

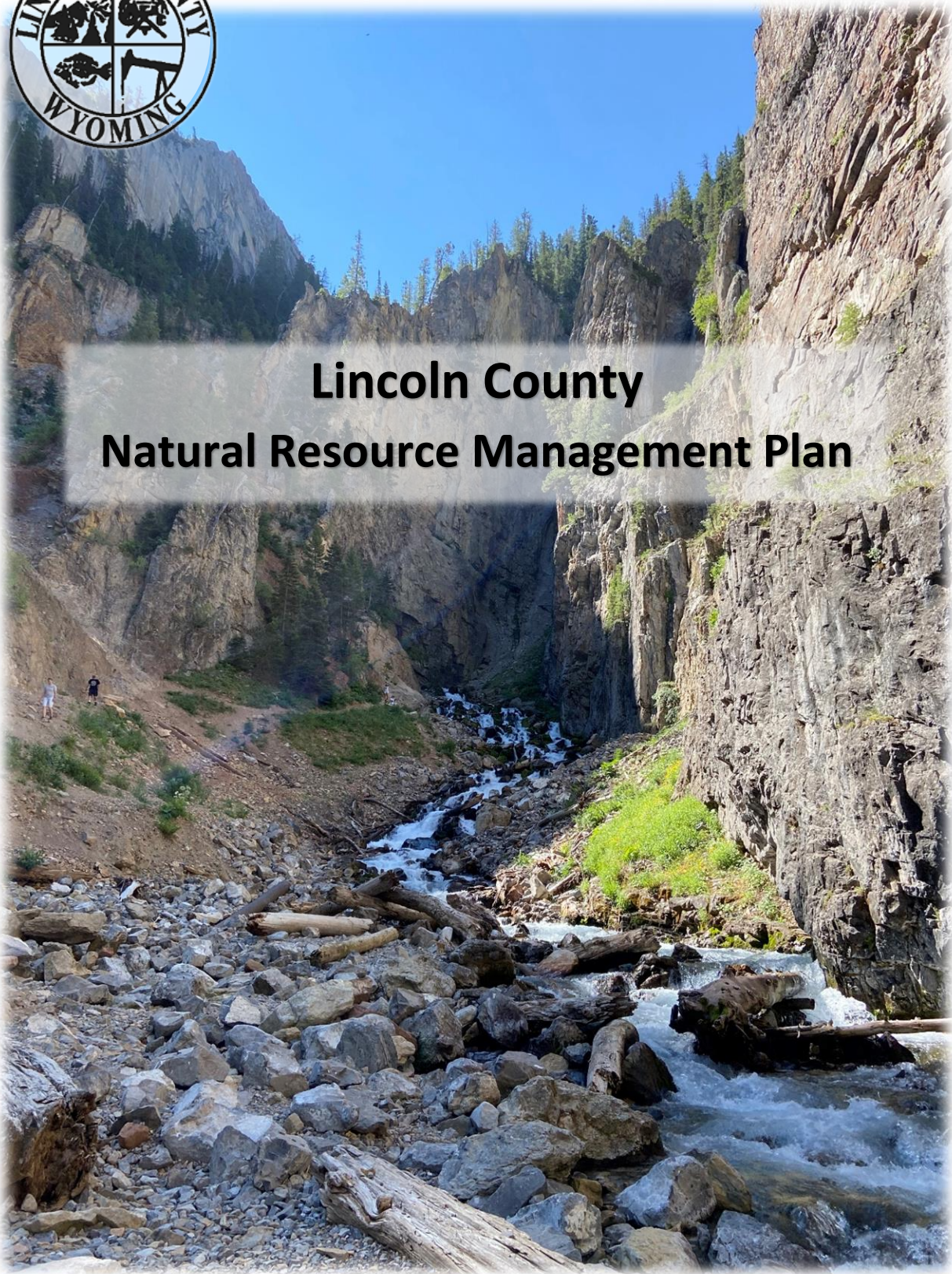
Lincoln County Comprehensive Plan

Appendix 3

Natural Resource Management Plan Dated January 19, 2021



JANUARY 19, 2021



Lincoln County Natural Resource Management Plan



Natural Resource Management Plan
Y2 Consultants, LLC & Falen Law Offices

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ACRONYMS

AAWPC - Alpine Area Wildfire Protection Coalition
ACEC- Areas of Critical Environmental Concern
APHIS - Animal and Plant Health Inspection Service
ARPA - Archeological Resources Protection Act
AUM- Animal Unit Month
BBL - Barrel
BGEPA - Bald and Golden Eagle Protection Act
BJFTA - Bankhead-Jones Farm Tenant Act
BLM - Bureau of Land Management
BMP - Best Management Practice
BOR - Bureau of Reclamation
BRB - Bear River Basin
BTNF - Bridger-Teton National Forest
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
cfs - Cubic Feet per Second
CLG – Coalition of Local Governments
CMNWR - Cokeville Meadows National Wildlife Refuge
CTNF - Caribou-Targhee National Forest
CWA - Clean Water Act
CWD - Chronic Wasting Disease
DOD - Department of Defense
DSA – Designated Surveillance Area
EA - Environmental Assessment
EAJA – Equal Access to Justice Act



ECOS - Environmental Conservation Online System
EIS - Environmental Impact Statement
ENSO - El Niño-Southern Oscillation
EPA - Environmental Protection Agency
ERFO - Emergency Relief for Federally Owned Roads
ESA - Endangered Species Act of 1973
ESD - Ecological Site Description
FAR - Functioning-at-risk
FAST - Fixing America’s Surface Transportation Act
FEMA - Federal Emergency Management Act
FERC - Federal Energy Regulatory Commission
FDQA - Federal Data Quality Act
FHWA - Federal Highway Administration
FLAP - Federal Lands Access Program
FLH - Federal Lands Highway Division
FLPMA - Federal Land Policy and Management Act of 1976
FLTP - Federal Lands Transportation Program
FSA - Farm Service Agency
GGRB - Greater Green River Basin
GHG - Greenhouse Gas
GLO - General Lands Office
GPC - Groundwater Pollution Control
GRAIP - Geomorphic Road Analysis and Inventory Package
GRC - Greys River Collaborative
GYE - Greater Yellowstone Ecosystem
HA - Herd Areas
HMA - Herd Management Areas
IMR - Intermountain Range
IPCC - International Governmental Panel on Climate Change



IPM - Integrated Pest Management
IRA - Inventoried Roadless Area
kV - Kilovolt
LCC - Lincoln County Commissioners
LCCE - Lincoln County Cooperative Extension
LCCWPP - Lincoln County Community Wildfire Protection Plan
LCD - Lincoln Conservation District
LCDLRUP - Lincoln Conservation District Land/Resource Use Plan
LCPB - Lincoln County Predator Board
LCSD - Lincoln County School Districts
LCWPD - Lincoln County Weed and Pest District
LNG - Liquefied Natural Gas
LRTP - Long Range Transportation Plan
LUP - Land Use Plan
LUPAs - Land Use Plan Amendments
LWC - Lands with Wilderness Characteristics
LWCF - Land and Water Conservation Fund Act of 1964
MBTA - Migratory Bird Treaty Act
MIM - Multiple Indicator Monitoring
MCF - Million Cubic Foot
MOA - Memorandum of Agreement
MOU - Memorandum of Understanding
MUSY - Multiple Use Sustained Yield Act of 1960
NAAQS - National Ambient Air Quality Standards
NAO - North Atlantic Oscillation
NCPN - Northern Colorado Plateau Network
NEPA - National Environmental Policy Act of 1973
NF - Non-Functioning
NFHL - National Flood Hazard Layer



NFIP - National Flood Insurance Program
NFMA - National Forest Management Act of 1976
NFS - National Forest System
NGL - Natural Gas Line
NHPA - National Historic Preservation Act
NHT - National Historic Trail
NM - National Monument
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
NST - National Scenic Trail
NWR - National Wildlife Refuge
OAA - Organic Administration Act of 1897
OHV - Off-Highway Vehicle
OMB - Office of Management and Budget
PDO - Pacific Decadal Oscillation
PFC - Proper Functioning Condition
PHSMA - Pipeline and Hazardous Materials Safety Administration
PIBO - PACfish/INfish Biological Opinion Monitoring Program
PILT - Payments In Lieu of Taxes
PSA – Pipeline Safety Act
RMP - Resource Management Plan
RNA - Research Natural Area
R.S. 2477 - Revised Statute 2477
RSRA - Rapid Stream-Riparian Assessment
RTP - Recreational Trails Program
SHPO - State Historic Preservation Officer



SIA - Specialist Interest Areas
SLIB - State Lands and Investment Board
SRMA - Special Recreation Management Area
SSRB - Snake/Salt River Basin
SVAP - Stream Visual assessment Protocol
SVCD - Star Valley Conservation District
SWAP - State Wildlife Action Plan
TCP - Traditional Cultural Property
TMDL - Total Maximum Daily Load
USACE - U.S. Army Corps of Engineers
USFS - U.S. Forest Service
USFWS - U.S. Fish and Wildlife Service
USGS - U.S. Geological Survey
USRS - U.S. Reclamation Service
VRM - Visual Resource Management
W&WP - Water & Wastewater Program
WDEQ - Wyoming Department of Environmental Quality
WEQA - Wyoming Environmental Quality Act
WFRHBA - Wild Free-Roaming Horse and Burro Act
WGFD - Wyoming Game and Fish Department
WLB - Wyoming Livestock Board
WMO - World Meteorological Organization
WOGCC - Wyoming Oil and Gas Conservation Commission
WQD - Water Quality Division
WSA - Wilderness Study Area
WUI - Wildland Urban Interface
WWDC - Wyoming Water Development Commission
WWDO - Wyoming Water Development Office
WYDOT - Wyoming Department of Transportation



INTRODUCTION

PURPOSE

Natural Resource Management Plan

A Natural Resource Management Plan (NRMP or plan) 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 and elected officials 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)). 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 is impacted by 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)

This 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. Counties 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))

These local LUPs 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. A 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 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)

STATUTORY REQUIREMENTS AND LEGAL FRAMEWORK

Federal agencies are required to identify and analyze the impacts to local economies and community cultures when making decisions. NRMPs outline the present economic and cultural conditions and desired future conditions of a county and demonstrate how those conditions are tied to activities on adjoining federal lands. The plan establishes the local government’s preferred policies for the planned use, management, protection, and preservation of natural resources on the federal and public lands within its jurisdiction. The goal of a NRMP 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” under the National Environmental Policy Act (NEPA) and the Federal Lands Policy and Management Act (FLPMA), the requirement for “coordination” under both FLPMA and the National Forest Management Act (NFMA), engaging local governments acting as a “cooperating agency” under NEPA, and a State Governor’s consistency review process.

The National Environmental Policy Act (NEPA)

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(2)(C)). The courts have interpreted this to 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 when 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).

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 action has been classified by an agencies’ procedures as a categorical exclusion because it does not individually or cumulatively have a significant effect on the human environment, then no further environmental analysis is needed. If a categorical exclusion does not apply to a proposed action, then the federal agency must prepare an Environmental Assessment (EA) to determine whether the proposed action will have a significant impact on the quality of the human environment. 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 EA. There are several ways local governments can participate in the NEPA process depending



on the level of analysis, type of federal decision, level of commitment of the local government, and the goals of the local government.

First, local governments can use these plans 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)). For local governments to take advantage of consistency review requirements, a written and adopted local plan is required. With a written plan, this analysis happens even when the local government does not know about the pending decision or action if the LUP was provided in advance to the reviewing federal agency.

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(2)(c)). As there is no requirement for federal agencies to discuss the inconsistencies of a proposed action with comments from state or local governments, written comments submitted by a local government not tied to a formally adopted NRMP require less rigorous analysis than those tied to an adopted NRMP.

Local governments can participate in the NEPA process as a “cooperating agency” (40 C.F.R. § 1508.5), an action separate from NRMP review. 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 analysis and decision-making process at its inception, the government may request “cooperating agency status” to the deciding federal agency. “Cooperating agency status” allows local governments to work with federal agencies throughout the development of a federal plan or proposal, including before public feedback is solicited. It does not require a written land use plan prepared by local governments. 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 proposed action (for example, the designation of critical habitat for a listed threatened or endangered species), the local government can, at the request of the lead agency, participate in drafting portions of the relevant NEPA document. 40 C.F.R. § 1501.6(b)(3). 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. A NRMP, while not required, can aide this 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. See Section 2.5 for County authority under state law.

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

The National Forest Management Act (NFMA)

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 Federal Land Policy and Management Act (FLPMA)

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. 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.



- The BLM must assure that local land use plans germane to the development of BLM land use plans are given consideration.
- To the extent practicable, the BLM must assist in resolving inconsistencies between local and BLM land use plans.
- 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)).

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)).

National Park Service (NPS)

The National Park Service (NPS) was established by the Organic Act in 1916 to manage 14 national parks and 21 national monuments. The Preservation of Historic Sites Act of 1935, the Wilderness Act of 1964, and the Wild and Scenic Rivers Act of 1968 all contributed to the evolution of the NPS and managed park land management. NEPA and the Endangered Species Act (ESA) of 1969 and 1973 increased the complexity and prevalence of science in park management. Throughout this time span the NPS had grown to solely oversee all the nation’s parklands, this included parks previously held by the War Department, national monuments previously managed by the USFS, and parks which resided in Washington D.C. The National Park Omnibus Management Act of 1998 increased accountability and improved management for multiple NPS programs. This legislation required that the NPS receive authorization from Congress prior to studying potential areas for addition the National Park System. (NPS, n.d.)

In accordance with Executive Order 13352, the NPS is required to carry out its natural resource management responsibilities in a cooperative manner that considers the interests of individuals “with ownership or other legally recognized interest in land and other natural resources” (*Executive Order 13352*, 2017). NPS is also expected to accommodate local participation in Federal decision-making (*Executive Order 13352*, 2017).



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 any inconsistencies with state or local plans. If a governor’s comments result in changes to the plan, the public notification of these changes is required. The governor may also refer to policies in the NRMP in their review of the proposed federal action.

LINCOLN COUNTY NRMP PROCESS

NRMP Organization

This plan 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 interpret federal laws, guidance, and handbooks.
- **Resource Management Objectives.** Describes general goals in the form of broad policy statements regarding the use, development, and protection for 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 tier 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.

NRMP DEVELOPMENT

Consistent with Wyo. Stat. § 9-4-218(a)(viii)(D) and in accordance with Wyo. Stat. §§ 16-4-401 through 16-4-408, the County developed this plan in public meetings, allowing for participation and contribution from the public. A steering committee has guided development of the draft document, including objective and priority development.



A draft NRMP was released for a 30-day public comment period beginning on November 2, 2020. Comments received during the public comment period were incorporated into the final plan as appropriate. The final plan is anticipated to be presented to the Lincoln County Board of County Commissioners for final adoption in January 2021. The plan can be found on the Lincoln County [website](#)¹.

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).

Amending the NRMP

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 every five years.

County Expectations for NRMP

While the statutes and regulations outlined above spell out the legal requirements of the federal agencies in their duties in working with local governments, the County recognizes that part of this land use planning process is to develop a solid working relationship with the federal agencies doing business in Lincoln County. The County also recognizes 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 commits to the following actions:

1. Within 30 days of the date of adoption of this plan, the County 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 items to discuss. Public meetings with the agencies should be scheduled on the agenda on at least a biannual basis.
2. Within 30 days of the date of adoption of this plan, the County will transmit a copy of this local land use plan to the state, regional, and local federal agency offices doing business within Lincoln County for their consideration as part of any consistency review that is required pursuant to federal statute.
3. Within 30 days of the adoption of this plan, the County will contact the BLM, USFS, BOR, USFWS, and NPS offices to determine a protocol for informal communication to ensure that each is apprised of issues and concerns as early as possible.
4. In a timely manner, the County 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.

The County supports establishment of a multi-agency stakeholder group hosted by the County Commissioners to review and discuss ongoing issues or actions on public lands and propose regular meetings on a schedule to be determined, but not less than quarterly.



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 internal review.

Resource Management Objective:

- A. Credible data has a universal meaning for all federal agencies in Lincoln County and is the basis for all agency decisions within the County.

Priorities:

- 1) When making land use planning decisions, federal agencies should include quantitative data in that meets credible data criteria, even if the data were not produced by a federal agency.
- 2) Support the use of credible scientific data. Credible scientific data is defined as rigorously reviewed, scientifically valid chemical, physical and/or biological monitoring data, collected in a timely manner under an accepted sampling and analysis plan, including quality control and assurance procedures and available historical data.
- 3) Require the federal agencies to only use data that meets the minimum criteria described in their respective handbooks:



- a) BLM H-1283-1 Data Administration and Management (Public) (Bureau of Land Management, 2012a)
 - b) FS FSH 1909.12, Chapter 40, Land Management Planning Handbook – Key Processes Supporting Land Management Planning (US Forest Service, 2013), unless other criteria are agreed upon between the County and agencies.
- 4) All federal agencies paying money to non-profit organizations under the Equal Access to Justice Act (EAJA) need to make a public full disclosure of all funding amounts awarded.



CHAPTER 1: CUSTOM AND CULTURE



1.1 County Introduction and Overview

County Commissions in the State of Wyoming have been charged with responsibility for the preservation of the custom and culture of Wyoming counties in matters relating to the NEPA and federal land planning. Since the customs, culture, and history of Lincoln County (“the County”) are inseparably tied to the use of and access to land and resources managed by federal agencies, the Board of County Commissioners (Board) will use the policies set forth in this NRMP to represent the vital interests of the County in federal natural resource planning effort.

1.1.1 County Overview

Lincoln County, named for President Abraham Lincoln, was established in 1911 and emerged from land previously encompassed by Uinta County which was one of the first five original counties in the state. In 1921, Lincoln County was created when Sublette and Teton Counties were divided. The County borders Utah and Idaho as well as Uinta County to the south, Sweetwater, and Sublette to the east, and Teton County to the north (*Figure 1*). Lincoln County is L-shaped and spans more than 110 miles from north to south. The northern portion of the County contains most of the Wyoming Mountain Range with the highest elevation in the County being 11,300 feet. The southern portion of the County is high desert. (Clark, 2014)

Lincoln County is the 11th largest County in Wyoming spanning over 2.6 million acres (4,069 square miles). Over 70% of the land in Lincoln County is federally owned, with the largest portions being held by the Bureau of Land Management at 36% (985,088 ac), the US Forest Service at 33% (903,488 ac), the Bureau of Reclamation at 0.5% (14,592 ac), the National Park Service at 0.3% (8,320 ac), and US Fish and Wildlife at about 0.3% (6,336 ac).

The total population in Lincoln County according to 2010 US Census data is 18,106 persons. The population is largely rural. There are nine incorporated towns in Lincoln County: Kemmerer, Afton, Alpine, Cokeville, Diamondville, La Barge, Opal, Star Valley Ranch, and Thayne. Other communities in Lincoln County include Etna, Turnerville, Oakley, Bedford, Auburn, Fontenelle, Taylor, Grover, Fairview, Alpine Northeast, Nordic, Smoot, Freedom, and Alpine Northwest.



1.1.2 Lincoln County History, Customs, and Culture

Lincoln County is environmentally diverse which resulted from this region being underwater nearly fifty million years ago. The region has some of the best-preserved fossils of plant and animal life that predate humans. Millions of fossilized plants, animals, and insects have been uncovered within the area since the mid-1800s and include specimens of gars, turtles, palm trees, dragonflies, crayfish, and bats. (Clark, 2014)

Lincoln County has a rich history of Native Americans, fur traders, and westward migrants. The Shoshone Tribe were the primary inhabitants of the present-day County and were primarily a hunting and gathering group prior to the introduction of the horse by Europeans. In the early 1800s, the fur trade began to rapidly expand into the Rocky Mountain West. A group known as the Astorians had their horses stolen and lost their way among present day northern Lincoln County before they finally made their way further east via South Pass, making them the first known migrants of European descent to use this route. The former Astorian, Donald MacKenzie, trapped furs on the Bear River in the southern half of the County in 1818 and 1819 and fur trappers visited the area frequently after this time until the fur trade died out in the mid-1800s. (Clark, 2014)

Starting in the 1840s the expansion westward gathered traction and thousands of pioneers traveled west to seek fortunes and make new lives for themselves. The Sublette Cutoff, Lander Cutoff, and other branches of the Oregon, Mormon, and California trails crossed present day Lincoln County. By the late 1870s settlements began to emerge in Lincoln County. Cokeville was established in the Bear River Valley when colonizers discovered copper, phosphate, and coal. Shortly after, cattle and sheep were brought into the area. Star Valley was settled near the same time as Cokeville. (Clark, 2014)

Large settlement of Lincoln County however did not occur until 1879 when members of the Church of Jesus Christ of Latter-day Saints arrived from Idaho and Utah. This movement north was a result of the passage of the 1887 Edmunds Tucker Act in which made it easier for federal officials to prosecute polygamy. Idaho had also passed a law where anyone who was a member of the Church of Jesus Christ of Latter-day Saints could not hold public office or vote. Many Mormons moved to more remote areas to continue practicing their religion and traditions without persecution. The Governor of Wyoming told the Mormons that they would be welcome in the state and could settle. Settlers took residence in Star Valley and established the town of Afton. Dairy farms and creameries were very popular in the valley and the valley became known as “Little Switzerland of America” as it reminded settlers of the sweeping hills and valleys from their European homelands. There were also many settlers in the Bear Lake Valley that came into Wyoming at this time. (R. Anderson, personal communication, 2020; Clark, 2014)





There is over 100-years of County history that is steeped in rich stories and journeys including coal mining, railroads, bootlegging, and the historic trails. The City of Kemmerer was a town that was organized in 1897, incorporated in 1899, by Patrick Quealy. Mr. Quealy and his partner and investor, Mahlon Kemmerer began their partnership in the development of coal mines in Frontier, a company town, and in Kemmerer, an independent town, both co-located in Unita County, one of the five original counties in Wyoming. These two towns had a multitude of underground coal mines. From the late 1890s until the 1960s, there were active mines throughout the region.

Mines in this area stretched from Cumberland south near the Carter Cutoff (State Highway 412) and north to Sublette and west to Cokeville. This coal mining boom produced coal towns such as Cumberland South, Cumberland No. 1, Cumberland No. 2, Blazon, Glencoe, Hams Fork, Sublet, Gomer, Suzie, Frontier, Diamondville, Elkol, and Kemmerer. Most of these towns no longer exist. However, several cemeteries still remain. The entire south Lincoln County area was active in coal mining due to the construction of the Oregon Short Line Railroad that still runs from the Union Pacific mainline along Interstate 80 to the Oregon shores. If the railroad did not exist or was not built, the coal could not have been moved efficiently throughout the west and limited its worth.

In 1911, Kemmerer and Frontier were incorporated into Lincoln County. The Kemmerer and Quealy partnership brought to this region the Kemmerer Coal Company (the mine properties are still in operation today by Westmoreland Kemmerer) as well as the towns of Frontier and Kemmerer. Mr. Quealy, who lived in the areas full-time, owned Frontier Supply Company and Unita Improvement Company, became president of the First National Bank of Kemmerer, Quealy Sheep and Livestock Company, and Wyoming Timber Company along with various other companies in the area. Prior to Mr. Quealy's work in Kemmerer Coal Company, he was employed by the Union Pacific Coal Company and worked to find, mine, and ship coal for the Union Pacific Railroad. He actively worked in coal mines since 1884. He became very familiar with the area and began his ambitious plan to mine coal within the region.



Around the unique Herschler Triangle Park are located the remaining 100 plus year-old buildings from Kemmerer’s heyday. Included is the 2nd J.C. Penney Store (when Mr. Penney was in business with partners) and called the store the Golden Rule store, the “mother” store for J.C. Penney that has been in operation since 1929 as well as the J.C. Penney House where Mr. Penney lived with his wife and children. The house remains open for tours to the public during the warmer months of the year.

Present day Lincoln County’s primary industry is mining and mineral extraction, with coal, oil and gas production, and natural gas processing dominating the southern end of the county, and phosphate mining in the northern end of the county. Economically, the county may be challenged



in the coming years as the Kemmerer Coal Mine and the Naughton coal fired electrical plant, both large employers, are replaced by alternative energy sources and demand for coal is reduced. The City of Kemmerer draws some tourism revenue as the Fossil Capital of the World. The northern end

of the county has transitioned from its historical agricultural base to tourism and light manufacturing (including aircraft and gun manufacturing as well as brewing). The northern end of the county has a growing residential population, and the construction industry has become a major employer as new housing is developed for this population. Further this area is closely tied to Jackson and has many individuals who reside in Lincoln County and commute to jobs in Teton County. Tourism has also extensively grown in this area as tourists make their way to Jackson and the national parks.



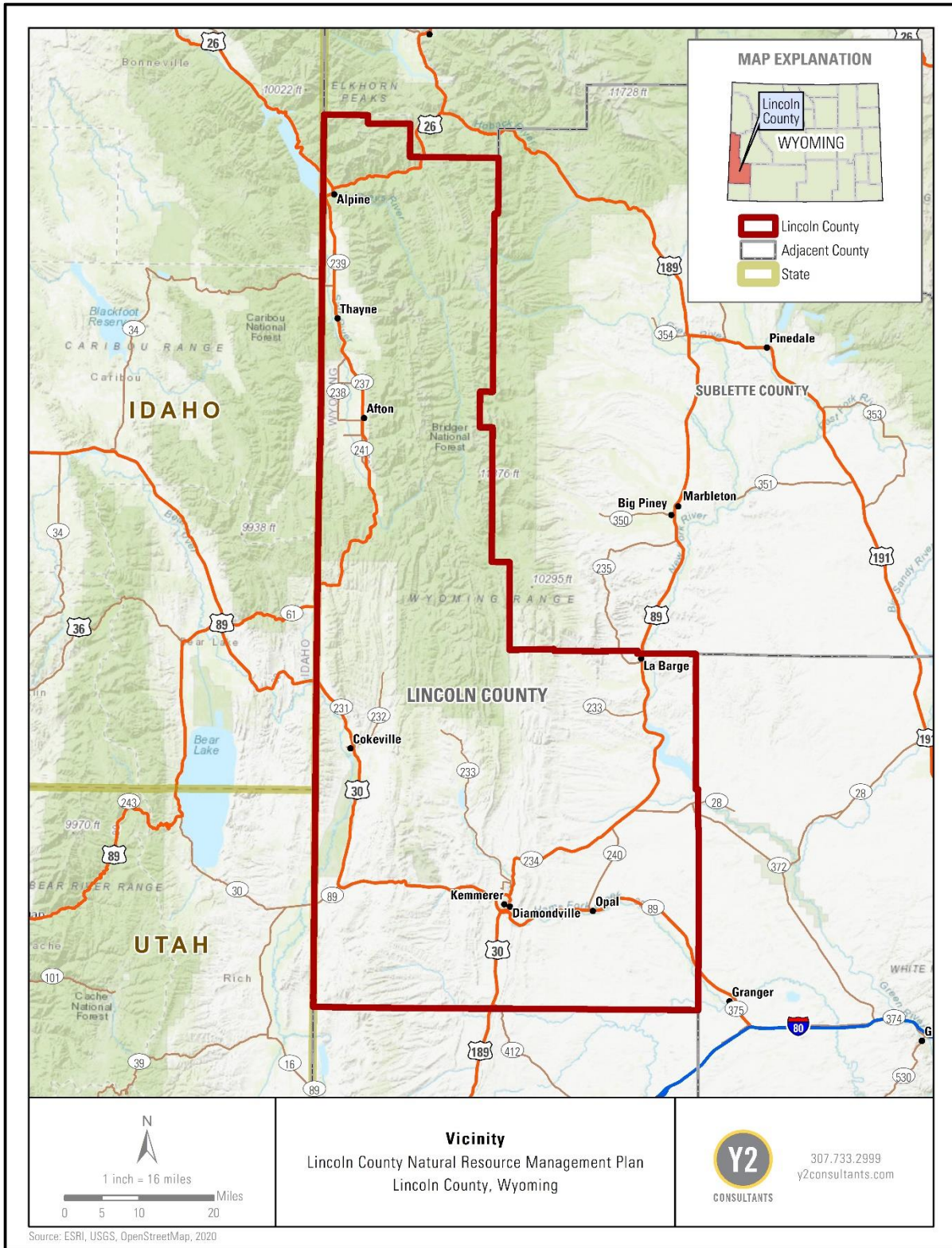


Figure 1. Vicinity map for Lincoln County, Wyoming. Data from USGS ESRI in 2020.



CHAPTER 2: LAND USE

2.1 LAND USE

2.1.1 Conservation Districts

During the 1930's, the Dust Bowl made the need to conserve natural resources, particularly soil, very clear. The Soil Conservation Act of 1935 created the Soil Conservation Service, now termed 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 authorities of the Conservation Districts are described in Wyoming Conservation District Laws [11-16-101 through 11-16-134](#)².

Lincoln County includes two Conservation Districts: [Lincoln Conservation District](#)³ (LCD) in Cokeville and [Star Valley Conservation District](#)⁴ (SVCD) in Afton. The LCD covers the southern portion of Lincoln County and was established in 1941. The SVCD was organized in 1941 by farmers and ranchers within Star Valley to deal with their agricultural problems efficiently, collectively, and according to a plan. The SVCD covers all of North Lincoln County. (LCD, 2011; Star Valley Conservation District, 2016)

2.1.2 Bureau of Land Management (BLM)

The BLM we know today was established in 1946 by combining the General Lands Office (GLO) and the US Grazing Service. The GLO was created in 1812 and was responsible for all public land sales, patents, and entries established within Treasury Department to oversee 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.

The Federal Land Policy and Management Act (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 (43 U.S.C. § 1732) (FLPMA, 1976). FLPMA requires the BLM to administer public lands "on the basis of multiple use and sustained yield" of all resources. (FLPMA, 1976)

The BLM manages approximately 36% of the land in Lincoln County. The Kemmerer BLM Field Office is in Kemmerer and manages all BLM lands within the County. The Kemmerer Field Office encompasses approximately 1.4 million acres of surface and 1.6 million acres of mineral estate in Lincoln, Sweetwater, and Uinta counties. The Kemmerer Resource Management Plan (RMP) was approved in May 2010.

2.1.3 U.S. Forest Service (USFS)

In 1876, United States forest management was formalized with the creation of the office of Special Agent within the Department of Agriculture for the purpose of assessing the quality and



condition of US 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 local communities 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.

Responsibility for forest reserves was transferred to the Department of Agriculture with the Transfer Act of 1905 and the establishment of the United States Forest Service (USFS). The Multiple-Use Sustained-Yield Act of 1960 (MUSY) requires that forests be managed for various non-timber uses (MUSY of 1960, 1960). This idea was further codified in the National Forest Management Act (NFMA) (16 U.S.C. § 1601(d)).

Both the Bridger-Teton National Forest (BTNF) and Caribou-Targhee National Forest (CTNF) have lands within Lincoln County. The USFS manages approximately 33% (903,488 ac) of the land within the County. Most of these acres are managed by the BTNF with a small amount managed by CTNF. There are two ranger districts that encompass the County for the BTNF: The Greys River Ranger District and the Kemmerer Ranger District. The CTNF also has two ranger districts that fall within the County: Palisades Ranger District and Soda Springs Ranger District.

2.1.4 Bureau of Reclamation (BOR)

The Bureau of Reclamation (BOR) manages <1% (14,592 ac) of the land in Lincoln County. The BOR manages the Fontenelle Dam.

The BOR began as the United States Reclamation Service (USRS) in 1902, as part of the United States Geological Survey (USGS). The United States Reclamation Service was established in accordance with the Reclamation Act to manage US water resources. In 1907, the USRS was separated from the USGS and designated as a separate agency within the Department of the Interior, the Bureau of Reclamation (BOR) (Bureau of Reclamation, 2018). The BOR is responsible for oversight and operation of irrigation, water supply, water storage, and hydroelectric power plant generation. The BOR was created to manage water projects and promote homesteading and economic development in the West. The mission of the BOR is “to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public” (Bureau of Reclamation - About Us, 2019).

2.1.5 National Park Service (NPS)

The National Park Service (NPS) Organic Act of 1916 created the NPS within the US Department of Interior. The NPS is also governed by the National Park Service Organic Act, delegating the roles of preserving the ecological and historical integrity of the land entrusted to their management while retaining public access and enjoyment of those lands to the NPS. Most lands



under NPS control were designated as National Parks or Monuments by Congress. Some holdings have been designated by the President of the United States via the Antiquities Act.

The NPS manages <1% of the land in Lincoln County. The NPS manages the Fossil Butte National Monument near Kemmerer. Fossil Butte National Monument was designated in 1972 by President Richard Nixon (NPS, 2019b).

2.1.6 U.S. Fish and Wildlife Service (USFWS)

The U.S. Fish and Wildlife Service (USFWS) manages <1% (6,336 ac) of land in Lincoln County. The Cokeville Meadows National Wildlife Refuge (NWR) is the only NWR located in Lincoln County along the Bear River. The Seedskaadee NWR is located near Lincoln County south of the Fontenelle Reservoir, but is entirely within Sweetwater County (USFWS, 2019). The USFWS National Wildlife Refuge System was created by President Theodore Roosevelt in 1903.



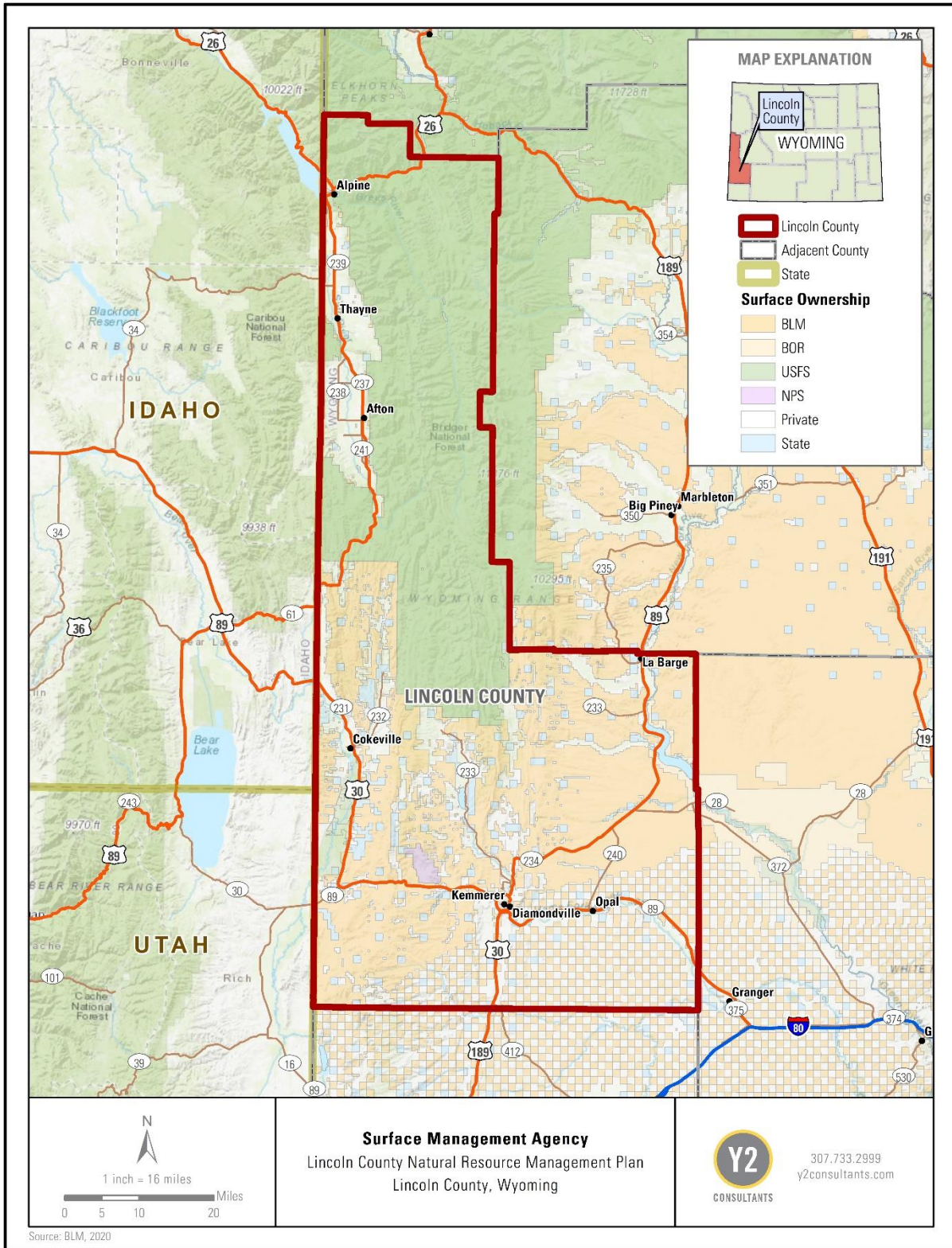


Figure 2. Lincoln County surface management. Data from 2020 BLM database.



2.2 TRANSPORTATION AND LAND ACCESS

2.2.1 History, Custom, and Culture

It is vital to the sustainability of the livestock industry in Lincoln County that grazing areas, and the stock trails that connect them, be open and accessible. Livestock “trailed” from one grazing area to another must access the grazing areas on either end of that process, as well as lands in between. Historical use of stock trails and grazing areas has fluctuated over the years, depending on market prices, and weather conditions, but the need for access availability has remained constant.



Access to and across public lands is critical to the use, management, and development of those lands and adjoining state and private lands. 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.

Lincoln County’s transportation corridors have historically serviced, and continue to service, diverse industries. Tourists constantly travel through the County to various destinations including Grand Teton National Park and Yellowstone National Park. There has also historically been a significant amount of coal mining and oil and gas traffic utilizing the southern corridors to transport resources.

2.2.2 Resource Assessment and Legal Framework

Congress, as the constitutional manager of the federal lands, has made it clear through natural resource statutes that the 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 continue.

The BLM and USFS both have specific provisions they must follow when considering the closure of roads and trails. A requirement of these provisions is that such activity be conducted in coordination with the County prior to such action being taken. Road closures have occurred in the County by both federal and state agencies without prior coordination, despite requirement by federal law for coordination prior to a final decision. This has caused economic harm and impacted citizen and visitor enjoyment of the County’s natural resources.



There are several well-traveled BLM designated roads within Lincoln County. These roads are the Dry Creek Road, Dempsey Basin Road, Muddy Creek Road (south of LaBarge), and the Cokeville Stocktrail. The IGO Road in Southern Lincoln County goes through approximately 18.5 miles of BLM lands. The County obtained a right-of-way grant from the BLM on the IGO Road and has been working with landowners to gain easements to assure access on the IGO Road from north to south.

The Taylor Grazing Act provides for the establishment, maintenance, and use of stock driveways 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.

2.2.2.1 Federal Highway Administration

The Federal Highway Administration (FHWA) is an agency within the US 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.” (Office of Federal Lands Highway, 2018)

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 wholistic network. Directly, the FHWA provides grants to the local Department of Transportation divisions in order 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 (FLH) 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.” (Office of Federal Lands Highway, 2018).
- 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 NPS, USFWS, USFS, BLM, U.S. Army Corps of Engineers (USACE), BOR, and independent federal agencies with land and natural resource management responsibilities.”(Office of Federal Lands Highway, 2018).



- 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.” (Office of Federal Lands Highway, 2018).
- 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.” (Office of Federal Lands Highway, 2018).

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.

2.2.2.2 National Park Service (NPS)

The NPS has created national and regional guidance when developing infrastructure on or servicing park lands.

2.2.2.3 U.S. Fish and Wildlife Service (USFWS)

The USFWS has produced both National Long-Range Transportation plans (LRTP’S) and Regional LRTP’s including Roadway design guidelines and other guidelines when developing infrastructure through conservation lands (US Fish and Wildlife Service, 2018).

2.2.2.4 U.S. Forest Service (USFS)

The federal lands managed by the USFS in the County are to be managed for multiple-use and sustained-yield uses (16 U.S.C. § 1601(d)) (Multiple-Use Sustained-Yield Act of 1960, 1960) including, but not 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 (mining, power production, oil and gas production/exploration, and timbering); intangible values (historical and cultural sites, access to open space, aesthetic values, conservation); and weed, pest, and predator control.

The USFS is directed to coordinate the preparation of Travel Management Plans with the County (36 C.F.R. § 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 C.F.R. § 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 C.F.R. § 212.54)

2.2.2.5 Bureau of Land Management (BLM)

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 public 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). 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. The BLM is required to coordinate “inventory” with the County (43 U.S.C. § 1712) (FLPMA, 1976).

2.2.2.6 Land and Water Conservation Fund (LWCF)

The Land and Water Conservation Fund (LWCF) Act of 1964 was permanently reauthorized as of 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) 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 highly reliable sources for funding through grants and loans.

2.2.2.7 Revised Statute 2477 (R.S. 2477)

Revised statute 2477 (R.S. 2477) provided that “the right of way for the construction of highways over public lands, 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). Congress enacted a grant of rights-of-way over unreserved public lands for the construction of highways. 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.

The grant is self-executing and an 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 the Federal Land Policy and Management Act of 1976 (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.

The courts have clearly established that the states have the 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, for the federal government to have control over rights-of-way. *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.* Further, the courts have also clearly demarcated that use of an 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. *Id.* 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. *Westland Nursing Home Inc. v. Benson*, 517 P.2d 862, 866 (Colo App. 1974). Mere nonuse of an easement, even for a long time does not constitute an abandonment. *Id.* Thus, in Colorado, 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.

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 the repeal of the statute; meaning a right-of-way today only covers the exact path of the right-of-way before the repeal. *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.



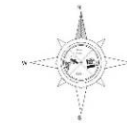
As discussed earlier, an R.S. 2477 grant is self-executing, and the right-of-way comes into existence “automatically” when the requisite state law elements are met. *See, Shultz v. Dep’t of Army*, 10 F.3d 649, 655 (9th Cir. 1993). Thus, adjudication of R.S. 2477 rights is not a prerequisite to their 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).

R.S. 2477 Resolutions have been passed by the Lincoln County Commissioners in 2000 and 2016. The 2000 resolution resolved that rights-of-way are claimed on all the identified highways, roads, and ways in Lincoln County. The 2016 resolution opposed the closure, obstruction, or unreasonable restrictions of public roads and rights-of-way by federal agencies (Lincoln County Board of County Commissioners, 2000, 2016). Figure 3 shows the R.S. 2477 roads identified within Lincoln County.





RS 2477 Roads



Map created by the County, Wyoming, GIS Department, using the best available data. The County is not responsible for any errors or omissions. The County is not responsible for any errors or omissions. The County is not responsible for any errors or omissions.

Figure 3. RS 2477 roads within the southern portion of Lincoln County (map from Lincoln County).



2.2.3 Resource Management Objective:

- A. The network of roads on public lands throughout the County provides for movement of people, goods, and services across public lands and access to federal lands (including federal land access for people with disabilities and the elderly; access to state lands and school and institutional trust lands; and access to inholdings and for the development and use of property rights).
- B. Road access is maintained throughout the County for search and rescue needs, public safety needs, public utility infrastructure development and maintenance, transportation of wood products, predator control, and recreational opportunities.
- C. R.S. 2477 roads identified within Lincoln County are protected and follow the 2000 and 2016 Resolutions passed by the Lincoln County Commissioners.

2.2.4 Priorities:

- 1. No road, trails, R.S. 2477 right-of ways, easements, or other traditional access for the transportation of people, productions, recreation, energy, or livestock should be closed, abandoned, withdrawn, or have a change of use unless public safety or health demands its closing. In all cases the county should be coordinated with and a full public disclosure and analysis should occur.
- 2. Federal agencies should coordinate with the County to utilize those roads identified in the 2000 and 2016 R.S. 2477 resolutions passed by the Lincoln County Commissioners.
- 3. The County should be notified and coordinated with on any disagreement between the County and the federal agency as to the existence of said R.S. 2477 right-of-way.
- 4. The County considers any long term (greater than one year) road closure a major federal action that significantly affects the quality of the human environment. Thus, a road on federal lands may not be closed 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 exemption, the County should be consulted.
- 5. The County should be notified of any temporary road closures.
- 6. Road access should be maintained for emergency personnel and law enforcement.
- 7. Future access should be planned and analyzed to determine its disposition at the completion of its intended life to ensure access is maintained. If removal of access is deemed appropriate, resulting disturbances should be reclaimed.
- 8. All proposed development plans should contain a transportation plan.
- 9. Access to all water related facilities such as dams, reservoirs, delivery systems, monitoring facilities, livestock water and handling facilities, etc., should be maintained and access should be economically feasible with respect to the method and timing of such access.
- 10. Transportation and access provisions for existing routes, roads, and trails across federal lands within the County should be determined and identified and agreements should be executed and implemented as necessary to fully authorize and determine responsibility for maintenance of all routes, roads, and trails.



11. Support the development of new routes and trails for motorized, human, and animal-powered recreation.
12. The County opposes any additional evaluation of national forest service lands as “roadless” or “unroaded” beyond the forest services’ second roadless areas review evaluation.
13. Oppose management of areas in a way that:
 - a. Closes or declassifies existing roads;
 - b. Permanently bars travel on existing roads;
 - c. Excludes or diminishes traditional multiple-use activities, including grazing and timber harvesting;
 - d. Interferes with the enjoyment and use of valid existing rights including water rights; local transportation plan rights, grazing allotment rights, and mineral leasing rights; or
 - e. Prohibits development of additional roads reasonably necessary to pursue traditional multiple-use activities.
14. The County will not support any forest plan revision or amendment until the appropriate plan revision or plan amendment clearly demonstrates that:
 - a. Established roads are not referred to as unclassified roads or a similar classification;
 - b. Lands in the vicinity of established roads are managed under the multiple-use, sustained yield management standard; and
 - c. No roadless or unroaded evaluations or inventories are recognized or upheld beyond those that were recognized or upheld in the USFS’s second roadless areas review evaluation.
15. Support the development of additional roads for public utilities infrastructure.
16. Federal agencies should recognize reciprocal right-of-way agreements within Lincoln County.

2.3 SPECIAL DESIGNATION AND MANAGEMENT AREAS

2.3.1 History, Custom, and Culture

There are several special designation and management areas within Lincoln County both designated by the USFS and the BLM. Figure 7 depicts the special management and designation areas within the County. To many in the County wilderness designation may not be an appropriate, effective, efficient, and/or economic use of land because of its effects on custom and culture. Special designations, such as wilderness areas, can also restrict access for individuals that are elderly or physically impaired.

2.3.2 Resource Assessment and Legal Framework

2.3.2.1 Areas of Critical Environmental Concern (ACEC)

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, 2016a). An ACEC may also be designated to protect human life and safety from natural hazards (BLM, 2016a). 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, mining, and recreation.

2.3.2.2 Wilderness and Wilderness Study Areas (WSA)

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 [Wyoming Wilderness Act of 1983](#)⁵ designated some wilderness areas and added onto other existing wilderness areas in the State of Wyoming. Wilderness areas must have "wilderness character", which is described with four qualities. 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. (BLM, 2016b)

The four characteristics that must be met for designation as a WSA or Wilderness Area:

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: they are identified by the wilderness review as required by Section 603 of FLPMA; they are identified during the land use planning process under Section 202 of FLPMA; or they are established by Congress.

Section 603(c) of the FLPMA 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 (BLM, 2016b). 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, specifically including allowing the



same number of livestock as existed in 1976, should be continued. Grandfathered uses are protected and must be 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 livestock related improvements (*Utah v. Andrus*, 486 F. Supp. 995 [D. Utah 1979]).

