Niobrara County.* (Headwaters Economics, 2020)

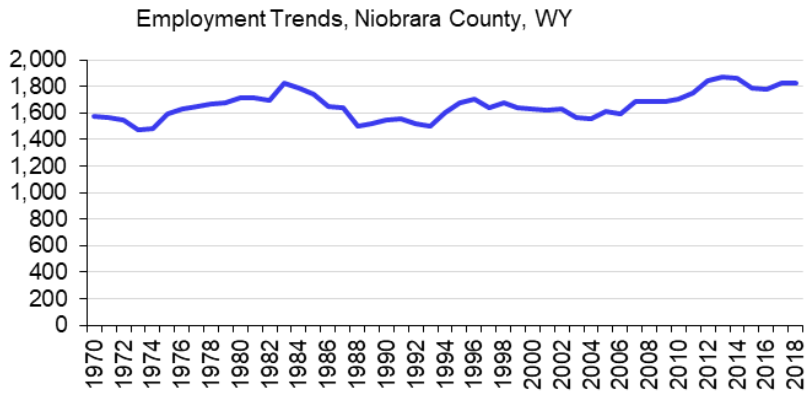



*Figure 20. Employment trends in Niobrara County.* (Headwaters Economics, 2020)

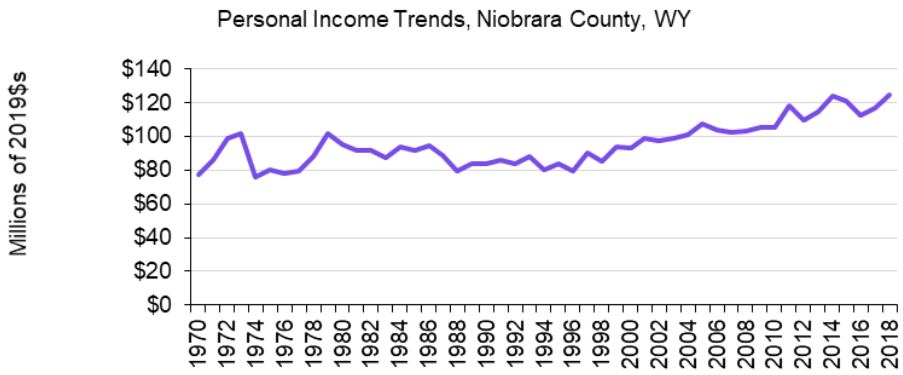



*Figure 21. Personal income trends in Niobrara County.* (Headwaters Economics, 2020)

## EMPLOYMENT BY INDUSTRY (2000 – 2018)

Employment data are categorized using two different systems. From 1970-2000, the Standard Industrial Classification (SIC) was used. Since 2001, industry-level data have been organized using the North American Industrial Classification System (NAICS).

From 1970-2000, the three industry sectors that added the highest number of new jobs were government, wholesale trade, and transportation and public utilities (Figure 22). (Headwaters Economics, 2020)

