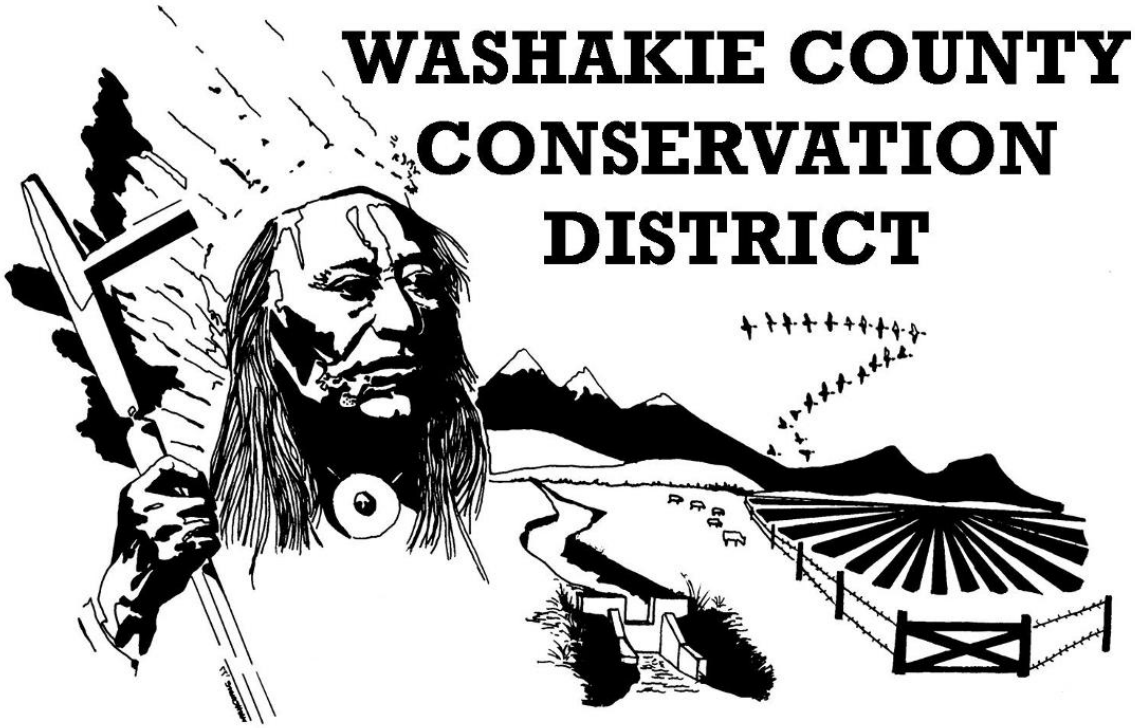

LONG RANGE NATURAL RESOURCE
LAND USE PLAN

2017

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WASHAKIE COUNTY CONSERVATION DISTRICT
NATURAL RESOURCE LAND USE PLAN

Washakie County Conservation District's (WCCD) Natural Resource Land Use Plan has been developed in partial fulfillment of the requirements of the Wyoming Department of Agriculture Base Funding Criteria as per "Wyoming Conservation District Law" (W.S. 11-16-101 through 11-16-134).

WCCD has long been respectful of the constitutional concept of private property rights. It is the intent of this Plan to be a guide for the citizens of WCCD, and others, for identifying and respecting the customs, culture, economic viability, social stability and quality of life found in this unique area, and then applying those values to resource conservation, planning, growth, development, and such changes as may occur within WCCD through time.

WCCD Natural Resource Land Use Planning Process

In 1999, WCCD initiated a collaborative planning process in order to implement the policy of the Wyoming Legislature. In 2001, WCCD implemented the initial WCCD Natural Resource Land Use Plan, which was submitted to and filed with the Washakie County Clerk. Since 2001, the plan was updated in 2005, in 2010, and in 2017.

Initially (2001) the goals were derived from public participation sessions to allow WCCD resources to be guided by the visions of the community. In 2010, public meetings were held and questionnaires were sent out to the public explaining who WCCD is with an outline of our goals and objectives. The public gave input on where they felt WCCD should focus efforts under each goal. They ranked the 10 most important natural resource, land use, or land management issues facing our community in the next decade, and ranked the 5 most important products, programs, or services WCCD can provide.

Public input made within the 45-day public comment period was incorporated to update the goals and WCCD policies.

Current specific goals of WCCD can be outlined as follows, recognizing that significant programmatic overlap occurs:

- Internal District Operations
- Range and Irrigated Land Management Program
- Habitat/Wildlife
- Recreation
- Minerals and Oil & Gas Development
- Water Quality/Quantity
- Water – Rights & Use
- Government Agency Interaction & Coordination
- Special Projects
- Public Information & Education
- Tree Program

- Waste Management
- Endangered Species Act
- Special Designation Areas
- Travel Management/Access
- Wild Horses, Burros, & Estray Livestock
- Forest Management
- Air Quality

WCCD recognizes that it will continue to experience change driven by a variety of social, economic, and natural resource issues and concerns, resulting in programmatic evolution through time.

WCCD has been a Local Government Cooperator in the Bighorn National Forest's Forest Plan Revision, and a Cooperating Agency in the Bureau of Land Management (BLM) Big Horn Basin Resource Management Plan (RMP) revision.

WCCD particularly relies on the USDA-Natural Resources Conservation Service (NRCS) for technical assistance and other support.

WCCD anticipates continuing membership in the Wyoming Association of Conservation Districts (WACD) and The National Association of Conservation Districts (NACD).

Introduction

A number of factors contributed to the rapid deterioration of western agricultural lands during the early 1930's. The application of poor farming procedures, misuse of range, and extreme lack of moisture were probably foremost in creating these adverse conditions.

Recognizing the need to stop further degradation of these valuable lands, Senator Earl Bower, of Washakie County, introduced a bill establishing the Wyoming Soil Conservation Act in February 1941. This Act authorized the establishment of Soil Conservation Districts. These newly formed bodies were given the responsibility of natural resource conservation within their respective districts.

On December 31, 1941, the Nowood Soil Conservation District at Ten Sleep became one of the first four Districts in Wyoming. In 1943 the Washakie Conservation District was established in Worland. In 1990 these two districts consolidated to form the Washakie County Conservation District (WCCD). The long standing, historic mission of conservation districts to conserve our nation's soil and water resources is still the guiding force of WCCD.

Authority

WCCD, pursuant to W.S. 11-16-122 (iv) and (xvi) of the Wyoming Conservation Districts Law is authorized to develop plans for WCCD and to file said plans in the office of the Washakie County Clerk.