2.3.2.2.1 Raymond Mountain WSA

The Raymond Mountain WSA encompasses 32,936 acres of BLM-administered land, 1,329 acres of State land, and 200 acres of private inholdings all within Lincoln County. This WSA is located in the Sublette mountain range which is extremely rugged within elevation ranging from 6,250 feet to 9,313 feet. It is important habitat for moose, deer, and elk and the primary recreational activity is hunting of these species. The WSA contains numerous peaks, ridges, canyons, creeks, and wildlife. The WSA is closed to motorized travel and closed to mineral entry, including gold panning. Other recreational activities that occur within the WSA include primitive camping, hiking, backpacking, fishing, trapping, and horseback riding. (BLM, 2017)



2.3.2.2.2 Palisades WSA

The Palisades WSA encompasses 134,417 acres with 32,637 acres falling in Lincoln County and the rest within Teton County (Figure 4). This WSA is administered by the USFS with 79,517 acres administered by the BTNF and 54,900 acres administered by the CTNF. The area lies south of Teton Pass Road, north of the Snake River Canyon, and west of the Fall Creek Road to the Wyoming/Idaho state line. The areas is noted for its rugged terrain, scenic, and watershed values. (USFS, 2016a)



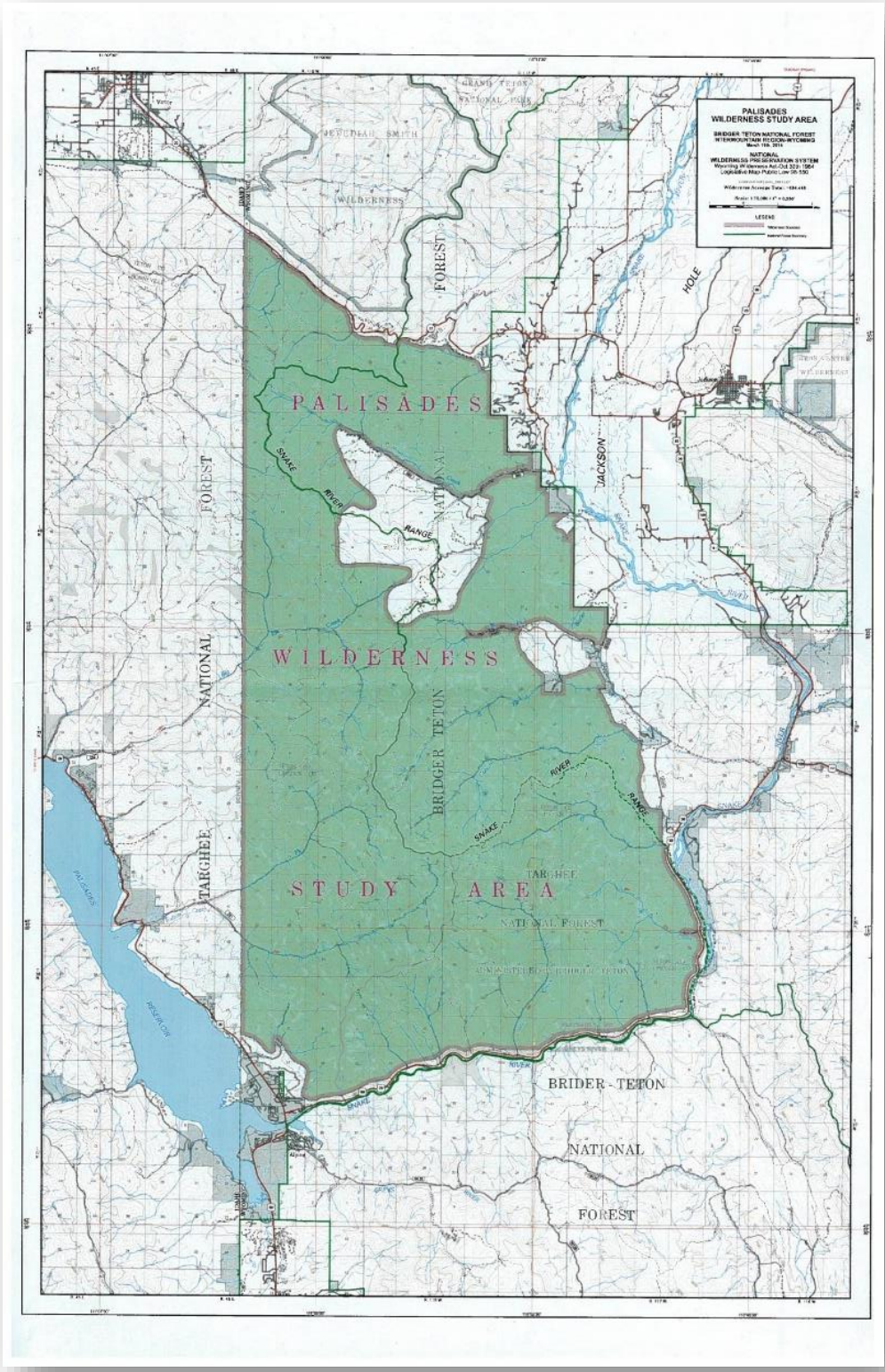


Figure 4. Palisades WSA boundary (map from the USFS). (USFS, 2016a)



2.3.2.3 Wilderness

There are no designated wilderness areas within Lincoln County.

2.3.2.4 Lands with Wilderness Characteristics (LWC)

Section 201 of FLPMA requires the BLM to maintain, on a continuing basis, an inventory of all public lands and their resources and other values, which includes wilderness characteristics. It also provides that the preparation and maintenance of the inventory shall not, of itself, change or prevent change of the management or use of public lands. 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 LWCs within Lincoln County.

2.3.2.5 Research Natural Areas (RNA) and Special Interest Areas (SIA)

Research Natural Areas (RNAs) are special management areas that reflect the natural condition of an ecosystem, allowing the agency to see how the ecosystem would be without their involvement. These RNAs serve three functions for the Forest Service: benchmark reference areas; protect biological diversity; and provide research sites for determining how an ecosystem functions. The BLM considers RNAs to be a type of ACEC (BLM, n.d.-a). Recreation in RNAs is not encouraged because it can alter the natural state of the area, but natural fire frequencies and intensities are desirable to maintain the natural cycles in the ecosystem.

There are currently two RNAs within Lincoln County. The Afton Front RNA is 715 acres on the Greys River Ranger District characterized by coniferous forest, shrubland, and sagebrush grassland plant communities what represent a large sample of the community variation in the Salt River Range. The other RNA is also located in the Greys River Ranger District and is the 4,170 acre Swift Creek RNA and represented and protects several under-represented forb and riparian community types. (USFS, 1999)

Special Interest Areas (SIAs) are designated by the USFS for scenic, geologic, botanic, zoologic, paleontological, archaeological/historic, or recreational values, or a combination of these values. The SIA designation gives the USFS the ability to meet internal and public interest in recognizing special values of certain areas and to tailor land uses to interpret, maintain, and enhance those special features. Land uses within SIAs can vary with the type of feature recognized. SIAs differ from RNAs in that a SIA is not designed to be a plant community reference area for research. (USFS, n.d.-a)

There is also one Special Interest Area on the Kemmerer Ranger District and that is the 640-acre Big Fall Creek. It is listed as a SIA because of its unusual geology, hydrologic, and biologic features and represents thermal features, rare species, and unusual plant communities. (USFS, 1999)



2.3.2.6 Prescriptive Management Area

There are two prescriptive management areas within Lincoln County. The Rock Creek/Tunp Area and the Bear River Divide Area. Off-trail vehicle motor use is not allowed within these areas. (BLM, 2010a)

2.3.2.7 Visual Resources

The BLM defines Visual Resource Management (VRM) as the inventory and planning actions taken to identify visual resource values and to establish objectives for managing those values, and the management action take to achieve visual resource management objectives. There are four different VRM Class Objectives that areas can fall into:

- **VRM Class I Objective:** This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.
- **VRM Class II Objective:** The level of change to the characteristic landscape should be low. Management activities may be seen but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.
- **VRM Class III Objective:** The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.
- **VRM Class IV Objective:** The level of change to the characteristics landscape can be high. Management activities may dominate the view and may be the major focus of viewer attention. However, the impacts of these activities should be minimized through careful siting, minimal disturbance, and repeating the basic elements of form, line, color, and texture within the existing setting.

The map in Figure 5 below shows the VRMs designated by the Kemmerer BLM Field Office within Lincoln County.



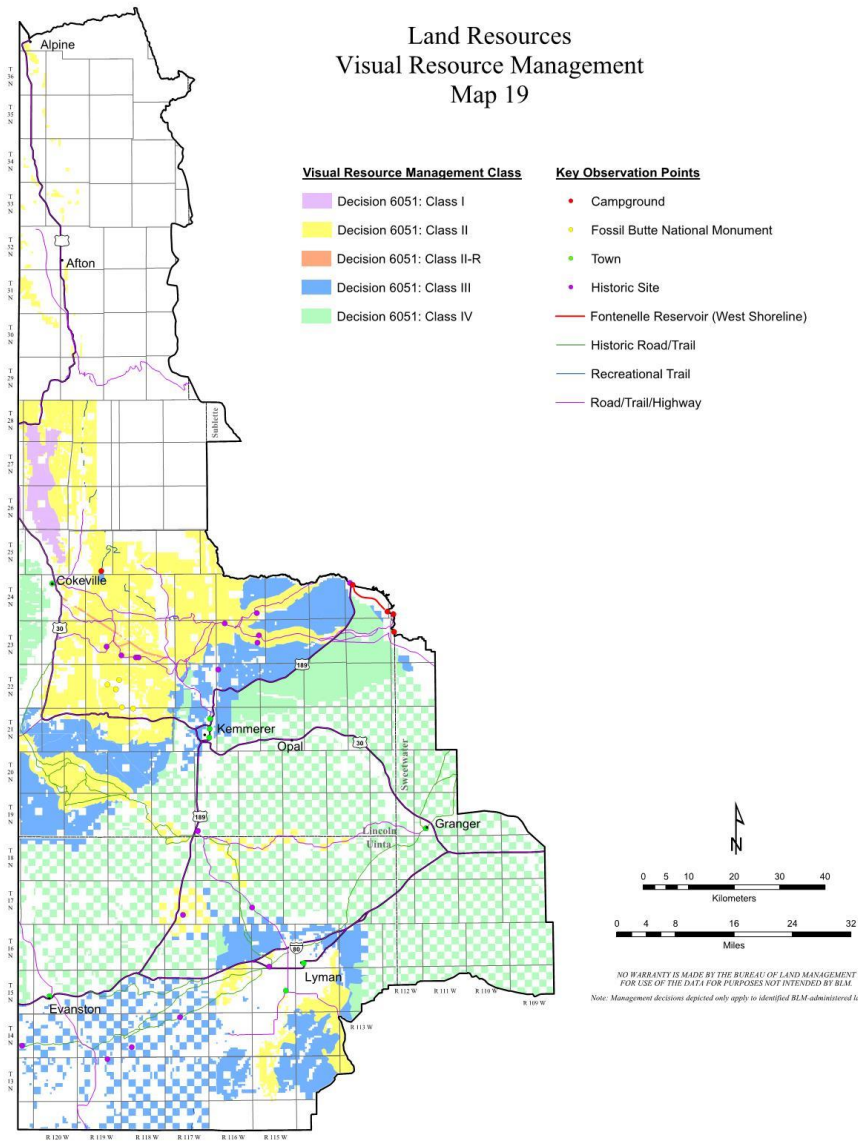


Figure 5. Visual resource areas within Lincoln County as designated by the 2010 Kemmerer BLM Resource Management Plan. Map is taken from the Kemmerer RMP (BLM, 2010a)



2.3.2.8 Special Recreation Management Areas (SRMA)

The BLM’s land use plans may designate Special Recreation Management Areas (SRMAs) to provide specific management for recreation opportunities, such as developing trailhead area 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. SRMAs within Lincoln County include:

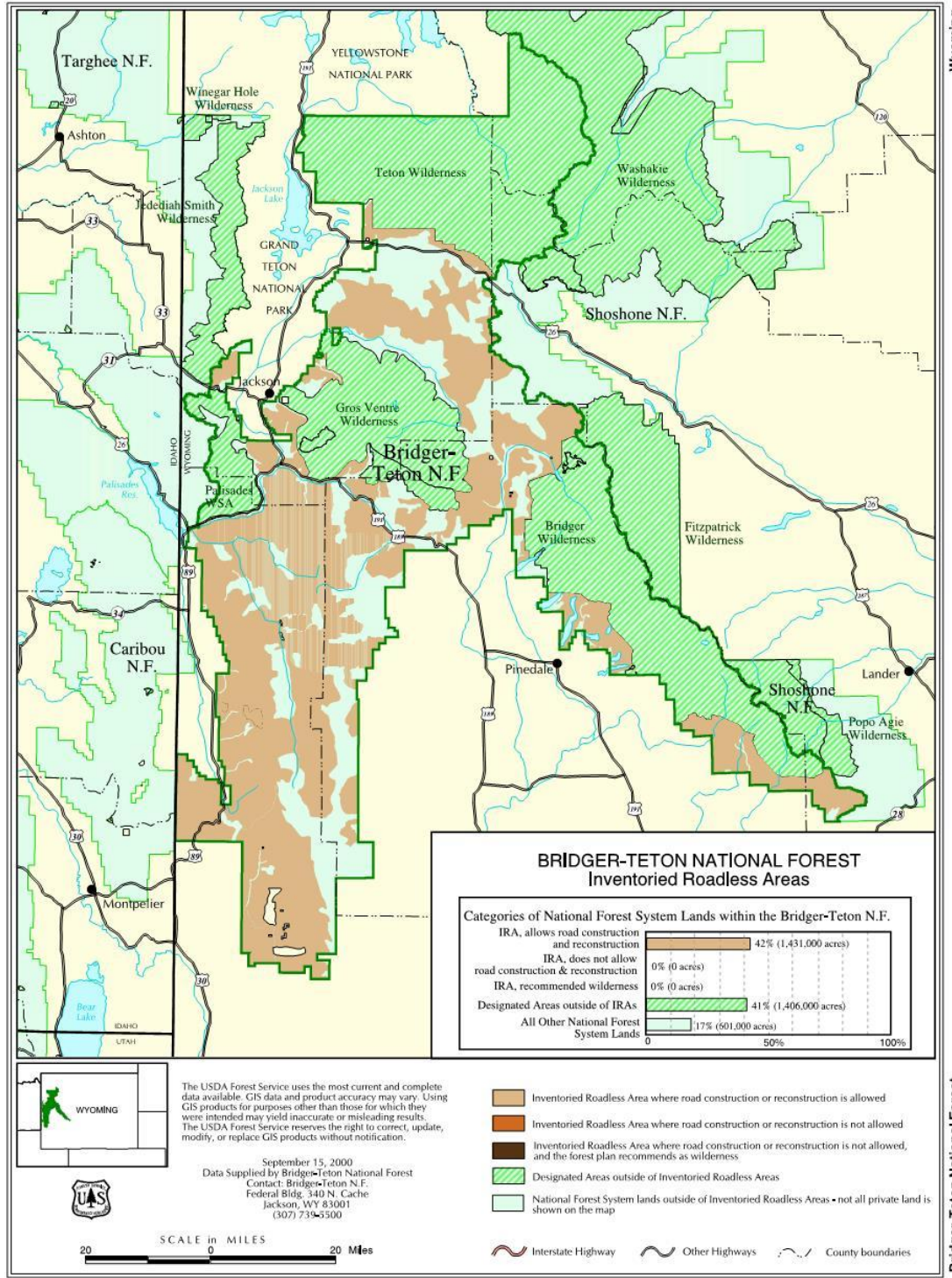
- Raymond Mountain SRMA
- Pine Creek SRMA
- Oregon Trail SRMA
- Dempsey Ridge SRMA

2.3.2.9 Inventoried Roadless Areas (IRA)

Inventoried Roadless Areas (IRA) are portions of National Forest that were identified in the USFS 2001 Roadless Area Conservation Final EIS as lands without roads that are worthy of protection. Construction and reconstruction of roads is prohibited in roadless areas unless the USFS determines the road is necessary to protect public health and safety or otherwise meets one of the exceptions listed in the rule. These lands are to be periodically evaluated for potential designation as wilderness based on the availability, capability, and need for these areas to be designated as such. Characteristics of roadless areas include things such as natural landscapes, high scenic quality, and traditional cultural properties. To help preserve the characteristics of IRAs, logging is greatly restricted.

The inventoried roadless areas mapped within Lincoln County can be seen in Figure 6.





Wyoming

Bridger-Teton National Forest

Figure 6. Inventoried roadless areas on the Bridger-Teton National Forest. (USFS, 2000)



2.3.2.10 National Historic Trails and Other Trails

The National Historic Trails Act of 1968 as amended allows for establishing trails in both urban and rural settings for people of all ages. There are two types of designations, National Historic Trails (NHT) and National Scenic Trails (NST). National scenic trails are to be continuous, extended routes of outdoor recreation within protected corridors. National Historic trails recognize original trails or routes of travel of national historic significance including past routes of exploration, migration, and military action. (NPS, 2019c)

2.3.2.10.1 California-Oregon Trail

The California and Oregon trails are designated as National Historic Trails (NHT). Each of these trails made their way through Wyoming, combining on the eastern side of the state and then dispersing to their final locations on the western side of the state in and around Lincoln County. There were many cutoffs from the trails that went through Wyoming. (Del Bene, 2014b)

The California and Oregon trail routes run north through the County and across the southern portion of the County both north and south of Kemmerer.

2.3.2.10.1 Lander Cutoff Trail

The Lander Cutoff Trail, named for its developer Frederick W. Lander, was established in 1857 after Congress passed the Pacific Wagon Road Act, allowing the survey and construction of wagon roads. The Lander Trail was one of the first national built roads in the west and stretches 229 miles from present-day South Pass, Wyoming to Fort Hall, Idaho. The route saved travelers 60 miles compared to the more traditional route on the Oregon-California Trail through Fort Bridger. (Del Bene, 2014a)

Approximately 48 miles of the Lander Cutoff Trail run north through Lincoln County starting at South Piney Creek canyon in the Wyoming range to the Idaho border.

2.3.2.11 Scenic Byway

2.3.2.11.1 Big Spring Scenic Backway

The Big Springs Scenic Backway is a 68-mile motorized route through national forest lands that connects Kemmerer to Cokeville. The Backway is crisscrossed by historic emigrant trails, the scenic Hams Fork River, and plunges into the Tump Mountain Range in the BTNF. The Backway was part of the Oregon Trail and in some areas tracks and ruts are still visible. (Lincoln County, n.d.-a)

2.3.2.11.2 Star Valley Scenic Byway

The Star Valley Scenic Byway is an 80 mile stretch of U.S. Highway 89 in Lincoln County. The scenic byway starts on the south end a few miles north of Geneva Junction, Idaho and continues north through Salt Canyon, over Salt River Pass, and all the way north to Alpine. The byway then heads east on U.S. Highway 26-89 into the Snake River Canyon to its northernmost point at the Lincoln-Teton County line about nine miles south of Hoback Junction. (Wyoming Office of Tourism, 2019)



2.3.2.12 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. There are currently 408 miles of rivers and streams designated as wild and scenic in Wyoming. (National Wild and Scenic Rivers System, n.d.)

In 2009, the Craig Thomas Snake Headwaters Legacy Act added the headwaters of the Snake River and twelve of its tributaries in Northwestern Wyoming to the National Wild and Scenic Rivers System. The purpose of the designation was to protect the free-flowing condition, water quality, the unique ecologic, geologic, fishers, scenic, recreation, and cultural values of the headwaters for the benefit and enjoyment of present and future generations. The portion within Lincoln County that was designated was a 19-mile segment from the mouth of the Hoback River to the point 1 mile upstream from the Highway 89 bridge at Alpine Junction (USFS, 2008). The act requires a management plan that must contain, with respect to the river segment that is the subject of the plan, a section containing an analysis and description of the availability and compatibility of future development with the wild and scenic character of such river segment.

The 2010 Kemmerer BLM RMP also lists a recommended wild and scenic river designation to Huff Creek and Raymond Creek which both lie within the Raymond Mountain WSA. (BLM, 2010a)

There is a study in progress at the time of this report evaluating other potential Wild and Scenic River designations within the County particularly on the main Greys River.

2.3.2.13 Fossil Butte National Monument

The Fossil Butte National Monument (NM) was designated in 1972 and encompasses approximately 8,198 acres which protects the largest deposit of freshwater fish fossils in the world. All of the NM lies within Lincoln County. The Fossil Butte National Monument holds some of the world's best-preserved fossils. Twenty-seven fish species, ten mammal species, fifteen reptile species, two amphibian species, thirty bird species, and several plant and arthropod specimens have been identified from the Fossil Butte NM. (NPS, 2019a)



The largest threat to the NM is invasive exotic plants. In 2018, the NPS contracted the Northern Colorado Plateau Network (NCPN) to identify and monitor invasive exotic plants (Washuta & Perkins, 2018). This information is further summarized and discussed in [Section 7.3 Noxious Weeds](#).



2.3.2.14 Cokeville Meadows National Wildlife Refuge (CMNWR)

The Cokeville Meadows National Wildlife Refuge (CMNWR) is located south of Cokeville along a 20 mile stretch of the Bear River. This national wildlife refuge was established in 1992 to protect the associated wetlands and uplands along the Bear River. The approved boundary for the CMNWR spans 26,657 acres, though only 9,259 acres have been acquired currently. The CMNWR supports Wyoming's highest density of nesting waterfowl and provides habitat for a variety of resident and migratory bird species. Some of the species supported by this refuge are White-faced Ibis (*Plegadis chihi*), Black Tern (*Chlidonias niger*), Trumpeter Swan (*Cygnus buccinator*), and numerous other marsh and shorebirds including the largest breeding population of American Bitterns (*Botaurus lentiginosus*) in Wyoming. The CMNWR also provide habitat for resident wildlife including Greater sage-grouse (*Centrocercus urophasianus*), mule deer (*Odocoileus hemionus*), elk (*Cervus canadensis*), and pronghorn (*Antilocapra americana*). (USFWS, 2019)

There have been several resource concerns particularly related to wildlife populations, in specific elk population numbers, associated with CMNWR and adjacent landowners and loss of the lands to agricultural production (specifically haylands).

In 2013, there were several USFWS NEPA actions that occurred on the CMNWR. A draft environmental assessment was completed for the proposed minerals withdrawal and transfer of jurisdiction on the CMNWR. The withdrawal contained 8,000 acres of federally owned mineral rights and a land transfer of 504 acres was proposed between the BLM and the Cokeville Meadows NWR (Jenkins et al., 2013). Also, in 2013, the UFWS proposed a rule for refuge-specific hunting and sport fishing regulations as the refuge had not allowed hunting since its creation in 1992. The last NEPA action that occurred during this time was a Draft Comprehensive Conservation Plan and Environmental Assessment for the CMNWR. Lincoln County submitted comments to all of these NEPA actions.

2.3.3 Resource Management Objectives:

- A. Designation and management of special designation or management lands are coordinated with Lincoln County, Conservation Districts, and adjacent landowners.
- B. No new special management or designation areas are established within the County without the County and Conservation District consent.
- C. Management of special designation areas allow for the greatest implementation of multiple-use management as allowed by law.
- D. Management and establishment of special designation areas considers the County's custom and culture and preexisting land uses.

2.3.4 Priorities:

1. The County does not support special designations, such as wilderness, Areas of Critical Environmental Concern (ACEC), wild and scenic rivers, critical habitat, semi primitive and non-motorized travel, etc. that result in single purpose or non-use and are detrimental to the County economy, lifestyles, custom, culture, and heritage.



2. County support for the addition of a river segment to the National Wild and Scenic Rivers System will be withheld until:
 - a. It is clearly demonstrated that water is present and always flowing.
 - b. It is clearly demonstrated that the required water-related value is considered outstandingly remarkable within a region of comparison, and that the rationale and justification for the conclusions are disclosed.
 - c. The plans and policies of the state and the County or counties where the river segment is located are followed, as those plans and policies are developed according to:
 - i. The effects of the addition upon the local and state economies, agricultural and industrial operations and interests, outdoor recreation, water rights, water quality, water resource planning, and access to and across river corridors in both upstream and downstream directions from the proposed river segment have been evaluated in detail by the relevant federal agency;
 - ii. It is clearly demonstrated that the provisions and terms of the process for review of potential additions have been applied in a consistent manner by all federal agencies;
 - iii. The rationale and justification for the proposed addition, including a comparison with protections offered by other management tools, is clearly analyzed within the multiple-use mandate, and the results disclosed;
 - iv. It is clearly demonstrated that the federal agency with management authority over the river segment, and which is proposing the segment for inclusion in the National Wild and Scenic River System will not use the actual or proposed designation as a basis to impose management standards outside of the federal land management plan;
 - v. It is clearly demonstrated that the terms and conditions of the federal land and resource management plan containing a recommendation for inclusion in the National Wild and Scenic River System;
3. Proposals for ACEC designations should strictly adhere to the relevance and importance criteria, and the BLM must demonstrate, using credible data, the need for an ACEC designation to protect the area in question and prevent irreparable damage to resources or natural systems.
4. The County will oppose any designation of an ACEC within federal land management plans unless:
 - a. It is clearly demonstrated that the proposed area satisfies all the definitional requirements set forth in FLPMA;
 - b. It is clearly demonstrated that the area proposed for designation as an ACEC is limited in geographic size and that the proposed management prescriptions are limited in scope to the minimum necessary to specifically protect and prevent irreparable damage to the relevant and important values identified, or limited in



geographic size and management prescriptions to the minimum required to specifically protect human life or safety from natural hazards;

- c. It is clearly demonstrated that the proposed area is limited only to areas that are already developed or used or to areas where no development is required;
 - d. It is clearly demonstrated that the proposed area contains relevant and important historic, cultural or scenic values, fish or wildlife resources, or natural processes which are unique or substantially significant on a regional basis, or contain natural hazards which significantly threaten human life or safety;
 - e. The federal agency has fully analyzed regional values, resources, processes, or hazards for irreparable damage and its potential causes resulting from potential actions which are consistent with the multiple-use, sustained-yield principles, and the analysis describes the rationale for any special management attention required to protect, or prevent irreparable damage to the values, resources, processes or hazards;
 - f. It is clearly demonstrated that the proposed designation is consistent with the plans and policies of the County where the proposed designation is located as those plans and policies are developed according to Subsection (3);
 - g. It is clearly demonstrated that the proposed ACEC designation will not be applied redundantly over existing protections provided by other state and federal laws for federal lands or resources on federal lands, and that the federal statutory requirement for special management addition to those specified by the other state and federal laws;
 - h. The difference between special management attention required for an ACEC and normal multiple-use management has been identified and justified, and that any determination of irreparable damage has been analyzed and justified for short- and long-term horizons.
5. The agencies should not create special designation areas unless it is determined that:
- a. It is not a substitute for a wilderness suitability recommendation;
 - b. It is not a substitute for managing areas inventoried for wilderness characteristics after 1993 under the BLM interim management plan for valid wilderness study areas;
 - c. It is not an excuse or justification to apply de facto wilderness management; and
 - d. Access and development of mineral and other resources have been fully analyzed and such designations needs outweigh the loss of value of the minerals and other resources.
6. Any recommendations made under a statutory requirement to examine the wilderness option during the revision of land and resource management plans by agencies should clearly demonstrate that:
- a. The duly adopted transportation plans of the state and County or counties within the planning area are fully and completely incorporated into the baseline inventory or information from which plan provisions are derived;



- b. Valid state or local roads and rights-of-way are recognized and not impaired in any way by the recommendations;
 - c. The development of mineral resources by underground mining is not affected by the recommendations;
 - d. The need for additional administrative or public roads necessary for the full use of the various multiple uses, including recreation, mineral exploration and development, forest health activities, and grazing operations is not unduly affected by the recommendations;
 - e. Analysis and full disclosure are made concerning the balance of multiple use management in the proposed areas, and that the analysis compares the full benefit of multiple-use management to the recreational, forest health, and economic needs of the state and the counties to the benefits of the requirements of wilderness management; and
 - f. The conclusion of all studies related to the requirement to examine the wilderness option are submitted to the County for review and action, and results in support of or in opposition to, are included in any planning documents or other proposals that are forwarded to the United States Congress.
7. The public lands that were determined to lack wilderness character during previous wilderness review processes should not be managed as if they were wilderness based on new or revised views of wilderness character and should remain subject to the full range of multiple uses.
 8. Any new wilderness designations in the County by Congress should be based on a collaborative process in which support for the wilderness designation is unanimous among federal, state and County officials.
 9. Any new wilderness designations should be provided for by Congress and created in cooperation with the County and the state.
 10. All Wilderness Study Areas (WSAs) pending Congressional approval, which were not recommended for wilderness designation by the Secretary of Interior, should be released and managed under for multiple-use and sustained yield.
 11. All wilderness management plans should fully provide for access for elderly and physically impaired.
 12. Wilderness management must provide for continued and reasonable access to and development of property rights within the area and provide for full use and enjoyment of these rights.
 13. Management must ensure that a wilderness designation does not affect or override state authority over water resources and that Wyoming's substantive and procedural laws controlling appropriation and allocation of water resources remain the primary authorities governing the water of Lincoln County.
 14. Wilderness or Wild and Scenic River designation should not be used to create a reserved water right.



15. Any interests in ditches, reservoirs or water conveyance facilities and easements or rights-of-way associated with those interests should be protected from impairment or diminution by wilderness or other special use designations.
16. Wilderness Study Areas released by Congress shall be managed based on the principles of multiple use and sustained yield. The management plans must be amended in a timely manner to reflect change in status.
17. Support the use of herbicides to control noxious weeds in wilderness areas.
18. Ensure that federal agencies when making wilderness recommendations comply with their respective coordination mandates when making wilderness determinations and developing wilderness inventories.
19. Ensure that decisions regarding Wilderness Study Area designation by Congress consider the recommendations put forth by the WPLI Committee.
20. County should be notified of any expansions or reductions of sage grouse core area.
21. The County should be notified at the earliest possible time in order to allow the County to be participate as a cooperating agency on all major federal actions regarding sage grouse core areas.
22. Sage-grouse mitigation credits should follow Wyoming House Bill HB0013.
23. Visible physical features are important to the landscape and the scenic quality of the County.
24. Visual Resource Management (VRM) classifications should reflect previous and current land uses.
25. Oppose the use of VRM classifications that will impede land uses on private and state lands.
26. Oppose the use of VRM classifications that undercut the federal land use allocations, including grazing permits, special use permits, and oil and gas leases.
27. The County should be coordinated with regarding management actions on the Cokeville Meadows National Wildlife Refuge.



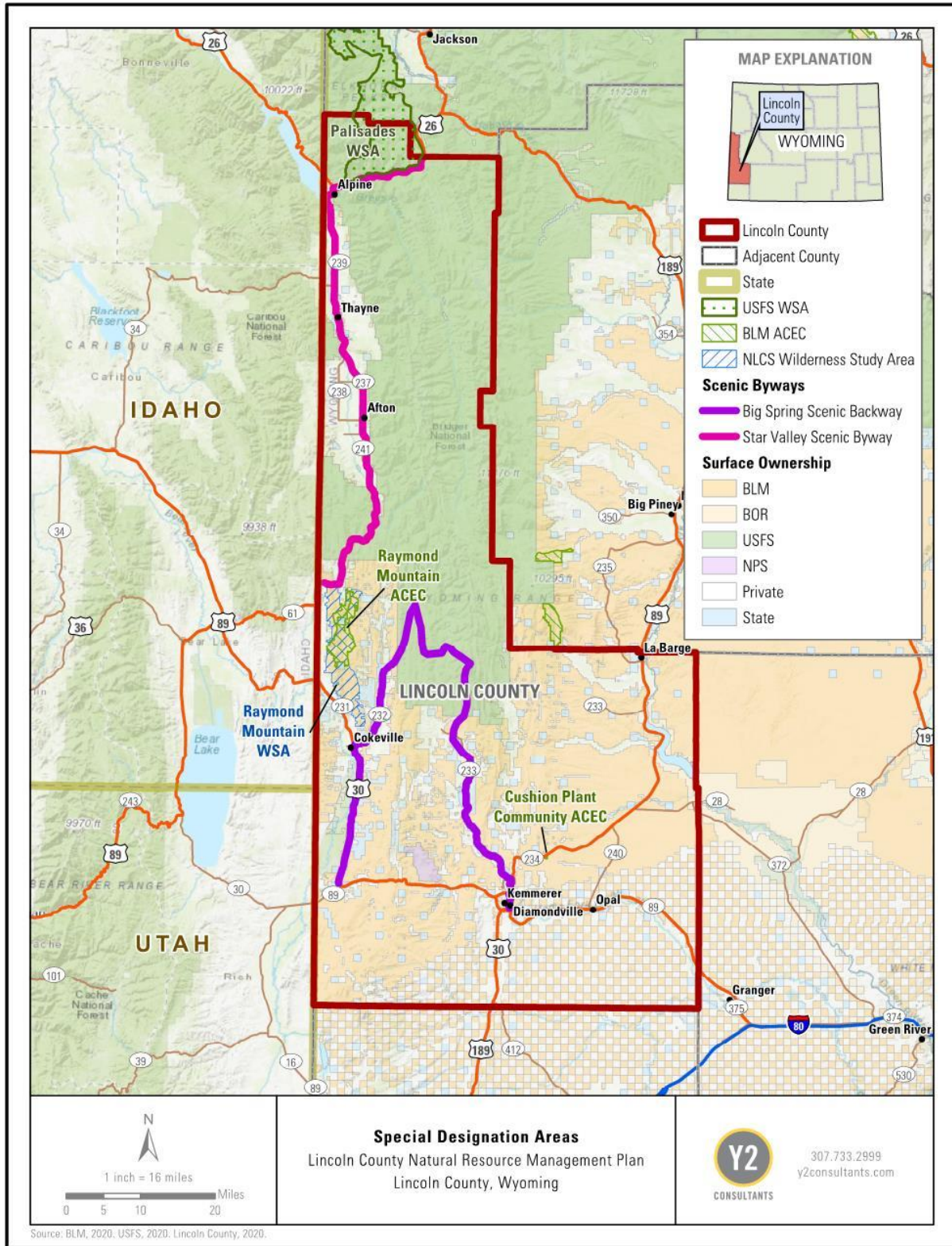


Figure 7. Special designation and management areas within Lincoln County. Data from BLM, USFS, and Lincoln County in 2020.

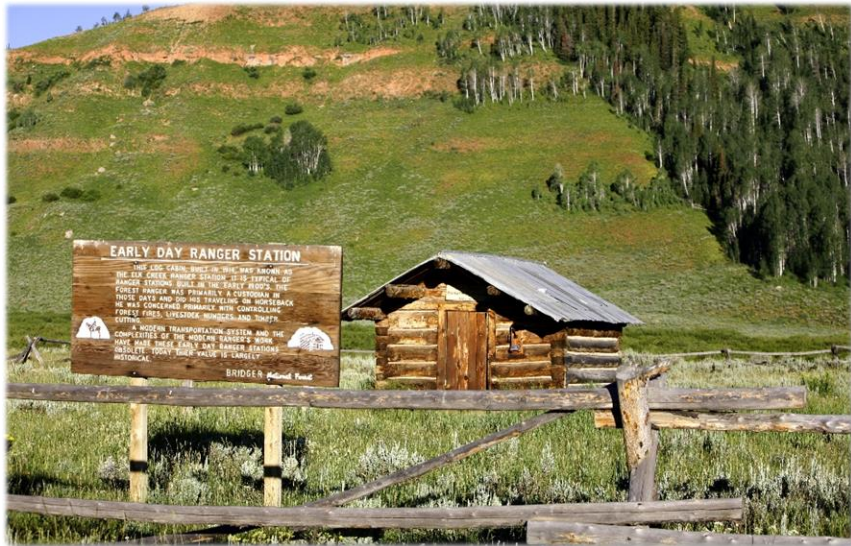


2.4 FOREST MANAGEMENT

2.4.1 History, Custom, and Culture

The beneficial use of forest natural resources has always been a part of Lincoln County's economy, customs, and culture. Early citizens relied on forest resources for timber for buildings, corrals, fences, and fuel. Logging occurred through the years on both federal and private lands. A healthy forest ecosystem provides employment and economic benefit for individuals and businesses in the County. Forest spans multiple management agencies in the County.

The Bridger National Forest was established in 1911 within 577,580 acres from part of Bonneville National Forest. In 1923 the Bridger National Forest was transferred to the Wyoming National Forest and the name was discontinued until 1943 when it was renamed the Bridger. Finally, in 1973, the Bridger Forest was administratively combined with Teton National Forest to form the Bridger-Teton National Forest (BTNF). (USFS, n.d.-b)



The Caribou National Forest was established in 1903 with the designation of the Pocatello Forest Reserve which was designated to protect the watersheds. Sawtimber harvesting on the Caribou National Forest averages 10 million board feet per year but other forest resources harvested include firewood, fence posts, and poles. The Caribou has some of the best range and grazing lands in the Intermountain West with approximately 22,000 cattle and 91,000 sheep permitted annually to graze on 140 different allotments. The Caribou and Targhee National Forests (CTNF) were combined in 2000 with only a small portion falling within Lincoln County. (USFS, n.d.-c)

2.4.2 Resource Assessment and Legal Framework

Forest products on all forests within the County include firewood, fence posts and poles. The BTNF and CTNF are mostly managed for aesthetic forest values and there is very little logging or timber harvest occurring within the County.

In 2016, Lincoln County initiated a forest collaborative process to tackle forest health issues within the County. The collaborative became known as the Grey's River Collaborative (GRC) and was made up of members who represented the BTNF, local government, grazing, hunting, wildlife and/or fisheries, Wyoming State Agencies, BLM, private timber industry, summer motorized recreation, winter motorized recreation, non-motorized recreation, conservation, and the public at large. The collaborative sought to address forest health issues related to insect infestations,



aging stands, forest fire risks, and associated forest fuels and hydrological concerns. The GRC met several times between 2016 and 2017 and came up with consensus recommendations for the management on the Greys River District, BTNF in Wyoming. (Ruckelshaus Institute, 2017) The GRC continues to meet and is currently focusing on recreational opportunities on the Greys River District. Those recommendations can be found [here](#)⁶ and [here](#)⁷.

2.4.3 Resource Management Objective:

- A. Forest resources are sustainably managed under multiple use, promoting the timber industry, grazing, fuels management, fire rehabilitation, and recreation in coordination with the County.
- B. Forest resources within the county are managed in an economic and efficient manner in coordination with the County, Conservation Districts, and other state and federal agencies.

2.4.4 Priorities:

1. All forested lands shall be managed for sustained yield and multiple use.
2. Fire, timber harvesting, and treatment programs shall be managed to prevent waste of forest products.
3. Management programs should provide for fuel load management to prevent catastrophic events and reduce fire potential at the urban interface.
4. Management and harvest programs should be designed to provide opportunities for local citizens and small business.
5. Encourage management programs and initiatives that improve watershed, forests, and increase forage for the mutual benefit of wildlife and livestock.
6. Encourage policies that support the timber industry to allow for the timber industry's continued economic benefit to the citizens of Lincoln County, including funding of projects when appropriate.
7. Forest management shall follow the mandates of the OAA and adhere to MUSY, as well as the NFMA, NEPA, and the ESA.
8. Roads on USFS and BLM lands should remain open to provide for the economic benefit, use, and safety of the public. Where road closures are proposed, specific justification for the proposal should be given on a case-by-case basis, and the proposal should be discussed in coordination with Lincoln County.
9. Forest management should support a coordinated timber harvesting and thinning method to promote forest health, reduce disease and insect infestation, reduce wildfire impacts, and prevent waste of forest products while supporting the economy of Lincoln County for future generations.
10. Utilize livestock grazing and fuels management programs to promote forest health and reduce wildfire risk (see Sections 2.4.1 and 2.4.2).



11. All dead trees should be promptly harvested once a snag component has been met, before additional loss of economic value occurs. The County encourages the use of Categorical Exclusions to accomplish this.
12. Support fire, both managed and prescribed, as a viable tool for vegetative treatment when properly applied. However, it should not replace harvest of timber products as the primary method to manipulate forested areas and must not create waste of forest products.
13. Promote the rehabilitation of harvested areas and areas affected by wildfire, including salvage logging operations, when not in conflict with federal law.
14. Wood harvesting and burning is needed for the personal health, safety, and welfare of the County's citizens and should be maintained as an acceptable practice.
15. The County supports federal Payments in Lieu of Taxes (PILT) to Lincoln County.
16. Access to forest products such as fuel, building materials, and Christmas trees should be ongoing. Access to these sites should be through an open roads and cross-country travel system.
17. Multiple use recreation opportunities are promoted and accessible.
18. Coordinate seasonal or temporary closures with the County and Conservation Districts.
19. Streamline fuel management between agencies and the County and Conservation Districts to promote efficient and timely management of forest resources.
20. Support and promote coordination between the timber industry and recreation trail development for the purpose of creating recreational trail opportunities for continued use upon the completion of timber extraction.



2.5 WILDFIRE SUPPRESSION, FUELS MANAGEMENT, FIRE REHABILITATION AND COMMUNITY WILDFIRE PLANNING

2.5.1 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, or fires with a natural ignition source. Large wildfires have occurred throughout Lincoln County and have caused resource stress to watersheds, timber, grazing lands, wildlife habitat, and recreational activities that rely on healthy forests and rangelands. Figure 8 shows the wildfires that have occurred within Lincoln County from 2000 through the development of this plan in 2020.

2.5.2 Resource Assessment and Legal Framework

Proactive planning for response to a wildland fire event is critical to the protection of Lincoln County. Its citizen's health, safety, welfare, private property, and forest and rangeland health all depend on this. A high degree of coordination between federal, state, and local agencies is necessary for maximal prevention and suppression of wildfire.

The National Cohesive Wildland Fire Management Strategy was developed by the Departments of Interior and Agriculture land management agencies and partners. The national strategy addresses the challenges of managing vegetation and fuels; protecting homes, communities, and other values at risk; managing human-cause ignition; and effectively and efficiently responding to wildfire. Through collaboration with stakeholders the plan strives to develop resilient landscape, fire adapted communities, and safe and effective wildfire response (USDA Forests and Rangelands, 2014). A link to the national strategy can be found [here](#)⁸.

The Lincoln County Community Wildfire Protection Plan (LCCWPP) that was last updated in 2015 guides land managers, elected officials, planning departments, and other citizen groups in their efforts to minimize the effects of wildfire upon the communities within Lincoln County. Implementation of the LCCWPP requires the collaboration of several jurisdictions including the USFS, BLM, Wyoming State Forestry Division, NPS, County Fire, Fire Districts, and local Fire Departments. Ongoing tasks under the plan include mitigation of fuels that increase wildfire potential. The goal of the plan is to help align federal, state, and local fuels reduction efforts within Lincoln County (LCCWPP, 2015). A link to the plan can be found [here](#)⁹.

The Fossil Butte National Monument has a Wildland Fire Management Plan that was adopted in 2005. The plan implements goals and objectives of the park's General Management Plan, Statement for Management, and Resource Management Plan. The plan was developed in a collaborative process utilizing an interdisciplinary team consisting of members from Fossil Butte NM, Grand Teton National Park, and the Intermountain Region of the NPS. Close coordination also occurred between the local representatives of the BTNF and the BLM's Kemmerer Field Office. A link to the plan can be found [here](#)¹⁰.



Wildland urban interface (WUI) areas are present throughout the county. These areas are where residential areas are intermingled within forested areas. These areas are particularly at risk should a wildland fire occur. The area around Alpine has formed the Alpine Area Wildfire Protection Coalition (AAWPC) (viewable [here](#)¹¹) which consists of private citizens, USFS staff, BLM staff, Lincoln County staff and citizen ambassadors to create awareness and provide work days to create defensible space around areas in the Alpine area that could be susceptible to fire.

Table 1. Fire Occurrences in excess of 100 acres in Lincoln County from 1966 to 2020.

Year of Fire	Fire Name	Acreage
1985	Boundry	2313
1986	Higby Creek Fire	473
1988	Corral Creek	4383
1996	Aspen Hollow	3048
2000	Blind Trail	9837
2000	Fontenelle	14716
2001	Deer Creek	147
2001	Wolf	112
2001	Tunp Fire	2912
2003	East Table Fire	3622
2007	SWEETWATER	2619
2007	Sheep Trail 2	1747
2007	Camp Cr	200
2007	Sage Jct	208
2007	Middle	2723
2007	Kelley WFU	364
2008	Shingle Mill WFU	1307
2010	Giraffe Creek	789
2010	Giraffe Creek	784
2010	Giraffe Creek	729
2011	Vail	103
2012	Fontenelle	6155
2012	Fontenelle	7597
2014	Pole Creek	374
2017	Pole Creek	3507
2018	Roosevelt	1057
2018	North Eden	4952
2018	North Eden	4954
2018	Roosevelt	1055
2018	Marten Creek	5946



2.5.3 Resource Management Objective:

- A. Wildfire, fuels, and fire rehabilitation are managed promptly and effectively using credible data, as defined above, in coordination with the County.
- B. Wildland urban interface (WUI) areas are managed to protect county citizens.

2.5.4 Priorities:

1. Federal agencies shall coordinate with local fire agencies. The USFS shall adhere to all requirements set forth in the Cooperative Forestry Assistance Act *16 U.S.C. § 2106*, including:
 - i. 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 be retained and improved;
 - ii. Efforts in fire prevention and control in rural areas should be coordinated among federal, state, and local agencies;
 - iii. In addition to aiding state and local rural fire prevention and control programs, the Secretary should 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.
2. Federal agencies should incorporate local fire association plans into their fire suppression and control plans and will support efforts of local fire departments in wildfire suppression activities.
3. Fire suppression efforts will be maximized through full coordination, communication, and cooperation between federal, state, and local fire-suppression units.
4. Support the development of a Master Good Neighbor Agreement between federal, state, and local fire-suppression units.
5. If grazing on federal lands is temporarily suspended due to fire, recommence grazing on the basis of monitoring and site-specific rangeland health determinations rather than solely on fixed timelines. 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.
6. Forage reserves and/or vacant allotments should be utilized as areas for grazing to occur when fire has affected a permittee's allotment.
7. Coordinate with other agencies to implement insecticide and herbicide treatments, livestock grazing, biomass fuel removal, slash pile burning, and prescribed burning as fire control tools.
8. Support and encourage temporary fire restrictions based on fire hazard designations to minimize the potential for human caused wildfires. Restrictions will be removed as soon as it is safe for work and recreation on federal lands.



9. Rehabilitate forests and rangelands damaged by wildfires as soon as possible for habitat and wildlife to reduce the potential for erosion and introduction of invasive or noxious weeds.
10. Encourage the use of the authorities granted under the Healthy Forests Restoration Act, Healthy Forests Initiative and Good Neighbor Authority to expedite cross-boundary/agency planning, collaboration processes and project implementation to treat and protect the resources of Lincoln County economically and efficiently.
11. Support the Department of Interior's Secretarial Order 3336-Rangeland Fire Prevention, Management, and Restoration and require the BLM to comply with the order and all subsequent revisions, reports, and instructional memos.
12. Use the BLM document *Earning Bridges: Strategies for Effective Community Relations Before, During and After Fire* to improve coordination between the BLM, state, Lincoln County local fire associations and local stakeholders.
13. Oppose prescribed burns on federal lands unless other management methods are not available. The County's preferred methods for land management are herbicide application, logging, thinning, chaining, and increased livestock grazing.
14. Support the management of non-native and noxious weeds after wildland fire events using tools including (but not limited to); livestock grazing, chemical, and other mechanical control that promote ecosystem health and as a management tool for vegetation manipulation; and fuels reduction for all federal lands. Prioritize the control of newly discovered noxious weed populations.
15. Support the use of ongoing research and experimental options for developing new and alternative treatments for the management of non-native noxious weeds after wildland fire events.
16. Conduct surveys of lands affected by fire in a timely manner following a fire to identify noxious weed presence.
17. Consultation and coordination with Lincoln County are expected on proposed changes and updates to the Fire Management Plans on federal lands.
18. Allow for adaptive grazing management practices and include them in term permits to allow for flexible management practices that will decrease fuel loads on the landscape particularly in areas with heavy grass understory.
19. Post-fire objectives should be consistent with site potential as defined in approved Desired Future Conditions or Ecological Site Descriptions. Require the use of credible data as previously defined to make these determinations.
20. Grazing rest prescriptions related to either wildfires or prescribed burns, will be determined on a site-specific basis. Post fire grazing will not be limited when scientific post fire monitoring and evaluation produces relevant, accurate data demonstrating that grazing will not unduly harm the range.
21. Promote the prompt rehabilitation of harvested areas and areas affected by wildfire, including salvage logging operations.



22. Lincoln County supports federal agencies following the April 2018 National Cohesive Wildland Fire Management Strategy.