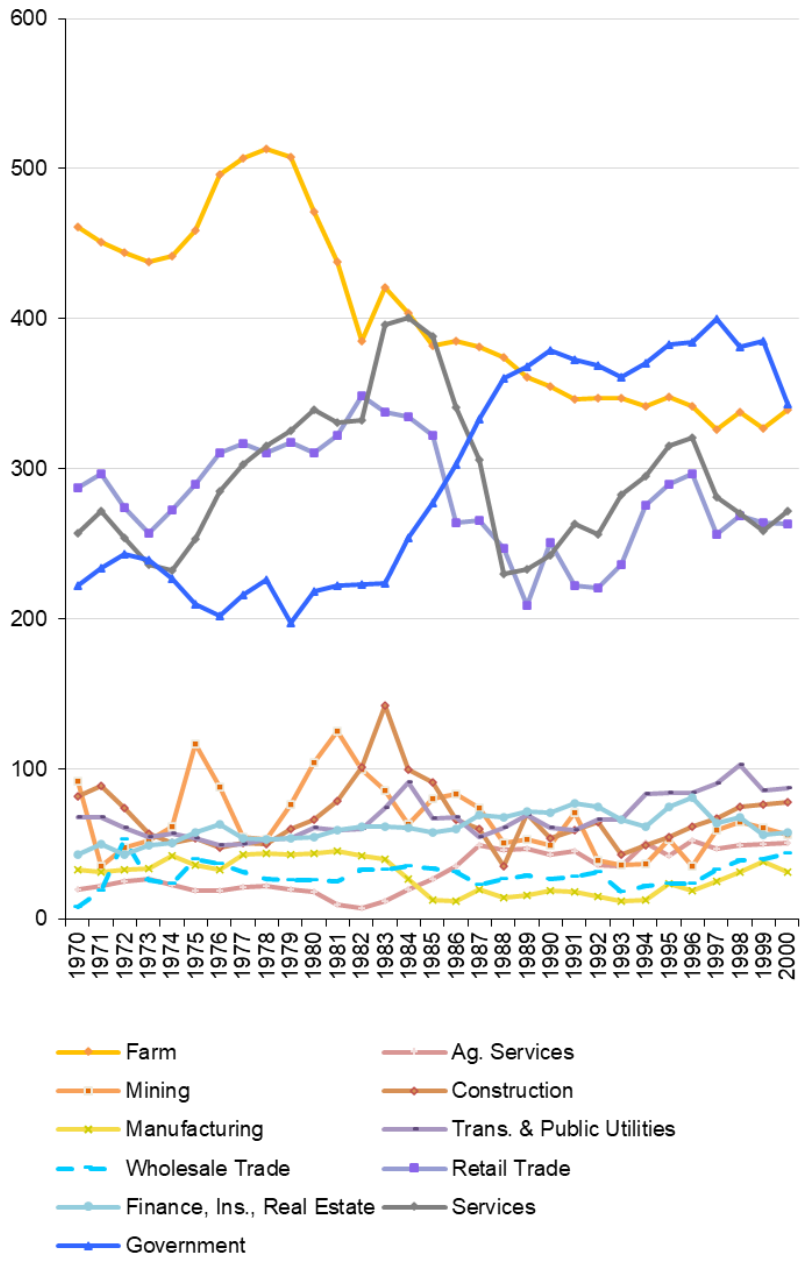



*Figure 22. Employment by Industry in Niobrara County from 1970-2000.* (Headwaters Economics, 2020)

From 2001 to 2018, total employment increased from 1,622 jobs to 1,829 jobs. Non-services related jobs (e.g., farming, mining, and construction) decreased 1%, from 571 to 563 jobs. Service-related industries (e.g., transportation and warehousing, utilities, retail) increased from 638 to 759, a 19% increase. In this same time, jobs in government grew from 334 to 459, a 37% increase. Since 2001, the three industry sectors that added the highest number of new jobs were government, health care and social assistance, and finance and insurance (Figure 23). (Headwaters Economics, 2020)