Governmental Subdivision of the State

WCCD is a local government and a governmental subdivision of the state as defined and established by the Wyoming Statutes at Title 11, Chapter 16, et seq., entitled – "Wyoming Conservation Districts Law." The Board of Supervisors of WCCD (5 members) are elected by the people of WCCD at General Elections, by popular vote. The elected members represent both the rural and urban populations within WCCD. The Supervisors are the only locally elected board charged specifically with the responsibility of representing local people on natural resource issues. A Conservation District Supervisor serves the community and district voluntarily and without pay. The WCCD Board of Supervisors employs a District Director, and other personnel to implement the projects and programs of WCCD. WCCD programs and administration is now supported by a voter approved one-mill levy, which generates revenue for projects and grants. WCCD was partially funded by a ½ mill levy from 1994 through 2002. During the 2002 General Election, voters approved an increase of up to one mill levy.

WCCD is guided by the legislative declarations and policy of the Wyoming State Legislature with the following charge:

AS REPRINTED FROM: W.S. § 11-16-103 Legislative declarations and policy

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

It is hereby declared to be the policy of the legislature to provide for the conservation of the soil, and soil and water resources of this state, and for the control and prevention of soil erosion and for flood prevention for the conservation, development, utilization, and disposal of water, and hereby to stabilize ranching and farming operations, to preserve natural resources, protect the tax base, control floods, prevent impairment of dams and reservoirs, preserve wildlife, protect public lands, and protect and promote the health , safety and general welfare of the people of this state.

The above, being the charge and direction of the Wyoming Legislature for all Conservation Districts within the State of Wyoming, WCCD's responsibility to the cooperators of the District is measurable and accountable by the actions WCCD takes to accomplish the direction given by the Wyoming Legislature.

The WCCD Board of Supervisors, an elected body and a local government, is the local guide to the management of lands within the jurisdiction of WCCD and is accountable to the citizens of the District.

Federal Involvement

This plan is intended to provide a positive guide for the people of WCCD, and local, state, and federal agencies in coordinating their management activities. This should be done in a manner consistent with locally led planning efforts. The intent is to ensure that federal agency actions provide additional benefits to local citizenry. Coordination with a local government, such as WCCD, can help achieve this important goal.

Statutes exist that outline roles of local government in federal agency planning activities. These statutes generally outline the need to coordinate land use planning activities with state agencies, boards, commissions and departments; and provide technical assistance, information and education to the state, counties, municipalities, regions, and political subdivisions of the state, relative to land use planning.

At the highest levels of our government this intent is evident and mandated by statute. In the Executive Order (13352) for Facilitation of Cooperative Conservation, August 26, 2004, guidance is given to multiple federal government agencies including the Department of the Interior, Department of Agriculture, Department of Defense, and the Environmental Protection Agency, and states:

> *"… to ensure that… implementing laws relating to the environment and natural resources in a manner that promotes cooperative conservation, with an emphasis on appropriate inclusion of local participation in Federal decision making, in accordance with their respective agency missions, policies, and regulations."*

"Cooperative conservation" in said order is defined as: *"actions that relate to use, enhancement, and enjoyment of natural resources, protection of the environment, or both…"*

The order goes on to state that federal agencies must carry out environmental programs and projects in a manner which:

> *"(i) facilitates cooperative conservation;*
> *(ii) takes appropriate account of and respects the interests of persons with ownership or other legally recognized interests in land and other natural resources;*
> *(iii) properly accommodates local participation in Federal decision making;"*

Upon gaining Statehood, the State of Wyoming retained concurrent civil and criminal jurisdiction by the State of Wyoming on all lands ceded to the federal government (W.S. 36-10-103). To this end, local government works in coordination and cooperation with federal agencies.

It is the intent of WCCD to ensure communication with federal and state agencies on proposed actions that affect resources that lie within jurisdictional boundaries of WCCD. Where appropriate, the WCCD board will coordinate with federal and state agencies in planning and implementation of those actions. When formal communication is required, official notification and delivery of information and documents should be directed to the Washakie County Conservation District, 208 Shiloh Rd., Worland, WY 82401. Electronic correspondence should be sent to wccd@rtconnect.net

Statutory Requirements for Local Government-to-Federal Interaction and Influence

1. The National Environmental Policy Act (NEPA)

NEPA applies to *"every major Federal action significantly affecting the quality of human environment"* (42 U.S.C. § 4332(2)(C)). The courts have interpreted this to mean that every time the federal government spends any amount of money for almost any action, NEPA compliance is required. There are several ways local governments can participate in the NEPA process, depending on the type of federal decision, the level of commitment of the local government, and the goal of the local government.

First, the local government can use its local land use or resource plan as part of the federal agency's "consistency review" process. Under this provision, if the federal agency, in the course of writing an EIS, receives a local land use or resource plan, 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)).

NEPA also requires that copies of comments by state or local governments must accompany the EIS or EA throughout the review process (421 U.S.C. §4332(c)).

Second, local governments can separately participate in the NEPA process as a "cooperating agency" (40 C.F.R. §1508.5). Pursuant to NEPA, an applicant for "cooperating agency status" must both (1) be a locally elected body such as a conservation district board of supervisors or a county commission; and (2) possess "special expertise." A local government's special expertise is defined as the authority granted to a local governing body by state statute.

Wyoming statues specifically recognizes a conservation district's duty to:

> *"provide for the conservation of soil, and soil and water resources of this State, and for the control and prevention of soil erosion and for flood prevention or the conservation, development, utilization and disposal of water, and thereby stabilize ranching and farming operations, to preserve natural resources, protect the tax base, control floods, prevent impairment of dams and reservoirs, preserve wildlife, protect public lands, and*

protect and promote the health, safety and general welfare of the people of this state." W.S. 11-16-103(b).

Wyoming statues go on to state that the powers and duties of conservation districts and supervisors include "*cooperate, including but not limited to representing the conservation district as a cooperating agency with special expertise as provided by the National Environmental Quality Act…."* and to:

"Develop and implement comprehensive resource use and management plans for range improvement and stabilization…..In developing plans under this paragraph, the supervisors of the district shall consider the customs and cultures of residents of the district as those customs and cultures relate to the land and resource, current and historical information and data related to the uses of the land and resource… The supervisors of a conservation district which has officially adopted a comprehensive plan pursuant to W.S. §11-16-122 (b)(xvi) may coordinate with federal agencies as provided in the Federal Land Policy and Management Act of 1976, the Forest Rangeland Renewable Resources Act of 1974, as amended by the National Forest Management Act of 1976 and any other federal statute which provides for coordination with local governments and federal regulations adopted pursuant to this statute." W.S. §11-16-122(b)(viii), (xvi) and (xxviii).