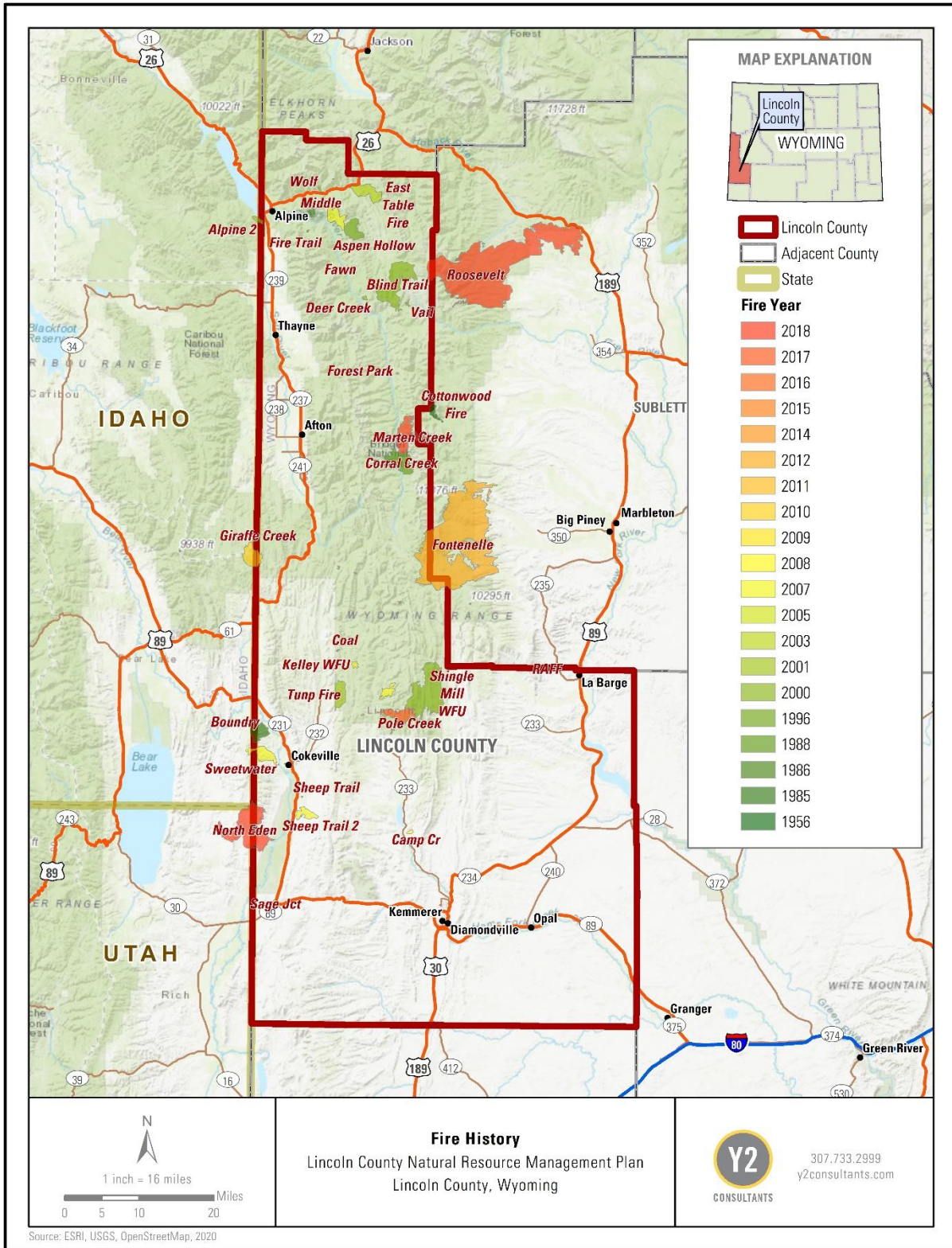


Figure 8. Fire history within Lincoln County. Data from ESRI and USGS in 2020.



2.6 LAND EXCHANGES

2.6.1 History, Custom, and Culture

Land exchanges can be used to alter the checkerboard 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 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.

2.6.2 Resource Assessment and Legal Framework

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 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 who 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 between an agency and 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 Guide to Land Exchanges)

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, hazmat cleanup, and land surveys at a minimum. The Forest Service usually pays for appraisals (USFS Handbook, 27-28). However, the BLM may share in some of these specific expenses as long as the total costs are apportioned in an equitable manner (BLM Handbook, 3-1 through 3-8).



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 Guide to Land Exchanges).

There are some small public land parcels that have been identified within the county for exchange including several BLM parcels.

2.6.3 Resource Management Objective:

- A. Land exchanges that are mutually beneficial to private landowners, the federal agencies, and the public are completed in a timely and cost-efficient manner.
- B. There is no net loss of private and state lands within Lincoln County.

2.6.4 Priorities:

1. Provide access to public lands for all users including the elderly and the physically impaired. Prevent existing access from diminishing and create new access where a need exists.
2. A private property owner has a right to dispose of or exchange his property as he/she sees fit within applicable law.
3. Federal and state governments hold sufficient land to protect the public interest.
4. There should be no net loss of the private land based on acreage and fair market value.
5. A Private property owner shall be protected from Federal, State, and County encroachment and/or coerced acquisition.
6. The County supports a no net loss of value or size.
7. Tax base resulting from exchanges should be compensated for by the appropriate acquiring agency.
8. Lands must be made available for disposal under the Recreation and Public Purposes Act and Special User Act.
9. When possible, combine land exchanges to increase efficiency and reduce costs.
10. Land exchanges should be sought out when said exchange will provide additional access to public lands.



CHAPTER 3: GEOLOGY, MINING, AND AIR

3.1 GEOLOGY

Lincoln County has a rich geologic history. There are many locations of geological interest throughout the County.

During the Late Jurassic and Cretaceous Periods, 160 to 60 million years ago, the subduction of the Farallon oceanic plate beneath the western edge of the North American continent resulted in the Sevier Orogeny. The compressional forces of this event created a series of north-south trending thrust faults that built many of the mountain ranges present in western North America today. In Lincoln County, these thrust faults, or the Overthrust Belt, folded and faulted the sedimentary rocks present into complex north-south trending structures. This north-south orientation of the rock units can be observed throughout Lincoln County today. (Lincoln County: Periodic Spring, n.d.)

Thousands of years after the Sevier Orogeny, regional relaxation led to the extension of these faulted areas. Star Valley was dropped down by the active Star Valley Normal Fault and has been partially filled with younger sediments over the last 10,000 years. (Lincoln County: Periodic Spring, n.d.)

Lincoln County has also seen several landslides occur on public land that have caused flooding and in turn caused significant safety and financial impacts to the county. Landslides tend to occur in the Smiths Fork area, the most recent one being the Porcupine Slide which occurred up the Greys River in February 2018 (Figure 18). Landslides also occur frequently in the Snake River Canyon and can cause road closures that significantly impact citizens commuting from Lincoln County to Teton County for work.

Figure 9 below shows the geology of Lincoln County. The symbols in the map are described in this list below:



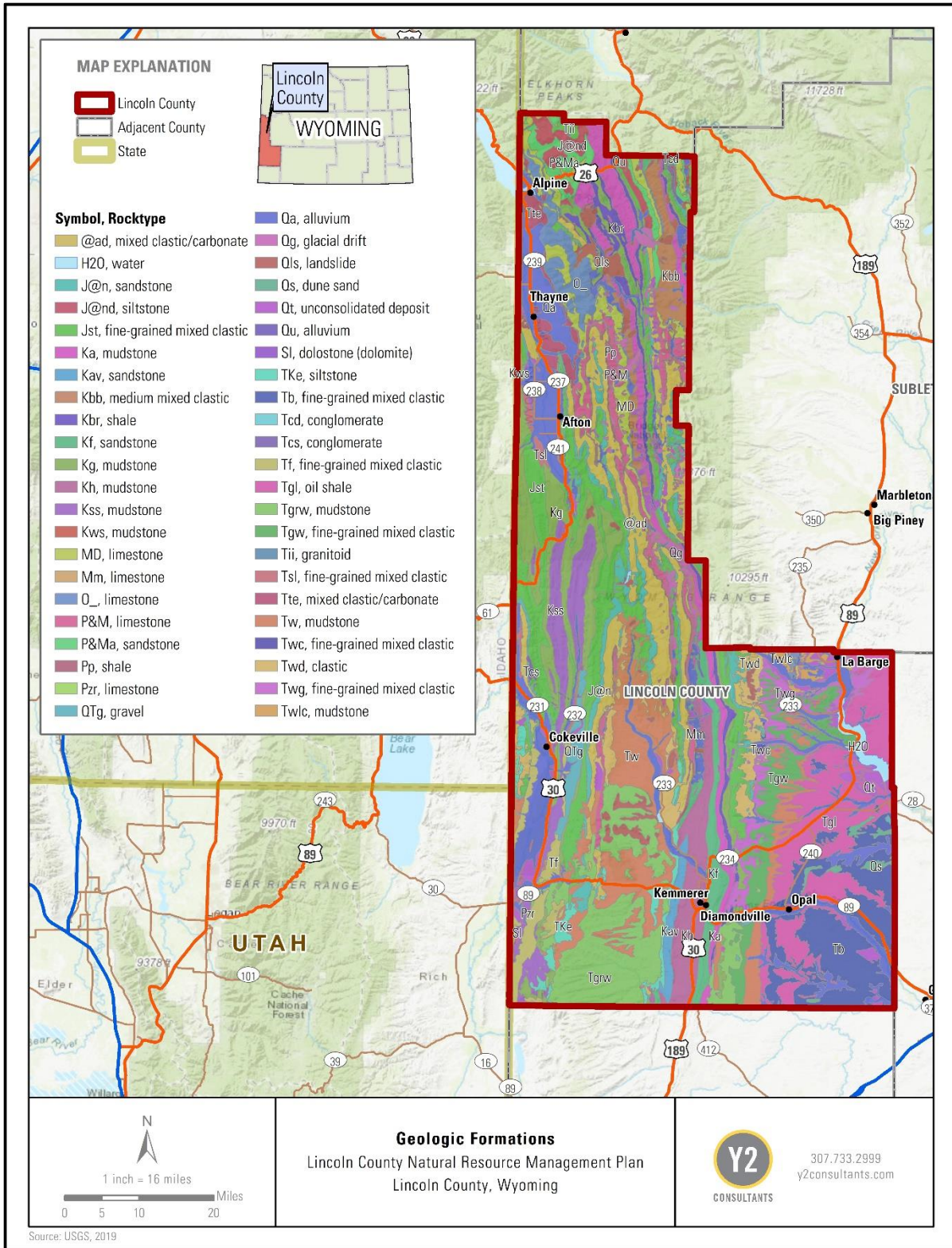


Figure 9. Lincoln County geologic formations. Data from USGS in 2019.



3.2 SOILS

3.2.1 History, Custom, and Culture

Healthy soils sustain plant communities, keep sediment out of streams, and dust out of the air. Land managers of public 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.

Anthropogenic land disturbance as well as wildfire can influence soil quality. Soil issues arising from both anthropogenic and natural causes include erosion, drainage, invasive species, soil compaction, salination, and loss of vegetation. (NRCS, 2018)

The two Conservation Districts within Lincoln County work to promote the conservation of soil and water resources within the district (see [Section 2.1 Land Use](#) for more information).

3.2.2 Resource Assessment and Legal Framework

3.2.2.1 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 3 is typical for most public lands projects which do require onsite investigations by expert soil scientists for site specific project related activities or projects (USDA: Soil Science Division Staff, 2017).

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](#)¹² (NRCS, n.d.-b). The soil survey mapping of Lincoln County is not currently completed (NRCS, n.d.-a). The NRCS office provides local soil mapping in unmapped areas upon request. The general soil map units for Lincoln County are depicted in Figure 10.

3.2.2.2 Ecological Sites

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.

3.2.3 Resource Management Objective:

- A. Soil quality and health is maintained and conserved through best management practices.



- B. Soils are protected from wind and water erosion and fertile land is maintained in order to sustain a viable agricultural economy, wildlife populations, and high levels of air and water quality.

3.2.4 Priorities:

1. When available, the NRCS soil survey is the basis for all public land soils related activities.
2. Support the need for completion of a NRCS soil survey that includes both public and private land in the County.
3. Any deviation from using soil survey data must be coordinated with NRCS.
4. Support mitigation of surface disturbances be accomplished on adjoining site of the disturbance. No off-site mitigation may be considered until onsite opportunities have been exhausted or that proper analysis shows that habitat losses cannot be mitigated on site.
5. Require that off-site mitigation is:
 - a. Voluntary on the part of project proponents;
 - b. Provides for the full involvement of the County;
 - c. Should not be permanent but be of a duration appropriate to the anticipated impacts being mitigated.
6. Support the cost-effective method of pooling committed mitigation funds to fund large efforts to mitigate the impacts of multiple impacts.
7. Support projects and policies which improve soil quality and ecology.
8. Support erosion control as a means of flood control.
9. For new soil disturbing projects, support implementation of BMPs to manage runoff and stabilize soils on site.
10. Land use designations that eliminate or reduce the opportunity for implementation of practices that can improve soil health are not supported.
11. Lincoln County supports and encourages the use of natural processes including livestock grazing as key to site reclamation for soil health and biodiversity.
12. Encourage the implementation of BMPs for watershed management.
13. The County prioritizes the completion and finalization of the soil survey mapping for the County.
14. All proposed projects on public lands that will disturb topsoil should implement a plan to separate and protect topsoil.



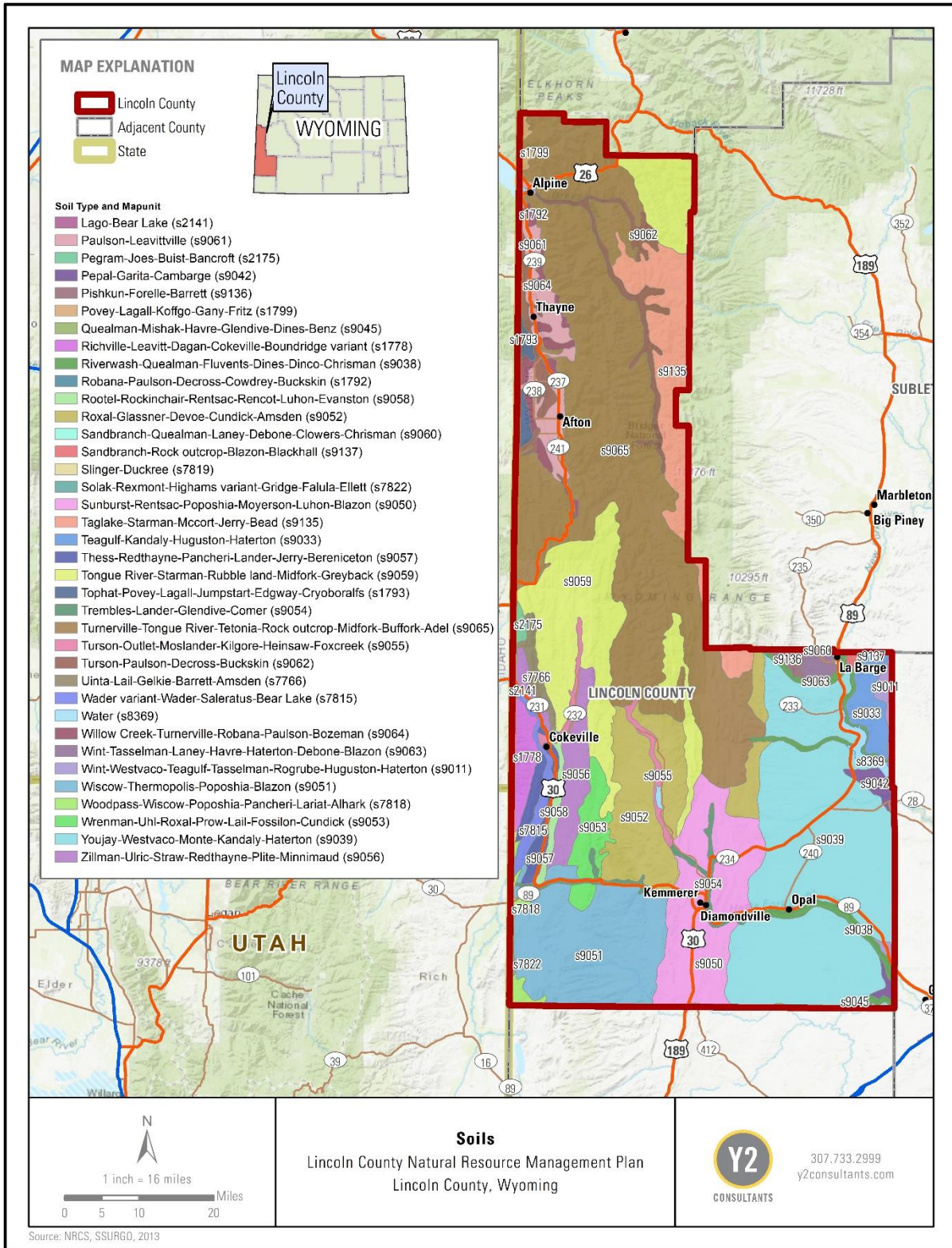


Figure 10. Soil type and map units for soils in Lincoln County. Data from NRCS Web Soil Survey in 2013.



3.3 MINING AND MINERAL RESOURCES

3.3.1 History, Custom, and Culture

Mineral production has been part of Lincoln County's culture for over 100 years. Mining is one of the historical uses of federally managed lands, predating the establishment of the USFS and BLM. Maintenance of such use is statutorily compatible with multiple use principles. Coal and mineral resource production is a large corner of industry in Lincoln County and provides jobs to hundreds of people throughout the region. (Data USA, 2020)

The production of minerals and the associated economic and cultural activities have historically waxed and waned with demand and pricing, but mining remains a significant portion of Lincoln County's tax base, domestic production, and employment. The mining industry makes up an important part of the property tax base of the County, and the payrolls and expenditures for equipment, materials, and supplies are important to the economic stability of the County. (Data USA, 2020)

3.3.1.1 Split Estate

A unique form of federal land ownership in the West comes from split mineral estates. A split mineral estate occurs when the ownership of the minerals (or subsurface rights) in a certain area is different from the ownership of the surface estate. 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.

3.3.1.2 Fossils

When fossils were first discovered in the County miners dug them up to sell to collectors. There are numerous quarries on private lands in the County that continue to produce extraordinary fossil specimens both for museums and private collectors. Fossils are no longer allowed to be harvested within the Fossil Butte National Monument. Refer to section 2.3.2.13 *Fossil Butte National Monument* for more information on Fossil Butte.

3.3.2 Resource Assessment and Legal Framework

Wyoming leads the nation in the production of bentonite, and the 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. Entities such as the Wyoming Oil and Gas 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.



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. Lincoln County’s policies for mineral development are structured to responsibly increase the exploration, development, and production of mineral and energy resources within the political jurisdiction of the County.

3.3.2.1 Split Estate

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. United States Department of the Interior and United States Department of Agriculture. 2007. Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development (BLM, 2007). 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.

Fossils are treated differently from mineral rights in that the surface owner possesses ownership of the fossil.

3.3.2.2 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.* In order 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).

3.3.2.3 Coal

Lincoln County has 22 records of coal leases on approximately 94,806 acres of public land managed by the BLM. (The Diggins, n.d.) The Naughton Power Plant near Kemmerer is a 448 megawatt coal-fired power station operated by PacifiCorp. A study done in April 2019 by PacifiCorp identified that units 1 and 2 of the power plant were less economic to operate beyond 2022 than alternatives and both units are candidates for early retirement. In January 2019, unit 3 was shut down and it was reported in September 2019 that the entire power station is scheduled to be closed by 2025. The Kemmerer Coal Mine that supplies the coal to the Naughton Power plant was formerly owned by Westmoreland Coal. This company filed bankruptcy in 2019 and handed the coal mine to its lenders who continue to operate the mine. The Naughton plant is the main buyer for of the Kemmerer mine's coal so if the plant is closed the mine could also be closed. However, several trona mines in southwest Wyoming also purchase coal from the Kemmerer Coal Mine. (Global Energy Monitor, 2020)



3.3.3 Resource Management Objective:

- A. All minerals are produced in an environmentally responsible manner by providing infrastructure and services such as roads, bridges, medical services, and law enforcement to support the project.
- B. Oil, gas, bentonite, limestone, silica sand, rare earth metals, and all other minerals within the County are able to be extracted responsibly and efficiently within the County.
- C. Partnerships are established with the County, mineral industries, and state and federal agencies, to increase and share knowledge of the mineral estate, and to develop and foster trust among partners. Through these relationships, the County plans to encourage development of mineral and energy production countywide.
- D. Reclamation is completed in a timely manner and protects existing uses on the land.



3.3.4 Priorities:

1. Support streamlining the permitting process for new activities within Lincoln County to allow for more exploratory drilling and mining and improved access to reserves.
2. Support consideration of all lands within the political jurisdiction of Lincoln County open to mineral exploration and extraction unless specifically precluded by federal, state, or local law.
3. Decisions to close lands to mineral exploration or extraction should be coordinated with the County prior to closure to consider the impact such closure will have on the County's economic viability and resolve potential conflicts with County plans and policies, as required by federal and state law.
4. Require that "public lands will 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," as stated in FLPMA.
5. Federal agencies should provide regular (where regular is defined as not less than bi-monthly) updates on the permit status for current and proposed projects within the County's jurisdiction and support reasonable timelines and explanations for issuance of delays from permitting agencies.
6. Local, state, and federal land use and management plans should contain a thorough discussion and evaluation of energy and mineral development, including the implications such development may have on surface land uses and the County economy. Additionally, all plans must demonstrate an understanding of the County's plans and policies and resolve any conflicts with the County's plans.
7. All exploration, development, and mining on federal lands in the County with mineral or energy potential shall be governed by adherence to all laws which pertain to mining and energy development and production, including but not limited to the General Mining Law of 1872, as amended, and FLPMA and 43 C.F.R. § 3809.
8. All lands not lawfully withdrawn from mineral exploration and development should remain available for their designated use. These lands should be developed in an orderly manner to accommodate exploration, development, and production. These activities will be performed in a manner consistent with the Mining and Mineral Policy Act of 1970.
9. State, federal, and County agencies shall protect the rights of access, occupation, and property of anyone prospecting and/or developing minerals within Lincoln County as required by federal and state law.
10. Access for prospecting, development, processing, and mining of mineral resources must remain open. Any closures should be coordinated with the County.
11. Integrate mineral resources programs and activities with the planning and management of renewable resources through the Land and Resource Management planning process to ensure efficient policies are implemented.



12. Encourage simultaneous or sequential mineral development with other resource uses in accordance with multiple use management principles in Lincoln County, giving precedence to established mineral rights in the development coordination process.
13. Encourage mining reclamation to use Best Management Practices (BMPs) instead of requiring restoration to as near the same condition as original. Consider nonnative seeding where beneficial.
14. Encourage coordination with other land users regarding mining reclamation.
15. Encourage justification in deferring lease applications.
16. Support the continued use of coal energy.
17. Support the development and improvement of current and future infrastructure for the transmission of coal powered energy.
18. Support and encourage research and development of other uses for coal beyond energy.
19. Energy generated from coal should be transmitted and stored in ways that limit risks to the environment and residents of the County.
20. The County should be involved as a cooperating agency as early as possible in Federal agency action intended to downsize the coal industry in the County.
21. Federal agencies should make the County aware of decisions or actions that could limit, impede, or increase the cost of coal energy brought into the County and allow the County to participate as a cooperating agency early in the process for all such decisions.

3.4 ENERGY RESOURCES

3.4.1 Oil and Gas

3.4.1.1 History, Custom, and Culture

Oil and gas production have contributed greatly to Lincoln County's taxable income for over 100 years. In the mid-1990s overall production peaked and has been downward trending since. This is illustrated in the countywide production records from the WOGCC.

The County has seen fluctuating oil and gas production over the past 35 years. Production peaked in the mid-1990s and production trends have declined in Lincoln County since. Oil production was 205,703 barrels (BBL) in 1979, peaked at 971,527 BBL in 1996, and has fluctuated downward to 229,853 BBL in 2019. Gas production has followed similar trend in the County since the 1980s. In 1979 annual gas production was 11 million million-cubic feet (MCF), by 1995 production had reached almost 96.5 million MCF. Since 1995 production has gradually declined, totaling 31.8 million MCF in 2019. (DrillingEdge, 2020)



These trends in decline and growth are tied to existing economic conditions at the County, state, and national levels (Figure 11, Figure 12, Figure 13).

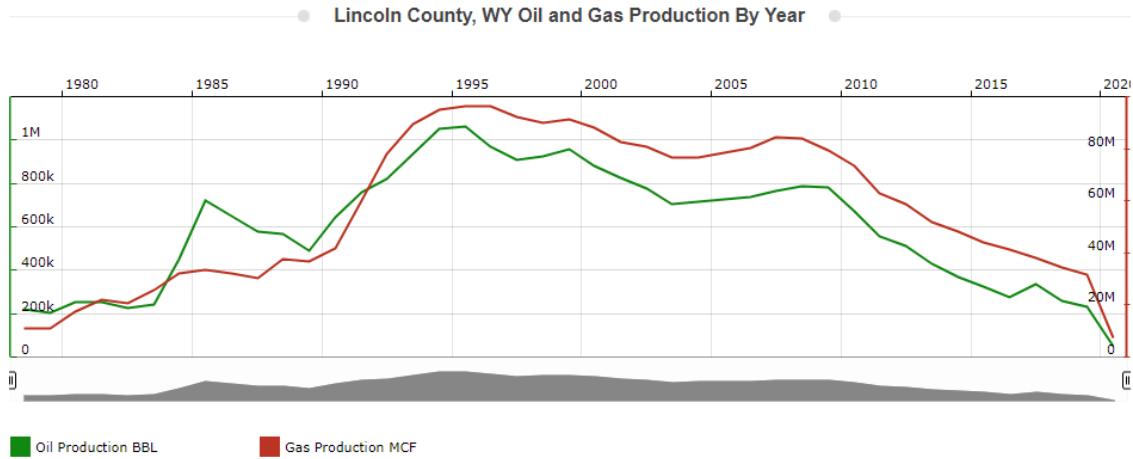


Figure 11. Oil and gas production in Lincoln County between 1980 and 2020. (DrillingEdge, 2020)

Wyoming Oil Production for 1978-2020

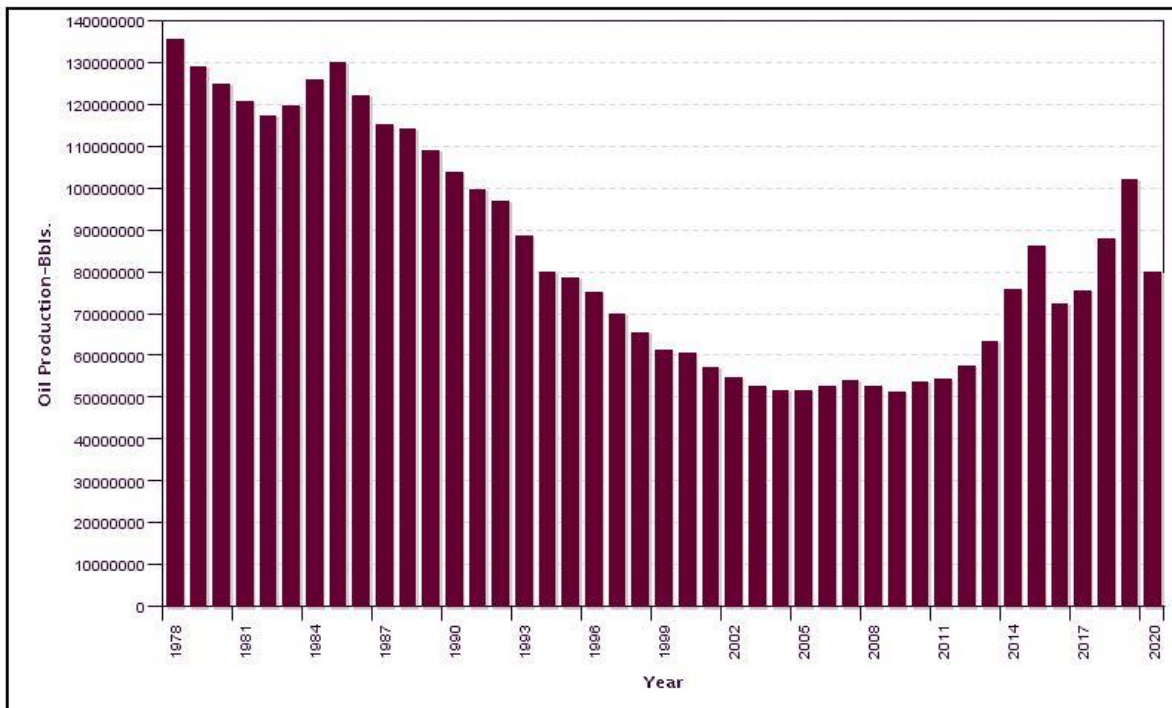


Figure 12: State of Wyoming oil production trends (1978-2020). (WOGCC, n.d.-a)



Wyoming Gas Production for 1978-2020

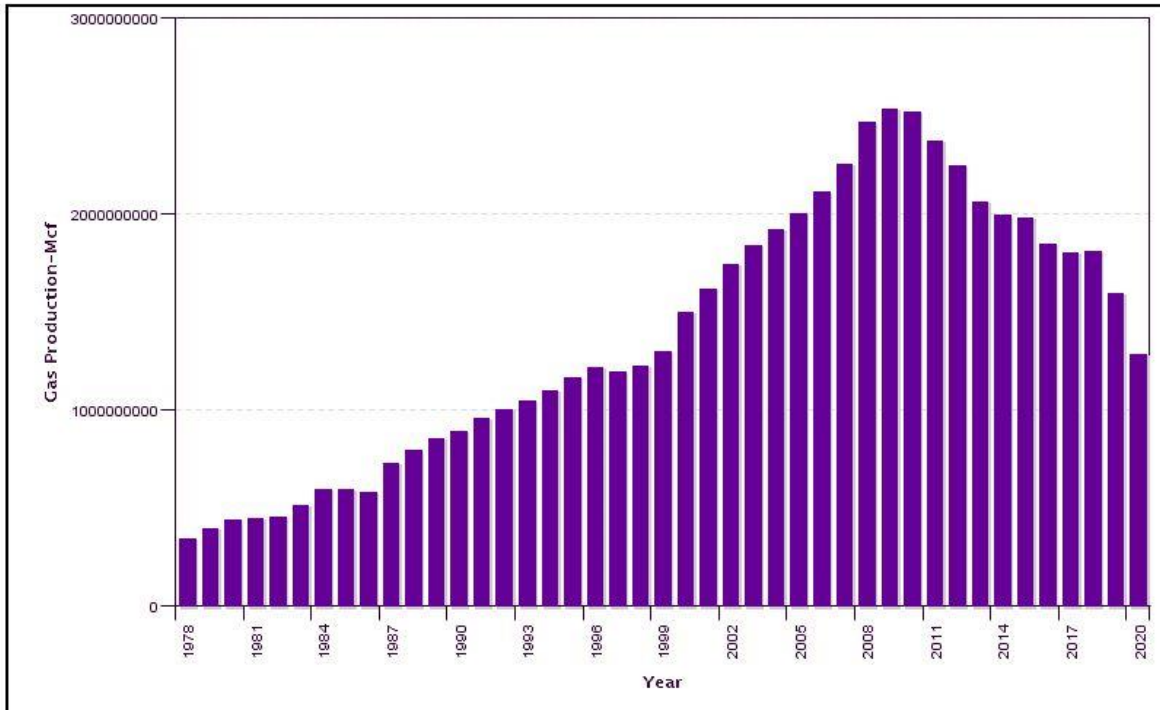


Figure 13: State of Wyoming gas production trends (1978-2020). (WOGCC, n.d.-b)

3.4.1.2 Resource Assessment and Legal Framework

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, or chemical flooding.

The production of gas is similar to 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.





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 also 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.

3.4.1.2.1 Helium

Unique to Lincoln County is the production of helium which is used not only in blowing up party balloons but also in arc welders, MRIs, and manufacturing silicon chips for computers. In Wyoming, all the state's commercially produced helium comes from the LaBarge field. Approximately 43% of the U.S. helium production and 31% of global production comes from Wyoming. The natural gas extracted from the LaBarge is piped down to ExxonMobil's Shute Creek natural gas processing plant in eastern Lincoln County, where the helium is separated from other gases like methane and carbon dioxide. The helium concentrate is only about 0.6% of the gas that comes out, but there are not many places on earth where you can find helium so it economical to produce. (Chilton, 2019)

In 2019, ExxonMobil applied for a Wyoming Industrial Siting Permit to build and operate a Carbon Capture Project at the existing Shute Creek Processing Facility. The permitting is still being completed as of the writing of this document.

3.4.1.3 Resource Management Objective:

- A. The responsible extraction of oil and gas within the County is encouraged by the agencies and done so efficiently.
- B. The County is a part of any regulatory process which impacts its cultural and economic stability.
- C. Reclamation is completed in a timely manner and protects existing uses on the land.



3.4.1.4 Priorities:

1. Support streamlining the permitting process for new drilling activities within Lincoln County to allow for more exploratory drilling and improved access to reserves.
2. Pursue opportunities to encourage the nomination of more leases for sale.
3. 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.
4. Encourage advanced production techniques to improve access to reserves in place.
5. Encourage coordination among the various federal agencies to facilitate hydrocarbon production permits in a timely manner, as prescribed in federal law.
6. Support the use of enhanced oil recovery and infrastructure (e.g., carbon dioxide pipelines, processing plants, steam flood facilities).
7. Support the utilization of enhanced production techniques and the development of infrastructure to provide material supply and support to ensure further development throughout Lincoln County.
8. Encourage reclamation of oil and gas to use Best Management Practices (BMPs) instead of requiring restoration to as near the same condition as original. Consider nonnative seeding where beneficial.
9. Coordinate with the County and other surface land users regarding the development and reclamation of oil and gas infrastructure to maintain preexisting uses.
10. Encourage federal agencies to approve oil and gas leases in a timely manner.
11. Encourage the expansion of helium plants where appropriate within Lincoln County.

3.4.2 Transmission Lines

3.4.2.1 History, Custom, and Culture

Transmission lines have been expanding within Lincoln County and surrounding areas particularly as more renewable energy sources such as wind energy become more prevalent across the landscape. Many of these transmission lines have the purpose of transporting energy generated in the state to other states such as Arizona, California, Colorado, Idaho, Nevada, and Utah.

3.4.2.2 Resource Assessment and Legal Framework

The Gateway West Transmission Line Project is a jointly proposed project by Rocky Mountain Power and Idaho Power to build and operate approximately 1,000 miles of new high-voltage transmission lines between the Windstar substation near Glenrock, Wyoming and the Hemingway substation near Melba, Idaho. The project would include approximately 150 miles of 230 kilovolt (kV) lines in Wyoming and approximately 850 miles of 500 kV lines in Wyoming and Idaho. These two power companies are building this new transmission line to provide electricity to meet increasing customer needs and it will deliver power from existing and future electric resources including renewable resources such as wind energy. The proposed Gateway West Transmission Line project would run through the southern portion of Lincoln County.



3.4.2.3 Resource Management Objective:

- A. Transmission lines are developed within the County efficiently with little use of eminent domain authority when possible.
- B. Reclamation is completed in a timely manner and protects existing uses on the land.

3.4.2.4 Priorities:

- 1. Support the development and improvement of future and existing transmission line infrastructure for the transmission of materials in and through Lincoln County when it will not affect pre-existing uses or rights.
- 2. The County supports streamlined decisions regarding transmission lines so long as it does not harm pre-existing uses or rights.
- 3. Encourage transmission line development to be in the most direct path regardless of land ownership, with a preference for placement on federal lands, however the use of eminent domain is not supported.
- 4. Whenever possible, power transmission lines should be placed in existing transmission line corridors.
- 5. Location of powerline should be coordinated with surface owners, users and local governments.
- 6. Reclamation should follow best management practices and be coordinated with surface users to maintain preexisting uses.
- 7. All proposed projects on public lands that will disturb topsoil should implement a plan to separate and protect topsoil.
- 8. The County should be regularly updated and coordinated with regarding all transmission line permitting and development within the County.

3.4.3 Renewable Energy

3.4.3.1 History, Custom, and Culture

Lincoln County does not have an extensive history or culture associated with renewable energy. The County understands that the development of renewable energy is a component of energy infrastructure development. Wyoming does not 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).

3.4.3.2 Resource Assessment and Legal Framework

Solar and wind energy are growing industries across Wyoming. New development of renewable energy in the County will be considered on the basis of expanding existing available energy infrastructure.

Hydroelectric plants are established on several reservoirs within the county including Lake Viva Naughton, Swift Creek Reservoir, and Strawberry Canyon Reservoir. More information on these can be found in Section 4.2 Dams and Reservoirs.



The BLM authorized renewable energy projects on public lands using a right-of-way grant under Title V of FLPMA. The BLM requires project developers to submit bonds in an amount that the agency has determined will be adequate to cover the potential costs for hazardous liabilities, decommissioning, and reclamation of the project site, should the developer be unable or unwilling to conduct those activities. Currently, the BLM requires a minimum bond of \$2,000 per wind energy test site and \$10,000 per wind turbine. There are currently no minimum bond amounts for solar energy projects. (BLM, 2015)

3.4.3.3 Resource Management Objective:

- A. Renewable energy resources within the County are developed in a manner that protects other preexisting multiple uses.
- B. Reclamation is completed in a timely manner and protects existing uses on the land.

3.4.3.4 Priorities:

1. Consider the development of renewable energy in coordination with the County and stakeholders.
2. Support renewable energy as a means to further develop energy infrastructure and energy independence without encumbering the underlying mineral estate.
3. Reclamation must be planned before projects are approved.
4. Renewable energy should be a lower priority than other multiple uses in the County.
5. Renewable energy development and permitting should consider effects on neighboring land uses and resources.
6. Prioritize development and permitting of renewable resources in areas where there will be minimal, or less, impact on preexisting uses, wildlife migration corridors, migratory birds, and other resources.

3.4.4 Pipelines

3.4.4.1 History, Custom, and Culture

Due to the development of oil and gas within Lincoln County there has been significant development of oil and gas transmission pipelines throughout the County, primarily along the east-west axis. These pipelines are mostly confined to a central corridor within the County, though a few oil and gas pipelines are located between Rawlins and the northeast corner of the County. The County has long been a proponent of pipeline development. (WSGS, 2020)

For an interactive map of the County's pipelines refer to the Interactive Oil and Gas Map of Wyoming located [here](#)¹³.

3.4.4.2 Resource Assessment and Legal Framework

Pipeline infrastructure plays a crucial role in the development and transmission of hydrocarbons at the national, state, and County levels. It is crucial that these avenues for transmission are allowed to thrive and develop within Lincoln County. Pipelines offer a safe and effective means for delivering large amounts of hydrocarbons across extended distances with minimal risk for spills (Global Energy Institute, 2013).



There is very little federal regulation of most pipelines. Permitting for interstate natural gas pipelines and interstate liquefied 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 Federal Energy Regulatory Commission “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 field of natural gas regulation was occupied by federal law, but that FERC required gas company to comply with local regulations through conditions in certificate). Thus, unless pipelines cross federal lands and trigger NEPA review, 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 (PHSMA) 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”). In order 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.

3.4.4.3 Resource Management Objective:

- A. Pipelines are developed within the County efficiently with little use of eminent domain authority when possible.
- B. Reclamation is completed in a timely manner and protects existing uses on the land.



3.4.4.4 Priorities:

1. Support the development and improvement of future and existing pipeline infrastructure for the transmission of materials in and through Lincoln County when it will not affect pre-existing uses or rights.
2. The County supports streamlined decisions regarding pipelines so long as it does not harm pre-existing uses or rights.
3. Encourage pipeline development to be in the most direct path regardless of land ownership, with a preference to placement on federal lands.
4. Reclamation should follow best management practices and be coordinated with surface users to maintain preexisting uses.
5. The County should be regularly updated and coordinated with regarding all pipeline permitting by the developing federal agency.
6. All proposed projects on public lands that will disturb topsoil should implement a plan to separate and protect topsoil.
7. The use of eminent domain is not supported by the County.



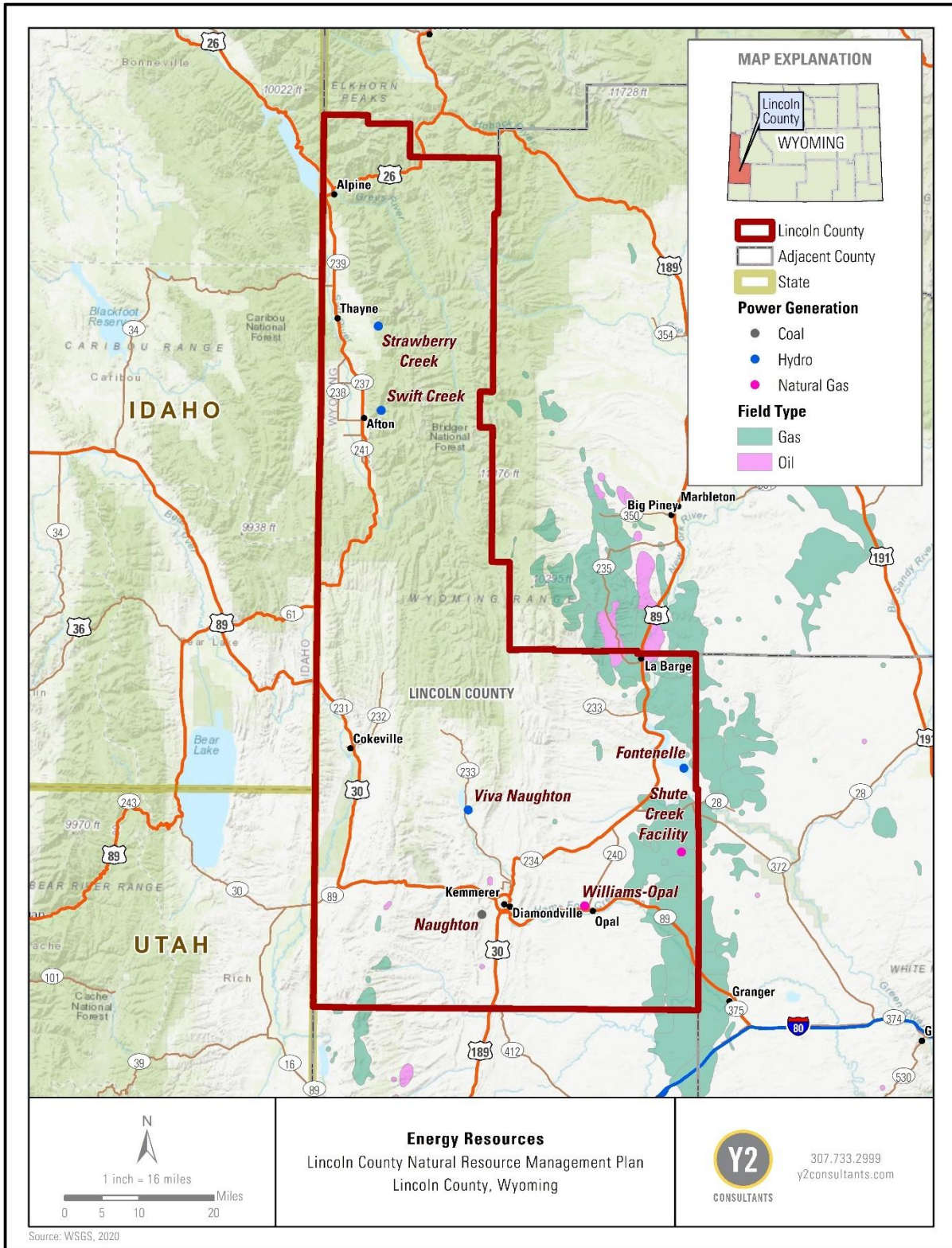


Figure 14. Energy developments within Lincoln County. Data from WSGS in 2020.



3.5 AIR QUALITY

3.5.1 History, Custom, and Culture

Clean air in the County is important to citizens and visitors. Wildfires burning on federal lands can create air quality issues in the summer and fall. Dust from roads and rangelands can negatively impact air quality, mostly during drought conditions. Energy production can also have a negative impact on air quality. Clean air is key to people living in this County and to those who visit and wish to live here.

3.5.2 Resource Assessment and Legal Framework

Air quality is important to the health, safety, and welfare of Lincoln 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). (O. EPA, 2014)

In Wyoming, local enforcement of many air pollutant regulations is delegated to the WDEQ (R. 08 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, 2018c). WDEQ has also established limits on the quantity, rate, and concentration of emissions of various air pollutants from various sources including, but not limited to:

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

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

- Wind-carried dust (especially during periods of drought)
- Wildfire emissions from other western states
- Emissions from the open burning of vegetation and trash
- Emissions from farming and agricultural operations
- Emissions from industrial operations
- Dust from unpaved roadway use
- Energy production



- Wasatch Front

The LaBarge area in Lincoln County is close to nonattainment status due to ozone. It is monitored carefully, and funding and MOUs with BLM have been done for suppression of dust on roads to help keep the area out of nonattainment.

3.5.3 Resource Management Objective:

- A. Clean air practices are supported, and air pollution is limited within the County, without expansion of regulations that would act as an impediment to economic development.
- B. Air quality is maintained at a high level to ensure the health and well-being of the County's residents and for future economic development as it reduces the possibility of restrictions being placed on that development due to air quality standard being exceeded.

3.5.4 Priorities:

1. Support establishment of air quality baselines for the County in coordination with the County.
2. All air quality related plans and decisions must be based on deviation from a baseline standard established for the County.
3. Encourage protection of the air from degradation from non-area sources.
4. All field development plans should provide for air quality monitoring and that data development must be coordinated with and the findings provided to the County.
5. Coordinate all air quality studies undertaken by or on behalf of a public land management agency or the Wyoming DEQ-AQD (Air Quality Division) with the County.
6. The County does not support the designation of any Class 1 Air Sheds. If congressionally mandated, the air shed will not exceed beyond the boundary of the land designation.
7. Work with the federal, state, and local agencies to educate all stakeholders involved to develop BMP concepts and plans to protect the air quality in the County.
8. Support the development and implementation of educational programs to provide BMPs on burning to improve air quality in the County.
9. Encourage federal agencies to implement BMPs and take aggressive efforts for forest management to decrease the number of wildfires.
10. Acknowledge that wood burning is a "necessity of life" for the health, safety, and welfare of the County's citizens and should be maintained as an acceptable activity.
11. Federal agencies should coordinate with the County to ensure that Lincoln County does not reach nonattainment of air quality standards.

3.6 CLIMATE CHANGE

3.6.1 History, Custom, and Culture

Lincoln County relies heavily upon agriculture and livestock to support the local economy. Climate change, including increased temperatures, reduced precipitation, and changes in airflow have the potential to drastically affect agriculture and the economy of Lincoln County. Increased occurrence of severe fires over the past decade have led to reduced air quality and various health



issues across Wyoming. Lincoln County is committed to preserving the health of its citizens and its economy and, as such, is calling for cooperation and open communication with federal agencies when assessing the effects of proposed federal actions within Lincoln County.

3.6.2 Resource Assessment and Legal Framework

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. (Audiovisual Library of International Law, 2020)

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, temperature, and temperatures.

Although Executive Order 13783 withdrew guidance on the consideration of the effects of climate change and greenhouse gas (GHG) emissions, in favor of promoting energy independence and economic growth, federal agencies must still assess the effects of major federal actions on the environment. 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 GHG emissions; (2) the effect of a changing climate over the life of 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)

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)

The Council on Environmental Quality (CEQ) recognizes that land management practices such as prescribed burning, timber stand improvements, fuel load reductions, scheduled harvesting, and grazing can result in both carbon emissions and carbon sequestration.

3.6.3 Resource Management Objective:

- A. Lincoln County is coordinated and consulted with when discussing the climate effects of proposed actions within the County and its impacts on the economy, environment, and health of the citizens of the County by the federal agencies.



3.6.4 Priorities:

1. Encourage inclusion of additional scientific data that meets the credible data criteria, even if not produced by a federal agency.
2. International scientific controversies are addressed with credible and quality data.
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. Regulation of greenhouse gases through climate change analysis is not supported.
6. When collecting or reviewing climate information, data should be viewed on a County level rather than on a National level.
7. When evaluating the economic effects of climate science data, view and evaluate the effects/data on a County level rather than on a National level.



CHAPTER 4: WATER RESOURCES

4.1 OVERVIEW

Lincoln 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. Healthy watersheds contain forests that are in good health, have minimal weed infestations, functioning riparian areas, rangelands with a variety of vegetation, and valleys that support farming and urban developments. Healthy watersheds provide recreation opportunities for residents and visitors, serve cultural needs, and provide habitat for native plants, wildlife, and fisheries.