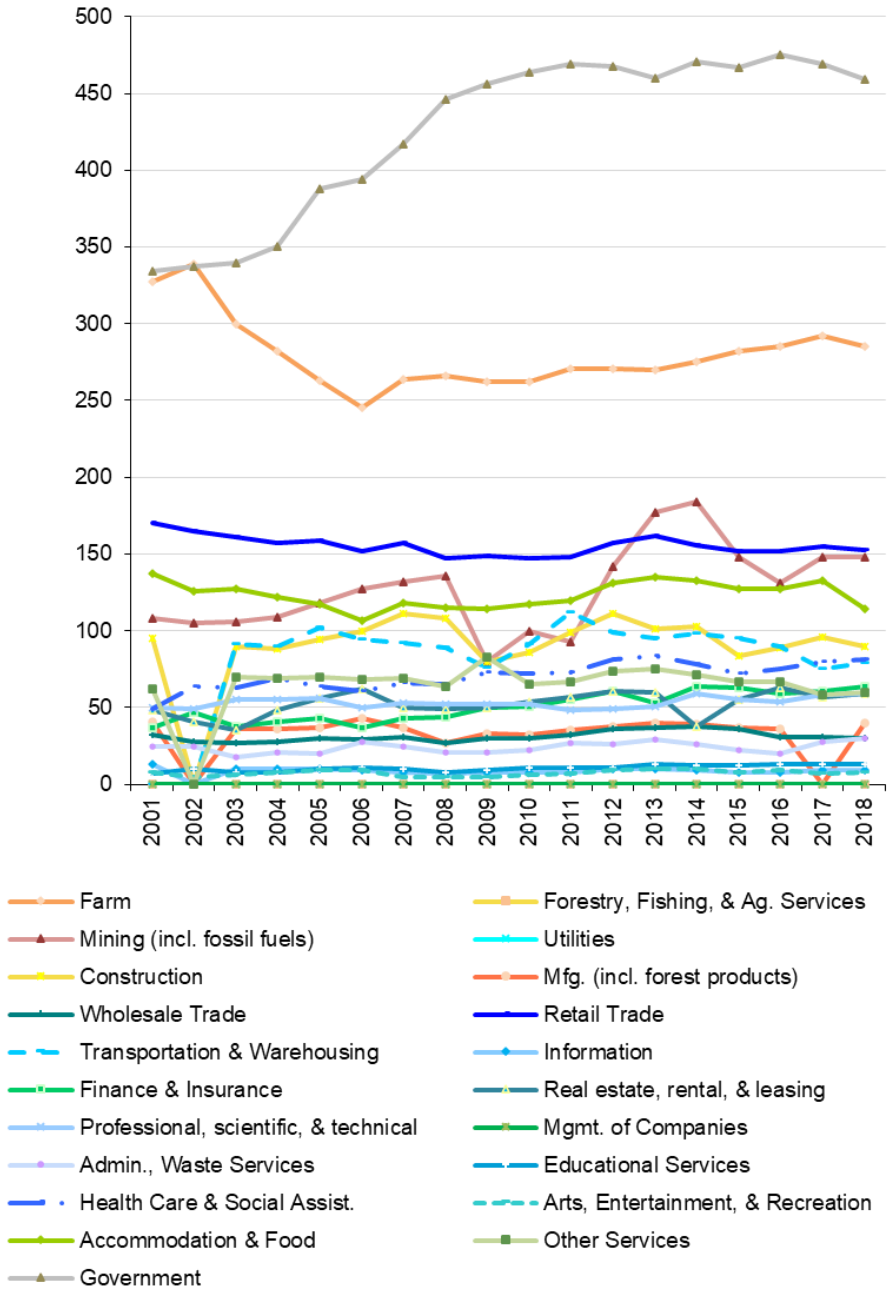



*Figure 23. Employment by Industry in Niobrara County from 2001-2018.* (Headwaters Economics, 2020)

## EARNINGS BY INDUSTRY (2000 – 2018)

From 1970 -2000, earning from non-services shrank from $25.9 million to $11.2 million, a 57% increase. Earnings from services grew from $19.8 million to $21.7 million, a 10% increase. The three industry sectors that added the most earnings were government, transportation and public utilities, and services (Figure 24). (Headwaters Economics, 2020)