<u>Third</u>, the Wyoming Statutes state:

"When representing a conservation district as a cooperating agency in matters related to the National Environmental Policy Act and in federal land planning, implementation and management actions, supervisors of a conservation district shall be deemed to have special expertise on all subject matters for which they have statutory responsibility as provided in W.S. 11-16-122, including but not limited to all subject matters directly or indirectly related to stabilization of the agriculture industry, protection of natural resources including but not limited to data and information, conservation of soil and water resources, control and prevention of soil erosion, flood prevention of the conservation , development, utilization and disposal of water within the district." W.S. § 11-16-135.

These statutes clearly define the local government's "special expertise" required to be a cooperating agency pursuant to NEPA.

2. Federal Land Policy and Management Act (FLPMA)

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 (43 U.S.C. § 1712):

"To the extent consistent with laws governing the administration of the public lands, coordinate the inventory, planning and management activities for such lands with the

land use planning and management programs of other federal departments and agencies of the State and local governments within which the lands are located…considering the policies of approved State and tribal land resource management programs."

Such coordination is to be achieved by:

To the extent practical, the BLM must stay apprised of local land use plans (43 U.S.C. § 1712(c)(9)).

- The BLM must assure that local land use plans germane to the development of BLM land use plans are given consideration.
- To the extent practical, 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 that may impact non-federal lands.

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, BLM] 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, 2012). FLPMA's consistency review requirement states that 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.

Finally, FLMPA requires that the BLM also provide for a Governor's consistency review as part of the land use planning process (43 C.F.R. § 1610.3-2€).

3. The National Forest Management Act (NFMA)

NFMA, which governs the U.S. Forest Service (USFS), requires the agency to "coordinate." The NFMA requires:

"[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.

4. Governor's Consistency Review Process

State Governors are entitled to a separate consistency review of BLM and land use plans, revisions, and amendments. Title 43 C.F.R § 1610.3-2 provides an opportunity for the Governor to review all proposed plans to identify any inconsistencies with State or local plans. If the Governor's comments result in changes to the plan, the public should be re-engaged in the process.

Multiple Use

WCCD, and its citizens, recognize that federal law outlines a multiple use management paradigm of federally managed lands. The Federal Land Policy and Management Act states in objective 7, *"that management be on the basis of multiple use and sustained yield unless otherwise specified by law;"* and in objective 12 the BLM is mandated to manage public lands *"in a manner which recognizes the Nation's need for domestic sources of minerals, food, timber and fiber."*

The Bighorn Basin Resource Management Plan (RMP) 2015, which directs the local BLM field offices, states a commitment to multiple use on page 8: *"In accordance with the principles of multiple use and sustained yield, this RMP will provide for monitoring and evaluation of RMP decisions over time."*

The National Forest Management Act of 1976, Part 1600 states

> *"(3) to serve the national interest, the renewable resource program must be based on a comprehensive assessment of present and anticipated uses, demand for, and supply of renewable resources from the Nation's public and private forests and rangelands, through analysis of environmental and economic impacts, coordination of multiple use and sustained yield opportunities as provided in the Multiple-Use Sustained-Yield Act of 1960 and public participation in the development of the program."*

The Multiple Use Sustained Yield Act (16 U.S.C. 528-531) states, *"It is the policy of the Congress that the national forests are established and shall be administered for outdoor recreation, range, timber, watershed, and wildlife and fish purposes."*More specifically the Bighorn National Forest Plan 2005 states

> *"Goal 2, Provide a variety of uses, values, products, and services for present and future generations by managing within the capability of sustainable ecosystems. Recognize the interdependence between the BNF and local communities. Consider natural and*

social systems across landownership boundaries, including land use patterns and open space."

WCCD has long supported multiple use, not only for federally managed lands, but also for State lands. Sustaining multiple uses includes preservation of historic and traditional economic uses on federally and State managed lands within and affecting WCCD.

Washakie County History (Pendergraft, 1985)

Topography played an important part in the development of Washakie County. It is a deep, fertile valley, isolated by high, formidable mountains, with few negotiable passes.

Agriculturally, the area was rich, and all along the Nowood valley there was good and plentiful water and vast miles of buffalo grass. Here existed a natural abundance - deer, elk, buffalo, bear, and trout in the creeks, which made it a favorite hunting area and winter camping ground for several Indian tribes. The severe winter storms generally were shunted away from the area because of the tall mountains surrounding, making the winters mild.

To the west of the foothills there were many miles of "badlands," clay soils whose nature was hidden by luxurious grass and was an ideal environment for salt sage, a high-protein superior livestock feed, which was grazed during the winter months. The Big Horn River, one of the few waterways in the United States that channels north, provided many square miles of river-bottom land with capabilities of raising bumper crops. Washakie County, which includes 2125 square miles beginning south of the 12th Standard Parallel, was originally part of Johnson County as far west as the Big Horn River (Pendergraft, 1985).

The first permanent settlement of the Ten Sleep area was around 1880 by cattlemen. The first large herds of cattle were brought into the area by a group of local ranchers in 1886. These cattle were driven overland from Texas to the Upper Nowood country. The following winter was severe and 80% of the cattle died because no hay or feed was available (Pendergraft, 1985).

During the 1890's, large numbers of sheep were brought into the area. There were more cattle in the Basin than ever before, but sheep were steadily encroaching on the cattlemen's domain. The cattlemen had grown to consider it their own open range because of prior occupancy and they were concerned that when the sheep were trailed over a section it was no longer usable for cattle grazing. Disputes between sheep and cattle ranchers increased, culminating in the Spring Creek Raid of 1909 in which three sheep men and large numbers of sheep were killed (Pendergraft, 1985).
Whether by sheep or cattle, the indisputable fact stands that the range had been consistently overstocked, and the near-drought conditions that prevailed for several years were also a major factor in the decline of the basin rangelands.

Irrigated farming began in the Ten Sleep area about 1883, and in 1888, the first irrigation works was built in Worland, the Pfeiffer Ditch, which is the first recorded appropriation of water on the Big Horn River. The Big Horn Canal was constructed in the early 1890's, which took three years to build, mostly by teams of horses. In 1904 the Hanover Canal Association was formed and was to supply water for irrigation of the several thousand acres of rich bottom land along the Big Horn valley. The Lower Hanover was to irrigate the bottom land and the Upper Hanover was to take its water from the river several miles farther south and at a higher elevation, to irrigate a thirty-mile long area of benchland. This was the most extensive irrigation project in the state (Pendergraft, 1985).