The health of Lincoln County's watersheds directly affects the current and future availability of quality water resources and water-dependent natural resources, as well as the ability of watersheds to adapt to climate variability, such as periods of drought or high rainfall and rain-on-snow events. A successful management strategy for Lincoln 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.

Lincoln Conservation District has worked in conjunction with the Wyoming Water Development Commission (WWDC) to complete the [Bear River Watershed Study Level I](#)¹⁴ and [the Black Fork River Watershed Study, Level I: Phase I Hams Fork](#)¹⁵. The goal of these studies were to combine watershed data and develop comprehensive watershed management and rehabilitation plans. (Anderson Consulting Engineers, Inc., 2015)

Lincoln County spans three river basins; the Snake/Salt River Basin (SSRB) to the north, the Greater Green River Basin (GGRB) covering the eastern half of the County, and the Bear River Basin (BRB) to the southwest. (Wyoming State Geologic Survey, 2020)

According to the WWDC there two municipal watersheds that communities in Lincoln County use surface water from for public use. The Upper Hams Fork Watershed in the municipal watershed for the Kemmerer-Diamondville area, and the Birch Creek- Green River Basin Watershed is the Municipal Watershed for LaBarge. The primary municipal water source for Afton, Alpine, Cokeville, and Thayne is deep water wells. In 2018 Afton pulled water from two wells supplemented by three springs, Alpine pulled water from three deep water wells, Cokeville pulled public water from two deep water wells, and Thayne pulled water from one well and one spring. (WWDC, 2018)

Refer below for maps of the watersheds in Lincoln County and basins in the state (Figure 15 and Figure 16).



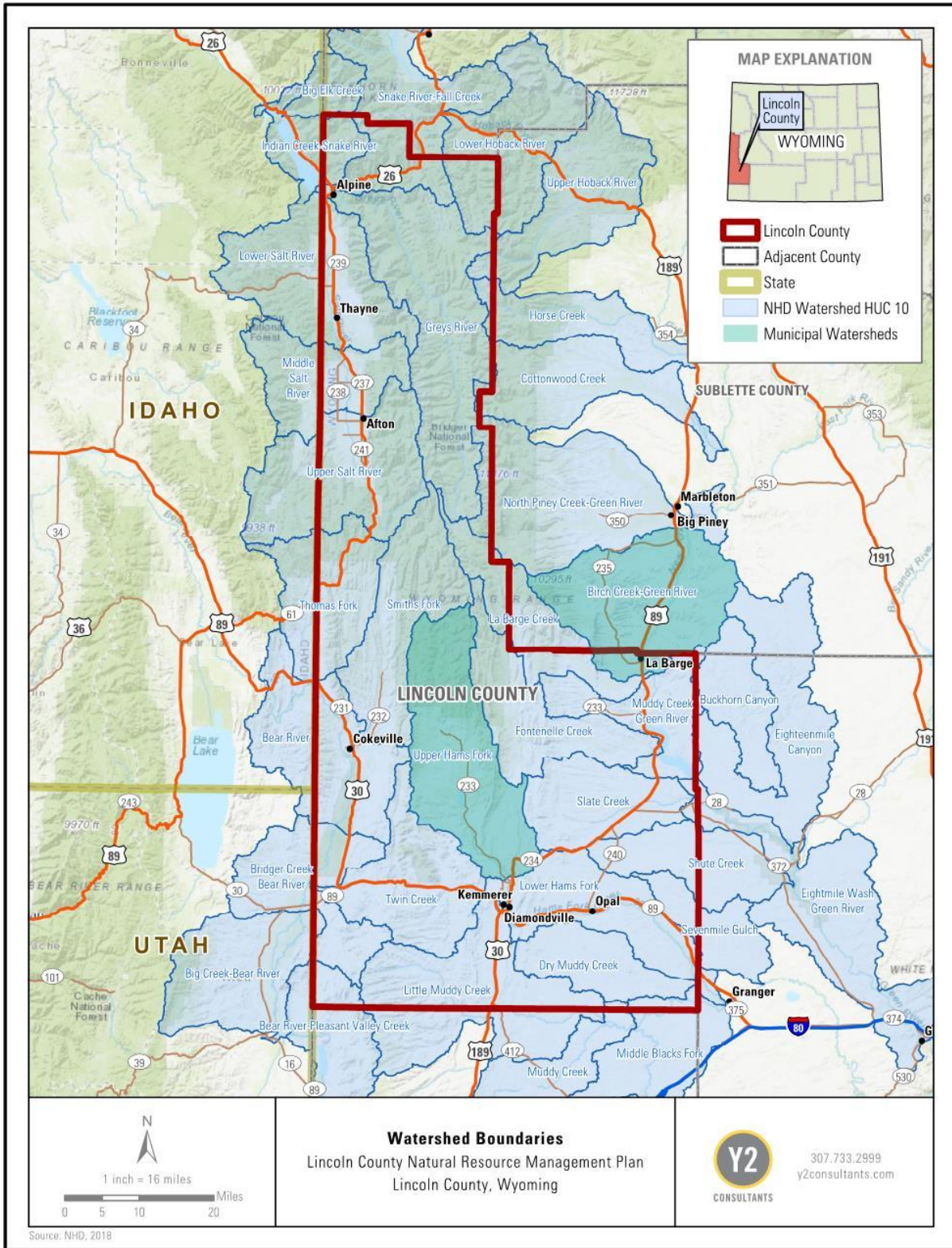


Figure 15. Watershed boundaries within Lincoln County. (WWDC, 2018)



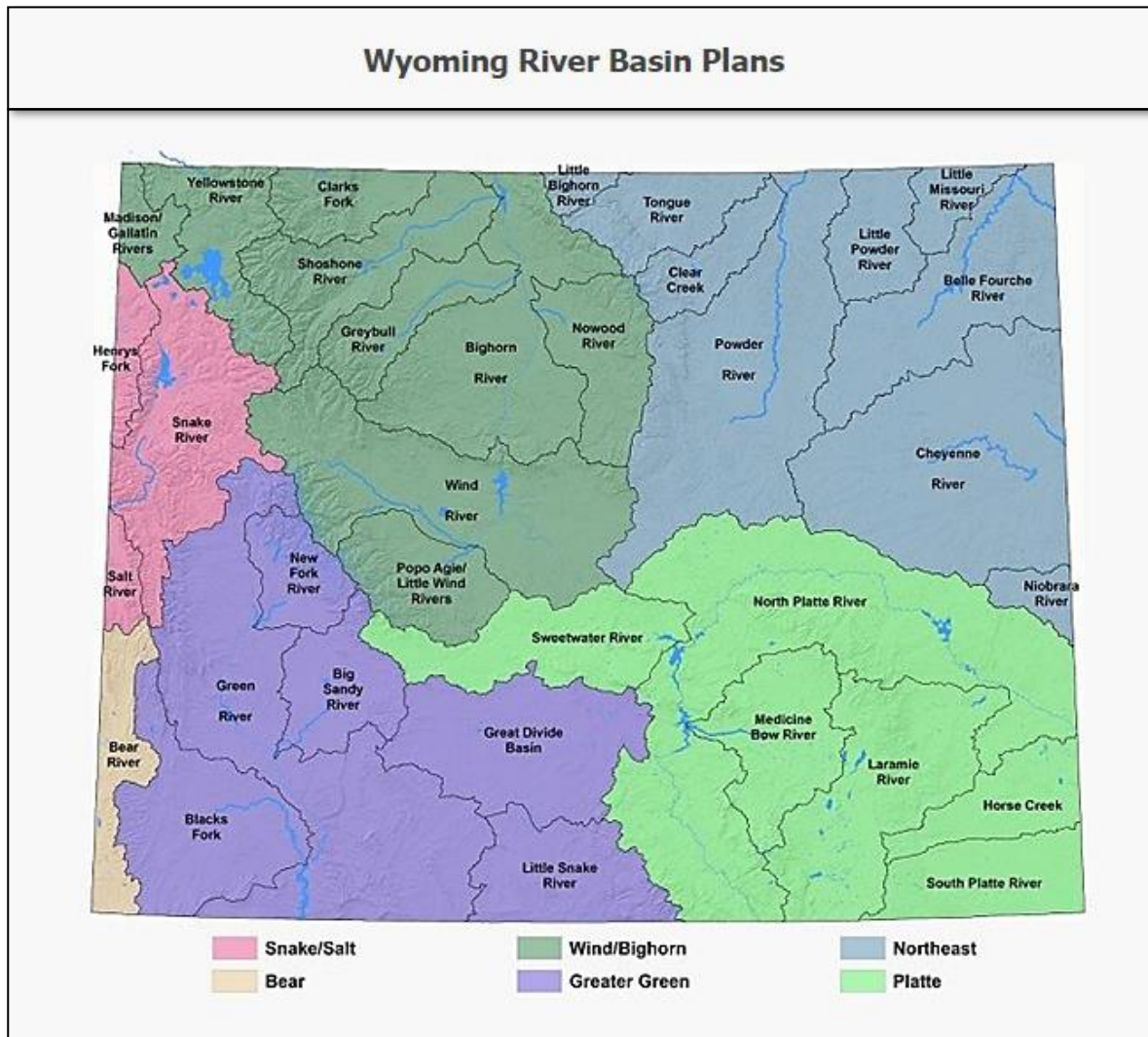


Figure 16. Wyoming State Geologic Survey (WSGS) map of the Wyoming River Basin Plan divisions. (Wyoming State Geologic Survey, 2020)

4.2 IRRIGATION AND RELATED INFRASTRUCTURE

4.2.1 History, Custom, and Culture

Only 15% of the state of Wyoming has a positive water balance, where the average annual precipitation exceeds the annual evapotranspiration. This climatic characteristic of the state has driven the need for and development of irrigation infrastructure over the years. Irrigation has been and will continue to be an important resource for the development of agriculture and the County. (States West Water Resources Corporation & WWDC, 2001; WWDC, 2006)

4.2.2 Resource Assessment and Legal Framework

Three of the irrigation zones in the Snake/Salt River Basin overlap with Lincoln County, the Lower Salt, Upper Salt, and Greys Zones. Most of the irrigation in this area is surface water used for pasture and hay land, including alfalfa, grain, grass, and mountain meadow hay. In 2012 irrigation depletions totaled 27,860 acre-feet for the Upper Salt Zone, 26,434 acre-feet for the Lower Salt



Zone, and 185 acre-feet for the Greys Zone. When totaled the zones in Lincoln County make up 64% of the irrigation depletions in the SSRB. (Wyoming Water Development Office, 2014)

Across the Greater Green River Basin irrigation for crop production and pastureland is a large component of water use. However, within Lincoln County only three permitted irrigation wells were recorded in the 2010 basin plan; one located outside of La Barge, one north of the Fontenelle Reservoir, and one north of Kemmerer. The majority of irrigation water is pulled from surface sources rather than ground water. Many surface irrigation diversions were recorded across the GGRB in contrast to the low number of irrigation wells. Little irrigation use occurs from the Fontenelle Reservoir within Lincoln County. (WWC Engineering et al., 2010)

In the Bear River Basin, irrigation is the largest form of surface water consumption. Ground water supplements irrigation in the basin but is a minor component. Only seven permitted irrigation wells are present within the Lincoln County portion of the Bear River Basin. The predominant form of irrigation in the BRB is flood irrigation and most of the irrigated land is pasture and hay land. In 2011 irrigation surface water consumption totaled 89,309 acre-feet or 91%, of the 97,460 acre-feet of surface water used. While significantly less ground water is used annually for irrigation, in 2011 it made up 60 % of the total use. (Wyoming Water Development Office, 2012)

According to the 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. An example of this is how the dam at Boysen Reservoir regulates the Bighorn River flow for irrigation supply. The result is peak and low flows that are more moderated; this decreased flow fluctuation can influence the ecology of downstream fisheries and habitat. (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 (Wyoming Water Development Office, 2019).

4.2.3 Resource Management Objective:

- A. Irrigation and water systems are managed to ensure future access to irrigation water and to promote the health and longevity of the County’s water systems and supply.
- B. Current and future Irrigation rights-of-way are protected and considered a property right.

4.2.4 Priorities:

- 1. Support the development, improvement, and continued use of irrigation and related infrastructure.
- 2. Recognize and protect the existence of all legal canals, laterals, or ditch rights-of-way.



3. All future federal and state mandates governing water or water systems should be developed in cooperation with the County and be funded by those agencies.
4. Work with appropriate partners and agencies to promote the efficient delivery and use of irrigation water.
5. Support the development of downstream and off stream storage facilities that would allow excess spring runoff to be captured and used later in the growing season.
6. Support the continued use and protection of historical irrigation ditch rights-of-way through federal lands whether those rights are permanent or require periodic renewal.
7. 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.
8. The County does not support the imposition of instream flow regulations as a condition precedent for renewal of historical irrigation ditch rights-of-way.
9. The County should be informed and coordinated with on all in-stream flow proposals. All proposals must go through the Wyoming State Engineer's Office.

4.3 DAMS AND RESERVOIRS

4.3.1 History, Custom, and Culture

Dams and reservoirs are located across Lincoln County and are used for various functions, including storage for irrigation, recreation, industrial, municipal, flood control, and fish propagation. 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 or larger, or the enlargement of currently existing reservoirs (minimum of 1,000 acre-feet increased capacity). Funding is also available to Level I and Level II feasibility studies identifying possible water storage projects. (WWDC, n.d.)

Hydroelectricity has been a long-time source of power for Lincoln County. In 1912, a power plant was located on Pine Creek to supply power to the town of Cokeville but was abandoned around 1963 when the Cokeville town council granted the franchise to furnish power to the town to the Utah Power and Light Company (Lloyd, 1970). Reservoirs that supply hydroelectricity in the county now include Fontenelle Reservoir, Lake Viva Naughton, Cottonwood Reservoir, Swift Creek Reservoir, and Strawberry Canyon Reservoir. Palisades Reservoir also supplies a large amount of electricity, but the power plant is in Idaho and all the power generated goes to areas outside of Wyoming.

4.3.2 Resource Assessment and Legal Framework

The Snake/Salt River Basin, Greater Green River Basin, and Bear River Basin Plans evaluate all reservoirs considered 'major reservoirs' within the surface water assessment. Major reservoirs are defined as reservoirs with equal to or greater storage capacity than 500-acre feet. Below is a description of the major reservoirs within Lincoln County. (WWDC, n.d.)



4.3.2.1 Snake/Salt River Basin

All major reservoirs within the Snake/Salt River Basin are managed by the United States Bureau of Reclamation (USBR) for irrigation and hydropower in Idaho as part of the Minidoka project. Palisades Reservoir is the only major reservoir in Lincoln County that is part of the Minidoka project. (Wyoming Water Development Office, 2014)

4.3.2.1.1 Palisades Reservoir

The Palisades Project includes the Palisades dam, reservoir, and powerplant (located in Idaho) on a 5,200-square-mile drainage basin. The creation of Palisades provided a dependable water supply to agriculture and other uses particularly in southeast Idaho. Wyoming holds only a small piece of the reservoir but holds storage space in the reservoir that can be exchanged for upstream water to enhance Wyoming streamflow's or increase Jackson Lake storage. The land around Palisades is managed by the Caribou-Targhee National Forest but the reservoir and dam are managed by the Bureau of Reclamation. (Bureau of Reclamation, n.d.)



4.3.2.1.2 Cottonwood Lake Dam

Cottonwood Lake is a key feature in the Cottonwood Creek drainage. The lake was originally created by a landslide from the north side of the canyon and in 1901 the landslide lake was built up by construction of a dam built on the toe of the landslide. A Level I Watershed Study was completed on Cottonwood Lake to assess raising the dam on the lake.

4.3.2.1.3 Swift Creek and Strawberry Canyon Hydroelectric Reservoirs

There are two reservoirs Swift Creek and Strawberry Canyon that have small hydroelectric plants that generate power to the main grid. Swift Creek Reservoir is located just east of the town of Afton and has three irrigation systems that run out of the reservoir. Strawberry Canyon Reservoir is located east of Bedford.

4.3.2.2 Greater Green River Basin

The following reservoirs are under the influence of Upper Colorado River Drainage jurisdiction. The State of Wyoming is in the process of developing a 'Demand Management Plan' to assist in meeting downstream water use needs. As of the writing of this plan water rights prior to 1922 are exempt from curtailment.

4.3.2.2.1 Fontenelle Reservoir

The Fontenelle Reservoir is managed for recreation, hydroelectric power generation, and wildlife use. Irrigation storage is a minor component due to the reservoirs location in relation to irrigated lands. The State of Wyoming holds 120,000 acre-feet of storage in the Fontenelle Reservoir and



holds a second pool of 125,000 acre-feet that is permitted to allocate annually to subcontracts. A third pool is held by the Bureau of Reclamation and holds approximately 89,000 acre-feet of water that is necessary to protect the reservoir embankment (WWC Engineering et al., 2010). The total reservoir capacity is 345,360 acre-feet. Lincoln County has been encouraged to look at the development of water from the two upper pools and should encourage the State to proactively prepare to riprap the structure to acquire the use of the third pool.



In 2017, a Level II Project Study was completed for the Fontenelle Dam to evaluate the technical and economic feasibility of armoring the dam face, making available the water currently stores below the active pool elevation. The newly available storage would likely be designated as drought mitigation supply or drought avoidance supply. Several alternatives were analyzed to armor the dam including riprap, soil cement, submat mats, and Contech wave attack blocks. NEPA would need to be conducted in order to progress this project forward and as of the writing of this document had not yet been completed. (EA Team, 2018)



4.3.2.2.2 Lake Viva Naughton

The Lake Viva Naughton is a reservoir on the Hams Fork approximately 15 miles northwest of Kemmerer. This reservoir is used for hydroelectric power generation, recreation, and irrigation storage. The dam at Viva Naughton was originally built from 1956 – 1960 to supply power to the thermal plant in Kemmerer. In the mid-1980s two hydroelectric units were installed, the larger unit has the capacity to supply a maximum of 500 kilowatts while the smaller unit can supply a maximum of 170 kilowatts. In most



years, only the smaller unit runs year-round to maintain flows and runs anywhere from 42-150 kilowatts depending on the time of year and flows. The larger unit typically only runs in the spring when runoff allows for larger flows. Power generated by the plant goes out to the main grid and is distributed throughout the country. There has been no discussion on expanding the hydroelectric component of Lake Viva Naughton as it would be too costly to upgrade and would not generate enough to be financially feasible. (R. Holt, personal communication, 2020)

The original storage permit for Lake Viva Naughton has a priority date of August 1, 1957 and allowed PacifiCorp to store 42,393 acre-feet of water for industrial use. An enlargement permit with a priority date of August 20, 1971 allowed for an additional 27,252 acre-feet to be stored in Viva Naughton for industrial and irrigation uses. Currently, 3,072 acre-feet of this permit is being utilized for storage while the 24,180 acre-feet are still available for storage. A second enlargement permit with a priority date of August 20, 1973 allowed Viva Naughton to store an additional 12,250 acre-feet but this permit is not currently being utilized. (States West Water Resources Corporation, 2013) Due to water shortages in the Hams Fork Basin permitting for a potential enlargement to 81,895 acre-feet has been acquired by PacifiCorp for which construction has not begun (ECI, 2004; RJH Consultants Inc., n.d.). The Hams Fork Water Users Group share water agreements with PacifiCorp through the Naughton Power Plant regarding water storage and use.

4.3.2.2.3 Kemmerer Reservoir

Kemmerer Reservoir is located just south of Lake Viva Naughton and north of the City of Kemmerer. The reservoir is a flow through reservoir and its main uses are for recreation and fishing. Refinement or improved functionality to the spillway structure on the reservoir is being considered so that the reservoir can operate as more than an evaporation sump as water currently must pass through the spillway at all times in order to maintain river flow.

4.3.2.3 Bear River Basin

There are no major reservoirs defined by the WWDC within Lincoln County in the Bear River Basin.



4.3.3 Resource Management Objectives:

- A. Dams and reservoirs are well maintained, accessible, and functional.
- B. Quality of all dams and reservoirs is preserved and water resources are developed responsibly in coordination with the County.
- C. Hydroelectric power plants within the County are maintained and increased as appropriate.

4.3.4 Priorities:

1. Federal agencies should analyze impacts on facilities such as dams, reservoirs, delivery systems, monitoring facilities, etc., located on or downstream from land covered by any water related proposal.
2. All potential reservoir sites and delivery system corridors should be protected from any federal action that would inhibit future use.
3. Any proposed sale, lease, or other exchange of water must consider the County's interest and concerns.
4. Oppose any proposal that fails to benefit the County or compensate for losses to the County and/or its residents.
5. Lincoln County should 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.
6. Support the construction of water storage or expansion of reservoirs as appropriate.
7. Maintain the primary use of all reservoirs within the County for the purpose for which they were originally intended so long as the primary use is consistent with Wyoming's preferred uses as created by statute.
8. County supports all efforts to create new hydroelectric power plants.
9. County does not support any decrease in size or use of reservoirs.
10. Encourage water development in the County and possible expansion of reservoirs when appropriate.
11. Lincoln County water should be curtailed to the lowest extent possible and all other compact obligations should be used with water not currently being used for beneficial use.



4.4 WATER RIGHTS

4.4.1 History, Custom, and Culture

Wyoming water laws and statutes are governed by Title 41 (Tyrrell & States West Water Resources Corporation, n.d.). By Wyoming law, all surface and groundwater belong to the State. The Wyoming State Engineers Office is responsible for management of these waters and protecting existing water rights and resources.

4.4.2 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 (W.S. § 41-3-101). Wyoming prioritizes water uses as “preferred uses” and all other uses (W.S. § 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, the 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. (W.S. § 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 temporary change in water use of a currently valid water right for up to two years with approval from the Wyoming State Engineers Office, so water right users may transfer their water rights for other uses on a temporary basis (W.S. § 41-3-110.).

Although all surface and groundwater in Wyoming belongs 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).

Territorial (pre-1890) water rights exist in Lincoln County and should be considered and researched when dealing with water rights within the county.

4.4.3 Resource Management Objective:

- A. State water law and policy is supported for all waters on public and private lands. Preferred uses under Wyoming statute are maintained and protected.



- B. All waters of the state are subject to appropriation for beneficial use and essential to the future prosperity of the state and the quality of life within the State.
- C. There are no new trans-basin diversions within Lincoln County

4.4.4 Priorities:

1. All water rights desired by the federal government shall be obtained through the state water appropriations system.
2. Oppose any movement toward nationalization or federal control of Wyoming's water resources or rights.
3. Privately held water rights shall be protected from federal and/or state encroachment and/or coerced acquisition.
4. Support Wyoming State water laws as the legal basis for all water use within the County.
5. Require the beneficial use is the basis for the appropriation of water in the State of Wyoming.
6. 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.
7. Support recognition of water rights as a private property right that may be owned separately from federal lands.
8. Support the state of Wyoming's prior appropriation principle for water right allocation.
9. Water rights should not be acquired through exactions, including claims of beneficial use by a federal agency.
10. The reduction of water districts and senior water right holders' allocations below historic levels is not supported.
11. Support protection of senior water right holders' allocations.
12. Support the prohibition of water right exactions for right-of-way and ditch permits. It is the position of the County that in stream flow requirements are exactions.
13. Lincoln County opposes over-reaching federal regulations on Wyoming Waters; we support Wyoming control of Wyoming waters.
14. Territorial water rights are protected and given the same rights as those of state water rights.
15. County should be notified of all federal and state agencies applying for in-stream flow permits.

4.5 WATER QUALITY

4.5.1 History, Custom, and Culture

The EPA and WDEQ establish, administer, and monitor standards, policies, rules, and regulations for ground and surface water quality. Lincoln County is in the SW WDEQ District.



In the past there have been a few water quality concerns within the County. In 1998, a large outbreak of *Escherichia coli* (*E. coli*) occurred in Alpine. Approximately 157 people were found to be ill and the illness was associated with drinking municipal water. The Alpine municipal water system was supplied by an underground spring which was found to be contaminated by wildlife use (Olsen et al., 2002). This among other reasons has led to many of the towns in Lincoln County obtaining their municipal water from wells rather than spring sources.

4.5.2 Resource Assessment and Legal Framework

4.5.2.1 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 the Waters of the United States and what qualifies as a “point source.” From the earliest rulemaking efforts following 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). The EPA recently finalized new CWA regulations that are 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 new regulations were implemented in fall 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 CWA and the Wyoming Environmental Quality Act (WEQA). These standards include water quality criteria, antidegradation provisions, and designated surface water uses (WDEQ, 2018b). 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.-e). 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 (WDEQ, n.d.-b, 2013).



4.5.2.2 Groundwater Quality

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.

4.5.2.2.1 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 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 ruled 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.

4.5.2.3 Impaired Waters

4.5.2.3.1 Green River Basin

There are several segments located within Lincoln County that fall within the Green River Basin that are on the 303(d) list. Blacks Fork, a 25.4-mile segment from the confluence with the Smiths Fork upstream to Millburne was listed in 2000 as not supporting its recreational use due to the pathogen-indicator *Escherichia coli* (*E. coli*). The 73-mile segment of Willow Creek which is the entire watershed upstream of the confluence with the Smiths Fork was listed in 1998 for threatening the uses of cold-water fish and aquatic life other than fish due to habitat alterations from grazing. A 34.5-mile segment of the Smiths Fork from the confluence with Cottonwood Creek upstream to the confluence with East and West Forks Smith Fork was listed in 2002 for not supporting recreation due to *E. coli*. A 4-mile segment of the Smiths Fork from the confluence with Blacks Fork upstream to the confluence with Cottonwood Creek was listed in 2000 for not supporting cold water fish and aquatic life other than fish due to habitat alternations; this segment was also listed in 2008 for not supporting recreation due to *E. coli*. A 45-mile segment of the Blacks Fork from the confluence with the Hams Fork upstream to the confluence with the Smiths Fork was listed in 2000 for not supporting recreation due to *E. coli*. A 7.6-mile segment of the Hams Fork from below the Kemmerer-Diamondville wastewater treatment facility to 7.6 miles downstream was listed in 1996 for not supporting cold water fish and aquatic life other than fish due to pH caused from the municipal wastewater treatment facility. All of these segments are listed on the 303(d) list and have not had Total Maximum Daily Load (TMDL) completed on them as of 2020. (WDEQ, 2018a)



4.5.2.3.2 Snake River Basin

There is one segment on the 2016-2018 WDEQ 303(d) list that falls within the Snake River Basin in Lincoln County. Crow Creek from the Wyoming/Idaho border 15.6-miles downstream to the confluence with the Salt River was listed in 2014 due to not supporting cold water fish and aquatic life other than fish due to selenium levels likely from phosphate mining.

Two segments were moved from the 303(d) list to Category 4A in the 2016-2018 WEDEQ Report as TMDLs were completed in 2018 for the Salt River segment and in 2016 for the Stump Creek segment (WDEQ, 2018a). These segments included a 7.5-mile segment of the lower section of the Salt River located 3.4 miles northwest of Etna and Stump Creek from the confluence with the Salt River to the Idaho Border. Figure 17 shows the location of these segments in the Salt River Watershed. Both segments do not support their designated recreation use because of high counts of *E. coli*. Potential sources of bacteria to these two segments include humans, livestock, pets, and wildlife. An implementation plan was developed in 2015 for these two segments. (Tetra Tech, 2015)

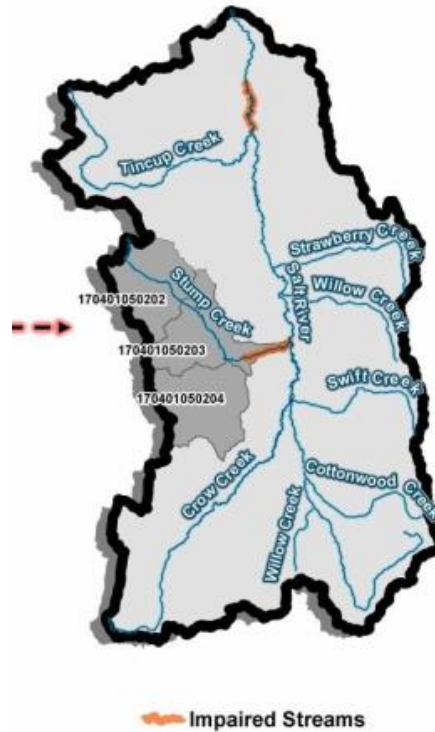


Figure 17. Impaired streams in the Salt River Watershed. Image from Salt River Watershed, Wyoming *E. coli* Implementation Plan. (Tetra Tech, 2015)

4.5.2.3 Bear River Basin

There is one segment on the 2020 WDEQ 303(d) list that falls within the Bear River Basin in Lincoln County. Bridger Creek, the entire watershed upstream of the Utah border (191.4 miles) was listed in 2004 due to not supporting aquatic and life other than fish due to sedimentation and siltation from grazing in riparian or shoreline zones. (WDEQ, 2020)

4.5.2.4 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 construction of subdivisions. The Conservation Districts within Lincoln County are 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 education 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)

4.5.3 Resource Management Objectives:

- A. Watersheds are managed with a balance of protection of the resource and consideration of economic costs of regulation.
- B. Clean water is managed using credible data.

4.5.4 Priorities:

1. Support an adequate supply of clean water which is essential to the health of County residents and the continued growth of its economy.
2. Federal agencies should analyze the effects of decisions on water quality, yields, and timing of those yields.
3. Oppose any action, lack of action, or permitted use that results in a significant or long-term decrease in water quality or quantity.
4. The County reserves the right to refer subdivision water quality reviews to the DEQ in special circumstances.
5. Support projects that improve water quality and increase the amount of dependability of the water supply.
6. Managers of public lands should protect watersheds with respect to water quality with the assurance that water yield will not be decreased but improved.
7. Support livestock grazing and other managed uses of watersheds.
8. Support all reasonable water conservation efforts. Water conserved should be allocated to those persons or entities whose efforts created the savings.
9. 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.
10. Require baseline water quality sampling and cataloguing of all collected data for wells (including injection wells) drilled on federal lands.
11. Consult Lincoln County 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.
12. 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.
13. Support implementation of land management actions and practices that contribute to or maintain healthy drainages and watersheds.
14. Encourage good management and maintenance of watersheds to retain and slowly release water for desired plant, animal, and human uses, and to reduce the risk of flash floods.



15. Encourage coordination with the USFS, BLM, BOR, EPA, DEQ, and other relevant public agencies to ensure that management of watersheds, including municipal watersheds, meets the multiple needs of residents and promotes healthy forests and rangelands.
16. Support decisions and actions that comply with Wyoming water laws and statutes.
17. Support reclamation activities on mined lands that improve soil productivity and water quality and the function of stream channels, floodplains, and wetlands for better productivity.
18. Support 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.
19. Coordinate all water quality studies undertaken by or on behalf of a public land management agency with the County.
20. Implement land use improvements and practices which promote healthy drainages and watersheds.
21. Lincoln County supports the Wyoming Data Trespass Act and any data collected through trespass should not be considered.
22. Federal agencies should create watershed BMPs in coordination with the County and the conservation districts to mitigate water pollution caused by heavy erosion and sedimentation from public lands under their management, and to work with the County and local conservation districts in accomplishing those BMPs.
23. Water quality monitoring should follow the protocol developed by the WDEQ and WACD and all field development plans should incorporate water quality monitoring.

4.6 FLOOD PLAINS

4.6.1 History, Custom, and Culture

Flood and floodplain management are important to the safety, economy, and ecological health of Lincoln County. Flooding is a significant natural hazard within the state of Wyoming and can cause significant damage. From 1905 to present there have been approximately \$126.7 million in damages across the state from flood damage (University of Wyoming, n.d.). Between 1960 and 2015 Lincoln County experienced 9 flood events which incurred \$175,000 in crop damage and \$1,833,739 in property damage. Lincoln County is categorized as 'Medium Risk' for flooding in the Wyoming State Mitigation Plan (Wyoming Office of Homeland Security, n.d.).

4.6.2 Resource Assessment and Legal Framework

Flooding does occur within Lincoln County particularly in the spring when runoff occurs from melting snow. Lincoln County has also had several landslides occur on public land that have caused flooding and that have caused significant safety and financial impacts to the county. Landslides occur in the Smiths Fork area and most recently the Porcupine Slide which occurred up the Greys River in February 2018 (Figure 18). Precipitation induced landslides also occur frequently in the Snake River Canyon and often cause road closures that significantly impact citizens commuting from Lincoln County to Teton County for work.





Figure 18. Porcupine Slide up Greys River in February 2018 and ponding at the slide site. Photo from article in Star Valley Weather. (Dance, 2018)

4.6.2.1 Federal Emergency Management Agency's (FEMA)

Multiple municipalities within Lincoln County participate in the National Flood Insurance Program (NFIP). At the time this document was written these include Afton, Cokeville, Diamondville, Kemmerer, Opal, Star Valley Ranch, La Barge, and Thayne (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 develops plans to reduce risk (FEMA, n.d.-d). There are currently no active Risk MAP projects within Lincoln County (FEMA, n.d.-c). For more information on flood hazard mapping within Lincoln County refer to FEMA's National Flood Hazard Layer (NFHL) viewer (FEMA, n.d.-b).

The Executive Order 11988-Floodplain management, signed in 1977, was implemented to avoid, to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative. Further information on this Executive Order can be found [here](#)¹⁶.



4.6.3 Resource Management Objective:

- A. Storm water is managed proactively to ensure the health, safety, and welfare of all residents within the County.
- B. Emergency flood response is coordinated through the Office of Emergency Management in Lincoln County.

4.6.4 Priorities:

1. Support projects and encourage policies which manage storm water, run-off, and flooding on public lands.
2. Federal managers should monitor and coordinate with county officials with any landslides that may cause future flooding.
3. The County should be consulted where flooding and storm water run-off could impact the County.
4. Project to reduce flooding occurrences within the County should be considered and coordinated with the County.

4.7 RIVERS AND STREAMS

4.7.1 History, Custom, and Culture

Rivers and streams are important surface water resources for Lincoln 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 forage irrigation and fisheries in Lincoln County.

4.7.1.1 Interstate Water Compacts

An interstate water compact is an agreement between two or more states that is approved by those states' legislators and by the U.S. Congress. An interstate compact that receives the approval of Congress counts as federal law. *Kansas v. Nebraska*, 574 U.S. 445, 455 (2015).

There are several interstate waters compacts within Lincoln County: the Green River falls within the 1922 Colorado River Compact; the Bear River falls within the 1978 Amended Bear River Compact; and the Salt River, Greys River, and Snake River fall within the 1949 Snake River Compact.

4.7.2 Resource Assessment and Legal Framework

Wyoming has approximately 108,767 miles of rivers. There are five major perennial rivers present within the County. These streams include the Salt, Snake, Green, Greys, and Bear. (National Wild and Scenic Rivers System, n.d.)

4.7.2.1 Salt River

The Salt River flows from its headwaters at Wagner Lake, southeast of Afton, northward along the western border of the County. The river continues north, past Afton and Thayne, to Alpine where it merges with the Palisades Reservoir. The Salt River is an important surface water



resource for several communities in northern Lincoln County. Major tributaries to the Salt River are Cottonwood, Swift Creek, and Pine Creek which both serve as culinary water.

4.7.2.2 Snake River

The Snake River is located in the northern portion of the County. The Snake enters the northeast corner of the County and crosses to the western border where it enters the Palisades Reservoir. This segment of the Snake River is a popular recreation and fishing location.

4.7.2.3 Green River

A short segment of the Green river is located on the eastern border of the County. The river enters the County at LaBarge and flows south until it connects with the Fontenelle Reservoir.

4.7.2.4 Bear River

The Bear River enters the County from the west parallel to Highway 89. The river flows north through the Cokeville Meadows National Wildlife Refuge and past Cokeville. It then veers back toward the west and exits the County into Idaho just south of Highway 89. The Bear River is an important resource for recreation and wildlife in the County.

4.7.2.5 Smiths Fork

The Smiths Fork is a tributary of the Bear River draining the west slope of the Wyoming Range. Cokeville is the main population area on the Smiths Fork.

4.7.2.6 Hams Fork

The Hams Fork headwaters originate in the Wyoming range at less than 10,000 feet. From the headwaters, the first 16 miles of the river lie on USFS lands, then flow through private lands before eventually flowing into Lake Viva Naughton and Kemmerer Reservoirs.

4.7.2.7 Greys River

The Greys River originates in the center of the County south of Wyoming Peak. The river flows north up the center of the County following Forest Road 10138 before joining with the Snake River at the confluence with the Palisades Reservoir.



4.7.2.8 Interstate Water Compacts

4.7.2.8.1 Colorado River Compact

The Colorado River Compact of 1922 is an agreement among the states whose boundaries lie within the Colorado River Basin. The purpose of the agreement was to provide for the equitable division and apportionment of the use of the waters of the Colorado River System; to establish the relative importance of different beneficial uses of water, to promote interstate comity; to remove causes of present and future controversies; and to secure the expeditious agricultural and industrial development of the Colorado River Basin, the storage of its waters, and the



protection of life and property from floods. Under the compact, the water of the Colorado River was divided in half; with half going to the upper basin states of Colorado, Utah, Wyoming, New Mexico, and parts of Arizona, and half to the lower basin states of California, Arizona, and Nevada. (Colorado, 2015)

The Colorado River Compact specifically protects water rights predating the compact, stating, “Present perfected rights to the beneficial use of waters of the Colorado River System are unimpaired by this compact.” Colorado River Compact Article VIII. Thus, any perfected water rights in the Colorado River system that predate November 24, 1922 are not obligated to the Colorado River

Compact and cannot be required to supply any shortage if a Lower Basin makes a call on the river. In Colorado there is approximately 2.5 million-acre feet of annual consumptive use on the Colorado River System. Of the 2.5 million-acre feet of consumptive use, approximately 1.6 million-acre feet are attributable to Pre-Compact rights, leaving approximately 900,000 acre-feet of consumptive use subject to the Colorado River Compact. (Falen Law Office, 2020)

4.7.2.8.2 Bear River Compact

The original Bear River Compact was created in 1958 and was amended in 1980 and is in conjunction with the Bylaws of the Bear River Compact Commission, various court decrees, and the laws of the States of Wyoming, Idaho, and Utah. The compact establishes the framework under which the waters of the Bear River are divided. The framework regulates how the waters of the Bear River are distributed to water users in Wyoming, Idaho, and Utah. (Utah Division of Water Rights, n.d.)



The Bear River Compact has three divisions where water is regulated: upper, central, and lower. Lincoln County lies within the upper and central divisions. The upper division starts in the Uinta Mountains in Utah and flows north and ends at Pixley Dam. The lower Wyoming section of the upper division is located in Lincoln County and is entitled to 9.6% of the flow of the upper division. In the central division 43% of the water is allocated to Wyoming. Once the flow reaches 870 cubic feet per second (cfs) a water emergency exists and 57% of the water is allocated to Idaho and 43% is allocated to Wyoming. Regulation in the central division occurs in the majority of the years. In most years the lower Wyoming section of the upper division section has not been regulated. (K. Payne, personal communication, October 6, 2020)

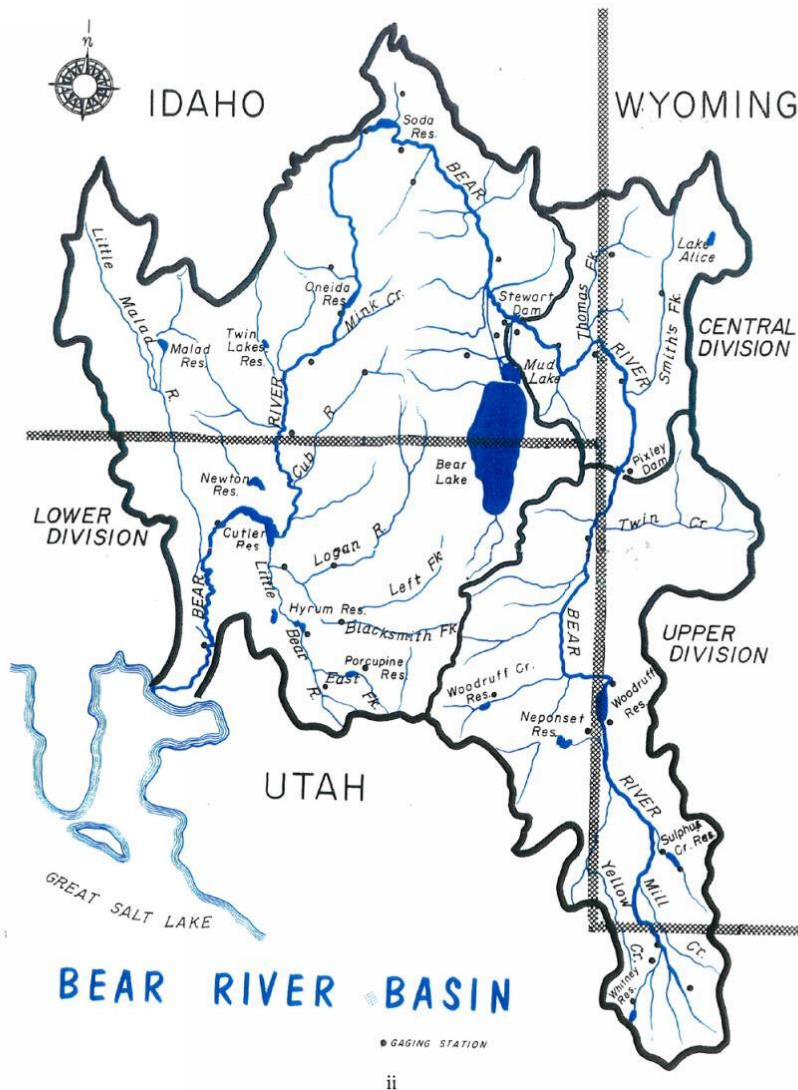


Figure 19. Bear River Basin compact map.



4.7.2.8.3 Snake River Compact

The Snake River Compact between Wyoming and Idaho was enacted into law in 1949 and all permitted uses of water prior to June 30, 1949 were recognized. For future use, the flow of water at the border of Wyoming and Idaho is allocated 4% to Wyoming and 96% to Idaho. After the first 2% is put to beneficial use by Wyoming, replacement storage for one-third of the next 2% must be provided by Wyoming for Idaho use. (Wyoming State Water Plan, n.d.)

4.7.3 Resource Management Objective:

- A. Rivers and streams are managed to maintain water quality and to maintain proper ecologic function needs.
- B. Rivers and streams are managed for municipal use, to control flooding, and for recreational and industrial use including irrigation.
- C. There are no new inter-basin water diversions established within the County.

4.7.4 Priorities:

1. Instream flows identified to maintain or enhance fisheries should be derived from water storage and not impair senior water rights.
2. Oppose any legislation to broaden the current instream flow statutes for the State of Wyoming or federal government.
3. Instream flow designations for a fishery population should only be supported if a valid existing population of sensitive native fish is present, excluding non-native populations.
4. All instream flow designation filings by any entity should be noticed to the County in a timely manner by the State Engineers Office (SEO).
5. Support continued use of rivers and streams by all users.
6. The County should be consulted when impacts to rivers and streams are a potential outcome of a federal action or decision.
7. Support projects and policies which improve or maintain the current ecological function of rivers and streams within the County.
8. Work with other river compact states (Idaho and Utah) and other federal agencies on developing, funding, and implementing a long-term water augmentation program.
9. Respect existing local water supply plans, land use plans, water quality plans, and other related documents adopted by local governments.
10. Local government regulatory tools adopted to mitigate impacts of water projects should be recognized and protected.
11. Promote viable storage or enlargement of in-basin water storage projects.
12. Lincoln County opposes any new interstate water compacts or expansion of existing interstate water compact obligations to other states.
13. Federal agencies should prioritize supplying and protecting water obligated to fulfill existing interstate water compacts.



4.8 WETLANDS AND RIPARIAN AREAS

4.8.1 History, Custom, and Culture

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 and in seep/spring areas. 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, improving 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.-f)

4.8.2 Resource Assessment and Legal Framework

There are multiple anthropogenic processes that can harm riparian and wetland areas. A few examples of activities that can degrade these ecosystems and their ability to function properly are urban and road development along streams and on floodplains, diversion of water, improper timber harvest, and improper grazing practices (WDEQ, n.d.-f; WGFD, n.d.-c). There are also multiple processes that if done correctly can have a positive impact on wetlands. Livestock grazing managed properly and in the right time of year can provide benefits to wetland areas by thinning vegetation to allow new growth and could be used as a weed treatment option (Clary et al., 1989; NRCS et al., 2006).

The Executive Order 11990 – Protection of Wetlands of 1977 was implemented to avoid, to the extent possible, the long- and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative. Further information on the Executive Order can be found [here](#)¹⁷.

The Association of State Wetland Managers maintain resources regarding voluntary wetland restoration work, wetland programs, and law and policy. Federally, some wetlands are considered “Waters of the United States” and are protected under the CWA. The definition of wetlands protected under CWA have been specified further through the Supreme Court rulings in 1985 *Riverside Bayview*, 2003 *SWANCC* and 2008 *Rapanos* (ASWM, n.d.-a, n.d.-b). As of the writing of this Plan, the EPA and Army Corps of Engineers recently published new CWA regulations 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.

Riparian and wetland areas are an integral part of the health and resilience of water resources within Lincoln County. Cokeville Meadows NWR (described in detail in [Section 2.3 – Special Designations](#)) is centered around a 20-mile stretch of the Bear River and its associated wetlands and uplands. Wetlands within the Bear River Valley provide excellent habitat for a variety of



migratory and resident wildlife species. Many of the wetland areas within the county are artificial and have been created through years of irrigation.

4.8.2.1 Monitoring and Management

Federal managing agencies monitor riparian-wetland areas using methods such as 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)

4.8.3 Resource Management Objective:

- A. Wetlands and riparian areas are healthy and function properly.
- B. Wetlands are not expanded within the County without consent.
- C. Wetlands have a universal definition agreed to by local and federal agencies.

4.8.4 Priorities:

1. When the law requires mitigation of impacts from conservation and other projects, the creation of artificial wetlands should be considered only after all other mitigation possibilities have been analyzed. The County views the creation of artificial wetlands as contrary to the intent of conservation.
2. Federal agencies should support the management, maintenance, protection, and restoration of existing naturally occurring wetland areas to proper functioning condition.
3. Support the use of responsible grazing and vegetation management as a tool to maintain wetlands/riparian areas.
4. Manage riparian areas damaged by non-native species (i.e. salt cedar, Russian olives, phragmites) to decrease the impact of these species on the watershed, including water quality and to restore the areas to a proper functioning condition.
5. Support the 2020 definition created by the EPA of a statutory wetland.
6. Lands flooded by irrigation water should not be classified as new wetlands.
7. Federal agencies should use appropriate methods and practices to maintain and restore riparian areas to PFC.
8. Support the use of credible data and scientific standards for wetland designation.



9. The County does not support the enlargement of the wetland areas within the Cokeville Meadows NWR.



CHAPTER 5: WILDLIFE

5.1 WILDLIFE MANAGING AGENCIES

5.1.1 U.S. Fish and Wildlife Service (USFWS)

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 7 National Wildlife Refuges totaling 86,681 acres in Wyoming, as of the 2018 Annual Lands Report (USFWS, 2018a). There are no Wetland Management Districts and no Waterfowl Production Areas in the state (USFWS, 2018a).

5.1.1.1 Wildlife Refuges in Lincoln 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. A number of activities take place on Refuges including hunting, fishing, ice fishing, bird-watching, hiking, bicycling, and water recreation (USFWS, 2018d).

There are 7 National Wildlife Refuges in Wyoming, one of which (Cokeville Meadows NWR) is located in Lincoln County (USFWS, n.d.-a). Detailed information about Cokeville Meadow NWR can be found in [Section 2.3 – Special Designations](#).

5.1.2 Wyoming Game and Fish Department (WGFD)

Wildlife in Wyoming not listed under the ESA are 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 Wyoming Game and Fish Department 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 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 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 governments on the development and implementation of the strategy; and
- Involve broad public participation.

The species 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 List of Species of Greatest Conservation Need 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; 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.-c; WGFD, 2017b)

The WGFD updates the species on the Conservation Priority List in conjunction with the State Wildlife Action Plan. The list of species can be found in Table 3, Table 4, and Table 5. The Wyoming Species of Conservation Priority List can also be found on the WGFD website (WGFD, 2017a).

5.1.3 Bureau of Land Management (BLM)

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;
- At 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 can be found in Table 6 in [Appendix A](#).