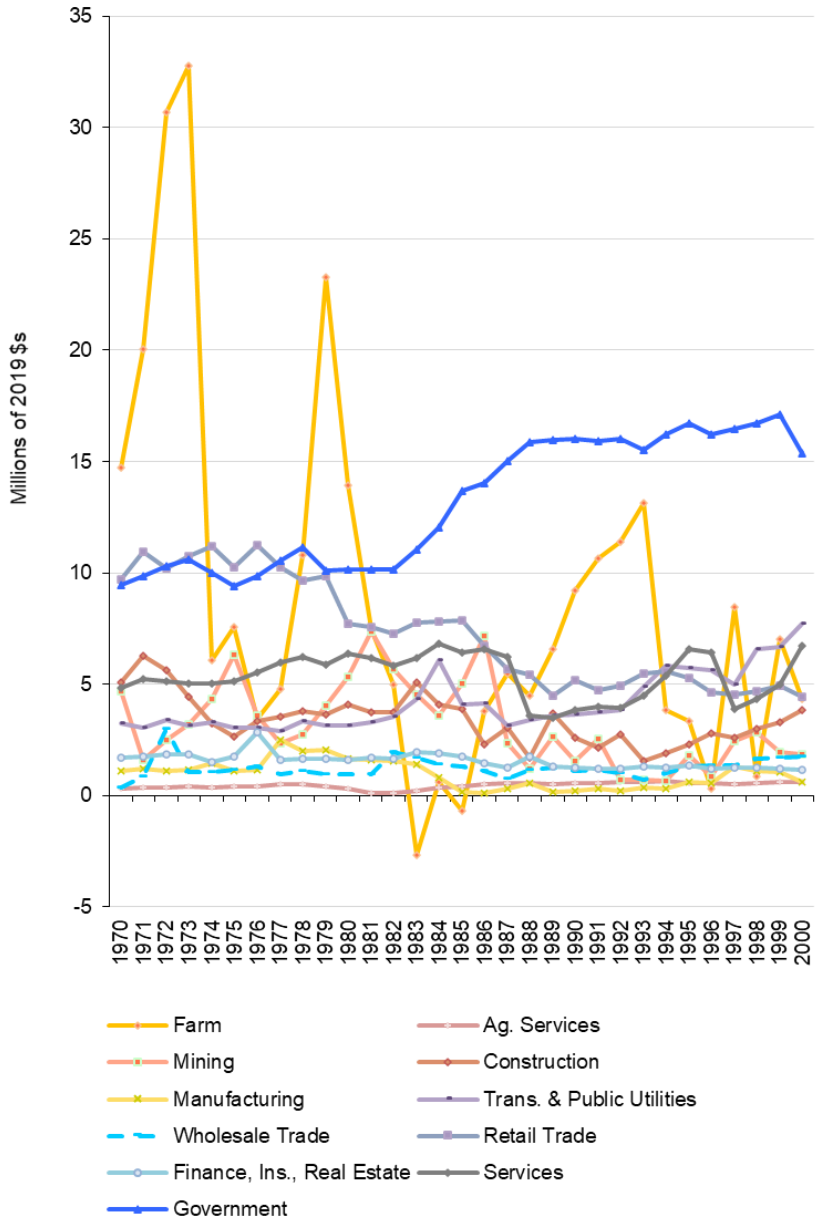



*Figure 24. Earnings by Industry for Niobrara County from 1970-2000.* (Headwaters Economics, 2020)

From 2001 through 2018, earnings in non-services related industries grew from $14.8 million to $16.9 million, a 14% increase. Earnings in services related industries grew from $15.9 million to $36.4 million, a 129% increase. In 2018, the three industry sectors with the largest earnings were government, transportation and warehousing and mining (Figure 25). (Headwaters Economics, 2020)