In 1903, a pioneer camp was established on the west bank of the Big Horn River, at its confluence with Fifteen Mile Creek. The camp was on the Bridger Trail, a road established by mountain man Jim Bridger for miners enroute to the goldfields of Montana. Charles H. Worland, a nursery salesman, selected this location as a halfway point between Basin City and Thermopolis, and the town located here now bears his name. The camp became an overnight stop for stagecoaches and freighters and provided them with supplies (Liams, 1976).

In 1904, work began on the Hanover and Big Horn Canals and people flooded in for the jobs created by this construction. The telephone arrived in Camp Worland, as well as a school, a church and a store with a post office. In 1905, survey crews from the Burlington Northern Railroad arrived and a newspaper was begun. In 1906, Camp Worland moved across the Big Horn River and became the incorporated town of Worland where the railroad, a bank, doctors and lawyers arrived. The railroad opened this area to markets that up to this time were not available. The farmers started irrigating from their canal, planting and raising alfalfa, wheat and sugar beets. The wheat was ground for flour and used for chicken feed (Pendergraft, 1985).

Washakie County was organized in 1911 as a division of Big Horn County, which included all of Big Horn Basin and Yellowstone Park. It was named in honor of the Shoshone Indian Chief "Washakie" (Liams, 1976).

In 1913 the town of Worland became the county seat. The town of Ten Sleep was incorporated in 1932, although it was in existence before that date. Ten Sleep takes its name from its location, ten sleeps (nights of travel) between the great Sioux camps on the Platte River and an area near Bridger, Montana (Pendergraft, 1985).

General Information about WCCD

WCCD includes all lands in Washakie County. Washakie County occupies the southeastern part of the Big Horn Basin, a large syncline extending about 100 miles from north to south and 120 miles from east to west.

The western boundary borders on Hot Springs and Park Counties. The northern boundary borders on Big Horn County and the southern boundary again borders Hot Springs County. The Absaroka Mountains are to the west, the Pryor Mountains to the north, the Big Horn Mountains to the east and the Bridger and Owl Creek Mountains to the south.

WCCD comprises 1,434,096 acres, which includes the incorporated towns of Worland and Ten Sleep and is wholly located in Washakie County, in north central Wyoming (Suitewater, 2016). Of the total area of WCCD, approximately 374,729 acres are privately owned; approximately 915,814 acres are owned by the Bureau of Land Management; approximately 1434 acres are owned by the Bureau of Reclamation; approximately 35,852 are National Forest lands and approximately 101,677 acres are owned by the State of Wyoming (Suitewater, 2016). About 20 percent of the privately-owned land is irrigated cropland, 78 percent is rangeland, and 2 percent is woodland (Suitewater, 2016). The federally administered land is predominately rangeland, with approximately 4 percent in woodlands.

Below is a breakdown of ownership within WCCD (Suitewater, 2016).

Private	26.1 %
USDA Forest Service	2.5 %
USDI Bureau of Land Management	63.9 %
USDI Bureau of Reclamation	.1 %
State of Wyoming	7.1 %

The basin is composed of uplands, alluvial fans, terraces, and badlands. The lowest point in Washakie County, about 3,950 feet above sea level, is where the Big Horn River leaves the county. The highest point, about 9,576 feet, is in the northeastern corner of the county. The elevation at Worland is 4,060 feet, and the elevation at Ten Sleep is 4,436 feet.

Transportation

Burlington Northern Santa Fe Railroad offers service from Worland, allowing freight to move in and out of Washakie County to any destination nationwide (BNSF, 2016).

The major transportation facilities are U.S. Highway 16 and U.S. Highway 20. U.S. Highway 16 enters the county from the northeast corner, then passes through Ten Sleep and joins U.S. Highway 20 at Worland. U.S. Highway 20 is a major connecting highway to points north and south through Washakie County. State secondary roads, and well maintained county roads, serve the major parts of the county and the farming and ranching communities.

Utilities

Electricity is provided in Worland by Rocky Mountain Power, and along the Big Horn River and rural constituents to the west, by High Plains Power. The Ten Sleep and Nowood Creek areas receive electricity from the Big Horn Rural Electric Association.

Natural Gas is provided in Worland by Wyoming Gas Company for a majority of residents within or near the city limits. Worland residents outside of the natural gas pipeline boundaries utilize propane. Ten Sleep residents are provided with propane from several propane supplier companies.

The major telephone land line service is provided in Worland by R.T. Communications and in Ten Sleep by TCT West, Inc. The major cell phone services are provided by Verizon Wireless and AT&T.

Water Resources

Irrigation water from the Big Horn River is diverted into the Big Horn and Bluff Canals on the west side of the river and into the Hanover Canal on the east side. Water for the Worland Valley area comes as direct flow from the Big Horn River; however, additional water is stored in Boysen Reservoir. Irrigation water for the Nowood and Gooseberry areas is conveyed by private ditches from wells or from Nowood, Ten Sleep, Gooseberry and Cottonwood Creeks and their tributaries. The irrigation water supply usually is very limited from mid-July through the rest of the growing season. Surface water supplies about 94 percent of water for off-stream use in WCCD. Artesian wells supply water for several isolated sprinkler systems just east of Nowood Creek (Liams, 1976).

The drinking water that supplies Ten Sleep and Worland comes from the Madison Formation. Northeast of Worland and west of Trapper Creek, lies the “Paint Rock Anti-Cline” which is a porous strata-like formation that angles many miles and 2000 plus feet under the ground surface. Geologically formed of dolomite or lime, this formation covers a large area of the United States and is an underground ocean of fresh water (Liams, 1976).

The Worland well heads located between Manderson and Hyattville or Bonanza include Husky #1 and Worland #3. The pipeline crosses the Nowood Creek and runs 22 miles slightly southwest to the pressure reducing station, 4 miles east of Worland, where chlorination takes place. According to the Wyoming Water Development Commission’s 2011 report, “During the spring of 2006, WESTON successfully conducted a flow test program on Husky-Worland Well No. 1 and Worland Well No. 3. The testing program indicated that while the wells are highly productive, they are not as prolific as represented in the past. Based on a well field evaluation conducted by WESTON, it was determined that the wells can sustain a production rate equal to the projected average daily demand of 2,027 gpm for twenty years. Additional analysis performed for this study indicated that the wells could produce up to 6,500 gpm without the need for installing pumps in the wells. However, production rates

above 3,000 gpm will require installation of a booster pump on the city's water line. As previously stated, it is likely that drawdowns with prolonged production will be greater than has been predicted and caution should be exercised before expecting such high production from the wells." (WWDC Groundwater Level II Report, 2011)

Ten Sleep's water supply is also primarily produced from the Madison aquifer through two high capacity, flowing artesian wells. Ten Sleep No. 1 was completed to a depth of 1,050 feet in the Madison Limestone and Darwin Sandstone Member of the Amsden Formation. Ten Sleep No. 2 was completed to a depth of 1,098 feet in the Madison Limestone. Recent aquifer testing of these wells indicates both are still capable of yielding moderate to large quantities of ground water to the water system (Wyoming Water Development Commission, 2002).