5.1.4 U.S. Forest Service (USFS)

The Bridger Teton National Forest provides important habitat to numerous wildlife species. The USFS is tasked with restoring wildlife habitats, conserving threatened and endangered species, maintaining wildlife habitat connectivity, and connecting people with nature through wildlife events and viewing activities.

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.

The BTNF has been planning and was scheduled to begin Forest Plan Revision in 2019, however nationally the USFS is completing ongoing Forest Plan Revision efforts and is unlikely to find funding for any new Forest Plan Revision starts until 2021. Once this planning effort begins one of the tasks will be to evaluate species of conservation concern within the BTNF.

5.2 THREATENED AND ENDANGERED SPECIES

5.2.1 History, Custom, and Culture

5.2.1.1 Endangered Species Act (ESA)

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 ESA of 1973. 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 areas that qualify as “habitat.” *Weyerhaeuser Co. v. US Fish and Wildlife Service*, 139 S. Ct. 361, 368 (2018). Neither the ESA nor USFWS regulations currently define “habitat.” *Id.* However, the USFWS is currently proposing new rules to better define habitat and specifically limiting unoccupied habitat for a species to areas “where the necessary attributes to support the species presently exist.” Federal Register Vol. 85 No. 151 47334 (August 5, 2020). 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.

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 at 55400. There are five major items developed in the proposed rule.

1. The rule as proposed will essentially give local governments expert status when discussing the economic and other nonbiological local impacts of critical habitat designation within their jurisdiction.
2. The rule also will reverse the USFWS’s current policy and will allow federal land to be excluded from critical habitat designation.
3. The rule sets a meaningful standard as to when critical habitat should be excluded.



4. The rule will encourage 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 will allow 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.

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, 2018c)

5.2.1.2 Bald and Golden Eagle Protection Act (BGEPA)

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

5.2.1.3 Migratory Bird Treaty Act (MBTA)

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 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)

5.2.2 Resource Assessment and Legal Framework

5.2.2.1 Candidate, Threatened, and Endangered Species in Lincoln County

Currently listed threatened and endangered species can be found on the USFWS [Environmental Conservation Online System](#)¹⁸ (ECOS) (USFWS, n.d.-b). At the writing of this report there are seven endangered, threatened, candidate, and proposed species identified as species believed to or known to occur within Lincoln County. Those species are:

- Yellow-billed Cuckoo (*Coccyzus americanus*)- Threatened in the western U.S. DPS (distinct population segment)



- Humpback chub (*Gila cypha*)- Endangered wherever found.
- Colorado pikeminnow (*Ptychocheilus lucius*)- Endangered wherever found, except where listed as an experimental population.
- Canada lynx (*Lynx canadensis*)- Threatened wherever found.
- North American wolverine (*Gulo gulo luscus*)- Proposed threatened wherever found.
- Grizzly bear (*Ursus arctos horribilis*)- Threatened in the conterminous States except where listed as an experimental population.
 - In 2020 there was a male grizzly that was identified in south Lincoln County.
- Ute ladies' tresses (*Spiranthes diluvialis*)- Threatened wherever found.

At the writing of this report the only identified critical habitat within the county is for the Canada lynx and lies within the Wyoming Range portion of the county. There is no proposed critical habitat for any species within the county.

5.2.3 Resource Management Objective:

- A. Threatened, and endangered species are managed using credible data and in conjunction with multiple use mandates in coordination with the County and other stakeholders.
- B. No endangered or threatened species are introduced to the County.
- C. Critical habitat designations are coordinated with the County and exclusion analysis is conducted considering the County's and Conservation Districts' expertise.
- D. Credible and quantitative data is used to support listing of a species and to create a species recovery plan.

5.2.4 Priorities:

1. Once populations objectives have been met, hunting should be an encouraged method of population control to prevent and manage movement outside of a species designated range.
2. Oppose the designation or expansion of grizzly bear, wolverine, lynx populations, habitats, protection, ranges, or migration corridors.
3. Lincoln County supports the appropriate removal of any grizzly that is found within Lincoln County boundaries.
4. Designations or reintroductions beyond physical boundaries and scope that result in detrimental effects on the economy, lifestyle, culture, and heritage must not be allowed.
5. No designations or reintroductions should be made until it is determined and substantiated by verifiable scientific data that: there is a need for such action, protections cannot be provided by other methods, and the area in question is truly unique when compared to other area lands.
6. Designation or reintroduction plans, guidelines, and protocols must not be developed or implemented without full public disclosure and involvement of the County.
7. Recovery efforts and/or conservation plans for threatened or endangered species must consider impacts to local interests, including resource use and development activities



such as ranching, agriculture, mining, oil and gas exploration and production, sand and gravel, wood products, power development, and recreation.

8. Recovery plans must provide indicators to track the effectiveness of the plan and identify at what point recovery is accomplished.
9. Recovery plans must contain provisions for management after the plan is terminated.
10. To the greatest extent possible, any introductions or re-introductions of threatened or endangered species into the County or on lands adjacent to the County will be designated as nonessential experimental populations.
11. Recommend management activities for habitat of endangered, threatened, or sensitive species must be designed to benefit those species through habitat improvement.
12. Support delisting of any species with insufficient, unsupported, or questionable data not meeting the minimum criteria for its listing or protection level.
13. Support the participation of the County and other local governments as a cooperating agency and/or in coordination in federal rulemaking, including any NEPA analysis related to the designation of critical habitat and development of recovery plans.
14. Support full analysis of the economic impacts on all proposed critical habitat designations or species management plans, and the inclusion of the County in this analysis, as required by the ESA.
15. Support cooperation between private landowners and federal agencies to reduce the risk of listing under the ESA.
16. Do not support the introduction or reintroduction of listed species into Lincoln County, unless the County is involved and consents to terms and conditions or standard operating criteria that avoid disrupting current land uses.
 - a. Should an agreement not be reached on the potential introduction or reintroduction, and the species is introduced anyway, support the species being introduced only as a non-essential or experimental population.
17. Support participation of the County and other local governments as cooperating agencies in all decisions and proposed actions which affect the County regarding sensitive, threatened, or endangered species; the reintroduction or introduction of listed species; habitat conservation plans; conservation agreements or plans; and candidate conservation agreements.
18. 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.
19. Support the petition of the immediate delisting of a species when population or recovery plan objectives have been met, in accordance with the ESA.
20. Support the development of local solutions (e.g., habitat management plans, conservation plans, or conservation agreements with assurances) to keep a species from being listed under ESA or as species of concern/species of special concern.



21. Include consideration of management activities on federal lands as part of the local solutions to keep a species from being listed under ESA or as a species of concern/species of special concern.
22. Single-species management should be avoided in all federal planning efforts. Multiple uses and sustained yield of lands and resources is supported and should be implemented as required by federal law.
23. The data used in any listing decision should meet the minimum criteria defined in Data Administration and Management (Bureau of Land Management, 2006) and FS Handbooks FSH 1909.12, (United States Forest Service, 2013) Supporting Land Management Planning.
24. Support control of predators negatively impacting special status, candidate, or listed species before restricting other multiple uses that could be conflicting.
25. Support 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 the County without an approved recovery plan is not supported. Without a recovery plan, management cannot focus on increasing the species population or habitat and cannot move closer to a potential delisting.
27. 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 should be provided to local governments in Lincoln 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.
30. An exclusion analysis should be completed for all lands within Lincoln County.
31. 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.
32. Upon conducting a robust and full local economic analysis of all proposed critical habitat designations in the County, if the analysis indicates that the economic harm to County and its citizens outweigh the benefit of the critical habitat to the listed species, the USFWS should immediately exclude such habitat from critical habitat designation.
33. Lincoln County supports the definition of “habitat” proposed in the 2020 USFWS regulations.
34. The County supports the critical habitat exclusion regulations proposed by USFWS in 2020.



5.3 WILDLIFE

5.3.1 History, Custom, and Culture

Lincoln County has a diversity of habitat that hosts several large wildlife species that are important to the recreational industry of the region. Almost all of the county contains habitat of some importance. Lincoln County's big game species include black bear (*Ursus americanus*), elk (*Cervus canadensis*), moose (*Alces alces*), mountain lion (*Puma concolor*), mountain goat (*Oreamnos americanus*), bighorn sheep (*Ovis canadensis*), and mule deer (*Odocoileus hemionus*). Upland game birds include ruffed grouse (*Bonasa unbelus*), dusky grouse (*Dendragapus obscurus*), and Greater sage-grouse (*Centrocercus urophasianus*). Various other wildlife present in the County include lynx (*Felis lynx*), bobcat (*Lynx rufus*), fox (*Vulpes vulpes*), coyote (*Canis latrans*), beaver (*Castor canadensis*), muskrat (*Ondatra zibethicus*), Sandhill Crane (*Grus candensis*), Blue Heron (*Ardea herodias*), Canada Geese (*Branta canadensis*), and Trumpeter Swans (*Cygnus buccinator*). (Star Valley Conservation District, 2016)

5.3.2 Resource Assessment and Legal Framework

5.3.2.1 Big Game

Lincoln County has a diversity of habitat that hosts several large wildlife species that are important to the recreational industry of the region. Virtually all the county is habitat of some importance.

Elk

Elk (*Cervus canadensis*) are found throughout most of the County with few numbers in the southeast corner. Elk are primarily grazers, or bulk foragers, though they will occasionally browse on willows and aspen. Most of the elk habitat within the County, 1,026,685 acres, is listed as spring/summer/fall habitat. Approximately 243,458 acres of the County are designated as crucial winter habitat and 675,927 are designated as migration corridor. See Figure 20 for mapped elk habitat designations.

Elk have been fed on feedgrounds in northwest Wyoming since the early 1900s to mitigate for the loss of winter range, reduce human/elk conflict, and increase elk overwinter survival. There are currently 23 elk feedgrounds in northwest Wyoming, with 22 operated by the WGFD and the National Elk Refuge in Jackson operated by the USFWS. Within Lincoln County there are two feedgrounds: Greys River and Forest Park. The Greys River Feedground is located on state land just south of Alpine off Highway 89. The Forest Park Feedground is located on USFS lands approximately 33 miles south on the Greys River Road from Alpine and 14 miles northeast of Afton. Elk feedgrounds create complex biological, social, economics, and political issues, along with issues of wildlife disease such as brucellosis and chronic wasting disease (CWD) (described below). Due to the complex nature of this issue the WGFD is planning to initiate a localized collaborative process for addressing management of feedgrounds in Teton, Sublette, and Lincoln counties. (WGFD, 2004, 2020b)



Moose

Shiras Moose (*Alces alces shirasi*) are found throughout much of Lincoln County. Moose are considered primarily browsers but will forage on grasses and forbs as well. Moose inhabit more riparian and wetland areas where willows and water are readily available. The northern portion of the County is mostly spring/summer/fall and winter/yearlong habitat while the southern portion of the County is mapped as yearlong and crucial winter/yearlong, and winter/yearling habitat. There are several small migration corridors in the northern end of the County. See Figure 21 for mapped moose habitat designations for moose in Lincoln County.



Mule Deer

Mule deer (*Odocoileus hemionus*) are found throughout all of Lincoln 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. A large portion of the County is designated as spring/summer/fall habitat, 1,403,675 acres. There are also large acreages of crucial winter (117,408 acres) and crucial yearlong (234,352 acres) habitat designated for mule deer. Lincoln County is known for a large mule deer migration that covers approximately 1,188.636 acres. See Figure 22 for mapped mule deer habitat designations.

Pronghorn

Pronghorn (*Antilocapra americana*) are common throughout the southern portion of Lincoln County. Pronghorn prefer the open shrublands that the southern portion of the county provides. They are intermediate foragers, eating grasses, forbs, and shrubs. Most of the habitat is identified as spring/summer/fall (810,552 acres) with approximately 498,546 acres identified as migration corridor. See Figure 23 for mapped pronghorn habitat designations.

Bighorn Sheep

Bighorn sheep (*Ovis canadensis*) are documented as occurring in the county. However, there only a small amount (108,185 acres) of spring/summer/fall habitat mapped within the County. Wyoming manages bighorn sheep according to the 2004 Wyoming State-wide Bighorn/Domestic Sheep Interaction Working Group Final Report and Recommendations created per Wyoming Statute 11-19-604. See Figure 24 for mapped bighorn sheep habitat designations.



Mountain Goats

Mountain goats (*Oreamnos americanus*) are documented as occurring in the county and are part of the Palisades mountain goat herd. There is only a small amount of mapped spring/summer/fall habitat in the very north end of the County. Idaho and Wyoming have committed to a cooperative management effort for the management of this herd which entails sharing population data, coordinating habitat management projects, and surveying the entire goat population concurrently every two years. Management goals of the Wyoming subpopulation have focused on maintaining a conservative hunting approach since 1999. See Figure 25 for mapped mountain goat habitat in Lincoln County.

5.3.2.2 State of Wyoming Migration Corridor Protections

In February 2020 Wyoming released the Wyoming Mule Deer and Antelope Migration Corridor Protection Order, [Executive Order 2020-1](#)¹⁹, 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’s designated migration corridor protections.

The northern most part of the Sublette Mule Deer Migration Corridor falls within the BTNF in Lincoln County around the Greys River and Alpine areas. A large portion of the Wyoming Range Mule Deer Migration Corridor lies within the entirety of Lincoln County.

5.3.2.3 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 affects to ungulate populations.



As of the 2020 WGFD CWD Management Plan, CWD had not be detected in the Jackson Elk Herd but has been detected in mule deer in Teton, Sublette, and Lincoln counties. For additional information on the monitoring and management of CWD in Wyoming refer to the [CWD Management Plan](#)²⁰.

Brucellosis

Brucellosis is a highly contagious bacterial disease that can occur in both 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. The WGFD vaccinates elk against brucellosis on 21 of its 22 feedgrounds (Dell Creek in Sublette County is treated as a control). Tests are done on the feedgrounds periodically along with tests from hunter harvest and data have shown that feedgrounds increase the probability of disease transmission. However, feedgrounds provide the only opportunity to effectively vaccinate elk and are one of the best methods to prevent comingling between elk and livestock during the winter months (WGFD, 2004). Further information about brucellosis can be found on the WGFD [website](#)²¹.

Hunting is an encouraged management tool to prevent the spread of wildlife diseases. In much of western Wyoming, including Lincoln County elk numbers are over objective and hunting is one tool that allows reduction in numbers that could reduce disease and prevent overuse on critical winter ranges in south Lincoln County and reduce numbers on feedgrounds in the northern portion of Lincoln County.

5.3.2.4 Greater Sage-Grouse

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 Greater 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 have been collaborating to conserve Greater Sage-Grouse and its habitats. BLM has broad responsibilities to manage federal lands and resources for the public benefit. Nearly one-half of Greater Sage-Grouse habitat is managed by the BLM.

In September 2015, the USFWS determined that the Greater Sage-Grouse did not warrant listing under the 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 in March 2019 to update greater sage-grouse management. The



2019 Plan Amendment is currently being litigated in the United States District Court and is blocked from implementation under an injunction issued by that court for all western states.

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 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](#)²².

There are approximately 771,061 acres of designated core habitat for sage-grouse within Lincoln County (Figure 26).

5.3.3 Resource Management Objective:

- A. Wildlife are managed sustainably using credible data and management plans developed in coordination with the County and other stakeholders. Species are not managed outside of their legal designation.
- B. Wildlife management plans are not to focus on single species management.
- C. A universal and coordinated list of special management species between federal agencies, state agencies, and local governments is created to coordinate management.

5.3.4 Priorities:

- 1. Federal agencies should coordinate with the County on any emergency closure proposed for hunting, fishing, or recreational shooting on public lands.
- 2. Lincoln County supports State management of wildlife and management of wildlife on federal lands that reflects Wyoming policy priorities.
- 3. Hunting should be encouraged to reduce herds to sustainable critical winter range numbers.
- 4. Require that all disturbances of habitats be reclaimed as soon as feasible after impacts have been created.
- 5. Support quick and effective adjustments in wildlife population goals and population census numbers in response to variations in the amount of available forage caused by catastrophic events, drought, or other climatic adjustments.
- 6. Support proper management of wildlife populations that are important to the County's recreation and tourism economy and the preservation of the culture and lifestyle of County residents.
- 7. Wildlife numbers must remain at the allocated level until studies and analyses are completed to determine the ability of forage resources to support population and species trends and impacts on other wildlife species has been assessed.
- 8. Encourage that reductions in forage allocations resulting from forage studies, drought, or other natural disasters be shared proportionately by wildlife.
- 9. Encourage that wildlife target levels and/or populations must not exceed the forage assigned to wildlife in forage allocations.



10. In evaluating a proposed introduction, or reintroduction, of wildlife species, priority will be given to species that will provide increased recreational activities.
11. If wildlife are the cause of an area not meeting BLM Rangeland Health Standards or USFS Desired Conditions, the appropriate wildlife management agency will manage that wildlife to reduce degradation which could include removal.
12. The County encourages federal agencies to support habitat projects that include chaining, logging, seeding, burning, and other direct soil and vegetation prescriptions that are demonstrated to restore forest and rangeland health, increase forage, and improve watersheds in grazing districts and allotments for the mutual benefit of domestic livestock, wildlife, and watersheds.
13. The County supports the 2019 State of Wyoming's Sage-Grouse Conservation Strategy.
14. The County should be coordinated with whenever actions are proposed that could substantively impact existing uses within migration corridors.
15. Encourage and support timely responses from federal agencies when requested by Lincoln County for resources concerns, management plans, and other sensitive, candidate or listed species.
16. Management plans must use independent scientific data, peer-reviewed science, and/or those data meeting the 'credible data' agency specifications to generate plans.
17. Minimize management of "special status" species to decrease single-species management efforts, and to eliminate management of special status species as ESA-protected species.
18. The County should be consulted and coordinated with in the continued management of Greater sage-grouse, and any other species for which a single-species management plan is developed.
19. Create management objectives based on the carrying capacity of the habitat and in consideration of all allowable and mandated multiple uses on federal lands.
20. Support habitat monitoring efforts and refine available habitat data.
21. Consultation and coordination should occur with Lincoln County where federal monies or resources are committed for the development of management plans, population objectives, wildlife introductions (i.e., bighorn sheep or pronghorn), or other decisions that may affect the economic viability of the communities within Lincoln County, as required by agency mandates.
22. Peer-reviewed science, and/or those data meeting the 'credible data' agency specifications, should be used in the management of disease spread between native and domestic species, with consultation and coordination of local government.
23. Support creating a unified (cross-agency) definition for "species of concern".
24. Support the use of credible data as information BLM and USFS can use as a basis for a decision that a species should be designated a "species of concern" or "sensitive" beyond criteria provided in their respective handbooks.



25. 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 Endangered Species Act is not supported.
26. The County should be consulted and coordinated with during the species of concern and sensitive species review process, including in the determination of what should be included as a species of concern or sensitive species.
27. The County opposes seasonal closures for crucial wildlife habitat that precludes management on or access to private lands.
28. County does not support any herd management areas for bighorn sheep.
29. The County supports continued research and management of big game herds for CWD and brucellosis.
30. The County supports the existing feedgrounds (Greys River and Forest Park) but discourages expansion or creation of any further feedgrounds within the County.
31. Support the Wyoming State-wide Bighorn/Domestic Sheep Interaction Working Group Report (September 2004) with respect to management of domestic sheep allotments.
32. The County recognizes no “core native” bighorn sheep areas within the County and should be consulted with if there is future discussion of core habitats within the county.
33. The County supports the promotion of realistic wildlife numbers appropriate to management of multiple use on federal lands.



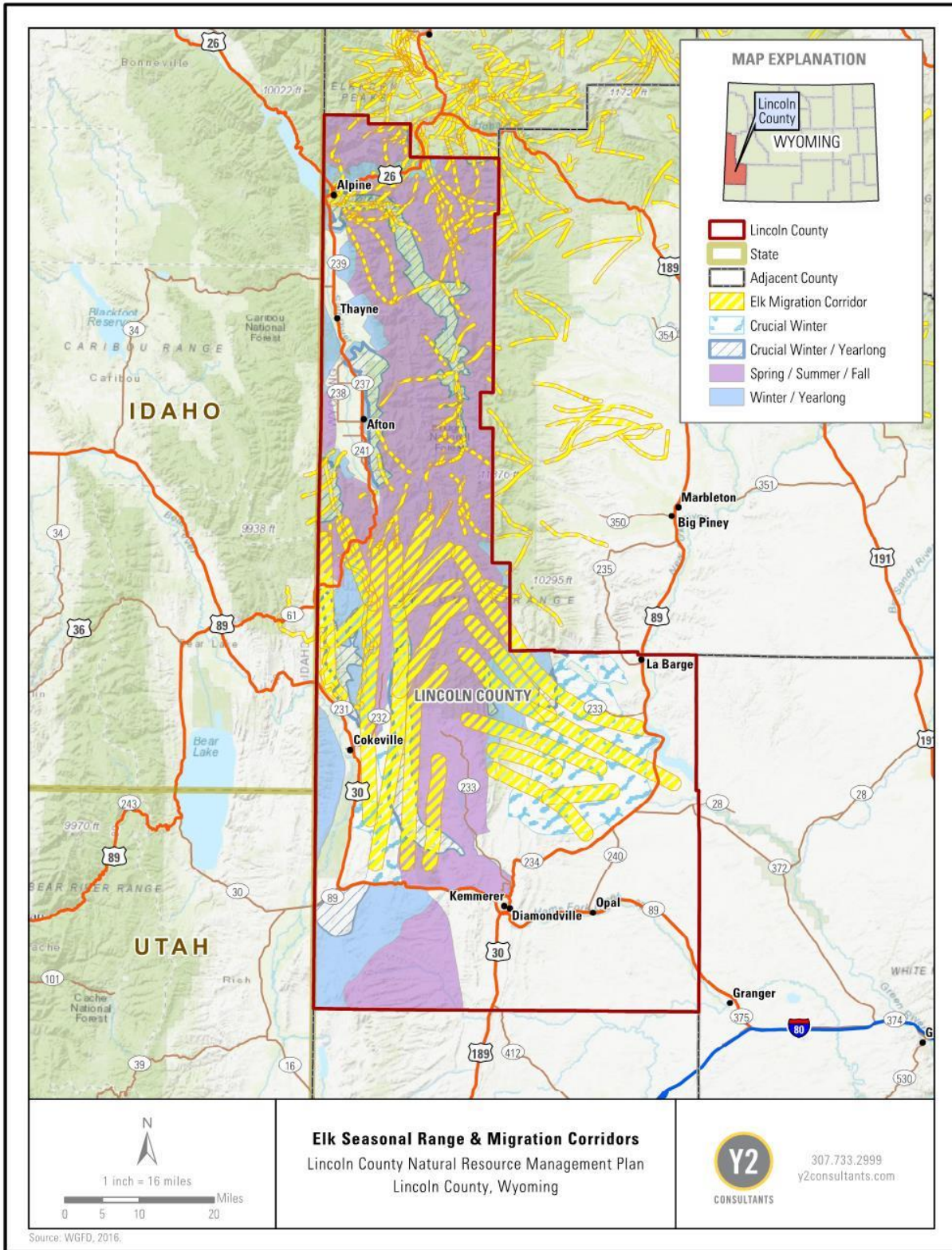


Figure 20. Elk seasonal range and migration corridors in Lincoln County. Data from 2016 WGFD shapefiles.



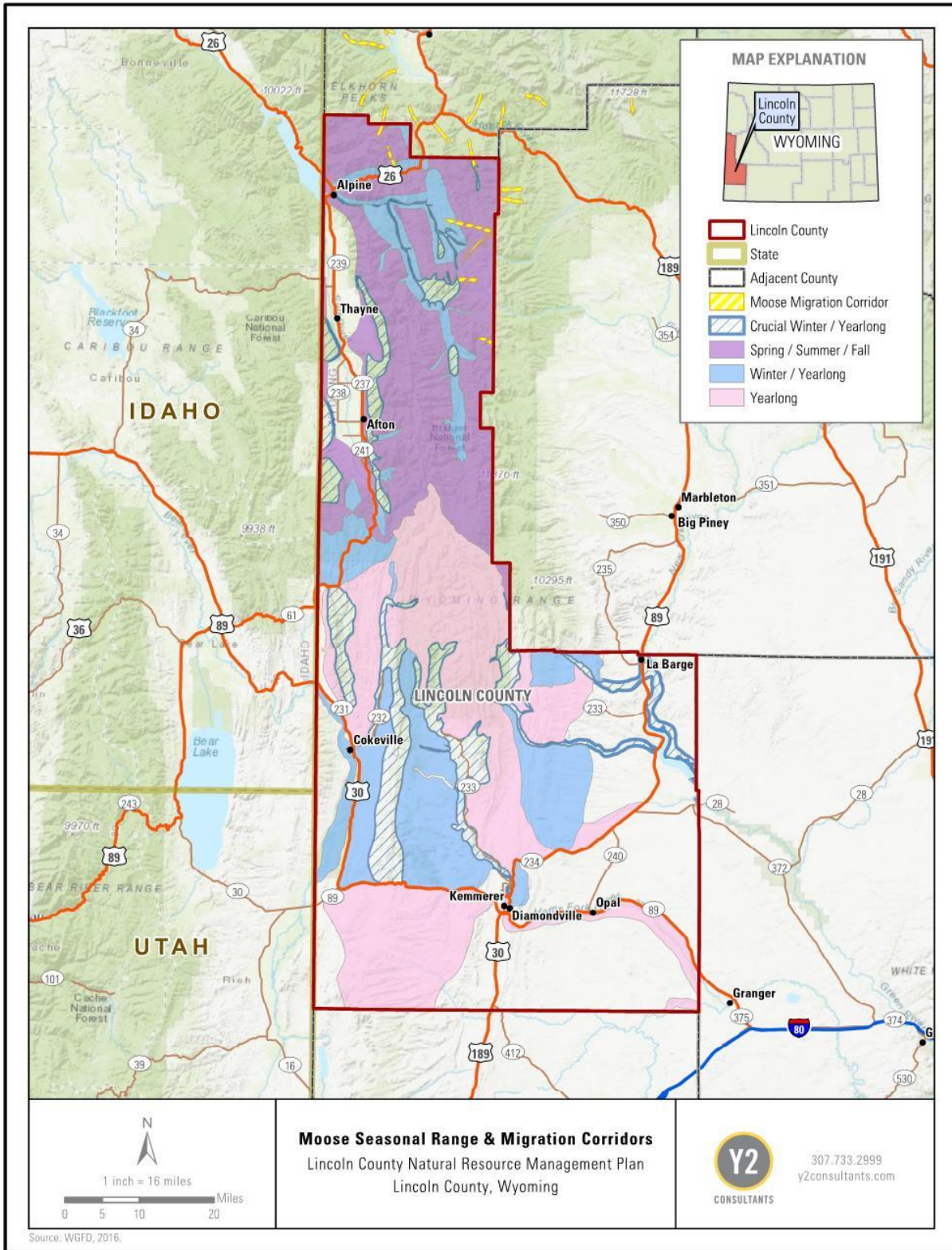


Figure 21. Moose habitat mapped within Lincoln County. Data from 2016 WGFD shapefiles.



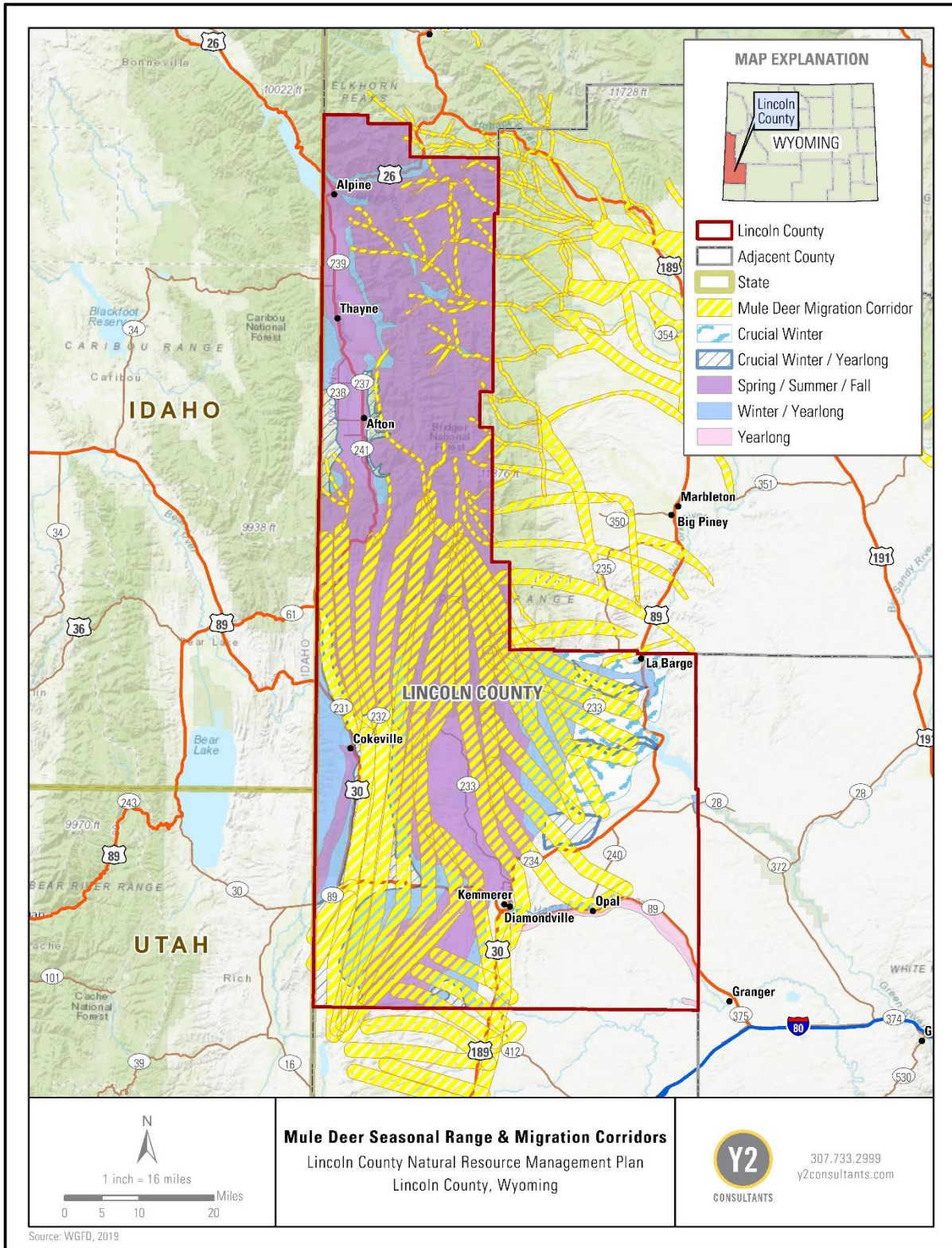


Figure 22. Mule deer mapped seasonal habitats and migration corridors in Lincoln County. Data from 2019 WGFD shapefiles.



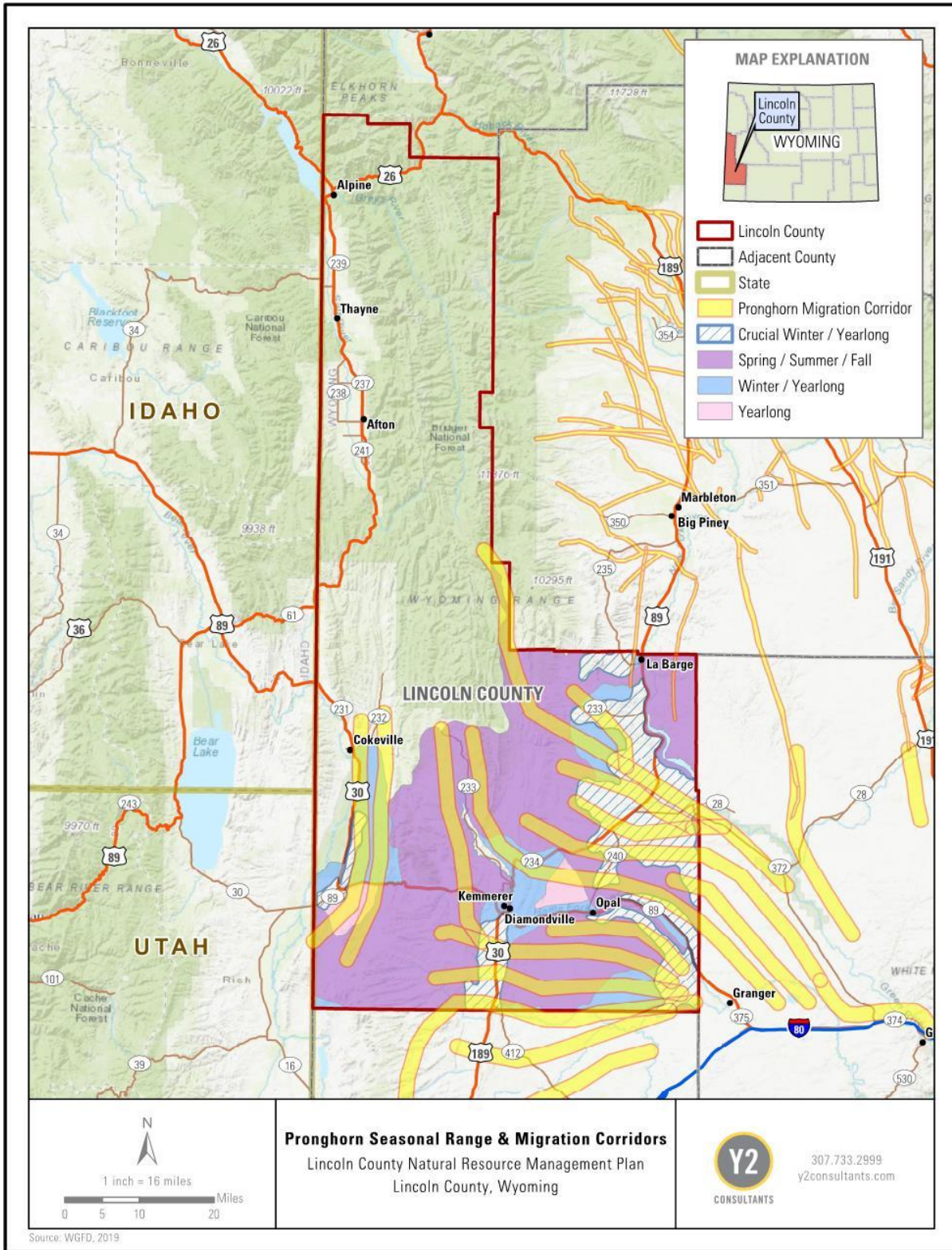


Figure 23. Pronghorn mapped seasonal habitat and migration corridors in Lincoln County. Data from 2019 WGFD shapefiles.



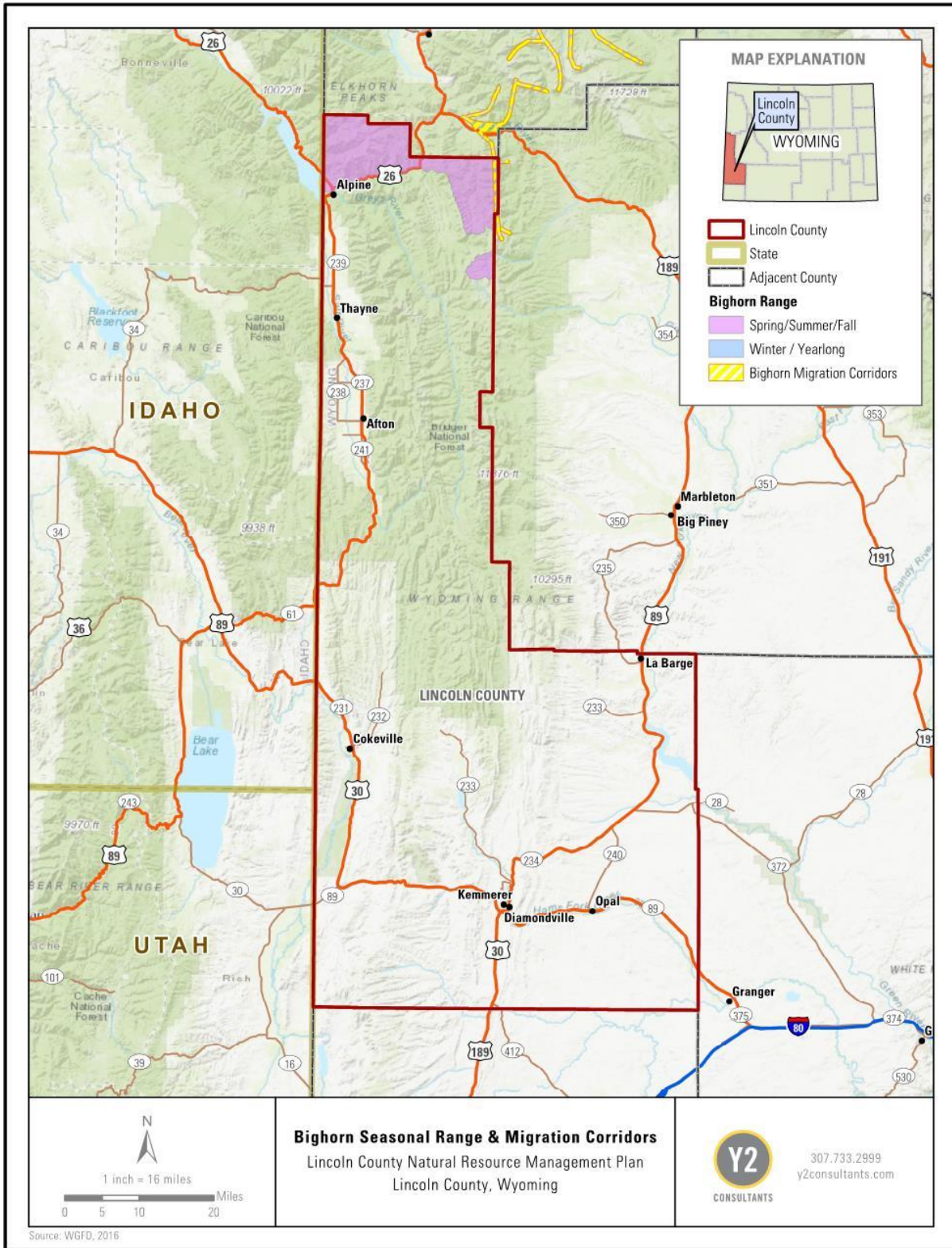


Figure 24. Bighorn mapped seasonal habitat and migration corridors in Lincoln County. Data from 2016 WGFD shapefiles.



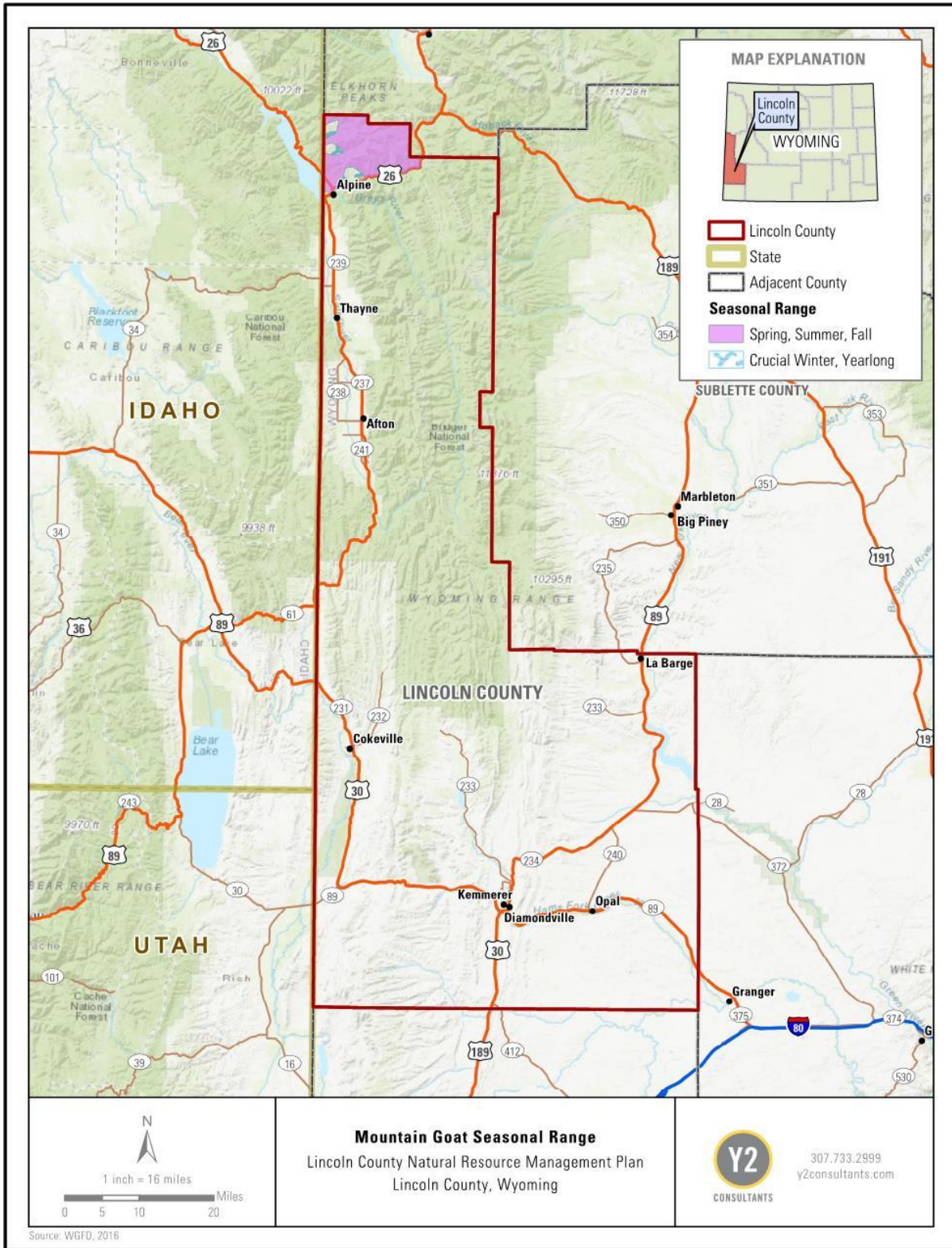


Figure 25. Mountain goat mapped seasonal habitat and migration corridors in Lincoln County. Data from 2016 WGFD shapefiles.



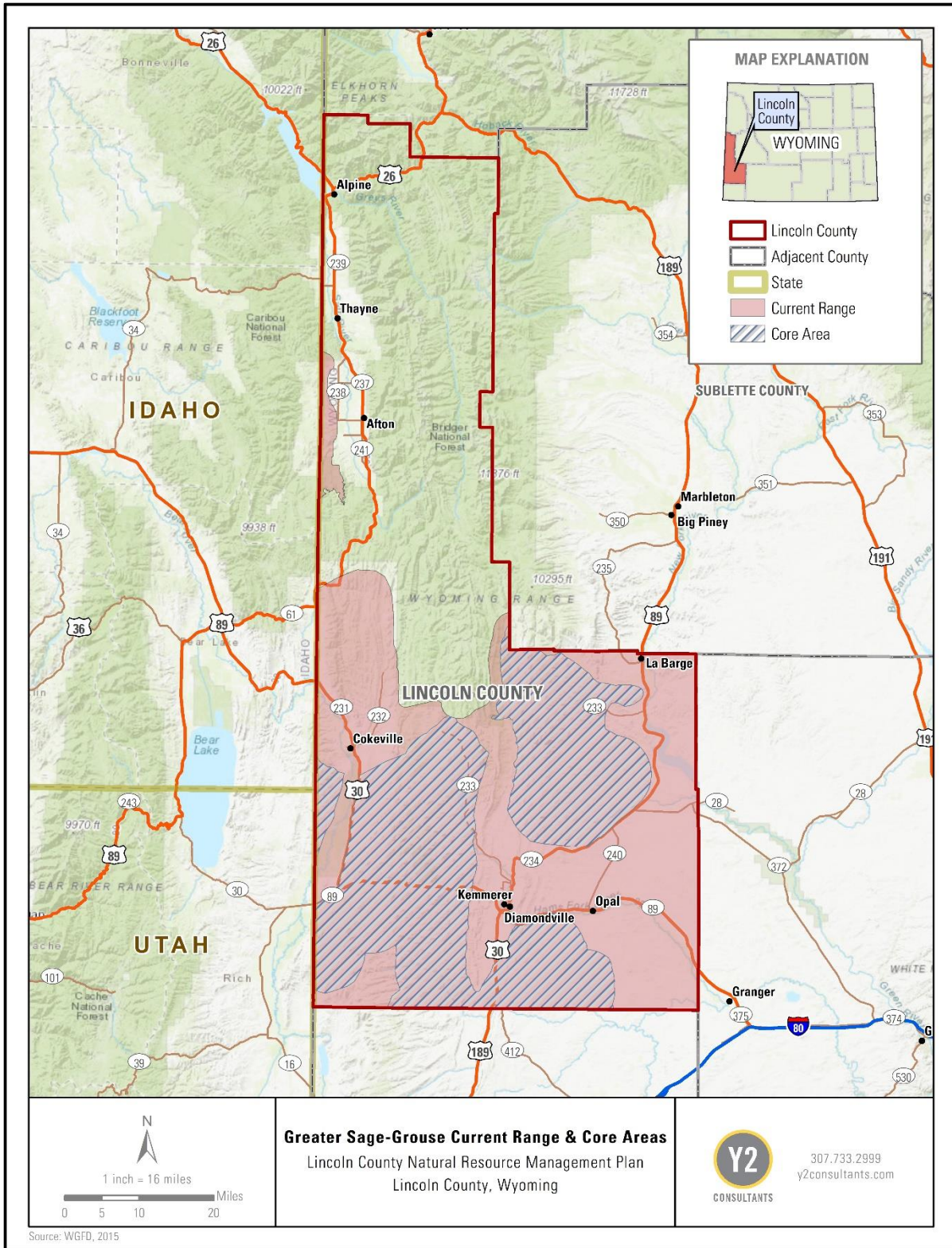


Figure 26. Greater Sage-Grouse mapped habitat and core area within Lincoln County. Data from 2015 WGFD sage-grouse shapefiles.



5.4 FISHERIES

5.4.1 History, Custom and Culture

Fisheries support recreation and tourism in Lincoln County. The combination of healthy fisheries and public access throughout the County's reservoirs, lakes, and rivers provide diverse fishing opportunities that attract recreators. Fishing within the County varies from fly fishing trout species to sport fishing the reservoirs. Lincoln County spans three river basins; the Snake/Salt River Basin to the north, the Greater Green River Basin covering the eastern half of the County, and the Bear River Basin to the southwest. (Wyoming State Geologic Survey, 2020)

5.4.2 Resource Assessment and Legal Framework

The WGFDM manages and monitors fishing activity throughout the state. The State of Wyoming classifies trout streams into four 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

Most of the streams within Lincoln County are classified as Yellow Ribbon streams. The Snake River and Lower Salt River are classified as Blue-Ribbon streams. Pine Creek and the Green River below the New Fork River and below Fontenelle Reservoir are classified as Red Ribbon stretches. Mapping of these streams can be found [here](#)²³.

Fish species known within the county include:

- Snake River Finespotted Cutthroat Trout (*Oncorhynchus clarkii carmichaeli*)
- Yellowstone Cutthroat Trout (*Oncorhynchus clarkii bouvieri*)
- Bonneville Cutthroat Trout (*Oncorhynchus clarkii utah*)
- Colorado Cutthroat Trout (*Oncorhynchus clarkii pleuriticus*)
- Brown Trout (*Salmo trutta*)
- Rainbow Trout (*Oncorhynchus mykiss*)
- Brook Trout (*Salvelinus fontinalis*)

The Fontenelle Dam has many types of fish including ling (*Molva molva*), lake trout (*Salvelinus namaycush*), and kokanee (*Oncorhynchus nerka*).