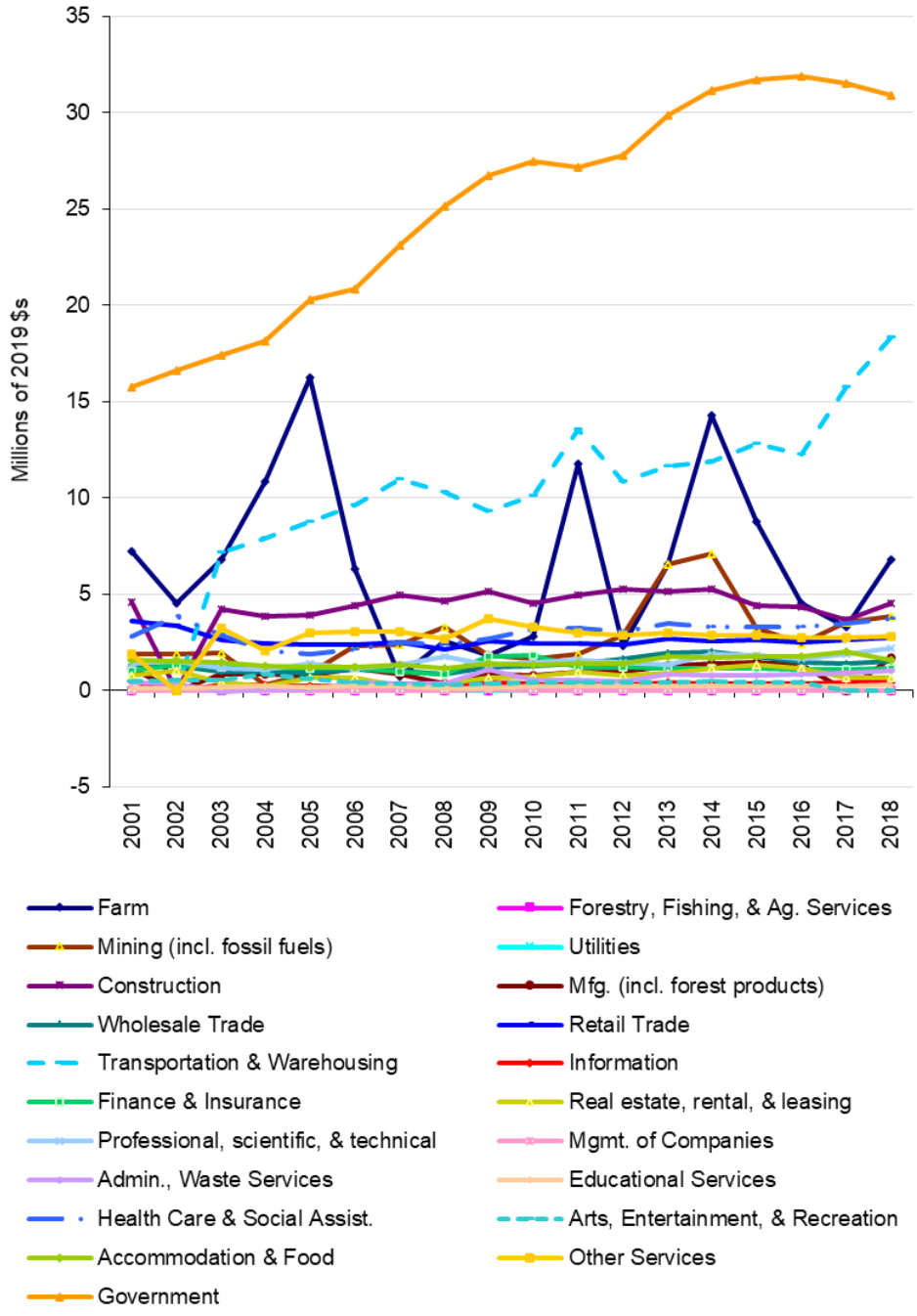



*Figure 25. Earnings by Industry in Niobrara County from 2001-2018.* (Headwaters Economics, 2020)

## EMPLOYMENT AND WAGES BY INDUSTRY (2019)

In 2019, 864 jobs had an average wage of $37,632. Non-services related jobs paid the highest and services related jobs paid the lowest. Trade, transportation, and utilities jobs employed the largest number of people (133) and the federal government employed the smallest (10 jobs) (Figure 26). (Headwaters Economics, 2020)

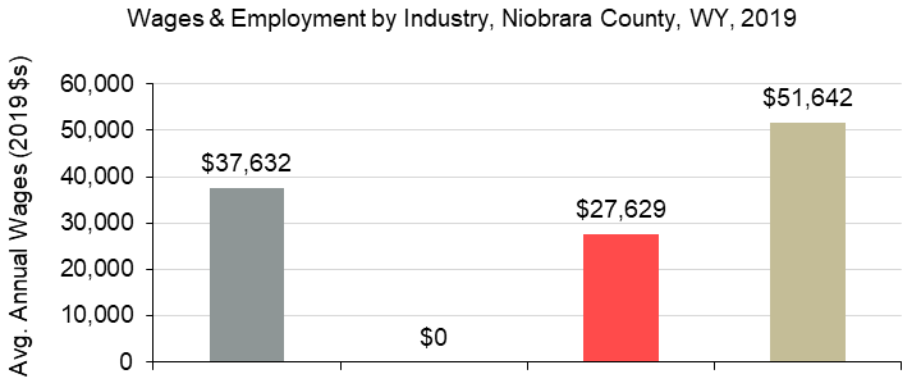



*Figure 26. Wages and employment by industry for Niobrara County in 2019.* (Headwaters Economics, 2020)