Surface Water

There are three types of streamflow characteristics: perennial, intermittent, and ephemeral. Perennial streams have continuous streamflows sustained by water stored in snowpack and ground-water discharge. Intermittent and ephemeral streams generally have their headwaters near the center of the county and are characterized by periods of no flow. High streamflows in intermittent streams usually are associated with snowmelt, thunderstorms or sustained rainstorms; high streamflows in ephemeral streams are only associated with thunderstorms or sustained rainstorms.

The Big Horn River and Nowood Creek are the major drainage systems in WCCD. The Big Horn River flows from south to north and most of the water is already in the river when it enters the county and is regulated for irrigation supply and flood control at Boysen Dam, 19 miles upstream from the county line. Drainage from the western part of the county comes from Cottonwood, Gooseberry, Fifteen Mile and Tenmile Creeks. Nowater Creek drains the badlands to the east. It receives most of its water from streams flowing west out of the Big Horn Mountains. The Nowood Creek enters the Big Horn River at Manderson, Wyoming, just north of the county line.

Annual precipitation is insufficient for dryland farming, or creation of water storage for industry. Agriculture, industry, and residential needs all depend in some way on diverting surface water or developing groundwater (Wyoming Water Development Commission, 2003). The current and domestic consumption would be impossible without management of the Big Horn River and the Nowood River as they flow through the county.

The Big Horn River in WCCD has an average flow of approximately 1,000,000 acre feet which is enough water to cover 1,000,000 acres of land to a depth of one foot. The streams and creeks of the county contribute over 390,000 acre feet to the river's flow.

Groundwater

The principal ground-water aquifers in WCCD in descending order are as follows: Alluvium, Willwood Formation, Fort Union Formation, Goose Egg Formation, Tensleep Sandstone, Madison-Bighorn aquifer and the Flathead Sandstone. The Willwood Formation is exposed in the central and western parts of the county, and the Fort Union Formation is exposed in the center of the county. The remaining principal aquifers crop out along the flank of the Big Horn Mountains in the eastern part of the county. The Tensleep Sandstone, Madison-Bighorn aquifer and the Flathead Sandstone probably have the greatest potential for further development in eastern Washakie County (Suson, D.D., M.L. Smalley and E. R. Banta, 1993).

Groundwater in WCCD is generally confined to the areas adjacent to streams and rivers within their underlying aquifers. The aquifers are generally composed of silts, sands and gravels underlain by sedimentary sandstone and shale rocks. The aquifers in areas not directly influenced by the streams and rivers are limited to underground permeable sandstones and limestones. Artesian wells occur within WCCD and provide a viable water resource to residents of WCCD. However, in some of the outlying areas, the availability of water suitable for domestic use is a problem for residents (Suson, D.D., M.L. Smalley and E. R. Banta, 1993).

Geology

Most of WCCD is in the Big Horn Basin, which is a structural basin that developed about 65 million years ago. The Big Horn and Owl Creek Mountains were uplifted at this time, and large quantities of pre-Tertiary sediments were eroded into the developing Big Horn Basin. Following the uplift of the mountains, a broad regional uplift raised basins and mountains thousands of feet to their present position (Suson, D.D., M.L. Smalley and E. R. Banta, 1993).

Bedrock in WCCD consists of rocks of Precambrian through Tertiary age. Because the Big Horn Basin is a large synclinal basin, the oldest rocks are exposed in the Big Horn Mountains in the eastern part of Washakie County, and younger rocks crop out in the western and central parts of the county. Sedimentary rocks have been eroded completely from the summit of the Big Horn Mountains, exposing Precambrian rocks. In the western and central parts of the county, the total sedimentary rock sequence is as much as 15,000 feet thick. Faults and folds are common along the western flank of the Big Horn Mountains (Suson, D.D., M.L. Smalley and E. R. Banta, 1993).

The principal aquifers are as follows: alluvium of Quaternary age, Willwood Formation of Tertiary age, Fort Union Formation of Tertiary age, and the formations of primarily Paleozoic age –Goose Egg Formation, Tensleep Sandstone, Madison Limestone, Bighorn dolomite and Flathead Sandstone (Suson D.D., M.L. Smalley and E. R. Banta, 1993).

The relief of WCCD is typical of that of intermountain desertic basins. The relief is the result of geologic processes that began with mountain building. After the mountains were thrust

up, the Tertiary Willwood Formation was deposited in the basin. This was followed by a period of erosion. Next, a valley-filling formation of stratified sand and gravel was deposited. The shaping of the present landscape began during the erosional cycle that followed. West of the Big Horn River, most of the terrace material and much of the underlying shale and sandstone were carried away and the gravel-capped pediments of the basin were formed. Where the shale and sandstone have been eroded, badlands occur. The stratified sand and gravel deposits originated primarily as outwash from the Absaroka, Shoshone, and Owl Creek Mountains to the west. East of the Big Horn River, the landscape is dominated by monoclinal backslopes, uplands, narrow, alluvial deposits along intermittent drainageways, badlands, and mountain fronts (Liams, 1976).

Soils (Liams, 1976)

The soils of Washakie County formed in material derived from limestone and sandstone on mountainsides and from interbedded sandstone and shale in the Big Horn Basin. The general slope of bedrock east of the Big Horn River is to the north-northwest and west of the Big Horn River it is north-northeast. The west flank of the Big Horn Mountains is a series of monoclinal ridges with short, steep front slopes and long, sloping back slopes. Starley, Starman, and Spearfish soils and Rock outcrop are on the front slopes and Woosley, Clayburn, Chittum, Stubbs and Vale soils are on the back slopes.

Granite and gneiss are in the northeastern corner of the county. There is a small area of glaciation, about 4 miles long, extending from the county line south along Ten Sleep Creek. Granile, Tine, Limber and Hyattville soils are also in this area. The southern part of the county is underlain by clay shale. These areas have shallow to very deep soils on rolling topography. By cultivating and leveling the soils, man has altered the natural soil horizons. This has changed the character of these soils and in some places, their classification.

Vegetation

Native vegetation fills a foundational role in WCCD, providing forage and cover for both wildlife and livestock, visual aesthetics, erosion control, soil fertility, photosynthesis, carbon sequestration, evapotranspiration, and economic benefits to WCCD. The following five vegetation zones from Skinner, Crane, Hiller and Rodgers (2000) are prevalent in WCCD and reflect the differing climatic and parent soil regimes in the region of WCCD.