Lincoln County is located in the Salt River and lower Snake River and Palisades sub-basins within the Snake/Salt River Basin. The Salt River sub-basin contains one Trout Unlimited site listed to experience medium-high level use. The site is located at the lower end of the Salt River before it enters the Palisades Reservoir. Within the Lower Snake River and Palisades sub-basin the lower snake experiences high use along the Snake River Canyon. The Greys River, a yellow ribbon stream, also experiences heavy recreational and fishing pressure. (Wyoming Water Development Office, 2014)



The Bear River Basin is known to have moderate angling opportunities throughout its span in the County. The basin contains a single reach classified as ‘Red Ribbon’ or producing between 300 and 600 pounds of sport fish per mile, and many reaches classified at lower productivity levels classified as ‘Yellow’ and ‘Green Ribbon’ (50-300 and 1-50 pounds of sport fish per mile). The ‘Red Ribbon’ reach is Pine Creek located east of Cokeville. Angler data is limited for this region. (Western EcoSystems Technology, Inc., 2018a)

The Green River Basin maintains many fishery resources and angling opportunities. Where the basin and Lincoln County intersect most streams are classified as ‘Green’ and ‘Yellow Ribbon’. The Green River within the County is classified as ‘Red Ribbon’, while the Green River leading into the Fontenelle Reservoir, and the reservoir itself, are classified as highly productive ‘Blue Ribbon’ stream, producing greater than 600 pounds of sport fish per mile. These areas provide large fishery resources for the County. (Western EcoSystems Technology, Inc., 2018b)

Known threats to fisheries within the county include whirling disease and invasive species. Whirling disease is caused by a microscopic parasite (*Myxobolus cerebralis*) that can infect trout and salmon. The parasite infects cartilage tissue and may cause a blackened tail, deformities of the head and spine, whirling behavior, and eventual death to fish. More information on the disease can be found [here](#)²⁴. Whirling disease has been detected in areas of the Salt River and most of the watersheds in Lincoln County are infested watersheds. (WGFD, 2014) Aquatic invasive species (AIS) can also cause detriment to fisheries. There has only been one detected AIS within Lincoln County in the Salt River a New Zealand Mudsnail was reported in 2015 and 2018. The zebra mussel and quagga mussel are both invasive species of concern for the area and have been detected in Utah and Colorado. A map of AIS locations can be found [here](#)²⁵. (WGFD, 2020a)

5.4.3 Resource Management Objectives:

- A. Fish resources are managed for healthy and biodiverse fisheries that support recreation and tourism.
- B. River and streams within Lincoln County are managed for multiple use including recreation, irrigation, fisheries, etc.

5.4.4 Priorities:

1. Management plans will use independent scientific data, peer-reviewed science, and/or those data meeting the ‘credible data’ agency specifications to generate plans.
2. Create management objectives for fisheries based on the carrying capacity of the habitat including all multiple use mandates (livestock grazing, mineral extraction, etc.) on federal lands.
3. Support fisheries habitat monitoring efforts and refine available fisheries habitat data.
4. Support expansion of fisheries within the County as appropriate.
5. Support management of fisheries for whirling disease and prevention of aquatic invasive species.



5.5 PREDATOR CONTROL & LIVESTOCK PREDATION

5.5.1 History, Custom, and Culture

Predatory wildlife is important to the ecology of an ecosystem. However, predators have negative impacts on livestock operations, developing communities, 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 stock growers 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.).

5.5.2 Resource Assessment and Legal Framework

The Animal and Plant Health Inspection Service (APHIS) is located within the U.S. 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 (APHIS, n.d.). The Wyoming State Legislature established predator control statutes in Title 11, Chapter 6. The statutes provide for general provisions, district boards, and the Wyoming State Animal Damage Management Board. The district for the County is the Lincoln County Predator Management District. Lincoln County also maintains an appointed Predator Management Board (Lincoln County, n.d.-b).

There are a variety of predators and/or carnivores within the County that are not classified within the Wyoming predator statutes, those not classified under Title 11, Chapter 6 are often managed by WFGD. Predators are managed variably in accordance with their individual designations. Many common large predators are classified and managed as game animals, such as mountain lions and black bears, and some mid-sized predators are managed as furbearers, like the bobcat. Predators within the County may also be protected under ESA or MBTA, such as the raven and birds of prey. Predator population management is highly variable depending on the species and the population in question.

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 and prevention techniques have 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. Predators in Lincoln County and the surrounding area include mountain lion, black bear, bobcat, coyote, fox, skunk, raccoon, and multiple birds of prey. It is important to recognize that changes in wildlife population dynamics and management in surrounding areas are likely to influence wildlife populations and behavior within Lincoln County.



5.5.3 Resource Management Objective:

- A. Predator populations are to be managed to maintain healthy ecological levels, while still prioritizing reducing the occurrence of livestock depredation and maintain the health and welfare of citizens of Lincoln County.
- B. Coordination of predator management within the County occurs with the Lincoln County Predator Management District.

5.5.4 Priorities:

- 1. After desired population numbers are achieved, hunting should be considered as a method of population control and manage the movement outside of their designated range.
- 2. Trapping is a historic and environmentally sound method of controlling predatory animals.
- 3. Management of predator populations should support levels consistent with the optimum utilization of forage by wild and domestic ungulates.
- 4. Support control of predatory animals to reduce property damage and to protect wildlife and to protect the local economy and tax base, including the viability of the agriculture community.
- 5. Support control of predators, rodents, and insects, which are disease-bearing vectors that are a recognized threat to public health.
- 6. The County opposes the creation or expansion of grizzly bear, wolf, wolverine, or lynx populations, habitats, protection, recovery areas, ranges, or migration corridors.
- 7. Any plan for the management of a predator that has naturally, or through introduction or re-introduction, repopulated the County must provide for its control by any means when it travels from its designated range or becomes a threat to people, property, livestock, or other wildlife species.
- 8. Predator and wildlife numbers should be controlled at levels that protects livestock and other private property from loss or damage and prevents the decline of other wildlife species populations.
- 9. Any plan that provides for the introduction, reintroduction, natural repopulation, or the management of any predator must provide for timely compensation to owners for direct or indirect cost associated with the loss of life, loss or damage to livestock and property rights. Compensation must be equal to the actual value of the loss (not limited to market value).
- 10. Support selective predator control as a valid means of increasing the productivity of lands within the County and as a valid method of attaining sustainability of the wildlife and domestic livestock populations.
- 11. Predator control measures are supported on all lands within the County.
- 12. Support recognized proactive efforts such as aerial hunting, snares, and leg traps to control predator populations.
- 13. The County opposes restrictions to current predator control methods.



14. Predator species such as grizzly bears and wolves should be deterred from migrating or re-locating to areas that impact the health, safety, and welfare of the people of Lincoln County.
15. When addressing a decline in sensitive species, predator control should be employed prior to placing any restrictions on resource-based industries like livestock grazing. Only when predation is determined to not be the cause of decline should restrictions on the resource industries be considered prior to predator management.
16. Federal agencies should coordinate with the County in the determination of any impact of management of predator species when related to the management of ESA 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 the County.
17. Support predator control as an effective method for protecting ESA listed species, special designated species, and game bird populations.

5.6 WILD HORSE AND ESTRAY LIVESTOCK

5.6.1 History, Custom, and Culture

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).

Under WFRHBA, BLM is required to maintain wild horse and burro population levels “in a manner that is designed to achieve and maintain a thriving natural ecological balance” and to establish appropriate management levels for the herd, considering the relationships with other uses of the public, and adjacent private lands (16 U.S.C. § 1333(a); 43 C.F.R. § 4710.3-1).

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.

Once the inventory occurs and the AML has been set, if an overpopulation of wild horses exists, the BLM “shall immediately remove excess animals from the [public] range so as to achieve appropriate management levels (AMLs).” See 16 U.S.C. § 1333(b) (1) and (2) and 43 C.F.R. § 4720.1 (“Upon examination of current information and a determination by the authorized officer that an excess of wild horses ... exists, the authorized officer shall remove the excess animals immediately...”). “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). As stated in another section of the WFRHBA, “[A]ll excess animals” must be removed by the BLM “so as to restore a thriving ecological balance to the range, and to protect the range from deterioration associated with overpopulation” to preserve and maintain the “multiple use relationship in that area.” See 16 U.S.C. § 1333 (b)(2). When a determination is made that there is an “excess,” action is immediately required because the “endangered and rapidly deteriorating range cannot wait.” *Blake v. Babbitt*, 837 F. Supp. 458, 459 (D. D.C. 1993).

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 on 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 WFRHBA mandates that the BLM, once notified, must “immediately” remove excess wild horses from state and private land.

Wild horses have been problematic for federal land grazing permittees since the passage of the WFRHBA. In recent years, the BLM has been unsuccessful in completing gathers to reduce the numbers of wild horses on rangelands. Many HMAs are significantly over AML, causing harm to rangelands. HMAs are not fenced, allowing horses to cause degradation on private and state lands.

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

5.6.2 Resource Assessment and Legal Framework

5.6.2.1 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. The Little Colorado HMA is the only HMA within Lincoln County. (BLM, n.d.-b)

5.6.2.1.1 Little Colorado Herd Management Area

The Little Colorado HMA spans over 630,000 acres south of the Pinedale/Rock Springs Field Office boundary, bounded by the Green River and Highway 191 (Figure 27). Within Lincoln County the



HMA is located east of the Green River between Fontenelle and La Barge. The Little Colorado HMA is dominated by BLM land with scattered state school sections and BOR Administered land in the southern corner. The area is characterized by rolling hills broken intermittently by significant canyons. Snow is the predominant form of precipitation throughout the year. The designated Appropriate Management Level (AML) for the HMA is between 69 and 100 horses. According to the March 2020 Herd Area and Heard Management Area Statistics report by the BLM, the HMA was last inventoried in March of 2019. The estimated 2020 population was 493 individuals. (BLM, 2016c, 2020)

5.6.2.2 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 six herd areas (HA) located in Lincoln County. Five of the six HAs in Lincoln County; Cumberland, Carter Lease, North Granger, Slate Creek, and La Barge, no longer hold horse populations. The Little Colorado HA spans 733,573 acres in congruence with the Little Colorado HMA described above and may have some equines. (BLM, 2011, 2020)

5.6.2.3 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 (W.S. 11-24-101 through 11-24-115).

5.6.3 Resource Management Objective:

- A. Wild horses within the County are to be managed as required by the Wild Free-Roaming Horses and Burro Act of 1971.
- B. The County does not support estray livestock and requires them to be removed from public or private lands immediately.

5.6.4 Priorities:

- 1. Strongly oppose the proposal to establish new or expand Herd Management Areas (HMAs) or Herd Areas (HAs) in Lincoln County.
- 2. All unauthorized feral horses (horses not assigned to herd units) are in trespass and must be removed from public lands.
- 3. An inclusive Herd Management Plan must be developed for each herd.
- 4. Any Herd Management Plans must include provisions for periodic gathers of all horses in the unit to limit populations to meet agreed-upon levels, to remove trespass horses, and to test for equine diseases as prescribed by the Wyoming state veterinarian and prevent habitat degradation.



5. Wild horses assigned to herd units must be identified in coordination with the County to ensure that feral or fugitive horses are not assimilated into wild horse herds on public lands.
6. Any future legally established herds must majorly consist only of wild horse which possess Spanish Barb characteristics.
7. Horse management plans must contain provisions for the maintenance of the health of wild horses and the prevention of equine diseases.
8. No herds will be in areas that do not provide barriers, natural or otherwise, to prevent herd movement, trespass to private lands, or mingling with domestic herds.
9. Wild horses are subject to Wyoming Rangeland Standards that govern rangeland health just the same as wildlife and livestock.
10. Work with the Wyoming Livestock Board to address stray livestock in the County per state law. Strays on public and private lands shall be removed immediately.
11. Support the completion of an inventory of wild horses at least every two years.
12. Support the continued use of long-term fertility control such as spaying of mares but only as a last resort to other viable solutions, and only if the herd numbers are above the lower end of Appropriate Management Level (AML).
13. The County encourages the creation of public education programs through the extension service to inform the public at large about the need to maintain healthy ecosystems and the differences between livestock, wild horse, and wildlife needs and impacts.
14. Support rulemaking to give the BLM, and those who adopt wild horses, additional options for the disposal of wild horses to allow BLM to meet their existing statutory requirements.
15. If livestock grazing AUMs are reduced due to excess wild horses, once excess horses are removed, livestock grazing AUMs should be reinstated as soon as resources recover.
16. The County promotes the sustainability of healthy rangeland conditions and suitable wildlife habitat and insists the BLM manage wild horse populations to levels at or below Appropriate Management Level (AML) as identified for each Herd Management Area (HMA).
17. The County supports efforts to control the number of wild and feral horses on private, state, and BLM lands both in and out of established Herd Management Areas (HMAs) at such level that the BLM can manage the annual increase in population in a manner consistent with Wild Horse Management Section 2 of the Wild Horse and Burro Act.
18. When active use AUMs are reduced in a grazing allotment due to drought or other resource condition, a proportional reduction of horses should also be implemented whenever there are any cattle and/or sheep AUM reductions.



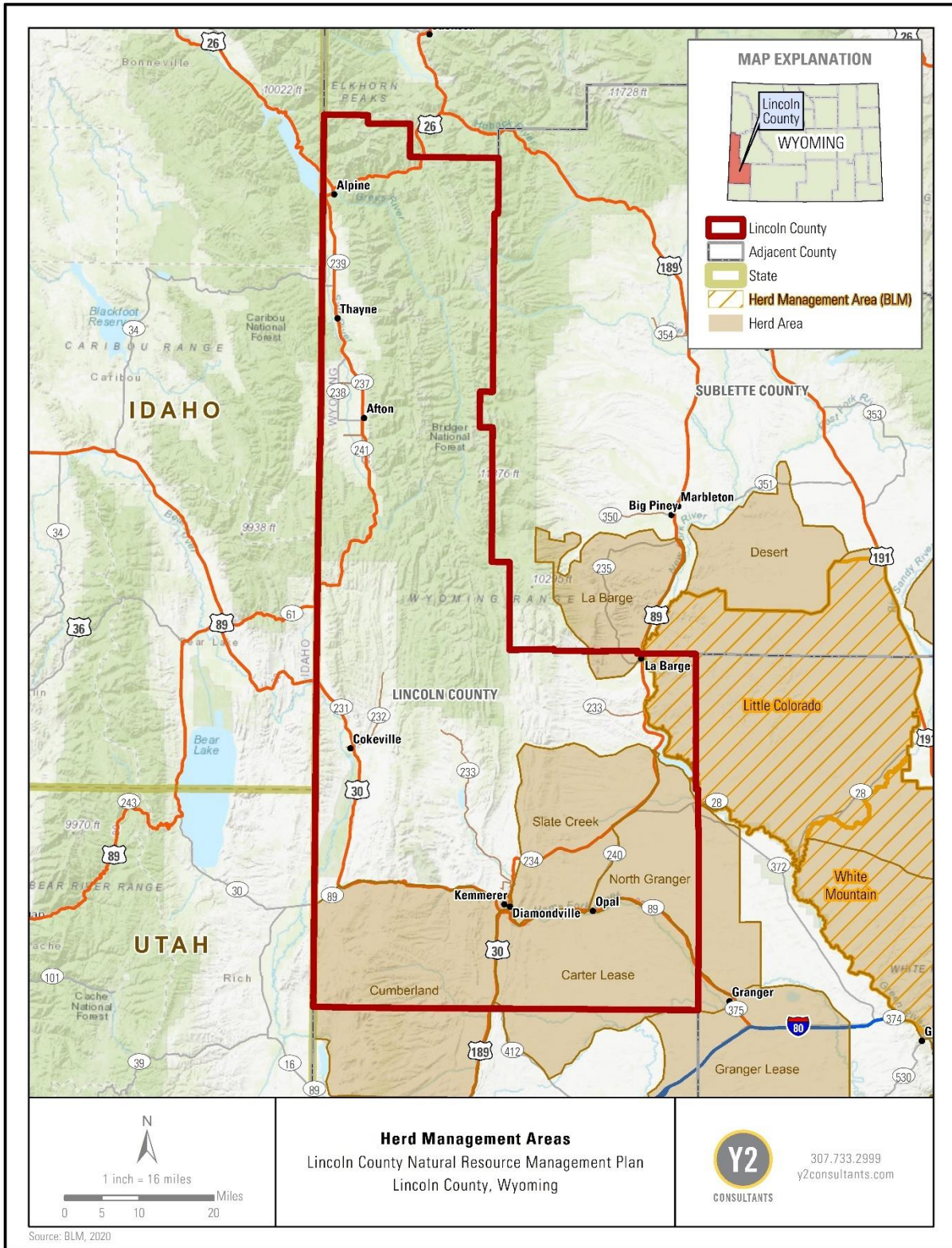


Figure 27. Herd areas and herd management areas in Lincoln County, description of management areas above. Herd areas are not managed for equine populations. Data is from BLM database in 2020.



CHAPTER 6: SOCIOECONOMICS

6.1 TOURISM AND RECREATION ON PUBLIC LANDS

6.1.1 History, Custom, and Culture

Tourism and recreation in Lincoln County continue to increase each year and are important to the economy, custom and culture of the County. People from all over are traveling to experience the solitude, peace, and aesthetic values of the mountains, ever green valleys, and high desert areas offered by federal lands in the County. Tourists are coming to the County both to vacation on the forest lands, explore BLM lands, visit Fossil Butte National Monument, visit Cokeville Meadows National Wildlife Refuge, visit Intermittent Spring (Periodic Spring) or spend time on the water at Palisades Reservoir. Tourists also use the County as a stopover on their way to other high tourist destinations including Jackson, Yellowstone National Park, and Grand Teton National Park.



Recreation is a huge economic driver within the County both from residents and non-residents. Recreational activities in Lincoln County include camping, hiking, mountain biking, fat biking, fishing, hunting, snowmobiling, cross-country skiing, downhill skiing at Pine Creek Ski Resort, off-highway vehicle (OHV) usage, motorcycling, horseback riding, mountain climbing, rafting, and boating. Recreational activities that occur on the BTNF include beaches and dunes, bicycling, camping and cabins, fishing, hiking, horse riding, camping, hunting, nature viewing, OHV riding, outdoor learning, picnicking, water activities, snowmobiling and other winter sports (including snowmobiling). More detailed information on where to recreate on the BTNF in Lincoln County can be found on the [Greys River Ranger District](#)²⁶ and [Kemmerer Ranger District](#)²⁷.

6.1.2 Resource Assessment and Legal Framework

The diversity of Lincoln County from the high-topped mountains to the high deserts provides a recreational sanctuary. Features such as an abundance of wildlife, beautiful aspen and conifer forests, high desert sagebrush landscape, green valleys, and wildflowers offer year-round outdoor recreational opportunities, which is essential to the health and well-being of the County's citizens as well as drawing in an economic influence from tourists and recreationalists outside of the County. The area attracts visitors who come to view wildlife, fish, hunt, cross country ski, snowmobile, mountain bike, hike, camp, and generally enjoy the outdoor recreational opportunities that open access motorized forest and BLM managed lands provide.



The Star Valley area of Lincoln County has a trails and open space plan that was developed in 2004 to create a trails system and public recreation areas in Star Valley. The trails system takes advantage of existing public road rights-of-way, and private roads by permission, to create a network of bicycle trails for non-motorized recreation, access to public lands, and alternative transportation. Bicycle lanes are along the highways and shared roadways were identified. A system of recreation trails separate from the bicycle system on roadways is also within the area to provide a more enjoyable recreational experience. More information on the Star Valley Trails and Open Space Plan can be found [here](#)²⁸.

Pine Creek Ski Resort, northeast of Cokeville, is the only downhill ski resort in Lincoln County. The County holds a patent on the BLM land that the resort sits on. Snowmobiling is a popular winter activity throughout the County. There are numerous snowmobiling areas within the BTNF with the Greys River Road and Salt River Pass being some of the more popular snowmobiling areas.



OHV use is a growing recreational activity in Lincoln County and brings in tourism to the area. Lincoln County passed a resolution in 2016 that supported the establishment of a trail network that connects communities to nearby public lands and opened certain county roads to OHV use. (Lincoln County Resolution 2016-45) The Caribou Loop Trail is 200 miles of OHV trails through southeast Idaho and comes into Lincoln County through Star Valley, south of Smoot and then crosses U.S. Highway 89 where it goes up the Greys River in between the Wyoming and Salt River mountain ranges. The Caribou Loop Trail has a committee that is comprised of County Commissioners from Caribou County Idaho, Bonneville County Idaho, and Lincoln County Wyoming with additional member support from Idaho Fish and Game, USFS, Idaho Transportation Department, Wyoming Department of Transportation, Stewards of the Greys, Blue Ribbon Coalition, multiple local trail users and ATV/UTV organizations, and the Great Western Trail. (Caribou Loop Trail, n.d.) The following list of trails are open to OHV use in Lincoln County.

- Strawberry Creek Co. Rd. 126
- Fairview South Co. Rd. 143
- Steward Trail Co. Rd. 106
- Crow Creek Co. Rd. 141
- Auburn-Tygee Co. Rd. 134
- State Line Co. Rd. 114



- Auburn-Forest Co. Rd. 139
- Thayne-Freedom Co. Rd. 125
- McNeel Power Plan Co. Rd. 104
- LaBarge Creek Co. Rd. 315
- Pine Creek Co. Rd. 204
- Cottonwood Creek Co. Rd. 153
- Bitter Creek Co. Rd. 140
- Dry Creek Co. Rd. 146
- Grover Park Co. Rd. 172
- Fontenelle-Forest Co. Rd. 334
- Bedford-Turnerville Co. Rd. 123
- Willow Creek Canyon Co. Rd. 177
- Gomer Co. Rd. 338
- Sublet-Pomeroy Basin Co. Rd. 306
- Hams Fork Co. Rd. 305
- Fairview Spring Creek Co. Rd. 144
- Reeves-Schway Co. Rd. 149
- Swab Creek Co. Rd. 420

The Big Springs Scenic Backway is another tourist and recreation destination within Lincoln County that is a 68-mile route through national forest lands that connects Kemmerer to Cokeville. The Backway is crisscrossed by historic emigrant trails, the scenic Hams Fork River, and plunges into the Tunp Mountain Range in the BTNF. The Backway was part of the Oregon Trail and in some areas tracks and ruts are still visible. (Lincoln County, n.d.-a)

Hunting and fishing are by far some of the more popular recreational activities within the County. The Tri Basin Divide mule deer herd is one of the largest in North America with a target population of 50,000 animals and is deemed as a trophy mule deer herd. Elk and moose hunting are also very popular, and the populations provide high opportunities for successful harvests.

6.1.3 Resource Management Objective:

- A. Recreational resources are to be managed to promote access and availability to the public for both tourism and recreational uses, while maintaining benefit to the County's economy across important industries including agriculture, mineral development, and tourism.
- B. Lincoln county is to be coordinated with when decisions could impact recreation or tourism within the county.
- C. Recreation and tourism uses are promoted throughout the county.

6.1.4 Priorities:

1. Motorized, human, and animal-powered outdoor recreation should be integrated into a fair and balanced allocation of resources within the historical and cultural framework of multiple-uses in rural Wyoming.
2. Outdoor recreation and tourism should be supported as part of a balanced plan of state and local economic support and growth.
3. Encourage and make accessible, new recreational and tourism developments to the general public.
4. Federal agencies should coordinate with the county and recreation based non-profit organizations to promote responsible recreational use and tourism through signage, maps, information kiosks, and other marketing tools that explain the historical and recreational significance of areas, sites, and roads.



5. Federal agencies should coordinate with the county to promote multiple recreational uses and tourism interests on federal lands.
6. Support and encourage a year-round multiple use management approach to be used on federal lands as a means of continuing and enhancing recreation opportunities within the County and strive to manage recreation in a way that is complementary to agricultural and mineral uses.
7. Land use fees and/or fee increases, or the creation of new fees for the use of federal lands within the County by any agency without County coordination and approval are not supported.
8. Support improved accessibility, maintenance, and development of motorized and non-motorized trails to facilitate recreation and access to natural resources for residents and visitors, reflecting the no net loss of our open roads system.
9. Recreational access should not discriminate in favor of one mode of recreation to the exclusion of others.
10. Support legal off-road (cross country) access for approved uses.
11. Federal agencies should identify areas heavily used for dispersed camping and in consultation with the County, allow temporary campsite closures to support vegetation and soil restoration.
12. Federal agencies should develop a funding mechanism for all trails for improved enforcement, emergency response efforts, trail maintenance, trail improvements, and/or development of trails. Partnership with the State of Wyoming and other agencies is encouraged.
13. Support responsible recreational uses on existing roads and designated trail networks.
14. Recognize that responsible use of OHVs have become an important segment of the County recreation industry and support that they are a tool and mode of transportation for farmers, ranchers, and resource development on federal lands.
15. Support the identification of trail systems that respond to current and future demand for multiple recreational uses.
16. Require that additional trails and areas be opened if a necessity for closure arises to offset the loss of that recreation opportunity.
17. Support the implementation and maintenance of an OHV education and enforcement program on reduction of resource impacts.
18. Support the non-recreational use of OHVs in all areas for development and livestock operations unless restricted by law.
19. Federal agencies should support responsible recreation to reduce impacts to land health, agriculture, conservation efforts. These actions can be done through campaigns to reduce invasive species, education, etc.



6.2 LAW ENFORCEMENT

6.2.1 History, Custom, and Culture

Law enforcement is critically important to the citizens of Lincoln County. Law enforcement includes the Sheriff's Department, emergency services, and search and rescue. The Wyoming Livestock Board partners with the Lincoln 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.

6.2.2 Resource Assessment and Legal Framework

Law enforcement in Lincoln County includes actions on both public and private lands. Public lands within Lincoln 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 Lincoln County include Wyoming Highway Patrol, Wyoming Department of Agriculture, Wyoming Livestock Investigation Bureau, and State Park Rangers. 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.

6.2.3 Resource Management Objective:

- A. Public lands are managed for orderly use and management in coordination with the County Sheriff's office.

6.2.4 Priorities:

1. All federal and state law enforcement actions within the County should be coordinated through the County Sheriff's office.
2. Promote federal agency recognition of the County Sheriff as the primary law enforcement official in the County.
3. The 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, and fire), and/or cultural resource site disturbance on public lands.
4. The management of OHVs should be uniform across all jurisdictions, and laws related to the use of OHVs should be uniformly applied across all jurisdictions.
5. The County requires that federal agencies allow safe and unfettered access to federal land for law enforcement and emergency services.

6.3 CULTURAL, HISTORICAL, & PALEONTOLOGICAL RESOURCES

6.3.1 History, Custom, and Culture

Human activity has occurred within the County for approximately 12,000 years. Evidence of past human activity includes physical remains such as archeological sites and historic structures, traditions of Native Americans who occupied the area starting around 12,000 years ago. The land and its resources within the County greatly affected and still affects where and how people live



and settle in the area. The area has been influenced by early Native Americans, fur traders and trappers, pioneers moving west, as well as miners and oil and gas workers. The historic Oregon, California, and Mormon trails that are throughout the County provide a significant amount of cultural resources within the County including artifacts, headstones, and ruts left in the landscape. (Kemmerer Field Office, 2004)

Lincoln County has a rich paleontological history particularly from the remnants of Fossil Lake which was formed 50 million years ago; it was formed during the Eocene Epoch when southwestern Wyoming and surrounding areas of Utah and Colorado had large lakes that formed



the Green River Formation. There were several types of life that thrived within Fossil Lake including plankton, herring, predatory fish such as dogfish and gars, catfish, and crustaceans. On occasion many fish would die simultaneously due to the contamination of the upper water by hydrogen sulfide that was released by an earthquake or season turnover of waters, this die off led to formation of many fossils within the lakebed. (Hein, 2014)

6.3.2 Resource Assessment and Legal Framework

Lincoln County's traditional lifestyle has centered on agricultural pursuits and resource-based industries for generations. Preservation of the remaining historic sites is important to maintain and preserve the cultures of historic and present Lincoln County. Historic preservation of property enhances economic values and provides the basis for heritage tourism.

6.3.2.1 Historic and Archeological Resources

There are two acts that primarily protect historic and archeological resources. The National Historic Preservation Act (NHPA) was passed in 1966 and it authorized the Secretary of Interior to maintain and expand a National Register of Historic Places (NRHP). 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. 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)

In order for listing in the NRHP, a property or site must usually 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 NRHP criteria recognize these values embodied in buildings, structures, districts, sites, and objects. The four criteria are as follows:

- That are associated with events that have made a significant contribution to the broad patterns of our history; or
- That are associated with the lives of persons significant in our past; or
- 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
- That have yielded or may be likely to yield, information important in prehistory or history. (Wyoming SHPO, n.d.)

Traditional Cultural Property (TCP) are included in the NRHP and are properties eligible for inclusion based on associations with the cultural practices, traditional, beliefs, lifeways, arts, crafts, or social institutions of a living community. TCPs are rooted in a traditional community's history and are important in maintaining the continuing cultural identity of the community. (NPS, 2012)

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 eligible in its opinion for listing in the National Historic Register. See NHPA Section 101(c). [Wyoming SHPO](#)²⁹ also plays crucial roles in historic preservation, such as surveying, evaluating, and nominating historic site, buildings, and structures for the National Register (NPS, 2019d). Currently Lincoln County does not have a Historic Preservation Commission to maintain the status of a certified local government.

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 take into account the effects of their actions on historic properties. The responsible federal agency must consult with appropriate state and local officials, Indian tribes, applicants for federal assistance, and members of the public and consider their views and concerns about historic preservation issues when making final project decisions.

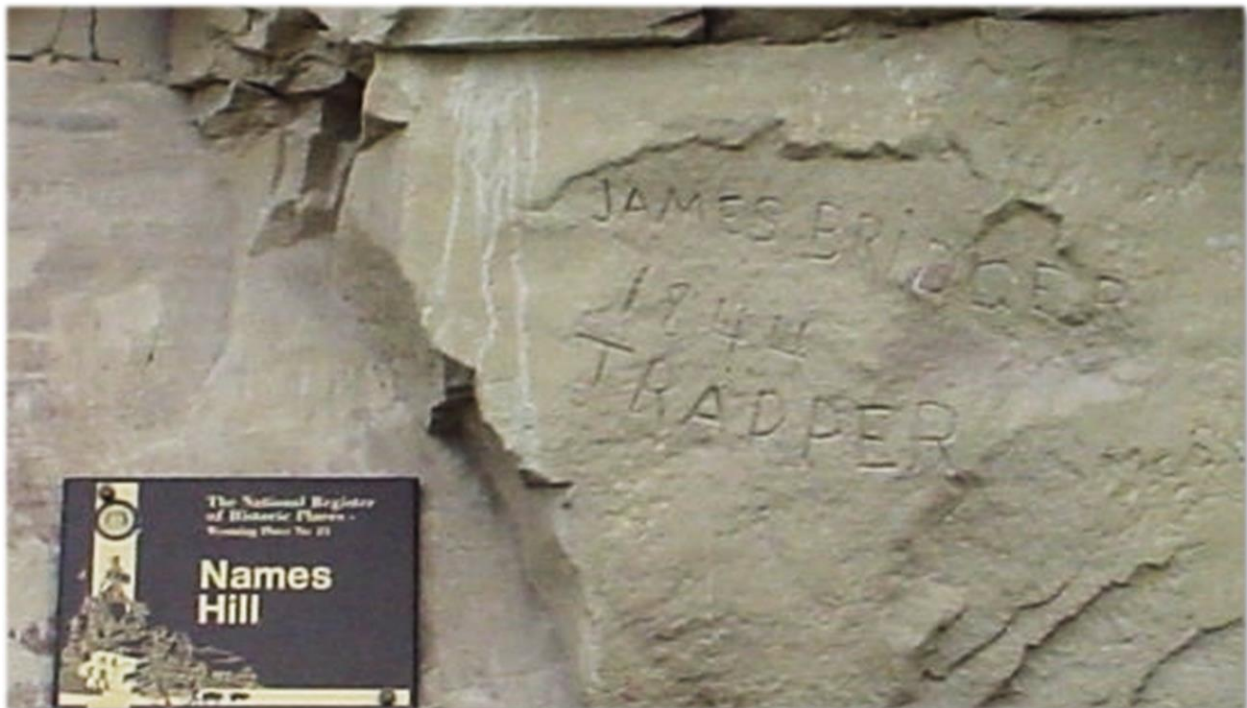
Effects are resolved by mutual agreement, usually among the affected state's SHPO or the Tribal Historic Preservation Officer (THPO), the federal agency, and any other involved parties. The ACHP may participate in controversial or precedent-setting situations.



In 2014 the act 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, so the listing criteria for placement of sites in the National Historic Register and the requirements under Section 106 remain.

Currently Lincoln County has 12 sites (not all are publicly accessible) listed in the National Register, including:

- Emigrant Springs
- Fossil Oregon Short Line Depot
- Lincoln County Courthouse
- J.C. Penney House
- J.C. Penney Historic District
- Haddenham Cabin
- Rock Church
- Johnston Scout Rocks
- Kemmerer Main Post Office
- LaBarge Bluffs Petroglyphs
- Names Hills
- Salt River Hydroelectric Powerplant (Wyoming SHPO, n.d.)



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.

6.3.2.2 Paleontological Resources

Fossils are a large part of Lincoln County history and can be found in many places throughout the County. The southern portion of the County was once a sub-tropical lake ecosystem known as the Green River Lake System. The Fossil Butte that is now the national monument is a remnant



of Fossil Lake. Fossil Butte National Monument has some of the world’s best-preserved fossils and includes fossils of fish, insects, plants, reptiles, birds, and mammals. When fossils were first discovered in the County miners dug them up to sell to collectors. There are numerous quarries on private lands in the County that continue to produce extraordinary fossil specimens both for museums and private collectors. Fossils are not considered a part of the mineral estate. Fossils are treated differently from mineral rights in that the surface owner possesses ownership of the fossil.

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](#)³⁰
- [Bureau of Reclamation Fossil Resources](#)³¹
- [U.S. Fish and Wildlife Service Historic Preservation](#)³²
- [BLM Paleontology](#)³³
- [National Park Service, Fossils and Paleontology](#)³⁴

6.3.3 Resource Management Objective:

- A. Cultural, historical, geological, and paleontological resources are to be preserved and protected for current and future public education and enjoyment.
- B. The County is coordinated with whenever there are significant cultural, historical, or paleontological artifacts found or designated on federal lands.
- C. There is a balance between protection of cultural, historical, and paleontological resources and private property rights and pre-existing uses.

6.3.4 Priorities:

1. All significant cultural, historical, or paleontological discoveries found on federal lands within the County should remain in the County.
2. Public land agencies should promote cultural, historical, and paleontological resources with educational material, signage, and information kiosks where appropriate.
3. Cooperate with state, tribal and federal authorities in identifying significant cultural resources in the County and evaluate the significance of proposed land use actions and their impact on cultural resources.
4. Federal agencies should evaluate the economic and cultural impacts associated with cultural resource identification and protection and weigh one against the other in a cost/benefit context based on the County’s unique custom and culture.
5. Support making significant local cultural resources available for research and education, and strongly urge the protection of those cultural resources. However, the County does not support unrealistic 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.

6. Discourage recognition of additional sites or structures on public land that have not played a significant part in creating the cultural, prehistoric, and historic fabric of the community.
7. Coordinate management decisions regarding cultural resources with the County.
8. Sites and trails should be allocated to other resource users based on their natural and relative preservation value. Such use allocation must be based on cultural resources not areas of land.
9. Potential adverse effects to significant and high-quality cultural resources will be managed to the extent possible through avoidance and confidentiality of location before other protections are considered.
10. Require preservation and accessibility to sites that represent a unique culture and have a close relation to early religious settlement of the area that are held by many County residents as reverent or consecrated sites.
11. Support the preservation and perpetuation of heritage and culture as it is important to the area economy as well as to the lifestyles and quality of life of County residents.
12. Encourage the maintenance of cultural resources and their physical attributes such as trails, cabins, livestock facilities, etc.
13. Require the consideration of the land, its people, and their heritage of the area residents and this relationship in all proposed actions.
14. Require preservation and perpetuation of livestock grazing, as the lifestyle and imprint on the landscape is some of the oldest enduring and economically important cultural and heritage resources.

6.4 SOCIOECONOMIC AND ECONOMIC VIABILITY

6.4.1 History, Custom, and Culture

Lincoln County is 70% federally owned land with over 1.9 million acres of land under federal control. The main economic drivers within the County are agriculture, mining of coal, oil and gas, with tourism and recreation on the rise.

An impending economic issue for Lincoln County and for the State of Wyoming is the uncertainty facing the energy industries. Wyoming is the largest producer of coal in the U.S. and coal provides one of the largest revenue streams for local and state governments. Lincoln County and the State are currently facing closures of coal mines and coal fired power plants. (Bank of Star Valley, 2019)

6.4.2 Resource Assessment and Legal Framework

Lincoln County has a population of approximately 18,791 (Data USA, 2020). Since 2000 the population within the County has increased by 36% and between 2017 and 2018 the Wyoming Economic Analysis Division estimated that the population in Lincoln County increase 0.90% or 169 people (Bank of Star Valley, 2019). In 2018, there were approximately 10,891 jobs within the



County with service industries representing 5,756 jobs, non-service industries representing 3,071 jobs, and government jobs representing 1,972 jobs. From 2001 to 2018 jobs in the non-services related industry grew 12% while jobs in the service industry grew 53%. The three industry sectors with the largest number of jobs were government (1,972 jobs), retail trade (1,091 jobs), and farming (695 jobs). The sectors that added the greatest number of jobs between 2001 and 2018 were government (415 new jobs), real estate and rental and leasing (377 new jobs), and health care and social assistance (264 new jobs). (Headwaters Economics, 2020)

The highest paid industries within the County are utilities (\$89,833), mining/quarrying/oil and gas (\$73,806), and agriculture/forestry/fishing and hunting (\$72,642). The median household income in Lincoln County is \$52,971. Many people from the Alpine and Star Valley areas commute to the Jackson area for work. (Data USA, 2020)

Lincoln County is a member of the Coalition of Local Governments (CLG) in southwest Wyoming. The CLG of southwest Wyoming consists of the county commissioners and conservation districts in Lincoln, Sweetwater, Sublette, and Uinta Counties. THE CLG is committed to access and multiple use of public resources such as timber, fish, wildlife, recreation, water, mineral, grazing and other appropriate uses.

Further economic information for Lincoln County can be found in the Bank of Star Valley's Economic and Demographic Report which is published every year and can be found on the main Bank of Star Valley [website](#)³⁵.

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 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 Trump Administration and the Council on Environmental Quality announced major regulation reforms to NEPA, including new rules trying to clarify what is a “major federal action.” The new regulations clearly demarcate that only actions that include major federal involvement and are major in scale are those actions that require NEPA. This means that those projects that the government has a minor role are not included. This also means that minor actions (such as allowing certain range improvements on a grazing allotment) are not included. *See* 85 F.R. 43304 (July 16, 2020). As of the finalization of this plan the rule is being challenged by several states and organizations.

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 Environmental Impact Statement (EIS). The regulatory



requirements for an EIS are more detailed and rigorous than the requirements for an Environmental Assessment (EA). NEPA does not mandate particular 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.

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).

6.4.3 Resource Management Objectives:

- A. Federal agencies evaluate and consider the County's socioeconomic and economic viability in all federal decisions. The socioeconomic and economic viability of the County are protected and enhanced.
- B. The county is coordinated and given opportunity to be cooperating agency when a decision that will impact the county socioeconomic and economic viability is being considered.
- C. New economic industries and opportunities are promoted on federal lands.
- D. Agencies follow the timing and page limit requirements set forth in the 2020 CEQ NEPA regulations.
- E. The County is included early in the scoping process whenever an agency action or decision may impact the economic or socioeconomic viability of the County.



6.4.4 Priorities:

1. Consultation and coordination with the County should occur 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. Support consultation and coordination with the County to determine the full scope of potential social and economic effects of activities proposed on public lands, including impacts to circulating dollars when access and use of federal land is proposed.
3. Support continued access to natural resources development/use on federal lands to maintain economically viable communities in our County.
4. Support “no net loss” in the County economic base due to federal agency decisions. Include the County in all discussions regarding mitigation if necessary, to protect the economic base of the County.
5. 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.
6. Promote the economic and socioeconomic growth of the County and consultation and coordination between federal agencies and the County regarding any issues and activities on public land that affect or influence the economic and socioeconomic viability of the County.
7. Federal agencies should streamline the permitting process for new multiple uses that will bring economic diversity to the county.
8. Lincoln County supports Order No. 3355 Streamlining of NEPA which states that EIS’s should be completed within 1 year from the issuance of a Notice of Intent and 150 pages or less excluding appendices and should follow the proposals developed by each federal agency for timelines and page limits for EAs.



CHAPTER 7: AGRICULTURE

7.1 AGRICULTURAL PRODUCTION

7.1.1 History, Custom, and Culture

Agricultural lands contribute to the County's landscape and scenic beauty and provide wildlife habitat, open space and recreational opportunities for residents and visitors alike for 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. Agriculture also provides numerous opportunities for environmental stewardship to benefit local ecosystems and serves as key component of the County's sustainable economy.



Public land grazing is essential to maintaining the agricultural industry in Lincoln 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.

7.1.2 Resource Assessment and Legal Framework

Agricultural production is an important part of the Lincoln County economy. In 2017 the market value of agriculture products in Lincoln County was up 17% from 2012, totaling \$47,860,000. The 2017 market value for livestock products was \$36,396,000 and for crop products was \$11,166,000. In 2017 there were 364,892 acres of farmland in the County. Hobby farms and ranchettes have increased in number over the last 10 years within the County. Agriculture is a major source of revenue and employment for Lincoln County. (United States Department of Agriculture National Agricultural Statistics Service et al., 2014; USDA, 2017)

Irrigated agricultural lands rely 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 US Census of Agriculture Lincoln County had 81,307 acres of irrigated land, or 22% of the farmland in the County. This makes the retention and proper management of water rights a priority for the



citizens of Lincoln County. (United States Department of Agriculture National Agricultural Statistics Service et al., 2014; USDA, 2017)

The basis for these policy statements in this NRMP is to carry out the state law mandate to protect agricultural practices through the ‘Right-to-Farm’ statutes as listed below.

7.1.2.1 Right to Farm Laws

Right 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.”

“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.” (W.S. 11-44-104(a)) (National Agricultural Law Center, n.d.)

The basis for these policy statements in this NRMP is to carry out the state mandate to protect agriculture.

7.1.3 Resource Management Objectives:

- A. Agricultural production is maintained as a viable and major component of the economy, custom, and culture of the County.
- B. Federal actions affecting agriculture are to be made in consultation with the County.

7.1.4 Priorities:

1. 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 production.
2. Support and assist agencies in quickly processing permits on federal lands for the construction, maintenance, or expansion of irrigation distribution systems to private lands, and allowing maintenance where those rights already exist through a range improvement agreement.
3. Federal agency actions shall be consistent with Right to Farm laws, to the extent applicable. Right to Farm laws shall be considered when coordinating on federal and state land use decisions.
4. Support production agriculture and the conscientious 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 Lincoln County should be considered justification for economic compensation and restoration by the responsible party to the property owner at current market values.



6. Wildlife and federal lands managers, including but not limited to the BLM, USFS, USFWS, USACE, BOR, NPS, and WGF, are expected to coordinate with private property owners to minimize impacts to private property.
7. Support streamlining the application process for range improvements. Proposed range improvements should be approved in six months or less.
8. Promote the creation of watershed BMPs by federal agencies in coordination with local conservation districts to mitigate water pollution from heavy erosion and sedimentation from public lands, and to work with local conservation districts in accomplishing these BMP's.

7.2 LIVESTOCK AND GRAZING

7.2.1 History, Custom, and Culture

The vegetation in Lincoln County evolved under tens of thousands of years of grazing and periodic fire, and the interaction of the two. Grazing in the region began to shape the modern vegetation we see today around 18,000 years ago in the Pleistocene. These grazers included ancient muskox, antelope, Pleistocene bighorn sheep, ancient bison, camels as well as mammoths. Additionally, there were predators such as wolves, American cheetahs, American lions, wolverines, short-faced bears, and eventually humans who used fire to manage grazing. (Martin & Gilbert, 1978; US National Park Service, 2015)

Eventually these species were replaced by the wildlife we know today. Wildlife, wildfire, and early humans continued to shape the vegetation of the basin. In the late 1600's to mid-1700's Native Americans obtained the horse and became forage managers as well as wildlife managers, manipulating the vegetation and animal populations.



Permitted grazing on public lands is a critical piece of livestock operations in Lincoln County. The intermingled BLM and private lands allow ranching to continue in the County. The low percentage of private lands in the County means that access to public lands is critical to the continued ability to maintain the ranching

community and the viability of the County. Public lands allow private lands to grow hay in the summer months that provides forage for livestock during the harsh winters.

Livestock grazing has been an important industry in Lincoln County since early settlement. It continues to be a vital part of the custom and culture of the County as well as a critical economic driver. The most efficient operations use a combination of private and federal lands. Historically, ranchers across Wyoming have grazed animals on open ranges and mountains on federal and



state lands during summer months and moved the stock to private lands during the winter months where livestock can be fed hay from the irrigated pastures. Such operations are some of the most efficient, sustainable, and economically productive for producing livestock.

Brucellosis transmission from elk to cattle is a concern for cattle operations surrounding the Greater Yellowstone Ecosystem (GYE). Designated Surveillance Areas (DSA) have been established in Idaho, Montana, and Wyoming surrounding the GYE to control brucellosis in these higher risk areas. The Wyoming Livestock Board (WLB) manages the DSA within Wyoming. Cattle operations within the Wyoming DSA are required to Official Calfhood Vaccinate, or OCV, all reproductive female cattle. Cattle are required to test negative for brucellosis before changing ownership or leaving the DSA. The Wyoming DSA parts of Park and Fremont Counties, all of Teton and Sublette Counties, and Lincoln County north of Cokeville. (Barnyards and Backyards, 2009; Portacci, 2014)

The contribution of the ranching industry to the County goes beyond the critical economic livestock sales. Studies in similar counties have shown that ranchers tend to spend the majority of their dollars in the County they reside in on fuel, food, supplies, and equipment. A thriving agriculture industry helps maintain local economies. (Miller & Heaton, 2015)

7.2.2 Resource Assessment and Legal Framework

With the federal agencies managing most of the rangeland in the County, ranchers rely on obtaining federal grazing leases. A large part of the vegetation in the County is lower producing saltbush and sagebrush areas, while many of the forested leases are highly productive but with limited forage available due to dead and downed timber. Low-productivity rangelands makes for a narrow profit margin. When agencies make a management decision without considering the economic impact on a rancher or a group of ranchers they can be impacted along with the local community. 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 Lincoln County.



Reduction in livestock numbers on federal and state lands can be a result of natural factors, including wildfire and drought. The primary factors in determining livestock grazing

capacity on public land is the quality and availability of the resources. Proper grazing



management is an important tool for management of the resources, and can be used to mitigate invasive species impacts, wildfire impact, and can improve rangeland health.

Livestock grazing, irrigated farming and other intensive agriculture are integral to this community'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.

7.2.2.1 Bureau of Land Management (BLM)

The Taylor Grazing Act 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. § 315(b). The TGA gives individuals the right to apply for grazing permits on federal lands based upon the ownership of qualified base property. *Id.* 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 U.S. 728 (2000). The Secretary can modify the boundaries of a grazing district, but unless land is removed from designation as grazing, or the Taylor Grazing Act 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 Taylor Grazing Act 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 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.



Within Lincoln County there are 121 BLM grazing allotments in Lincoln County covering approximately 1.4 million acres.

7.2.2.1.1 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 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 reconstruction of a range improvement or construction of new improvements, NEPA analysis and a decision by the authorized officer is required. Range improvements, such as water developments, aid in resource management and benefit wildlife and livestock.

7.2.2.2 U.S. Forest Service (USFS)

Within Lincoln County there are 78 USFS grazing allotments covering approximately 778,315 acres. Of those there are eleven allotments that are vacant and managed as forage reserves, eight that are vacant, and eight that have been closed due to conflicts with bighorn sheep (Table 2). The eight vacant allotments were turned back to the USFS approximately 4-years ago with no preference. These allotments are still eligible to be permitted for livestock grazing through a NEPA decision, however as of the writing of this document NEPA had not yet been completed on any of the eight to permit livestock grazing. Monitoring has been occurring over the last several years on these allotments to ensure their health prior to livestock grazing being re-permitted on them. (USFS, 2016b) A map of these allotments can be found [here](#)³⁶.