## EMPLOYMENT CHANGES DURING RECESSIONS (1976 – FEBRUARY 2020)

Five national recessions occurred between 1976 and 2010 and the most recent occurred in 2020. From 1976 to February 2020, employment grew from 1,119 to 1,185 jobs, a 6% increase (Figure 27) (Headwaters Economics, 2020)

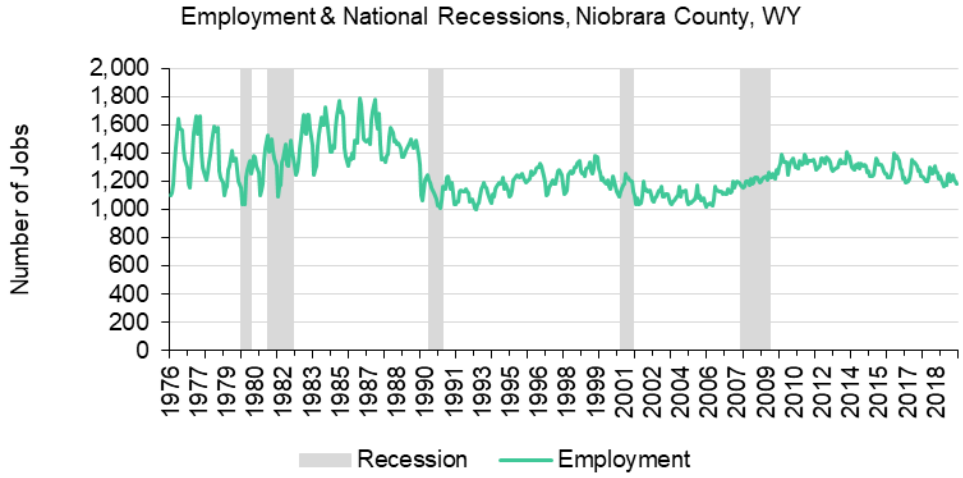



*Figure 27. Employment trends during National Recessions for Niobrara County.* (Headwaters Economics, 2020)

## UNEMPLOYMENT (1990-2019)

Since 1990, the annual unemployment rate ranged from a low of 2% in 1997 to a high of 9.3% in 1985. The lowest monthly unemployment rate was August of 2017 and the highest monthly unemployment rate was June of 2020 (Figure 28). (Headwaters Economics, 2020)

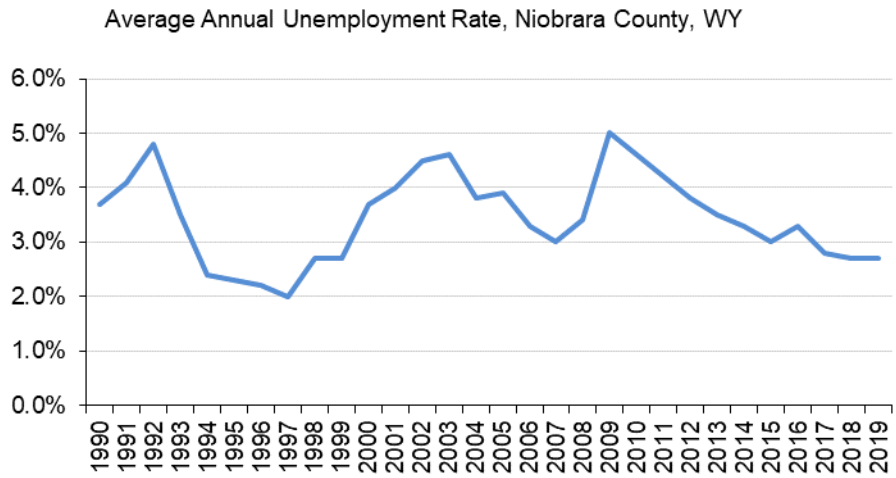



*Figure 28. Average annual unemployment for Niobrara County.* (Headwaters Economics, 2020)

## APPENDIX F: PUBLIC COMMENTS RECEIVED

There were no public comments received during the official public comment period held between June 7, 2021 and July 21, 2021. A public meeting was held in Lusk, WY on June 27, 2021.