SUB-ALPINE: The zone exists in the highest elevations of WCCD, from 9,500 foot elevation east of Meadowlark Lake, to the top of the conifer tree line. Most of the vegetation is herbaceous, with lichens and sporadic low and dwarf shrubs. The vegetation in this region is mainly used for wildlife food and cover. The high rock to soil ratio helps harvest snowmelt which is stored in the shallow gravels and coarse soils, thus recharging ground water stores and feeding lower elevation streams which provide drinking water for wildlife, livestock, and humans. Summer precipitation events are low

intensity and infiltration rates are high, resulting in low amounts of surface runoff (Skinner et al., 2000).

MONTANE: The zone includes the area from the top of the conifer tree line to the open grasslands and meadows. Most of the trees are conifers, however some species of deciduous trees (aspen and cottonwood) are found also. Forested areas of the lower montane zone can be broken up by open "parks" of grasses and forbs (Carr and Melcher 2015). The montane zone provides many forest products of timber, firewood, posts, poles, Christmas trees, and tree transplants. The open parks provide excellent wildlife and livestock forage. Soils under forest canopy are usually shallow with a low water holding capacity. Water requirements of the trees and rain interception by the canopy and pine litter result in little recharge to subsurface water storage. Drainage basins that originate in these zones usually provide intermittent streamflow to perennial streams originating higher in the range (Skinner et al., 2000).

FOOTHILLS: On the lower slopes of the mountains there is a zone of shrubs and small deciduous trees. Sagebrush occurs where favorable moisture and soil conditions exist. Juniper trees also occur in the foothills. The vegetation in this region provides grazing opportunities and habitat for wildlife and livestock, particularly in the winter months. Wyoming foothills commonly possess highly erodible, fine soils. Surface runoff from foothills can be high in response to single snow melt or rainfall events. High quantities of sediment can be transported from streams and creeks in the foothills (Skinner et al., 2000).

BASINS: Along the rivers and streams at lower elevations are found deciduous trees and brush, with open areas covered with perennial grasses such as Basin wildrye, smooth brome, and Kentucky bluegrass. There are swampy and wetland areas adjacent to the streams occupied by cattails and various rushes and sedges. The vegetation in this area provides habitat for many species of waterfowl, wildlife, and livestock as well as opportunities to level the land for high production agriculture and building sites. Basin soils are usually fine and field capacity can be high. Vegetation cover in basins is important to reduce the potential for high sediment runoff during high intensity summer storm events (Skinner et al., 2000).

BADLANDS: The lowest areas of WCCD are sparsely vegetated. The sparse vegetation conditions are caused by the lack of moisture throughout the growing season. The climax plants are bluebunch wheatgrass, indian ricegrass, and needle and thread grass, with five to fifteen percent sagebrush. The saline upland areas have saltbrush and the lowland areas have greasewood. The low vegetation cover and erodible soils result in highly dissected drainage basins (Skinner et al., 2000).

Surface runoff can be quite high and the badlands have considerable influence on the water quality within WCCD. The sparse vegetation in this area is used for grazing by

livestock and wildlife habitat. The Bureau of Land Management also manages approximately 160 wild horses in this area.

Climate (Liams, 1976)

WCCD is protected from strong winds by the Absaroka Mountains to the west and Big Horn Mountains to the east. Francs Peak, approximately 65 miles west of Worland, has an elevation of 13,140 feet and Cloud Peak, approximately 40 miles northeast of Worland, has an elevation of 13,165 feet. The protection provided by these mountain ranges results in very light winds or calm at Worland much of the time. It also has a pronounced effect on the temperature and precipitation at Worland. The air moves downslope into the basin from all directions. When moving downslope, the air is compressed and heated, warming at a rate of 5.5 degrees F for every 1,000 feet of descent. This warming of the air also contributes to the low relative humidity in the area.

Shallow cold air masses approaching from Canada are largely blocked by the Big Horn Mountains; however, deeper cold air masses can spill into the basin. The cold air can be trapped in the basin, resulting in severely cold temperatures that persist for several days. Also, in winter a layer of cold air can form in the basin because of the loss of heat by radiation and the drainage of cold air from the surrounding mountains. This usually occurs during periods when winds are very light and the night sky is clear for several days. Moisture from the Pacific Ocean is largely blocked by the mountain chains between Worland and the west coast. This climate is classified as semiarid.

In summer and winter, the daily maximum and minimum temperatures vary greatly. This is primarily because of the high elevation and low humidity, which permit rapid warming by solar radiation, and also because of the passage of both warm and cold air masses. Thus, Worland is subject to wide and sometimes abrupt changes in temperature. The average annual air temperature is about 45 degrees.

Freezes late in spring and early in fall are common. The average last occurrences of 32 degrees and 28 degrees in spring are May 13 and April 30, respectively. The average first occurrences of 32 degrees and 28 degrees in fall are September 23 and October 4, respectively. Thus, the average length of the growing season is 133 days at 32 degrees and 157 days at 28 degrees.

The average annual precipitation is about 8 inches at Worland and about 13 inches at Ten Sleep. Generally, the least amount of precipitation falls during December, January, and February; the amount increases rapidly to a peak in the latter part of May and the first part of June. The amount of precipitation decreases rapidly during the last part of June through August. Precipitation increases to a secondary peak in September, then decreases again to a low in winter. Normally, about 3.93 inches of the annual precipitation falls between the average 32-degree freeze-free dates, and about 4.74 inches falls between the average 28-

degree freeze-free dates. Occasional thunderstorms are accompanied by hail, but most of the hail is light and is limited to small areas.

Sunshine is abundant in WCCD and there are few days during the year without some sunshine. It is estimated that Worland receives sunshine on the average about 70 percent of the time possible annually, ranging from about 65 percent in winter and spring to about 75 percent in summer and fall.

Public Lands in General

"Public land" as used in this section is real property owned or controlled by an agency or bureau of either the state or federal government. Nearly 75% of the land which makes up WCCD is public land. The county's custom and culture has been significantly influenced by the relationship of the citizenry to public land, and the economic benefits derived from public land.

The public lands and the rights and privileges they confer on local residents are central to the custom and culture of WCCD. WCCD finds public land and natural resources management practices are both relevant and substantive to its custom and culture; its economy; its environment; its quality of life; and its ability to protect and enhance local resources in spite of potentially detrimental outside influences.