Table 2. Vacant, forage reserve, and closed allotments in Lincoln County. (USFS, 2016b)

Allotment Name	Status
Mule Creek S&G*	Vacant – Forage Reserve
North Horse Creek S&G*	Vacant – Forage Reserve
Prospect Peak S&G*	Vacant – Forage Reserve
Squaw Creek – Weiner Creek	Vacant – Forage Reserve
Birch Creek – Star Peaks	Vacant – Forage Reserve
White Creek-Man Peak	Vacant – Forage Reserve
South Fork Sheep Creek*	Vacant – Forage Reserve
Marten Creek*	Vacant – Forage Reserve
Triple Peak S&G*	Vacant – Forage Reserve
Bare Mountain S&G*	Vacant – Forage Reserve
North Piney S&G*	Vacant – Forage Reserve
Stewart	Vacant
Grizzly Basin	Vacant
Blind Trail	Vacant
Deadman	Vacant



Blind Bull	Vacant
Black Canyon	Vacant
Cabin Creek	Vacant
Mosquito-Fall Creek**	Vacant
Twin Peaks Bighorn Sheep*	Closed
South Piney Bighorn Sheep	Closed
Mt. Darby Bighorn Sheep*	Closed
Grizzly Creek Bighorn Sheep*	Closed
Corral Creek Bighorn Sheep*	Closed
Pickle Pass Bighorn Sheep*	Closed
Upper Grayback-Phosphate Bighorn Sheep*	Closed
Willow Creek***	Closed

*Allotments are within Lincoln and Sublette Counties

**Allotments are within Lincoln and Teton Counties

***Allotments are within Lincoln, Sublette, and Teton Counties

7.2.2.2.1 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.

7.2.3 Resource Management Objective:

- A. Public lands continue to support livestock grazing at a level that sustains and enhances production, operational efficiencies, and ecosystem health.

7.2.4 Priorities:

1. Any allotments that have been turned back should be reissued within 1-year in coordination with the county and local conservation districts.
2. Allotments that have been turned back but met resource objectives should have NEPA started within 6 months.
3. Public lands must maintain and enhance public land grazing to retain its contribution to the local economy, customs, culture, and heritage as well as a secure national food supply.
4. Support healthy forests, rangelands, and watersheds that benefit wildlife, livestock grazing, and other multiple uses.



5. Support proven techniques and tools for management programs that are founded in credible data and initiatives that are implemented to increase forage for the mutual benefit of the watersheds, livestock operations, and wildlife species.
6. Support the conversion of livestock AUMs (i.e. sheep to cattle or cattle to sheep) at established equivalencies.
7. Oppose reductions of forage allocated to livestock for other uses including wildlife. Current livestock forage allocation will be maintained.
8. Support financially the needed structural and vegetation improvements to ensure there is sufficient forage, particularly when there is pressure from other land uses.
9. Support the continued viability of livestock operations and the livestock industry on federal lands within the County through management of the lands and forage resources, by the proper optimization of animal unit months for livestock, in accordance with the multiple use provisions of FLPMA, 43 U.S.C. § 1701 et seq. and the provisions of the Taylor Grazing Act of 1934, 43 U.S.C. § 1901 et seq.
10. Land management plans, programs, and initiatives should provide that the amount of domestic livestock forage, expressed in animal unit months, for permitted, active use, as well as wildlife forage, be no less than the maximum number of animal unit months sustainable by range conditions in grazing allotments and districts, based on an on-the-ground and scientific analysis.
11. Oppose the relinquishment or retirement of grazing animal unit months in favor of conservation, wildlife, wild horses, and other uses.
12. Oppose the transfer of permitted animal unit months to wildlife or wild horses.
13. Require that any reductions or suspensions in domestic livestock animal unit months be temporary and scientifically based upon rangeland conditions.
14. Policies, plans, programs, initiatives, resource management plans, and forest plans may not allow the placement of grazing animal unit months in a suspended use category unless there is a rational and scientific determination that the condition of the rangeland allotment or district in question will not sustain the animal unit months proposed to be placed in suspended use.
15. Any grazing animal unit months that are placed in a suspended use category should be returned to active use when range conditions improve.
16. Policies, plans, programs, and initiatives related to vegetation management should recognize and uphold the preference for domestic grazing over alternate forage uses in established grazing districts while upholding management practices that optimize and expand forage for grazing and wildlife in conjunction with state wildlife management plans and programs in order to provide maximum available forage for all uses.
17. In established grazing districts, animal unit months that have been reduced due to rangeland health concerns should be restored to livestock when rangeland health improve and should not be converted to wildlife use.
18. Support the proper management and allocation of forage on public lands which is critical to the viability of the County's agriculture, recreation, and tourism industries.



19. Oppose any agency efforts to restrict the development of livestock water or other rangeland improvements.
20. Increases in available forage resulting from practices or improvements implemented by managing agencies should be allocated proportionately to all forage allocations unless the funding source specifies the benefactor.
21. Upon termination of a permit, the livestock permittee will be compensated for the remaining value of improvements or be allowed to remove such improvements that permittee made on his/her allotment.
22. Forage reductions resulting from forage studies, fire, drought, or other natural disasters should be implemented on an allotment basis and applied proportionately based on the respective allocation to livestock, wildlife, and wild horses.
23. Reductions resulting from forage studies using credible data should be applied to the allocated use responsible for the forage impact.
24. Rangeland health assessments must identify all causal factors (such as wildlife, weather, fire, etc.) when there is a failure to meet the Wyoming Standards for Healthy Rangelands.
25. Livestock grazing uses should not be reduced to compensate for or mitigate the impacts of other causal factors.
26. Permittees may sell or exchange permits, and such transactions should be promptly processed.
27. The individual that files for an improvement/development permit on BLM shall be allowed to manage the resource and the permit shall be in their name if it is approved.
28. The individual that files for an improvement/development permit on USFS should be allowed to manage the resource and the permit should be in their name if it is approved.
29. Changes in season of use or forage allocation must not be made without full and meaningful consultation with the permittee.
30. The permitted seasons of use set forth in a management plan may be adjusted and still be in conformance with the plan if:
 - a. Meeting, maintaining, or making progress towards meeting outcomes for range management developed cooperatively with the permittee/lessee.
 - b. Managing agency and the permittee sign an agreement documenting monitoring plan.
 - c. With coordination, consultation, and cooperation the managing agency should develop grazing management practices determined necessary including those that provide for physiological requirements of desired plants.
31. Livestock allocations must be protected from encroachment or depredation by wild horses and wildlife.
32. Increases or decreases in grazing allocations reflecting changes in available forage will be based on the vegetative type of that forage and applied proportionately to livestock or wildlife based on their respective dietary need.
33. Support the Wyoming State-wide Bighorn/Domestic Sheep Interaction Working Group Report (September 2004) with respect to management of domestic sheep allotments.



34. The County recognizes no “core native” Bighorn sheep areas within the County.
35. Oppose the use of mandatory separation buffers for domestic sheep but will only support voluntary separation on a case-by-case basis.
36. The County does not support allotment retirements or changes from domestic federal allotments.
37. Support and assist agencies in quickly processing grazing permits on federal lands.



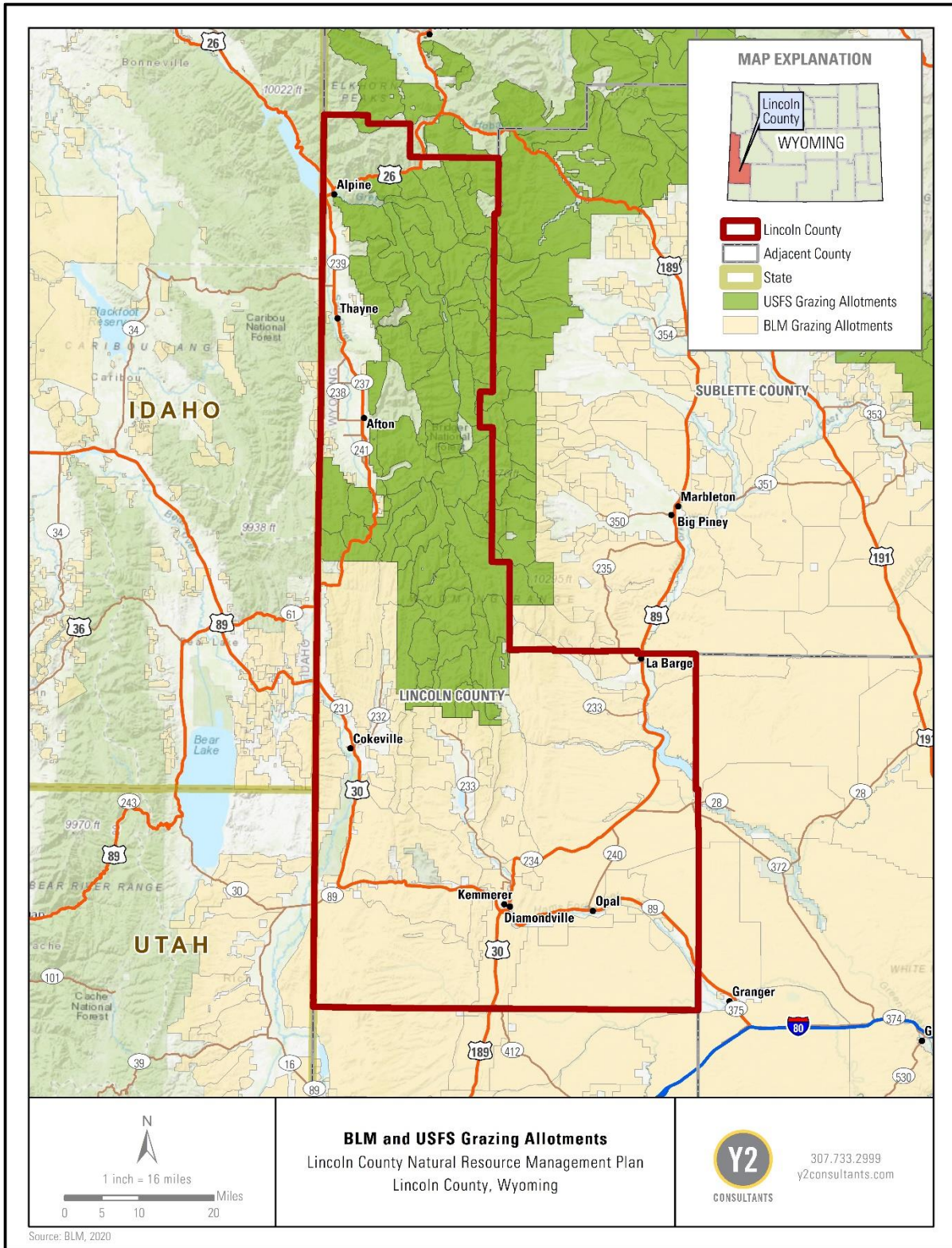


Figure 28. Lincoln County BLM and USFS grazing allotments. Data is from BLM database in 2020.



7.3 NOXIOUS WEEDS AND INVASIVE SPECIES

7.3.1 History, Custom, and Culture

Lincoln County has traditionally practiced weed and pest control to increase the productivity of the various lands within the County and as a means of promoting the health, safety, and general welfare of the residents of the County. In order to do so, a fundamental goal of weed and pest management has been to hold each of the various property owners in the County responsible for the control of the weeds and pests on their land.

Lincoln County, by and through the Lincoln County Weed and Pest District, has cooperative agreements and memorandums of understandings with various State and Federal agencies. Various programs are being directed to weed and pest management; including, but not limited to the National Undesirable Plant Management Act (7 U.S.C. § 2814). The County relies upon the Lincoln County Weed and Pest Control District to declare weeds and pests in the district, and to make use of cooperative agreements, NEPA, the Wyoming Weed and Pest Act of 1973, and broad-based legal precedent to assure recognition of local conditions and circumstances in the decision-making process, and to keep the County and the public informed of these efforts.

7.3.2 Resource Assessment and Legal Framework

We often think of species in these categories as plants, and most are. However, 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, in unwanted numbers that may result in negative economic impacts. The term Noxious Weed is a legal term indicating that by law the species must be controlled. Failure to comply with the Noxious Weed laws may result in legal action. Ongoing programs to identify locations of all noxious weeds and pests and initiate management and/or eradication efforts will continue. All State agencies are required to control noxious weeds and pests on State managed lands and state law provides for cooperation with the federal agencies in controlling noxious weeds and pests on all federally managed lands. Current control tactics 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); and Board of County Commissioners actions (emergency declarations, budgeting, public meetings, etc.) (Wyoming Weed and Pest Council, n.d.). Cooperative agreements and legal actions, if warranted, may be utilized to assure protection of vital land resources from noxious weed and pest occupation or invasion.

The Wyoming Weed and Pest Act of 1973, as enacted by the legislature of Wyoming, establishes the guidelines for creating Weed and Pest Control Districts and the regulations which govern the districts. Within the Act, the composition of districts is defined at W.S. § 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 W.S. § 11-5-102. The Weed and Pest Act of 1973 in W.S. § 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.” (W.S. §11-5-109e)

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. In recent years drought conditions have led State and Federal agencies to focus funds on fighting and protecting against wildfires rather than weed and pest management.

Lincoln County is working to suppress and eradicate all federally designated, State of Wyoming designated, and Lincoln County declared weeds and pests. The current federal noxious weeds list is maintained on the [USDA Plants Database](#)³⁷ (NRCS, 2019). The State of Wyoming designated list can be found [here](#)³⁸ and the Lincoln County declared weeds and pests are presented below.

Lincoln County Declared Weeds and Pests W.S. 11-5-102(a)(viii) (list as of April 2019)

- Alfalfa weevil (*Hypera postica*)
- Bull thistle (*Cirsium vulgare*)
- Mosquito (*Culicidae* spp.)
- Plains pocket gopher (*Geomys bursarius*)
- Poison hemlock (*Conium maculatum*)
- Poplar borer (*Saperda calcarata*)
- Western water hemlock (*Cicuta douglasii*)
- Wild oat (*Avena fatua*)

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.

In addition to these plants, aquatic plants like hydrilla (*Hydrilla verticillata*), Eurasian watermilfoil (*Myriophyllum spicatum*), curly pondweed (*Potamogeton crispus*) and didymo (rock snot) are of concern. While most people think of invasive species as plants, a number of animal species are



also of concern such as aquatic invasive species like zebra and quagga mussels, New Zealand mudsnail, Asian carp and rusty crawfish. Almost all of these species can have a negative impact on irrigation structures if they become established. White pine blister rust, pine borers, and spruce bud worms can also be problem invaders in the forested regions of the County. A number of agricultural pests exist that can negatively impact the farming regions of the County.

U.S. Forest Service

The USFS has a [National Strategic Framework for Invasive Species Management](#)³⁹ 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)

Region 4 of the USFS, which includes both the BTNF and CTNF, also has an [Invasive Species Management Strategy](#)⁴⁰ that addresses invasive species by focusing efforts and resources on seven key areas which are:

1. Identify and staff key invasive species positions to implement aggressive and effective invasive species programs.
2. Develop and implement:
 - a. Region 4 invasive species strategy
 - b. Forest invasive species risk assessments
 - c. Forest invasive species management plans
 - d. District invasive species action plans
3. Promote Region-wide use of weed-free materials.
4. Initiate short-term “rehabilitation” considering desirable native and/or non-native seedings where sites are unstable.
5. Maintain National Recreation Areas free from aquatic invasive species.
6. Actively support partnership activities and new opportunities to expand effective landscape scale invasive species management.
7. Apply current business rules consistently across the Region. (USFS, 2009)

In June of 2020, the BTNF signed a Record of Decision that authorized annual treatment of approximately 20,000 acres of invasive plant species using a combination of manual treatments, mechanical treatments, biological treatments, cultural treatments, and aerial and ground herbicide applications over the next 15 years in areas such as crucial big game winter ranges and other important habitats, fuels reduction projects, roads and trails, power lines, areas of timber harvest, and beetle-killed forests. (O’Connor, 2020)



Bureau of Land Management

The BLM has a ROD for [a Final Programmatic EIS for National Vegetation Treatments using Aminopyralid, Fluroxypyr, and Rimsulfuron on BLM lands](#)⁴¹ in 2016 and tiers to the [2007 Final Programmatic EIS for Vegetation Treatments Using Herbicides on BLM Lands in 17 Western States](#)⁴². The BLM keep the National Invasive Species Information Management System (NISIMS) database which provides a comprehensive tool for managers to use to standardize collection of invasive species and treatment data. The database can be found [here](#)⁴³.

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 provides a clear call to action to be informed, attentive, and accountable for stopping the spread of all invasive species. (NAISMA, n.d.)

7.3.3 Resource Management Objective:

- A. Noxious and invasive species are to be managed, in coordination with the County, in a sustainable and effective manner that uses credible data and integrated pest management (IPM) addressing biology and ecology of the pest and system.
- B. Noxious and invasive species management is developed comprehensively with IPM.

7.3.4 Priorities:

1. Federal agencies should support integrated pest management in management of noxious weeds on public lands.
2. Support and encourage control efforts focused on the control of all federally listed, State of Wyoming designated, and Lincoln County declared weeds and pests.
3. Federal agencies should coordinate with the County and other agencies to allow Weed and Pest Control District road access across state and federal lands to access infestations on public and private lands, as is required for the suppression of invasive species and pests even on wilderness areas and wilderness study areas.
4. Support and encourage cooperative efforts with state, federal, and private landowners/managers to enhance cooperative weed and pest management efforts Countywide as required by agency mandates; coordinated with, and primarily managed by, the Lincoln County Weed and Pest Control District.
5. All property owners/managers, including state, federal, private, and tribal property owners/managers within the County, should be responsible for controlling invasive species and pests on their property to minimize movement onto adjacent lands to the extent required by federal law and the Wyoming Weed and Pest Act.
6. Evaluate prescribed burns as a means of controlling weed species and revitalizing rangeland vegetation to support and expand multiple use.



7. Encourage prescribed grazing to control invasive, noxious, and nuisance plant species. State and federal land managers should provide flexibility to and work with permittees to achieve this as a control method.
8. Support cheatgrass control research. The County recognizes the spread of cheatgrass on public lands as one of the most severe present-day threats to grassland and sagebrush ecosystems, wildlife population health, and livestock grazing.
9. Weed management plans are required to identify funding sources and control of noxious weeds as a full interagency collaborative effort.
10. Support and encourage development of a policy regarding adequate notice to all parties responsible for noxious weed control in the area.
11. Any habitat enhancement projects that do not have a defined and funded weed control and monitoring plan for the anticipated life of the enhancement are not supported.
12. Support the federal agencies' development of an environmental analysis to expand weed control options.
13. Encourage implementation of federal and local Weed Management Plans, including mapping of all noxious weed populations.
14. Support federal monitoring efforts to accurately identify the extent of noxious weed infestations, and the identification of dispersal mechanisms where possible.
15. Support the prevention and management of aquatic nuisance species (i.e., zebra mussels, quagga mussels) and other invasive species on all waters within Lincoln County.
16. Support education programs for public and private land users regarding all possible vectors of weed spread.
17. Support preparation and compliance with a plan including ensuring adequate funding to control noxious weeds on federal lands.
18. Develop a good neighbor program that allows safe reporting of infestations on state, federal, and private lands.
19. Support the use of aerial devices (i.e., drones, fixed wing, helicopters, and other aircraft) for weed monitoring and control where feasible.
20. Support herbicide use in wilderness areas and wilderness study areas.
21. Federal agencies should coordinate with local weed and pest districts regarding approved herbicide lists.



REFERENCES

- Anderson Consulting Engineers, Inc. (2015). Blacks Fork River Watershed Level I Study Phase I: Hams Fork.
- Anderson, R. (2020). History of Lincoln County—Star Valley Historical Society [Personal communication].
- 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>
- Audiovisual Library of International Law. (2020). United Nations Framework Convention on Climate Change—Main Page. <https://legal.un.org/avl/ha/ccc/ccc.html>
- Bank of Star Valley. (2019). The Bank of Star Valley 2019 Star Valley Economic and Demographic Review. <https://www.bosv.com/Media/BOSV/pdf/2019-Economic-Analysis.pdf>
- Barnyards and Backyards. (2009). Barnyards and Backyards: Ask Sam: Brucellosis. http://www.uwyo.edu/barnbackyard/_files/documents/magazine/2009/summer/ask-sam-brucellosis-summer-bb-2009.pdf
- BLM. (n.d.-a). Areas of Environmental Concern. Retrieved July 23, 2020, from https://www.blm.gov/or/plans/rmpswesternoregon/files/prmp/RMPWO_V1_Chapter_3_ACEC.pdf
- BLM. (n.d.-b). 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. (2007). The Gold Book—4th Ed—Revised 2007.pdf. <https://www.blm.gov/sites/blm.gov/files/uploads/The%20Gold%20Book%20-%204th%20Ed%20-%20Revised%202007.pdf>
- BLM. (2010a). Kemmerer BLM RMP ROD. https://eplanning.blm.gov/public_projects/lup/63198/77649/86669/Record_Of_Decision_Approved_RMP.pdf
- BLM. (2010b). BLM Wyoming Sensitive Species Policy and List. <https://www.blm.gov/download/file/20067>
- BLM. (2011, April). HA and HMA Index Map Wyoming. https://www.blm.gov/sites/blm.gov/files/wildhorse_maps_doc10.pdf
- BLM. (2015). Renewable Energy Bonding. <https://www.doi.gov/ocl/renewable-energy-bonding>
- BLM. (2016a, 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. (2016b, September 30). Programs: National Conservation Lands: About: Wilderness [Text]. <https://www.blm.gov/programs/national-conservation-lands/wilderness>
- BLM. (2016c, November 22). Programs: Wild Horse and Burro: Herd Management: Herd Management Areas: Wyoming: Little Colorado HMA [Text].



- <https://www.blm.gov/programs/wild-horse-and-burro/herd-management/herd-management-areas/wyoming/little-colorado>
- BLM. (2017). Programs: National Conservation Lands: Wyoming: Raymond Mountain WSA [Text]. <https://www.blm.gov/Programs/National-Conservation-Lands/Wyoming/Raymond-Mountain-WSA>
- BLM. (2020, 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, K. (2018). Local Government Participation in Federal Agency Decision Making.
- Bureau of Reclamation. (2018, August 5). The Bureau of Reclamation- A Very Brief History [Government]. Reclamation History. <https://www.usbr.gov/history/borhist.html>
- 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>
- Bureau of Reclamation. (n.d.). The Story of the Palisades Project. 3.
- Bureau of Reclamation—About Us. (2019, January 30). Bureau of Reclamation. <https://www.usbr.gov/main/about/>
- Caribou Loop Trail. (n.d.). Who We Are – Caribou Loop Trail. Retrieved October 26, 2020, from <https://cariboulooptrail.com/index.php/about-page/>
- Chilton, J. (2019). Wyoming helium production helps keep world supply afloat. Cowboy State Daily. <https://cowboystatedaily.com/2019/05/30/wyoming-helium-production-helps-keep-world-supply-afloat/>
- Clark. (2014). Lincoln County, Wyoming | WyoHistory.org. <https://www.wyohistory.org/encyclopedia/lincoln-county-wyoming>
- Clary, W. P., Webster, B. F., & USFS Intermountain Research Station. (1989). Managing grazing of riparian areas in the Intermountain Region (INT-GTR-263; p. INT-GTR-263). U.S. Department of Agriculture, Forest Service, Intermountain Research Station. <https://doi.org/10.2737/INT-GTR-263>
- Colorado, W. E. (2015, February 27). Call it a compact: Why examining the limits of Colorado River sharing is key to a successful state water plan. Water Education Colorado.



- <https://www.watereducationcolorado.org/publications-and-radio/blog/call-it-a-compact-why-examining-the-limits-of-colorado-river-sharing-is-key-to-a-successful-state-water-plan/>
- 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.
- Dance, D. (2018). NEW PICTURES OF PORCUPINE SLIDE IN GREYS RIVER – Star Valley Weather. <https://blog.starvalleyweather.com/2018/03/16/new-pictures-of-porcupine-slide-in-greys-river/>
- Data USA. (2020). Lincoln County, WY | Data USA. <https://datausa.io/profile/geo/lincoln-county-wy>
- deCalesta, D. S. (n.d.). Predator Control: History and Policies. Oregon State University Extension Service.
- Del Bene, T. A. (2014a). The Lander Trail: National Road Building Comes to Wyoming | WyoHistory.org. <https://www.wyohistory.org/encyclopedia/lander-trail-national-road-building-comes-wyoming>
- Del Bene, T. A. (2014b). Trails across Wyoming: The Oregon, Mormon Pioneer and California Routes | WyoHistory.org. <https://www.wyohistory.org/encyclopedia/trails-across-wyoming-oregon-mormon-pioneer-and-california-routes>
- DrillingEdge. (2020). Lincoln County, WY Permits, Production, Wells & Operators. <http://www.drillingedge.com/wyoming/lincoln-county>
- EA Team. (2018). Fontenelle_Dam-Outworks_Infrastructure_Completion_Level_II_Study-Executive_Summary-2018.pdf. http://library.wrds.uwyo.edu/wwdcrept/Fontenelle_Dam/Fontenelle_Dam-Outworks_Infrastructure_Completion_Level_II_Study-Executive_Summary-2018.pdf#page=1&toolbar=1&pagemode=none
- ECI. (2004). Viva Naughton Enlargement Level II Study—Executive Summary.
- EPA, O. (2014, April 11). Process of Reviewing the National Ambient Air Quality Standards [Policies and Guidance]. US EPA. <https://www.epa.gov/criteria-air-pollutants/process-reviewing-national-ambient-air-quality-standards>
- 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>
- Executive Order 13352. (2017, July 31). FedCenter. <https://www.fedcenter.gov/Bookmarks/index.cfm?id=57>
- 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).
- 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=6331cc6b45734c4eabfd e6102d5fc0b1&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). FEMA Community Status Book Report: Communities Participating in the National Flood Program. <https://www.fema.gov/cis/WY.html>
- Global Energy Institute. (2013, February 1). Benefits of Keystone XL. Global Energy Institute. <https://www.globalenergyinstitute.org/benefits-keystone-xl>
- Global Energy Monitor. (2020, July 11). Naughton Power Plant. Global Energy Monitor. https://www.gem.wiki/Naughton_Power_Plant
- Headwaters Economics. (2020). A Profile of Socioeconomic Measures for Lincoln County, Wyoming.
- Hein, A. (2014). Fossil Butte National Monument | WyoHistory.org. <https://www.wyohistory.org/encyclopedia/fossil-butte-national-monument>
- Holt, R. (2020). Lake Viva Naughton Hydroelectricity [Personal communication].
- Jenkins, P. C., Wolf, T. D., & Connelly, K. (2013). Board of Lincoln County Commissioners. 3. Kemmerer Field Office. (2004). Cultural_Resources_Overview.pdf. https://eplanning.blm.gov/public_projects/lup/63198/77667/86849/Cultural_Resources_Overview.pdf
- LCCWPP. (2015). Lincoln County Community Wildfire Protection Plan. <https://gacc.nifc.gov/gbcc/dispatch/wy-tdc/home/sites/default/files/site-files/CWPP.pdf>
- LCD. (2011). Lincoln Conservation District—Home Page. <https://www.lincolnconservationdistrict.org/index.html>
- Lincoln County. (n.d.-a). Big Spring Scenic Backway Brochure.
- Lincoln County. (n.d.-b). Lincoln County Boards and Commissions. Retrieved July 20, 2020, from https://www.lcwy.org/government/county_commissioners/boards_and_commissions.php
- Lincoln County Board of County Commissioners. (2000). Lincoln County R.S. 2477 Resolution.
- Lincoln County Board of County Commissioners. (2016). 2016 Lincoln County R.S. 2477 Resolution.
- Lincoln County: Periodic Spring. (n.d.). Geology of Wyoming. Retrieved July 22, 2020, from <https://www.geowyo.com/periodic-spring.html>
- Lloyd, E. (1970). The History of Cokeville, Wyoming. <https://digitalcommons.usu.edu/cgi/viewcontent.cgi?article=8644&context=etd>
- Martin, L. D., & Gilbert, B. M. (1978). Excavations at Natural Trap Cave. 11.
- Miller, G., & Heaton, K. (2015). Livestock Grazing on the Grand Staircase Escalante National Monument: Its Importance to the Local Economy. 2.



- 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>
- National Conference of State Legislatures. (2019, February 1). State Renewable Portfolio Standards and Goals. National Conference of State Legislatures. <http://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx>
- 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>
- National Wild and Scenic Rivers System. (n.d.). Wyoming Wild and Scenic Rivers. Wild Andd Scenic Rivers System. Retrieved March 23, 2020, from <https://www.rivers.gov/wyoming.php>
- National Environmental Policy Act 1969, Pub. L. No. 91–190 (1969).
- NPS. (n.d.). National Park Service History: National Park System Timeline. History E-Library. Retrieved November 13, 2018, from https://www.nps.gov/parkhistory/hisnps/npshistory/timeline_annotated.htm
- NPS. (2012). National Register of Historic Places—Traditional Cultural Properties (TCPs) A Quick Guide for Preserving National American Cultural Resources.
- NPS. (2019a). Fossils—Fossil Butte National Monument (U.S. National Park Service). <https://www.nps.gov/fobu/learn/nature/fossils.htm>
- NPS. (2019b). Management—Fossil Butte National Monument (U.S. National Park Service). <https://www.nps.gov/fobu/learn/management/index.htm>
- NPS. (2019c). National Trails System Act Legislation—National Trails System (U.S. National Park Service). <https://www.nps.gov/subjects/nationaltrailssystem/national-trails-system-act-legislation.htm>
- NPS. (2019d, March 5). State Historic Preservation Offices—National Register of Historic Places (U.S. National Park Service). <https://www.nps.gov/subjects/nationalregister/state-historic-preservation-offices.htm>
- NRCS. (n.d.-a). 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. (n.d.-b). Web Soil Survey. Retrieved February 25, 2019, from <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>
- 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/>
- NRCS, BLM, & USFS. (2006). Grazing Management Processes and Strategies for Riparian- Wetland Areas. <https://www.blm.gov/or/programs/nrst/files/Final%20TR%201737-20.pdf>
- O'Connor, P. (2020). Record of Decision for Invasive Plant Management for the Bridger-Teton National Forest. 31.



- 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 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
- Olsen, S. J., Miller, G., Breuer, T., Kennedy, M., Higgins, C., Walford, J., McKee, G., Fox, K., Bibb, W., & Mead, P. (2002). A Waterborne Outbreak of Escherichia coli O157:H7 Infections and Hemolytic Uremic Syndrome: Implications for Rural Water Systems. *Emerging Infectious Diseases*, 8(4), 370–375. <https://doi.org/10.3201/eid0804.000218>
- Payne, K. (2020, October 6). Bear River Compact Implications [Personal communication].
- Plafcan, M., Cassidy, E. W., & Smalley, M. L. (1993). *Water Resources of Big Horn County, Wyoming*. 148.
- Portacci, K.-A. (2014). Brucellosis regionalization risk assessment model. 63.
- RJH Consultants Inc. (n.d.). Viva Naughton Enlargement Study Description | RJH Consultants. Retrieved July 24, 2020, from <https://www.rjh-consultants.com/core-services/viva-naughton-enlargement-study>
- Ruckelshaus Institute. (2017). Greys River Collaborative, Lincoln County, Wyoming 2017 Process and Recommendations. https://www.uwyo.edu/haub/_files/_docs/ruckelshaus/collaboration/2017-greys-river/2017-greys-river-forest-collaborative-final-report.pdf
- Star Valley Conservation District. (2016). SVCD Long Range Natural Resource Plan 2016-2021. STAR VALLEY CONSERVATION DISTRICT. <https://www.starvalleycd.org/svcd-long-range-plan-2016-2021.html>
- 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
- States West Water Resources Corporation. (2013). Viva_Naughton-Enlargement_Study_Level_II_Phase_II-Executive_Summary-2013.pdf. http://library.wrds.uwyo.edu/wwdcrept/Viva_Naughton/Viva_Naughton-Enlargement_Study_Level_II_Phase_II-Executive_Summary-2013.pdf#page=1&toolbar=1&pagemode=none
- States West Water Resources Corporation, & WWDC. (2001). *Green River Basin Water Planning Process*. 178.
- Tetra Tech. (2015). Salt River Watershed, Wyoming E. coli Implementation Plan.
- The Diggins. (n.d.). Coal In Lincoln County, Wyoming. The Coal Fields™. Retrieved December 16, 2020, from <https://thecoalfields.com/usa/wyoming/lincoln-wy023>
- Tyrrell, P., & States West Water Resources Corporation. (n.d.). Wyoming Water Law Summary.



- United States Department of Agriculture National Agricultural Statistics Service, Vilsack, T., & Clark, C. Z. F. (2014). 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
- University of Wyoming. (n.d.). Wyoming Floods. Retrieved December 16, 2019, from <http://wyofloods.wrds.uwyo.edu/>
- 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>
- US Forest Service. (2013). FSH 1909.12—Process Supporting Land Management 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
- US National Park Service. (2015, February 24). Natural Trap Cave—Bighorn Canyon National Recreation Area. <https://www.nps.gov/bica/learn/nature/natural-trap-cave.htm>
- USDA. (2017). Lincoln County Profile: Agriculture Census. https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/County_Profiles/Wyoming/cp56023.pdf
- USDA Forests and Rangelands. (2014). The National Cohesive Wildland Fire Management Strategy. <https://www.forestsandrangelands.gov/strategy/thestrategy.shtml>
- USDA: Soil Science Division Staff. (2017). Soil Survey Manual (SSM). https://www.nrcs.usda.gov/wps/portal/nrcs/detail//?cid=nrcs142p2_054262
- USFS. (n.d.-a). Appendix D. Special Interest Areas Ottawa National Forest. Retrieved July 24, 2020, from https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5110701.pdf
- USFS. (n.d.-b). Bridger-Teton National Forest—History & Culture. Retrieved July 24, 2020, from https://www.fs.usda.gov/detail/btnf/learning/history-culture/?cid=fsbdev3_063676
- USFS. (n.d.-c). Caribou-Targhee National Forest—History & Culture. Retrieved July 24, 2020, from <https://www.fs.usda.gov/main/ctnf/learning/history-culture>
- USFS. (1999). Decision Document for Designation of RNA and SIA on the Bridger-Teton National Forest. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5446683.pdf
- USFS. (2000). Inventoried Roadless Areas. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsmrs_072276.pdf
- USFS. (2002). Land and Resource Management Plan for Bridger-Teton National Forest.
- USFS. (2008). Snake River Headwaters, Wyoming. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsbdev3_062526.pdf
- USFS. (2009). Invasive Species Management Strategy. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5182307.pdf
- 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. (2016a). Palisades Wilderness Study Area. <https://tetonwpli.files.wordpress.com/2016/12/palisades-wsa-fact-sheet1.pdf>
- USFS. (2016b). Rocky Mountain Region Shoshone National Forest. 1.



- USFS. (2016c, June). Intermountain Region 4 (R4) Threatened, Endangered, Proposed, and Sensitive Species. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5370041.pdf
- 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). Species By County Report- Lincoln County. Retrieved July 20, 2020, from <https://ecos.fws.gov/ecp0/reports/species-by-current-range-county?fips=56023>
- USFWS. (n.d.-c). 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). U.S. Fish & Wildlife Service—Migratory Bird Program | Conserving America’s Birds. <https://www.fws.gov/birds/policies-and-regulations/laws-legislations/bald-and-golden-eagle-protection-act.php>
- USFWS. (2018c, 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. (2018d, March 22). About: Mission | National Wildlife Refuge System. <https://www.fws.gov/refuges/about/mission.html>
- USFWS. (2019). About the Refuge—Cokeville Meadows—U.S. Fish and Wildlife Service. https://www.fws.gov/refuge/Cokeville_Meadows/about.html
- USFWS. (2020). USFWS: Laws that Protect Bald Eagles. <https://www.fws.gov/midwest/eagle/history/protectations.html>
- Utah Division of Water Rights. (n.d.). History of the Bear River Compact. Retrieved August 17, 2020, from <https://waterrights.utah.gov/techinfo/bearrivc/history.html>
- WACD. (n.d.). About WACD. Retrieved September 26, 2019, from <http://www.conservewy.com/ABOUT.html>
- Washuta, A., & Perkins, D. (2018). Invasive Exotic Plant Monitoring at Fossil Butte National Monument: 2018 Field Season. 84.
- 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 Quality Assessment | Water Quality. Retrieved December 16, 2019, from <http://deq.wyoming.gov/wqd/water-quality-assessment/>
- WDEQ. (n.d.-f). 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. (2013). Wyoming Surface Water Classification List.



- WDEQ. (2018a). Wyoming's Final 2016/2018 Integrated 305(b) and 303(d) Report. 229.
- WDEQ. (2018b). Water Quality Rules and Regulations Chapter 1: Wyoming Surface Water Quality Standards.
- WDEQ. (2018c). Wyoming Department of Environmental Quality Air Quality Division Standards and Regulations- Chapter 2: Ambient Standards. WY Department of Environmental Quality.
- WDEQ. (2020). 2020_Integrated-305b-and-303d-Report.pdf. http://deq.wyoming.gov/media/attachments/Water%20Quality/Water%20Quality%20Assessment/Reports/2020_Integrated-305b-and-303d-Report.pdf
- Western EcoSystems Technology, Inc. (2018a). Environmental and Recreational Water Use Analysis for the Bear River Basin, Wyoming (Bear River Basin Plan Update, p. 61).
- Western EcoSystems Technology, Inc. (2018b). Environmental and Recreational Water Use Analysis for the Green River Basin, Wyoming (Green River Basin Plan Update, p. 130).
- 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. (2004). WY_ELKFEEDGROUNDS.pdf. https://wgfd.wyo.gov/WGFD/media/content/PDF/Wildlife/WY_ELKFEEDGROUNDS.pdf
- WGFD. (2014). AIS_WHIRLINGDISEASE_INFO.pdf. https://wgfd.wyo.gov/WGFD/media/content/PDF/Fishing/AIS_WHIRLINGDISEASE_INFO.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. (2020a). Wyoming Aquatic Invasive Species Locations. <http://wgfd.maps.arcgis.com/apps/webappviewer/index.html?id=935acbec194f4d42823af3db59272409>
- WGFD. (2020b). 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>
- 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>
- WSGS. (2020). Interactive Oil and Gas Map of Wyoming- Carbon County. <https://www.arcgis.com/apps/webappviewer/index.html?id=3f7ab99343c34bd3ac5ae6ac8c04d95a/>
- WWC Engineering, AECOM, ERO Resources Corp., & WWDC. (2010). Green River Basin Plan. <http://waterplan.state.wy.us/plan/green/2010/finalrept/finalrept-GRB.pdf>
- 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. (2006, May). Platte River Basin Plan. http://waterplan.state.wy.us/plan/platte/2006/finalrept/Final_report.pdf
- WWDC. (2018). State of Wyoming Public Water System Survey Report. <https://wwdc.state.wy.us/watsys/2018/raterept.pdf>
- 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 Office of Tourism. (2019). Star Valley Scenic Byway. Travel Wyoming. <https://travelwyoming.com/listing/star-valley-scenic-byway/>
- Wyoming SHPO. (n.d.). Criteria for National Register. Retrieved April 24, 2020, from <https://wyoshpo.wyo.gov/index.php/programs/national-register/criteria-for-national-register>
- Wyoming State Geologic Survey. (2020). Wyoming River Basin Plans. <https://www.wsgs.wyo.gov/water/river-basin-plans.aspx>
- Wyoming State Water Plan. (n.d.). Wyoming State Water Plan—Snake/Salt River Basins: Issues. Retrieved August 17, 2020, from <http://waterplan.state.wy.us/basins/snake/issues.html>
- Wyoming Water Development Office. (2012). 2011 Bear River Basin Plan Update. <http://waterplan.state.wy.us/plan/bear/2011/finalrept/finalplan.pdf>
- Wyoming Water Development Office. (2014). 2012 Snake/Salt River Basin Plan Update. http://waterplan.state.wy.us/plan/snake/2012/PlanUpdate/201411_FinalRept.pdf
- 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/>



APPENDICES



APPENDIX A: TABLES

Table 3: Wyoming Tier 1 Species of Conservation Priority. (WGFD, 2017b)

Species	Common Name	Priority Tier
Amphibians		
<i>Anaxyrus baxteri</i>	Wyoming toad	I
<i>Anaxyrus boreas</i>	western toad	I
Birds		
<i>Accipiter gentilis</i>	Northern Goshawk	I
<i>Athene cunicularia</i>	Burrowing Owl	I
<i>Charadrius montanus</i>	Mountain Plover	I
<i>Gavia immer</i>	Common Loon	I
Fish		
<i>Catostomus discobolus</i>	bluehead sucker	I
<i>Catostomus latipinnis</i>	flannelmouth sucker	I
<i>Gila robusta</i>	roundtail chub	I
<i>Nocomis biguttatus</i>	hornyhead chub	I
<i>Rhinichthys osculus thermalis</i>	Kendall Warm Springs dace	I
Mammals		
<i>Lynx canadensis</i>	Canada lynx	I
<i>Mustela nigripes</i>	black-footed ferret	I
<i>Thomomys clusius</i>	Wyoming pocket gopher	I
Reptiles		
<i>Crotalus oreganus concolor</i>	midget faded rattlesnake	I
Mollusks		
<i>Lampsilis cardium</i>	plain pocketbook	I
<i>Fluminicola coloradoensis</i>	Green River pebblesnail	I
	mountainsnails (many species)	I



Table 4: Wyoming Tier 2 Species of Conservation Priority. (WGFD, 2017b)

Species	Common Name	Priority Tier
Amphibians		
<i>Anaxyrus cognatus</i>	Great Plains toad	II
<i>Lithobates pipiens</i>	northern leopard frog	II
<i>Lithobates sylvaticus</i>	wood frog	II
<i>Rana luteiventris</i>	Columbia spotted frog	II
<i>Spea bombifrons</i>	plains spadefoot	II
<i>Spea intermontana</i>	Great Basin spadefoot	II
Birds		
<i>Aechmophorus clarkii</i>	Clark's Grebe	II
<i>Aechmophorus occidentalis</i>	Western Grebe	II
<i>Aegolius funereus</i>	Boreal Owl	II
<i>Ammodramus bairdii</i>	Baird's Sparrow	II
<i>Ammodramus savannarum</i>	Grasshopper Sparrow	II
<i>Aphelocoma woodhouseii</i>	Woodhouse's Scrub-jay	II
<i>Aquila chrysaetos</i>	Golden Eagle	II
<i>Archilochus alexandri</i>	Black-chinned Hummingbird	II
<i>Ardea herodias</i>	Great Blue Heron	II
<i>Artemisiospiza nevadensis</i>	Sagebrush Sparrow	II
<i>Asio flammeus</i>	Short-eared Owl	II
<i>Baeolophus ridgwayi</i>	Juniper Titmouse	II
<i>Bartramia longicauda</i>	Upland Sandpiper	II
<i>Botaurus lentiginosus</i>	American Bittern	II
<i>Bubulcus ibis</i>	Cattle Egret	II
<i>Buteo regalis</i>	Ferruginous Hawk	II
<i>Buteo swainsoni</i>	Swainson's Hawk	II
<i>Calcarius ornatus</i>	Chestnut-collared Longspur	II
<i>Centrocercus urophasianus</i>	Greater Sage Grouse	II
<i>Chlidonias niger</i>	Black Tern	II
<i>Coccyzus americanus</i>	Yellow-billed Cuckoo	II
<i>Coccyzus erythrophthalmus</i>	Black-billed Cuckoo	II
<i>Cygnus buccinator</i>	Trumpeter Swan	II
<i>Dolichonyx oryzivorus</i>	Bobolink	II
<i>Egretta thula</i>	Snowy Egret	II
<i>Falco peregrinus</i>	Peregrine Falcon	II
<i>Geothlypis tolmiei</i>	MacGillivray's Warbler	II
<i>Glaucidium gnoma</i>	Northern Pygmy Owl	II
<i>Haliaeetus leucocephalus</i>	Bald Eagle	II



<i>Histrionicus histrionicus</i>	Harlequin Duck	II
<i>Hydroprogne caspia</i>	Caspian Tern	II
<i>Icterus parisorum</i>	Scott's Oriole	II
<i>Lanius ludovicianus</i>	Loggerhead Shrike	II
<i>Leucophaeus pipixcan</i>	Franklin's Gull	II
<i>Leucosticte atrata</i>	Black Rosy-finch	II
<i>Leucosticte australis</i>	Brown-capped Rosy-finch	II
<i>Loxia curvirostra</i>	Red Crossbill	II
<i>Melanerpes erythrocephalus</i>	Red-headed Woodpecker	II
<i>Melanerpes lewis</i>	Lewis's Woodpecker	II
<i>Myiarchus cinerascens</i>	Ash-throated Flycatcher	II
<i>Nucifraga columbiana</i>	Clark's Nutcracker	II
<i>Numenius americanus</i>	Long-billed Curlew	II
<i>Nycticorax nycticorax</i>	Black-crowned Night-Heron	II
<i>Oreoscoptes montanus</i>	Sage Thrasher	II
<i>Oreothlypis virginiae</i>	Virginia's Warbler	II
<i>Pelecanus erythrorhynchos</i>	American White Pelican	II
<i>Picoides arcticus</i>	Black-backed Woodpecker	II
<i>Plegadis chihi</i>	White-faced Ibis	II
<i>Psaltriparus minimus</i>	Bushtit	II
<i>Rhynchophanes mccownii</i>	McCown's Longspur	II
<i>Selasphorus calliope</i>	Calliope Hummingbird	II
<i>Selasphorus rufus</i>	Rufous Hummingbird	II
<i>Setophaga nigrescens</i>	Black-throated Gray Warbler	II
<i>Sitta pygmaea</i>	Pygmy Nuthatch	II
<i>Sphyrapicus thyroideus</i>	Williamson's Sapsucker	II
<i>Spiza americana</i>	Dickcissel	II
<i>Spizella breweri</i>	Brewer's Sparrow	II
<i>Sterna forsteri</i>	Forster's Tern	II
<i>Strix nebulosa</i>	Great Gray Owl	II
<i>Tympanuchus phasianellus columbianus</i>	Columbian Sharp-tailed Grouse	II
<i>Vireo olivaceus</i>	Red-eyed Vireo	II
<i>Vireo vicinior</i>	Gray Vireo	II
Fish		
<i>Chrosomus neogaeus</i>	finescale dace	II
<i>Etheostoma exile</i>	Iowa darter	II
<i>Etheostoma spectabile</i>	orangethroat darter	II
<i>Fundulus kansae</i>	Northern Plains killifish	II
<i>Fundulus sciadicus</i>	plains topminnow	II



<i>Hiodon alosoides</i>	goldeye	II
<i>Hybognathus argyritis</i>	western silvery minnow	II
<i>Hybognathus placitus</i>	plains minnow	II
<i>Lepidomeda copei</i>	northern leatherside chub	II
<i>Lota lota</i>	burbot	II
<i>Macrhybopsis gelida</i>	sturgeon chub	II
<i>Margariscus nachtriebi</i>	northern pearl dace	II
<i>Oncorhynchus clarkii bouvieri</i>	Yellowstone cutthroat trout	II
<i>Oncorhynchus clarkii pleuriticus</i>	Colorado River cutthroat trout	II
<i>Oncorhynchus clarkii spp.</i>	Snake River cutthroat trout	II
<i>Oncorhynchus clarkii utah</i>	Bonneville cutthroat trout	II
<i>Phenacobius mirabilis</i>	suckermouth minnow	II
<i>Sander canadensis</i>	sauger	II
<i>Scaphirhynchus platyrhynchus</i>	shovelnose sturgeon	II
Mammals		
<i>Alces americanus</i>	moose	II
<i>Antrozous pallidus</i>	pallid bat	II
<i>Brachylagus idahoensis</i>	pygmy rabbit	II
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	II
<i>Cynomys leucurus</i>	white-tailed prairie dog	II
<i>Cynomys ludovicianus</i>	black-tailed prairie dog	II
<i>Geomys lutescens</i>	Sand Hills pocket gopher	II
<i>Glaucomys sabrinus</i>	northern flying squirrel	II
<i>Gulo gulo</i>	wolverine	II
<i>Lemmiscus curtatus</i>	sagebrush vole	II
<i>Lontra canadensis</i>	northern river otter	II
<i>Microtus richardsoni</i>	water vole	II
<i>Myotis ciliolabrum</i>	western small-footed myotis	II
<i>Myotis lucifugus</i>	little brown myotis	II
<i>Myotis septentrionalis</i>	northern long-eared myotis	II
<i>Myotis thysanodes</i>	fringed myotis	II
<i>Ochotona princeps</i>	American pika	II
<i>Ovis canadensis</i>	bighorn sheep	II
<i>Peromyscus crinitus</i>	canyon deer mouse	II
<i>Peromyscus truei</i>	piñon deer mouse	II
<i>Reithrodontomys montanus</i>	plains harvest mouse	II
<i>Sorex nanus</i>	dwarf shrew	II
<i>Spilogale putorius</i>	eastern spotted skunk	II
<i>Tamias dorsalis</i>	cliff chipmunk	II



<i>Thomomys idahoensis</i>	Idaho pocket gopher	II
<i>Vulpes velox</i>	swift fox	II
<i>Zapus hudsonius preblei</i>	Preble's meadow jumping mouse	II
Reptiles		
<i>Apalone spinifera spinifera</i>	eastern spiny softshell	II
<i>Charina bottae</i>	northern rubber boa	II
<i>Lampropeltis triangulum multistriata</i>	pale milksnake	II
<i>Pituophis catenifer deserticola</i>	Great Basin gophersnake	II
<i>Urosaurus ornatus wrighti</i>	northern tree lizard	II
Crustaceans		
<i>Branchinecta constricta</i>	constricted fairy shrimp	II
<i>Orconectes neglectus</i>	ringed crayfish	II
<i>Pacifastacus gambelii</i>	pilose crayfish	II
<i>Streptocephalus mackini</i>	Mackin fairy shrimp	II
Mollusks		
<i>Anodonta californiensis</i>	California floater	II
<i>Anodontoides ferussacianus</i>	cylindrical papershell	II
<i>Oreohelix pygmaea</i>	pygmy mountainsnail	II
<i>Oreohelix strigosa cooperi</i>	Cooper's rocky mountainsnail	II
<i>Oreohelix yavapai</i>	yavapai mountainsnail	II
<i>Physa spelunca</i>	cave physa	II
<i>Pyrgulopsis robusta</i>	Jackson Lake springsnail	II
	aquatic snails (many species)	II
	land snails (many species)	II



Table 5: Wyoming Tier 3 Species of Conservation Priority. (WGFD, 2017b)

Species	Common Name	Priority Tier
Amphibians		
<i>Ambystoma mavortium</i>	western tiger salamander	III
Birds		
<i>Anthus rubescens</i>	American Pipit	III
<i>Catherpes mexicanus</i>	Canyon Wren	III
<i>Charadrius nivosus</i>	Snowy Plover	III
<i>Chordeiles minor</i>	Common Nighthawk	III
<i>Empidonax traillii</i>	Willow Flycatcher	III
<i>Falco columbarius</i>	Merlin	III
<i>Falco sparverius</i>	American Kestrel	III
<i>Geothlypis trichas</i>	Common Yellowthroat	III
<i>Passerina caerulea</i>	Blue Grosbeak	III
<i>Polioptila caerulea</i>	Blue-gray Gnatcatcher	III
<i>Progne subis</i>	Purple Martin	III
<i>Psiloscoops flammeolus</i>	Flammulated Owl	III
<i>Rallus limicola</i>	Virginia Rail	III
<i>Thryomanes bewickii</i>	Bewick's Wren	III
Fish		
<i>Hybognathus hankinsoni</i>	brassy minnow	III
<i>Luxilus cornutus</i>	common shiner	III
<i>Notropis dorsalis</i>	bigmouth shiner	III
<i>Platygobio gracilis</i>	flathead chub	III
Mammals		
<i>Bassariscus astutus</i>	ringtail	III
<i>Chaetodipus hispidus</i>	hispid pocket mouse	III
<i>Euderma maculatum</i>	spotted bat	III
<i>Lasiurus borealis</i>	eastern red bat	III
<i>Mustela nivalis</i>	least weasel	III
<i>Myotis evotis</i>	long-eared myotis	III
<i>Myotis volans</i>	long-legged myotis	III
<i>Myotis yumanensis</i>	yuma myotis	III
<i>Perognathus fasciatus</i>	olive-backed pocket mouse	III
<i>Perognathus flavescens</i>	plains pocket mouse	III
<i>Perognathus flavus</i>	silky pocket mouse	III
<i>Perognathus mollipilosus</i>	Great Basin pocket mouse	III
<i>Sciurus aberti</i>	Abert's squirrel	III
<i>Sorex haydeni</i>	Hayden's shrew	III



<i>Sorex hoyi</i>	American pygmy shrew	III
<i>Sorex preblei</i>	Preble's shrew	III
<i>Spilogale gracilis</i>	western spotted skunk	III
<i>Tamias amoenus</i>	yellow-pine chipmunk	III
<i>Tamias umbrinus</i>	Uinta chipmunk	III
<i>Xerospermophilus spilosoma</i>	spotted ground squirrel	III
<i>Zapus hudsonius</i>	meadow jumping mouse	III
Crustaceans		
<i>Cambarus diogenes</i>	devil crayfish	III
<i>Orconectes immunis</i>	calico/papershell crayfish	III
<i>Thamnocephalus platyurus</i>	beavertail fairy shrimp	III
	fairy, tadpole, and clam shrimp (many species)	III
Mollusks		
<i>Gyraulus parvus</i>	ash gyro	III
<i>Ferrissia rivularis</i>	creeping ancyloid	III
<i>Fossaria dalli</i>	dusky fossaria	III
<i>Discus whitneyi</i>	forest disc	III
<i>Pyganodon grandis</i>	giant floater	III
<i>Planorbella trivolvis</i>	marsh rams-horn	III
<i>Vallonia gracilicosta</i>	multirib vallonia	III
<i>Physa acuta</i>	pewter physa	III
	pill or fingernail clams (many species)	III
<i>Fossaria bulimoides</i>	prairie fossaria	III
<i>Zonitoides arboreus</i>	quick gloss	III
<i>Oreohelix strigosa</i>	Rocky Mountain mountainsnail	III
	stagnicola pond snails (many species)	III
<i>Oreohelix subrudis</i>	subalpine mountainsnail	III
<i>Physa gyrina</i>	tadpole physa	III
<i>Promenetus umbilicatellus</i>	umbilicate sprite	III
<i>Vitrina pellucida</i>	western glass-snail	III



Table 6: BLM's Sensitive Species List for Wyoming. (BLM, 2010b)

Species	Common Name
Amphibians	
<i>Bufo boreas boreas</i>	Boreal Toad (Northern Rocky Mountain Population)
<i>Rana pipiens</i>	Northern Leopard Frog
<i>Rana luteiventris</i>	Columbia Spotted Frog
<i>Spea intermontana</i>	Great Basin Spadefoot
Birds	
<i>Accipiter gentilis</i>	Northern Goshawk
<i>Ammodramus bairdii</i>	Baird's Sparrow
<i>Amphispiza belli</i>	Sage Sparrow
<i>Athene cunicularia</i>	Burrowing Owl
<i>Buteo regalis</i>	Ferruginous Hawk
<i>Centrocercus urophasianus</i>	Greater Sage-grouse
<i>Charadrius montanus</i>	Mountain Plover
<i>Coccyzus americanus</i>	Yellow-billed Cuckoo
<i>Cygnus buccinator</i>	Trumpeter Swan
<i>Falco peregrinus</i>	Peregrine Falcon
<i>Haliaeetus leucocephalus</i>	Bald Eagle
<i>Lanius ludovicianus</i>	Loggerhead Shrike
<i>Numenius americanus</i>	Long-billed Curlew
<i>Oreoscoptes montanus</i>	Sage Thrasher
<i>Plegadis chichi</i>	White-faced Ibis
<i>Spizella breweri</i>	Brewer's Sparrow
<i>Tympanuchus phasianellus columbianus</i>	Columbian Sharp-tailed Grouse
Fish	
<i>Catostomus discobolus</i>	Bluehead Sucker
<i>Catostomus latipinnis</i>	Flannelmouth Sucker
<i>Lepidomeda copei</i>	Northern Leatherside Chub
<i>Gila robusta</i>	Roundtail Chub
<i>Oncorhynchus clarkii bouvieri</i>	Yellowstone Cutthroat Trout
<i>Oncorhynchus clarkii ssp. (O. c. behnkei)</i>	Fine-spotted Snake River Cutthroat Trout
<i>Oncorhynchus clarkii pleuriticus</i>	Colorado River Cutthroat Trout
<i>Oncorhynchus clarkii Utah</i>	Bonneville Cutthroat Trout
<i>Nocomis biguttatus</i>	Hornyhead Chub
Mammals	
<i>Brachylagus idahoensis</i>	Pygmy Rabbit
<i>Corynorhinus townsendii</i>	Townsend's Big-eared Bat
<i>Cynomys leucurus</i>	White-tailed Prairie Dog
<i>Cynomys ludovicianus</i>	Black-tailed Prairie Dog



<i>Euderma maculatum</i>	Spotted Bat
<i>Myotis evotis</i>	Long-eared Myotis
<i>Myotis thysanodes</i>	Fringed Myotis
<i>Thomomys clusius</i>	Wyoming Pocket Gopher
<i>Thomomys idahoensis</i>	Idaho Pocket Gopher
<i>Vulpes velox</i>	Swift Fox
<i>Zapus hudsonius preblei</i>	Preble's Meadow Jumping Mouse
Reptiles	
<i>Crotalus viridis concolor</i>	Midget Faded Rattlesnake
Plants	
<i>Antennaria arcuata</i>	Meadow Pussytoes
<i>Aquilegia laramiensis</i>	Laramie Columbine
<i>Artemisia porteri</i>	Porter's Sagebrush
<i>Astragalus diversifolius</i>	Meadow Milkvetch
<i>Astragalus gilviflorus var. purpureus</i>	Dubois Milkvetch
<i>Astragalus jejunus var. articulatus</i>	Hyattville Milkvetch
<i>Astragalus proimanthus</i>	Precocious Milkvetch
<i>Astragalus racemosus var. treleasei</i>	Trelease's Milkvetch
<i>Boechera (Arabis) pusilla</i>	Small Rock Cress
<i>Botrychium lineare</i>	Slender Moonwort
<i>Cirsium aridum</i>	Cedar Rim Thistle
<i>Cirsium ownbeyi</i>	Ownbey's Thistle
<i>Cleome multicaulis</i>	Many-stemmed Spider-flower
<i>Cryptantha subcapitata</i>	Owl Creek Miner's Candle
<i>Cymopterus evertii</i>	Evert's Wafer-Parsnip
<i>Cymopterus williamsii</i>	Williams' Wafer-Parsnip
<i>Descurainia torulosa</i>	Wyoming Tansymustard
<i>Elymus simplex var. luxurians</i>	Dune Wildrye
<i>Ericameria discoidea var. winwardii</i>	Winward's narrow leaf goldenweed
<i>Lepidium integrifolium var. integrifolium</i>	Entire-Leaved Peppergrass
<i>Lesquerella arenosa var. argillosa</i>	Sidesaddle Bladderpod
<i>Lesquerella fremontii</i>	Fremont Bladderpod
<i>Lesquerella macrocarpa</i>	Large-fruited Bladderpod
<i>Lesquerella prostrata</i>	Prostrate Bladderpod
<i>Penstemon absarokensis</i>	Absaroka Beardtongue
<i>Penstemon acaulis var. acaulis</i>	Stemless Beardtongue
<i>Penstemon gibbensii</i>	Gibbens' Beardtongue
<i>Phlox pungens</i>	Beaver Rim Phlox
<i>Physaria condensata</i>	Tufted Twinpod
<i>Physaria dornii</i>	Dorn's Twinpod



<i>Physaria saximontana var. saximontana</i>	Rocky Mountain Twinpod
<i>Pinus albicaulis</i>	Whitebark Pine
<i>Pinus flexilis</i>	Limber Pine
<i>Rorippa calycina</i>	Persistent Sepal Yellowcress
<i>Shoshonea pulvinata</i>	Shoshonea
<i>Sphaeromeria simplex</i>	Laramie False Sagebrush
<i>Thelesperma caespitosum</i>	Green River Greenthread
<i>Thelesperma pubescens</i>	Uinta Greenthread
<i>Townsendia microcephala</i>	Cedar Mtn. Easter Daisy
<i>Trifolium barnebyi</i>	Barneby's Clover

Table 7: Management Indicator Species/Focal Species for the Bridger-Teton National Forest. (USFS, 2002)

Species	Common Name
Birds	
<i>Falco peregrinus anatum</i>	Peregrine falcon
<i>Grus americana</i>	Whooping Crane
<i>Haliaeetus leucocephalus</i>	Bald eagle
<i>Spizella breweri</i>	Brewer's sparrow
Fish	
<i>Oncorhynchus clarki</i>	Cutthroat trout
<i>Oncorhynchus mykiss</i>	Rainbow trout
Mammals	
<i>Ursus arctoc horribilis</i>	Grizzly bear
<i>Castor canadensis</i>	Beaver
<i>Cervus elaphus nelsoni</i>	Rocky Mountain elk
<i>Alces alces</i>	Moose
<i>Odocoileus hemionus</i>	Mule deer
<i>Ovis canadensis canadensis</i>	Rocky Mountain bighorn sheep
<i>Antilocapra americana</i>	Pronghorn antelope
<i>Martes americana</i>	Pine Marten



Table 8: Threatened, Endangered, Proposed, Candidate and Forest Service Region 4 Sensitive Species for the Bridger-Teton National Forest. (USFS, 2016c)

Species	Common Name
Amphibians	
<i>Bufo boreas</i>	Boreal toad
<i>Rana luteiventris</i>	Columbia spotted frog
Birds	
<i>Grus americana</i>	Whooping Crane
<i>Coccyzus americanus</i>	Yellow-billed Cuckoo
<i>Cygnus buccinator</i>	Trumpeter swan
<i>Histrionicus histrionicus</i>	Harlequin duck
<i>Haliaeetus leucocephalus</i>	Bald eagle
<i>Accipiter gentilis</i>	Northern goshawk
<i>Falco peregrinus anatum</i>	Peregrine falcon
<i>Centrocercus urophasianus</i>	Greater sage grouse
<i>Otus flammeolus</i>	Flammulated owl
<i>Aegolius funereus</i>	Boreal owl
<i>Picoides tridactylus</i>	Three-toed woodpecker
<i>Gavia immer</i>	Common loon
<i>Strix nebulosi</i>	Great grey owl
Fish	
<i>Rhinichthys osculus</i>	Kendal Warm Springs dace
<i>Oncorhynchus clarki lewisi</i>	Westslope cutthroat trout
<i>Oncorhynchus clarki pleuriticus</i>	Colorado River cutthroat trout
<i>Oncorhynchus clarki utah</i>	Bonneville cutthroat trout
<i>Oncorhynchus clarki bouvieri</i>	Yellowstone cutthroat trout
<i>Lepidomeda copei</i>	Northern leatherside chub
Mammals	
<i>Euderma maculatum</i>	Spotted bat
<i>Plecotus townsendii</i>	Townsend's big-eared bat
<i>Martes pennanti</i>	Fisher
<i>Gulo gulo</i>	North American wolverine
<i>Ursus arctoc horribilis</i>	Grizzly bear
<i>Canis lupus</i>	Gray wolf
<i>Lynx canadensis</i>	Canada lynx
<i>Ovis canadensis canadensis</i>	Rocky Mountain bighorn sheep
Plants	
<i>Pinus albicaulis</i>	Whitebark pine
<i>Agoseris lackschewitzii</i>	Pink agoseris



<i>Androsace chamaejasme carinata</i>	Sweet-flowered rock jasmine
<i>Astragalus diversifolius diversifolius</i>	Meadow milkvetch
<i>Astragalus jejunus jejunus</i>	Starvling milkvetch
<i>Astragalus paysonii</i>	Payson's milkvetch
<i>Carex incurviformis</i>	Seaside sedge
<i>Carex luzulina atropurpurea</i>	Back and purple sedge
<i>Descurainia torulosa</i>	Wyoming tansymustard
<i>Draba globosa</i>	Rockcross draba
<i>Ericameria discoidea linearis</i>	Narrow-leaf goldenweed
<i>Erigeron lanatus</i>	Woolly daisy
<i>Lesquerella paysonii</i>	Payson bladderpod
<i>Parrya nudicaulis</i>	Naked-stemmed parrya
<i>Physaria integrifolia monticola</i>	Creeping twinpod
<i>Primula egaliksensis</i>	Greenland primrose
<i>Saussurea weberi</i>	Weber's saussurea
<i>Symphotrichum mole</i>	Soft aster



Table 9: Regional Forester’s Sensitive Animal Species List for the Rocky Mountain Region. (U.S. Forest Service, 2017)

Species	Common Name
Amphibians	
<i>Anaxyrus boreas boreas</i>	boreal toad
<i>Lithobates blairi</i>	plains leopard frog
<i>Lithobates pipiens</i>	northern leopard frog
<i>Lithobates sylvaticus</i>	wood frog
<i>Rana luteiventris</i>	Columbia spotted frog
Birds	
<i>Accipiter gentilis</i>	Northern Goshawk
<i>Aegolius funereus</i>	Boreal Owl
<i>Ammodramus savannarum</i>	Grasshopper Sparrow
<i>Artemisiospiza nevadensis</i>	Sagebrush Sparrow
<i>Asio flammeus</i>	Short-eared Owl
<i>Athene cunicularia</i>	Burrowing Owl
<i>Botaurus lentiginosus</i>	American Bittern
<i>Buteo regalis</i>	Ferruginous Hawk
<i>Calcarius ornatus</i>	Chestnut-collared Longspur
<i>Centrocercus urophasianus</i>	Greater Sage-Grouse
<i>Charadrius montanus</i>	Mountain Plover
<i>Chlidonias niger</i>	Black Tern
<i>Circus cyaneus</i>	Northern Harrier
<i>Contopus cooperi</i>	Olive-sided Flycatcher
<i>Cygnus buccinator</i>	Trumpeter Swan
<i>Cypseloides niger</i>	Black Swift
<i>Falco peregrinus anatum</i>	Peregrine Falcon
<i>Haliaeetus leucocephalus</i>	Bald Eagle
<i>Histrionicus histrionicus</i>	Harlequin Duck
<i>Lagopus leucura</i>	White-tailed Ptarmigan
<i>Lanius ludovicianus</i>	Loggerhead Shrike
<i>Melanerpes lewis</i>	Lewis's Woodpecker
<i>Numenius americanus</i>	Long-billed Curlew
<i>Peucaea cassinii</i>	Cassin's Sparrow
<i>Picoides arcticus</i>	Black-backed Woodpecker
<i>Progne subis</i>	Purple Martin
<i>Psiloscops flammeolus</i>	Flammulated Owl
<i>Rhynchophanes mccownii</i>	McCown's Longspur
<i>Spizella breweri</i>	Brewer's Sparrow
<i>Tympanuchus cupido</i>	Greater Prairie-Chicken
<i>Tympanuchus phasianellus columbianus</i>	Columbian Sharp-tailed Grouse



Fish	
<i>Catostomus discobolus</i>	bluehead sucker
<i>Catostomus latipinnis</i>	flannelmouth sucker
<i>Catostomus platyrhynchus</i>	mountain sucker
<i>Catostomus plebeius</i>	Rio Grande sucker
<i>Chrosomus eos</i>	northern redbelly dace
<i>Chrosomus erythrogaster</i>	southern redbelly dace
<i>Chrosomus neogaeus</i>	finescale dace
<i>Couesius plumbeus</i>	lake chub
<i>Fundulus sciadicus</i>	Plains topminnow
<i>Gila pandora</i>	Rio Grande chub
<i>Gila robusta</i>	roundtail chub
<i>Hybognathus placitus</i>	plains minnow
<i>Macrhybopsis gelida</i>	sturgeon chub
<i>Margariscus nachtriebi</i>	northern pearl dace
<i>Nocomis biguttatus</i>	hornyhead chub
<i>Oncorhynchus clarkii bouvieri</i>	Yellowstone cutthroat
<i>Oncorhynchus clarkii pleuriticus</i>	Colorado River cutthroat
<i>Oncorhynchus clarkii virginalis</i>	Rio Grande cutthroat
<i>Platygobio gracilis</i>	flathead chub
Insects	
<i>Bombus occidentalis</i>	western bumble bee
<i>Capnia arapahoe</i>	Arapahoe snowfly
<i>Danaus plexippus plexippus</i>	monarch
<i>Hesperia ottoe</i>	Ottoe skipper
<i>Ochrotrichia susanae</i>	Susan's purse-making caddisfly
<i>Somatochlora hudsonica</i>	Hudsonian emerald
<i>Speyeria idalia</i>	regal fritillary
<i>Speyeria nokomis nokomis</i>	Nokomis fritillary, Great Basin silverspot
Mammals	
<i>Conepatus leuconotus</i>	American hog-nosed skunk
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat
<i>Cynomys gunnisoni</i>	Gunnison's prairie dog
<i>Cynomys leucurus</i>	white-tailed prairie dog
<i>Cynomys ludovicianus</i>	black-tailed prairie dog
<i>Euderma maculatum</i>	spotted bat
<i>Gulo gulo</i>	North American wolverine
<i>Lasiurus cinereus</i>	hoary bat
<i>Lontra canadensis</i>	river otter
<i>Martes americana</i>	American marten
<i>Microtus richardsoni</i>	water vole



<i>Myotis thysanodes</i>	fringed myotis
<i>Ovis canadensis canadensis</i>	Rocky Mountain bighorn sheep
<i>Ovis canadensis nelsoni</i>	desert bighorn sheep
<i>Sorex hoyi</i>	pygmy shrew
<i>Thomomys clusius</i>	Wyoming pocket gopher
<i>Vulpes macrotis</i>	kit fox
<i>Vulpes velox</i>	swift fox
Molluscs	
<i>Acroloxus coloradensis</i>	Rocky Mountain capshell
<i>Oreohelix pygmaea</i>	pygmy mountainsnail
<i>Oreohelix strigosa cooperi</i>	Cooper's Rocky Mountainsnail
Reptiles	
<i>Sistrurus catenatus edwardsii</i>	desert massasauga
<i>Storeria occipitomaculata pahasapae</i>	Black Hills redbelly snake



Table 10: Regional Forester’s Sensitive Plant Species List for the Rocky Mountain Region. (U.S. Forest Service, 2017)

Species	Common Name
Non-Vascular	
<i>Sphagnum angustifolium</i>	sphagnum
<i>Sphagnum balticum</i>	Baltic sphagnum
Ferns & Allies	
<i>Botrychium ascendens</i>	trianglelobe moonwort
<i>Botrychium campestre</i>	Iowa moonwort, prairie moonwort
<i>Botrychium paradoxum</i>	peculiar moonwort
<i>Lycopodium complanatum</i>	groundcedar
<i>Selaginella selaginoides</i>	club spikemoss
Angiosperms - Monocots	
<i>Calochortus flexuosus</i>	winding mariposa lily
<i>Carex alopecoidea</i>	foxtail sedge
<i>Carex diandra</i>	lesser paniced sedge
<i>Carex livida</i>	livid sedge
<i>Cypripedium montanum</i>	mountain lady's slipper
<i>Cypripedium parviflorum</i>	lesser yellow lady's slipper
<i>Eleocharis elliptica</i>	elliptic spikerush, slender spikerush
<i>Epipactis gigantea</i>	stream orchid, giant helleborine
<i>Eriophorum chamissonis</i>	Chamisso's cottongrass
<i>Eriophorum gracile</i>	slender cottongrass
<i>Festuca hallii</i>	plains rough fescue
<i>Galearis rotundifolia</i>	roundleaf orchid
<i>Kobresia simpliciuscula</i>	simple bog sedge
<i>Liparis loeselii</i>	yellow widelip orchid
<i>Malaxis monophyllos var. brachypoda</i>	white adder's-mouth orchid
<i>Platanthera orbiculata</i>	lesser roundleaved orchid
<i>Ptilagrostis porteri</i>	Porter's false needlegrass
<i>Schoenoplectus hallii</i>	Hall's bulrush
<i>Triteleia grandiflora</i>	largeflower triteleia
Angiosperms - Dicots	
<i>Aliciella sedifolia</i>	stonecrop gilia
<i>Aquilegia chrysantha</i>	Rydberg's golden columbine
<i>Aquilegia laramiensis</i>	Laramie columbine
<i>Armeria maritima ssp. sibirica</i>	Siberian sea thrift
<i>Asclepias uncialis</i>	wheel milkweed
<i>Astragalus barrii</i>	Barr's milkvetch
<i>Astragalus iodopetalus</i>	violet milkvetch
<i>Astragalus leptaleus</i>	park milkvetch



<i>Astragalus missouriensis</i> var. <i>humistratus</i>	Missouri milkvetch, Archuleta milkvetch
<i>Astragalus proximus</i>	Aztec milkvetch
<i>Astragalus ripleyi</i>	Ripley's milkvetch
<i>Braya glabella</i>	smooth northern-rockcress
<i>Chenopodium cycloides</i>	sandhill goosefoot
<i>Cuscuta plattensis</i>	prairie dodder, Wyoming dodder
<i>Descurainia torulosa</i>	mountain tansymustard
<i>Draba exunguiculata</i>	clawless draba
<i>Draba grayana</i>	Gray's draba
<i>Draba smithii</i>	Smith's draba
<i>Draba weberi</i>	Weber's draba, Weber's whitlowgrass
<i>Drosera anglica</i>	English sundew
<i>Drosera rotundifolia</i>	roundleaf sundew
<i>Eriogonum brandegeei</i>	Brandegee's buckwheat
<i>Eriogonum exilifolium</i>	dropleaf buckwheat
<i>Eriogonum visherii</i>	Visher's buckwheat, Dakota buckwheat
<i>Gutierrezia elegans</i>	Lone Mesa snakeweed
<i>Ipomopsis aggregata</i> ssp. <i>weberi</i>	scarlet gilia
<i>Lesquerella fremontii</i>	Fremont's bladderpod
<i>Lesquerella pruinosa</i>	Pagosa Springs bladderpod
<i>Mimulus gemmiparus</i>	Rocky Mountain monkeyflower, budding monkeyflower
<i>Neoparrya lithophila</i>	Bill's neoparrya
<i>Oreoxis humilis</i>	Pike's Peak alpineparsley
<i>Packera mancosana</i>	Mancos shale packera
<i>Parnassia kotzebuei</i>	Kotzebue's grass of Parnassus
<i>Penstemon absarokensis</i>	Absaroka Range beardtongue
<i>Penstemon caryi</i>	Cary's beardtongue
<i>Penstemon degeneri</i>	Degener's beardtongue
<i>Penstemon harringtonii</i>	Harrington's beardtongue
<i>Physaria didymocarpa</i> var. <i>lanata</i>	common twinpod
<i>Physaria pulvinata</i>	cushion bladderpod
<i>Physaria scrotiformis</i>	west silver bladderpod
<i>Potentilla rupicola</i>	rock cinquefoil, Rocky Mountain cinquefoil
<i>Primula egaliksensis</i>	Greenland primrose
<i>Pyrrocoma carthamoides</i> var. <i>subsquarrosa</i>	largeflower goldenweed
<i>Pyrrocoma clementis</i> var. <i>villosa</i>	tranquil goldenweed
<i>Pyrrocoma integrifolia</i>	many-stemmed goldenweed
<i>Ranunculus grayi</i>	ice cold buttercup
<i>Rubus arcticus</i> ssp. <i>acaulis</i>	dwarf raspberry



<i>Salix arizonica</i>	Arizona willow
<i>Salix barrattiana</i>	Barratt's willow
<i>Salix candida</i>	sageleaf willow, sage willow
<i>Salix myrtilifolia</i>	blueberry willow
<i>Salix serissima</i>	autumn willow
<i>Sanguinaria canadensis</i>	bloodroot
<i>Shoshonea pulvinata</i>	Shoshone carrot
<i>Thalictrum heliophilum</i>	Cathedral Bluff meadow-rue
<i>Townsendia condensata var. anomala</i>	cushion Townsend daisy
<i>Utricularia minor</i>	lesser bladderwort
<i>Viburnum opulus var. americanum</i>	American cranberrybush, mooseberry
<i>Viola selkirkii</i>	Selkirk's violet
<i>Xanthisma coloradoense</i>	Colorado tansyaster
<i>Gymnosperms</i>	
<i>Pinus albicaulis</i>	whitebark pine



APPENDIX B. WEBSITE LINKS IN DOCUMENT

1. <https://www.lcwy.org/>
2. <https://law.justia.com/codes/wyoming/2010/Title11/chapter16.html>
3. <https://www.lincolnconservationdistrict.org/>
4. <https://www.starvalleycd.org/>
5. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5350226.pdf
6. <http://www.uwyo.edu/haub/files/docs/ruckelshaus/collaboration/2017-greys-river/2018-greys-river-collaborative-charter-final.pdf>
7. <https://www.starvalleycd.org/greys-river-forest-collaborative-as-of-august-2019.html>
8. <https://www.forestsandrangelands.gov/strategy/>
9. <https://gacc.nifc.gov/gbcc/dispatch/wy-tdc/home/sites/default/files/site-files/CWPP.pdf>
10. <https://www.nps.gov/fobu/learn/management/upload/fobu%20fmp.pdf>
11. <https://www.facebook.com/AlpineWildfireProtection/>
12. <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>
13. <https://www.arcgis.com/apps/webappviewer/index.html?id=3f7ab99343c34bd3ac5ae6ac8c04d95a/>
14. http://library.wrds.uwyo.edu/wwdcrept/Bear_River/Bear_River-Watershed_Level_I_Study-Final_Report-2017.html
15. http://library.wrds.uwyo.edu/wwdcrept/Blacks_Fork/Blacks_Fork_River-Watershed_Level_I_Study-Phase_I-2015.html
16. <https://www.archives.gov/federal-register/codification/executive-order/11988.html>
17. <https://www.archives.gov/federal-register/codification/executive-order/11990.html>
18. <https://ecos.fws.gov/ecp/>
19. <https://drive.google.com/file/d/1TLuj1UGcRTjOvBklmP4qwjehSVmGich8/view>
20. <https://wgfd.wyo.gov/WGFD/media/content/PDF/Vet%20Services/Approved-CWD-Mgmt-Plan-July-16-2020.pdf>
21. <https://wgfd.wyo.gov/Wildlife-in-Wyoming/More-Wildlife/Wildlife-Disease/Brucecellosis>
22. 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
23. <https://wgfd.maps.arcgis.com/apps/MapTools/index.html?appid=31c38ed91cf04fb7bb8aebd29515e108>
24. https://wgfd.wyo.gov/WGFD/media/content/PDF/Fishing/AIS_WHIRLINGDISEASE_INFO.pdf
25. <https://wgfd.maps.arcgis.com/apps/webappviewer/index.html?id=935acbec194f4d42823af3db59272409>
26. <https://www.fs.usda.gov/recarea/btnf/recarea/?recid=71395>
27. <https://www.fs.usda.gov/recarea/btnf/recarea/?recid=71399>
28. https://cms6.revize.com/revize/lincolncowy/document_center/Forms%20&%20Documents/Planning%20&%20Engineering/%20Supplemental%20Appendices/Appendix%207A%20-%20Star%20Valley%20Trails%20&%20Open%20Spaces,%20Comprehensive%20Plan.pdf
29. <https://wyoshpo.wyo.gov/>



30. <https://www.fs.usda.gov/science-technology/geology/paleontology>
31. <https://www.usbr.gov/cultural/fossil.html#:~:text=To%20date%2C%20Reclamation%20has%20documented,have%20occurred%20on%20Reclamation%20land.>
32. <https://www.fws.gov/historicPreservation/crp/index.html>
33. <https://www.blm.gov/paleontology>
34. <https://www.nps.gov/subjects/fossils/fossil-protection.htm>
35. <https://www.bosv.com/>
36. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd532173.pdf
37. <https://plants.sc.egov.usda.gov/java/noxiousDriver>
38. <https://wyoweed.org/noxious-species/listed-species/state-designated-noxious-weeds/>
39. [https://www.fs.fed.us/foresthealth/publications/Framework for Invasive Species FS-1017.pdf](https://www.fs.fed.us/foresthealth/publications/Framework%20for%20Invasive%20Species%20FS-1017.pdf)
40. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5182307.pdf
41. <https://eplanning.blm.gov/eplanning-ui/project/70301>
42. <https://eplanning.blm.gov/eplanning-ui/project/70300/510>
43. [https://webmaps.blm.gov/Geocortex/Html5Viewer/index.html?viewer=NISIMS Publication HTML51](https://webmaps.blm.gov/Geocortex/Html5Viewer/index.html?viewer=NISIMS_Publication.NISIMS_Publication_HTML51)



APPENDIX C. STEERING COMMITTEE MEMBERS

Member	Affiliation/Resource Expertise
Amy Butler	Lincoln County Engineer/Project Manager
Robert Green	Land Use/Forestry
Dave Julian	Agriculture
DeMont Grandy	Lincoln Conservation District Manager
Jeremy Larsen	Recreation
Kay Lynn Nield	Star Valley Conservation District Manager
Melvin Shumway	Weed and Pest (Private)
Steve Johnson	County Planner
John Woodward	County Planner (Retired in July 2021)
Robert King	Lincoln County Commissioner
Jerry Harmon	Lincoln County Commissioner
Kent Connelly	Lincoln County Commissioner

*All photos in the document were provided by Lincoln County.



APPENDIX D. PUBLIC COMMENTS RECEIVED

Comment Received From	Comment Received	Response
Lincoln Conservation District	Page 6 - Put in Lincoln County Web Site (https://www.lcwy.org) somewhere in the 5th paragraph.	Link was added to text in document.
Lincoln Conservation District	Page 10 – Paragraph 10 needs to be completed.	Paragraph 10 was completed.
Lincoln Conservation District	Page 13 – Paragraph 1 list state authorities of conservation districts (Wyoming Conservation District Laws 11-16-101 through 11-16-134).	State authorities were listed in the paragraph and a link to the authorities was included.
Lincoln Conservation District	Page 13 – Paragraph 2 place link to the Lincoln Conservation District website (www.lincolnconservationdistrict.org).	Link was added to text in the document.
Lincoln Conservation District	Page 15 – The USFWS manages 6,336 acres Seedskafee National Wildlife Refuge and 9,259 acres Cokeville Meadows National Wildlife Refuge totaling 15,595 acres.	Information was checked and corrected in document. The Seedskafee NWR is completely within Sweetwater County.
Lincoln Conservation District	Page 17 – Paragraph 2 list the 4 BLM designated roads in Lincoln County. (Dry Creek Road and the Dempsey Basin Road. There are also two other roads that will need	Information was added to resource assessment on these BLM roads.



	to be added to the list. Contact Kelly Lamborn at the Kemmerer BLM Office, office phone 303 828 4505 for details.)	
Bridger Teton National Forest	2001 Roadless Rule: Some Inventory Roadless Areas (IRAs) contain roads, but the 2001 Roadless Rule (36 CFR 294) establishes prohibitions on new road construction and timber harvesting within IRAs. However, the rule also identified exceptions to these prohibited activities. The Lincoln County draft NRMP does not clearly articulate when such exceptions apply. The plan states: "The inventoried roadless areas mapped within Lincoln County can be seen in Figure 6. All areas within the county mapped as IRA allow road construction and reconstruction." (p. 32-33).	Provided clarification to contradictory statements in the description of roadless areas.
Kenneth B.	As a resident of Alpine Northeast, I favor the Palisades WSA continuing to be managed as it has for the past several decades and ultimately be designated a Wilderness.	Thank you for your comment. Comment was received and taken into consideration.
Kenneth B.	I do not support the "2.3.4 Priorities" listed on pages 36-40.	Thank you for your comment. Comment was received and taken into consideration.
Lincoln Conservation District	Page 41 – Include Star Valley Scenic Byway in the map.	Star Valley Scenic Byway was added to the map.



Bridger Teton National Forest	Wildland Fire and Fuels Management: We recommend that the discussions of prescribed fire, fuels management and wildland fire be made consistent among sections of the NRMP and with the “National Cohesive Wildland Fire Management Strategy” which was developed by state, local and federal agencies. This strategy includes three goals: Resilient Landscapes, Fire Adapted Communities and Safe and Effective Wildfire Response. Objectives for each goal are referenced and may help you clarify your wildland fire and fuels management strategy for Lincoln County. We also recommend the use of the current fire terminology provided by the National Wildfire Coordinating Group (https://www.nwccg.gov/glossary/a-z?combine=pile).	Information regarding the National Cohesive Wildland Fire Management Strategy was added to the Resource Assessment and a policy statement was added supporting the use of this document.
Lincoln Conservation District	Page 53 – Paragraph 5 give link to the NRCS soils surveys available (http://websoilsurvey.nrcs.usda.gov).	Link was added to text in the document.
Lincoln Conservation District	Page 63 – Place in priorities (Place power transmission lines in existing corridors).	Priority statement was added to section 3.4.2.
Lincoln Conservation District	Page 66 – Priority #5 wording change (The County should be regularly updated and coordinated about all pipeline permitting by the developing federal agency.)	Wording on priority #5 was changed to reflect wording suggested in comment.



Lincoln Conservation District	Page 67 – On the map need to add Viva Naughton Hydro Plant and Opal Gas Plants.	Viva Naughton Hydro Plan and Opal gas plants were added to the map.
Lincoln Conservation District	Page 68 – Paragraph 3 need to add to the list from the Wasatch Front in Utah.	The Wasatch Front in Utah was added to the list of factors for air quality.
Bridger Teton National Forest	Water Resources: We suggest adding a description of the municipal water sources in the county that originate on federally managed lands, and those directly influenced by federal land management. The addition of municipal water sources to the NRMP would highlight the importance of municipal water sources to county residents and the role of the federal lands from which some sources originate.	A description of the municipal watersheds within the County was added to the Water Overview section and those municipal watersheds are highlighted are the watershed map.
Lincoln Conservation District	Page 72 – The Lincoln Conservation District has completed two watershed plans in conjunction with the Wyoming Water Development Commission (WWDC) – Bear River Watershed Study Level 1 and the Hams Fork River Watershed Study Phase 1.	Information on these two WWDC studies were added into the overview for the water section of the document.
Don L. – Hams Fork Water Users Group	The Hams Fork Water Users Group would also like to present comments on irrigation along the course of its namesake drainage. There are currently water agreements between the group and PacifiCorp through the Naughton Power Plant that benefit both entities that involve storage times and use of stored water. Irrigators would encourage Lincoln County to add language to the plan that would strongly support the continuation	Information was added to background in irrigation section and priority statements were added reflecting this information.



	of the agreements, especially in the future were the power plant to change ownership.	
Lincoln Conservation District	Page 75 – The information given in the second paragraph concerning irrigation diversions and irrigation wells appears to be a little low may need to be checked with other records.	Information was reviewed with other sources and this was the most current and accurate information found.
Don L. – Hams Fork Water Users Group	Fontenelle Reservoir lies within the county boundaries. Water storage has largely gone undeveloped over the years. There are basically three pools of storage water within this reservoir. There is a pool that the State of Wyoming has appropriated to that is over 100,000 acre-feet. There is a second pool that is larger than the State of Wyoming has first right to obtaining. The third pool is approximately 89,000 acre-feet that lies under the riprap line of the dam so the Bureau of Reclamation currently, won't allow the reservoir level to be drawn below the top of this pool in order to protect the integrity of the reservoir embankment, itself. Some studies by the Wyoming Water Development Commission have looked at utilizing some of the first pool of water but have not come to fruition. Lincoln County should encourage the development of water use from the two upper pools and encourage the State to proactively prepare to riprap the structure to acquire the use of the third pool of water when it would be most practical. Irrigators located in the southeast	Information was added to Resource Assessment in the Fontenelle Reservoir section and a priority statement was added to support water development and reservoir expansion where appropriate in the County.



	<p>portion of the county believe there is ample opportunity for more practical development of the Fontenelle resources than have been studied in the past. We would direct attention to the Central Utah and Arizona Water Projects as examples of what can be accomplished.</p>	
<p>Don L. – Hams Fork Water Users Group</p>	<p>The plan mentions the Kemmerer Reservoir. The Hams Fork Water Users would encourage Lincoln County to encourage refinement or improved functionality to the structure so that it operates as more than an evaporation sump as water currently must pass over the spillway at all times in order to maintain river flow. Most local fisherman comment on the shallowness of the reservoir in its current state.</p> <p>All three of these reservoirs and the irrigators are under the influence of the Upper Colorado River Drainage jurisdiction which the State of Wyoming is currently developing a Demand Management Plan in order to meet downstream water use demands. Currently, water rights prior to 1922 are exempt from from curtailment. The Water Users Group would encourage Lincoln County to support all current use be exempt from curtailment and that the State meet their obligation with water from Fontenelle Reservoir prior to diminishing the use by irrigators and beneficial users that add to the economy of Lincoln County and the State of</p>	<p>Information added to resource assessment and priority statement was added to support these statements.</p>



	Wyoming. We would actually encourage the construction of desalination plants at the bottom end of the system if federal money is used to procure curtailment of upstream water use in order to meet the States 38,000 acre-feet obligation to basin.	
Lincoln Conservation District	Page 77 – Paragraph 6 Lake Viva Naughton was initially developed to supply water for the power plant at Kemmerer. Hydro power was installed later.	Information was updated in document to reflect comment language.
Lincoln Conservation District	Page 78 - Paragraph 3, the Kemmerer Reservoir is flow through water only, not for irrigation storage.	Information was corrected in document to reflect comment language.
Lincoln Conservation District	Page 80 – The last paragraph on page the Territorial Water Rights in Lincoln County are listed in the State Engineers Office book of water rights as far as LCD board members know.	Language was updated for clarification.
Lincoln Conservation District	Page 122 - There should be no Herd Management Areas in Lincoln County for wild horses except possibly in the Little Colorado Allotment on the map.	Language was added to the document to better clarify the difference between a herd area and a herd management area.
Lincoln Conservation District	Page 129 - Paragraph 2 needs to explain what SHPO does and give a link to the office.	Information was added to paragraph on what SHPO does and a link was added to the Wyoming SHPO website.
Lincoln Conservation District	Page 132 – Need to place in priorities the tax base for a healthy school system throughout Lincoln County, needs to be maintained	Priority statement was added to section 6.4.4.



Lincoln Conservation District	Page 133 – Paragraph 3 states there is a 15 percent increase in farms in Lincoln County. Need to define what constitutes a farm. Most economic self-sustaining single dwelling farms are being bought up and combined into bigger farms. Possible more hobby farms and ranchettes are on the increase but no increase in self-sustaining single dwelling farms.22.	Clarified wording to describe that hobby farms and ranchettes have been on the rise within the county over the last decade.
Lincoln Conservation District	Page 134 – In section 7.2.1 History, Custom, and Culture, something needs to be mentioned about Brucellosis issues between cattle and elk throughout Lincoln County. There are Designated Surveillance Areas (DSA) throughout Lincoln County where cattle must be bled before shipping out of state. This causes a huge logistics problem for cattle producers when shipping cattle plus the cost involved to bleed. Contact Jim Logan, State Veterinarian, for maps of DSAs plus other information on the issue. Office phone 307 777 7515. Possibly need a priority to do away with some of the DSA areas because they are not relevant.	Information was added to background in livestock grazing section regarding brucellosis. Priority statement was also developed to ensure coordination with County and Conservation Districts when discussing DSAs.
Lincoln Conservation District	Page 135 - After paragraph 5 it should be mentioned that Lincoln County is a member of the Coalition of Local Governments (CLG) in south west Wyoming consisting of county commissioners and conservation districts in Lincoln, Sweetwater, Sublette and Uinta Counties. The CLC is committed to the	Information was added describing the County’s involvement in CLG.



	multiple use and access of public lands for timber, fish, wildlife, recreation, water, mineral extraction, grazing along with other appropriate uses. This could possibly be put in the Social Economic section of the Lincoln County NRMP.	
Lincoln Conservation District	Page 136 - In the second paragraph something should be mentioned about the Kemmerer BLM Office's Resource Management Plan (RMP) with a link to the plan.	Information was added about the Kemmerer RMP in the livestock grazing section and a link to the RMP was added to text in the document.
Lincoln Conservation District	Page 137 – The Wyoming Stock Growers organization said there are 34 vacant Forest Service Allotments in Lincoln County. There is a discrepancy with Table 1 at the bottom of the page.	Information was double checked with sources and left as stated in document as information came directly from the Forest Service list of vacant allotments.
Lincoln Conservation District	Page 144 – Verify the Lincoln County Weed and Pest District declares all weeds and pests in the district not the Lincoln County Commissioners.	Language was updated to say that the Lincoln County Weed and Pest declares all weeds and pests in the county.
Kenneth B.	Multiple-use management may be appropriate for a good portion of USFS land--but not all of it.	Thank you for your comment. Comment was received and taken into consideration.
Bridger Teton National Forest	2020 NEPA regulations (40 CFR 1500- 1508 and 36 CFR 220): We recommend you incorporate the new CEQ NEPA and Forest Service regulations.	Information was added to the NEPA section in the Introduction of the document and a NEPA section was added to section 6.4 to address the new CEQ NEPA regulations.



<p>Bridger Teton National Forest</p>	<p>Multiple Use Sustained Yield Act (MUSYA): The Forest Service has responsibility to consider a wide range of resources in addition to the multiple uses listed in several parts of the Lincoln County draft NRMP. The plan did not include some uses identified in the MUSYA and added other uses not identified in the MUSYA.</p>	<p>The County’s plan includes the uses that the County believes are most important to sustaining and protecting the custom and culture of the County. The County believes that these uses fall within the intent of MUSYA and also falls within the intent of several other important public land’s laws including the Taylor Grazing Act, the Mining Act of 1872, NEPA, NFMA, and FLPMA. While there may be a disagreement at times as to the interpretation of these laws or management of these resources, the County stands by this plan and hope that it can be used as a tool to achieve coordination, consistency, and compatibility between the Forest Service’s plans and management decisions and the County’s.</p>
<p>Bridger Teton National Forest</p>	<p>2012 Planning Rule direction (36 CFR 219). Direction in CFR 219.9 explains how 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. Both the Regional Forester's Sensitive Species (RFSS) and Management Indicator Species (MIS) were part of the</p>	<p>Language was updated in this section to reflect the 2012 Planning Rule direction.</p>



	<p>previous 1982 planning rule and those terms are no longer applicable in the 2012 planning rule direction which currently implements the National Forest Management Act.</p>	
<p>Bridger Teton National Forest</p>	<p>It should be noted that the Forest Service is required to follow laws, Executive Orders, regulations and policies not mentioned in the draft NRMP such as National Historic Preservation Act, EO 13175 Consultation & Coordination with Indian Tribal Governments, EO 11988 Floodplain Management, EO 11990 Protection of Wetlands, and Wyoming Wilderness Act to name a few. Adherence to such direction may appear to conflict with what the County is submitting as part of their natural resource management plan. However, we are committed to ensuring a common understanding and interpretation of such legal direction to facilitate a positive working relationship with the county and to accomplish our common goals.</p> <p>As public servants and local elected officials, we should work together to reach solutions that are politically and socially durable and ensure the long-term sustainability of communities and natural resources. It is through working together, at multiple stages of planning and project implementation, that we will achieve true success.</p> <p>We look forward to continuing our work together beyond this comment period and I invite you to contact our Environmental Coordinator, Anita Delong at</p>	<p>Lincoln County thanks the Forest Service for their comments and their commitment to facilitate a positive working relationship with the County. Changes were incorporated to the document to reference the listed statutes and executive orders. The County does not believe that there are any conflicts with the County's Natural Resource Management Plan and the listed statutes and executive orders, however, the County promises to work with the Forest Service to reach a common understanding as to how to achieve compatibility with this plan and the laws and regulations the Forest Service must follow.</p>



	anita.delong@usda.gov should you have questions or wish for additional input.	
Lincoln Conservation District	<p>Addition of the following acronyms</p> <ul style="list-style-type: none"> a. CLG - Coalition of Local Governments b. LCC - Lincoln County Commissioners c. LCDLRUP - Lincoln Conservation District Land/Resource Use Plan d. LCPB – Lincoln County Predator Board e. LCSD - Lincoln County School Districts f. LCWPD – Lincoln County Weed and Pest District g. LCCE – Lincoln County Cooperative Extension h. DSA – Designated Surveillance Area i. SLIB – State lands and investment Board 	The following acronyms were added to the acronym list in the document.
Lincoln Conservation District	Concerning the maps used throughout the Lincoln County NRMP report, the maps should show what agency generated the map or where the information for the map was obtained rather than the Lincoln County NRMP on all maps. Very important.	Maps were updated to include the data source for information provided on the maps.
Kemmerer BLM	BLM attended the public meetings in both Afton and Kemmerer.	The County appreciates BLM’s participation in the public meetings that were held for the Lincoln County NRMP.