State and Federal Lands

Upon the statehood of Wyoming in 1889, the state was granted the Section 16 and 36 lands in all Townships across Wyoming. They were ceded to the state for the support of the common schools. These lands were in turn leased in most cases to adjacent landowners who acquired preference rights to graze said lands. State lands total 101,000 acres in WCCD, the overriding majority of which are native rangelands (Suitewater 2016). Only 4,703 acres are managed by the State Forestry Division (Josh Shroyer, District State Forester, personal communication, October 26, 2015). As grazing leases on state lands are often integral parts of ranching operations in WCCD, any change in their management that would eliminate their continued use would not be in the best interest of the citizens of WCCD.

WCCD contains 915,814 acres of land managed by the BLM (Suitewater 2016). The Federal Land Policy and Management Act of 1976 (FLPMA), mandates the BLM to manage these lands for multiple use, including energy development, livestock grazing, recreation and timber harvesting.

The Taylor Grazing Act of 1934 designated grazing lands as either Section 3 or Section 15 lands. Section 3 lands were public lands with designated grazing districts established by the Act. Grazing permits for section 3 lands were issued for 10 years and required the permittee to have control (owned or leased) of a base private property capable of providing feed for a specified number of livestock. Base property of Section 3 lands did not have to be adjacent to

the permitted grazing area, but preference was given to landholders within close proximity (The Taylor Grazing Act, 1934). The Taylor Grazing Act also designated federally owned Section 15 lands outside of grazing districts as available for grazing *leases*. Base private property is usually adjacent, surrounding or intermixed with leased Section 15 lands, such as in the case of "checkerboard" ownership.

Current policy as laid out by the more recent FLPMA of 1976 and amendments of 1978, removed the management distinction of Section 3 and Section 15 lands and requires BLM grazing lands to be categorized as "custodial" "improve" or "maintain" management goals. Permits are authorized for 10 years. Generally, lands previously designated as Section 15 parcels, which are smaller, isolated, federal lands, are managed as custodial (BLM, 2011). The checkerboard of private and federal lands limits the ability to manage these lands for multiple use such as recreation or oil and gas exploration. The historic human activity on these lands is livestock grazing. Private land owners whose holdings are interspersed with federal lands accept the fact that wildlife and livestock travel across ownership boundaries. Deer, elk, antelope, cattle, sheep and domestic horses use these lands without regard to human-made boundaries.

Although management distinctions between Section 3 and Section 15 lands have been made consistent with more recent legislation, receipts from grazing on Section 3 and Section 15 lands are still handled differently. Section 3 fees are distributed with 50% going to range betterment projects, 37.5% remaining in the US treasury, and 12.5% returned to the state. Fees from Section 15 lands are split with 50% used for range betterment projects and 50% returned to the state (BLM, 2011).

WCCD contains 35,852 acres within the Big Horn National Forest, which is administered by the USDA Forest Service (Suitewater 2016). The Forest Service manages land under the National Forest Management Act of 1976 and is mandated to manage these lands for multiple uses, including, among others, livestock grazing, recreation, wildlife habitat, forest products, and water. Some of these lands are permitted for grazing sheep and cattle.

The large amount of federally owned land in Wyoming impacts state and county revenue streams. Washakie County contains 953,100 acres of federally owned lands. Chapter 69, Title 31 of the US Code recognizes the inability of local government to collect property taxes on federally owned land creates a financial impact (U.S. Dept. of Interior, 2016). Payment in Lieu of Taxes (PILT) from the federal government to local governments attempts to offset the cost of providing services such as roads, schools, public safety services, etc. Washakie County received over 1.1 million dollars in PILT money in 2016 (U.S. Dept. of Interior, 2016).

Agriculture

Agriculture is a primary driver of Washakie County's economy and the largest water user. One hundred sixty-eight million gallons of surface water are used for irrigation per day, and 5.19 million gallons from ground water are used for irrigation (USGS, 2005). Domestic use is 0.21 million gallons per day and industrial usage is 0.75 million gallons per day (USGS, 2016). In general, the agricultural operations use sound management techniques and have done much to conserve and build up the soil on ranches and farms.

Over 341,000 acres are designated as farmland in Washakie County (USDA, 2012, Table 8). Major crops are sugar beets and malting barley. Other crops grown locally include alfalfa hay, corn, millet, grass hay, alfalfa seed, oats, feed barley, turnips, native grass, and flower seed. Farm sizes are fairly evenly distributed over a range of sizes; from less than 10 acres to over 1000 acres. Larger (>1000 acres) agriculture parcels are typically range livestock operations instead of cropland (USDA, 2012 Table 8).

The livestock industry accounts for a large portion of Washakie County's agricultural income and is the oldest continuing industry in the county and is still the single largest land user with 88% of the acreage in WCCD utilized for grazing (USDA, 2007, Table 8). Wyoming is the third largest producer of domestic wool and the 15th largest producer of beef cattle (USDA, 2015). Many of the ranches have summer range on the Big Horn Mountains and some operate on rangeland year round, supplementing the range grass with hay and concentrates during the winter and spring. Livestock raised in the area is primarily cattle and sheep, however, there are several breeders of good quality saddle horses in the area.

Federal land grazing is an integral part of many ranching operations in Washakie County. The 1997 Census of Agriculture indicates that 85 percent of all commercial agricultural lands (sales of $10,000 or more) in Washakie County are managed by agricultural operations with grazing permits (USDA, 2007, Tables 39 and 12). Ranchers with grazing permits in Washakie County hold on average 1.3 permits per operation (USDA, 2007, Table 39). More than 80 percent of these permits are with the U.S. Forest Service and Bureau of Land Management (USDA, 2007, Table 39). Less than 20 percent of the permits are classified as "other," which may include state and other grazing. Thus, the majority of these permits are associated with federal lands. Federal grazing permits represent pounds of forage (Animal Unit Months) in WCCD. These AUMs allow for extended grazing seasons outside of private property grazing, and are foundational to livestock operations in the county.

Livestock grazing is also a tool for wildland fire management. Proper management of AUMs help to suppress catastrophic wildfires by removing some of the fuel. Catastrophic wildfires can cause soil erosion, which could have an impact on water quality and the public water supply, and can also alter plant communities. Range monitoring is an important part of proper range management. Utilization data and trend data is important to making proper range management decisions.

Industry, Minerals, and Oil and Gas Development

A variety of industries operate in the county. Natural gas, oil, sulphur and bentonite constitute the commercial non-renewable resources in Washakie County. Sand and gravel are other economic resources present within WCCD.

Many residents find employment in the mining and processing of minerals and related services. Oil and gas are produced from several fields in the county. In 2015 258,994 barrels of oil and 1,109,371 Million cubic feet of gas were produced (WOGCC, 2016). Bentonite, mined west of Ten Sleep, is processed in Worland. Sulphur extraction and liquid gas processing are conducted north of Worland and a grain buying, processing and storage plant is also located north of Worland.

Wyoming Sugar (formerly Holly Sugar), Admiral Beverage (Pepsi), Allied Seed (alfalfa seed receiving station), Coors (barley receiving station) and Crown Cork and Seal (a global food and beverage packaging company) are amongst some of the major industries.

Tourism and Recreation

Tourism and recreation have been increasing in recent years, and WCCD is feeling the effects of the increased amount of visitation and requirements for access. Some of the recreation enjoyed within WCCD include off-road vehicle (4-wheelers and larger vehicles) use, snowmobiling, hunting & fishing, rock climbing, rock-hunting, skiing, horseback riding, hiking, camping, rodeos, county fairs, Nowoodstock and BBQ Bluegrass Music Festivals, and enjoying the abundant wildlife of the area.

WCCD has several historical sites and area attractions, which include:

i. The Pioneer Square in Worland is dedicated to ranchers, farmers and those that followed and put down roots to weave a new civilization here.

ii. The Big Horn National Forest's 1.1 million acres includes hiking trails, horseback riding, ATV's, camping, hunting, rock climbing, skiing, site seeing and fishing. Cloud Peak Wilderness, located within the Bighorn National Forest has experienced a dramatic increase in visitation in the last 10 years (USDA, 2013).

iii. Ten Sleep Fish Hatchery, at the mouth of the Ten Sleep Canyon, hatches approximately 6 million eggs each year, which produces and rears rainbow, cutthroat, and brook trout.

iv. Washakie Museum & Cultural Center and Ten Sleep Museum include important Paleoamerican exhibits of the Colby & Horner site artifacts, Meeteetse Hadrosaur fossils, a Sheepeater Shoshone lodge and artifacts, a rock shelter

replica, historic wagons, a sod house and historical photographs and much more.

v. The Spring Creek Raid monument, on the Upper Nowood Road south of Ten Sleep, describes a feud between sheepmen and cattlemen during the 1890's.

vi. Leigh Creek monument, located above Ten Sleep, describes the story of an English nobleman, Gilbert Leigh, who was hunting Big Horn Sheep when he and his horse plummeted over a cliff in the fog.

vii. Camp Worland monument, on the west end of Worland, describes the site of the original town of Worland.

viii. The Colby Site is located approximately 2 miles east of Worland and is one the largest known mammoth kills in North America.

ix. Dana Dinosaur Quarry near Ten Sleep, Wyoming is located on private land. It is highly productive and has been producing dinosaur fossils for over 20 years. Over a dozen individual skeletons have so far been discovered, representing a variety of species, including predator and prey, both large and small. Owing to their completeness and excellent state of preservation, these specimens represent significant paleontological contributions.

x. Big Cedar Ridge has produced hundreds of species of fossilized plants, some of which have never previously been found in North America (Smithsonian 2016).

In the higher elevations, the construction of cabins near reservoirs and streams for leisure time/vacation activities reflects a shift in land ownership from long-term ranch family land ownership to vacation homes and seasonal occupation.

The travel and tourism industry has a significant impact on Washakie County economics. According to Runyan (2015), travel spending resulted in $6.5 million of annual earnings in the county, supports over 300 jobs, and generates approximately $200,000 in tax receipts per year.

Wildlife

Wildlife and fish are a recreational, renewable natural and aesthetic resource in WCCD. Wildlife populations are considered a state resource and are managed solely by the Wyoming Game and Fish Department. However, wildlife and fish know no political or jurisdictional boundaries and private landowners play a key role in supporting wildlife by providing additional forage that eases pressures on sensitive wildlife habitat.

Only 2% of WCCD land is classified as riparian (BLM, 1996), however an estimated 80% of native animals depend on riparian areas at some time in the year for water, food, shelter and migration routes (Olson and Gerhart 1982). The vast majority of riparian areas are privately owned (Suitewater, 2016). Private land owners provide a crucial resource to our wildlife populations. The co-management of private and public lands is integral to the maintenance of wildlife in WCCD.

Species of wildlife include: mule and white-tailed deer, antelope, elk, moose, turkeys, wolves, bears, pheasant, cottontail rabbits, sage grouse, blue grouse, Hungarian partridge, ducks and chucker.

WCCD is home to crucial big game ranges for pronghorn, mule deer, and elk (Suitewater 2016). Roughly 570,000 acres of Sage Grouse Core area exist within WCCD (SGIT, 2015).

A red ribbon trout stream (300-600 lbs of trout per mile) lies in the eastern part of Washakie County (Little Canyon Creek). Across WCCD, rivers and streams support Trout, Walleye, Sauger, Bass, Catfish, and Carp (Wyoming Game & Fish, 2016).

Areas of Influence in Washakie County for Threatened and Endangered Species include:
Ute Ladies Tresses, and Canada Lynx in the Bighorn Mountains (WES, 2016)

Species of Concern possibly located in Washakie County include: Greater Sage grouse, White-tailed Prairie Dog, Bald Eagle, and Mountain Plover (WES, 2016).

Resident raptors seasonally in Washakie County include: Eagles, Osprey, Hawks, Harriers, Falcons, and Owls (USFWS, 2016).

Hunting, fishing, and outfitting licenses are economically important to the state economy. Hunting licenses sold to resident and non-resident hunters has held steady over the last ten years and grossed over $25 million dollars to the state in 2015 (U.S. Fish and Wildlife Service, 2015a).

Fishing licenses to non-residents has increased significantly (>27%) over the last decade. Statewide, total sport fishing licenses grossed over $6 million in 2015 (U.S. Fish and Wildlife Service, 2015b). Locally, fishing activities including guided fishing trips have increased dramatically on the Bighorn River. Special use permits (SRPs) are required for commercial guiding on BLM lands. The BLM has processed 20 new SRPs for hunting and fishing taking place within the Worland Field Office boundary since September, 2015. Prior to 2015, issuance of new SRPs ranged from 2-5 per year.

Certain species of wildlife such as bears, wolves, coyotes, mountain lions, eagles, ravens and hawks, have a negative economic impact on ranching and farming operations. In WCCD other predators include skunks, raccoons, and fox. In 2014 reports, the Washakie County Predator Management District reported sheep losses due to black bears, coyotes, mountain

lions and golden eagles. Reported cattle losses were due to coyotes, foxes, and Gray wolves. Other conflicts included coyote kills of pets and guard dogs, coyote depredation on foals, coyote and skunk depredation on chickens, and human health and safety risks with rabies exposure (Wyoming Animal Damage Board 2014). Statewide predator losses of lambs in 2013 totaled 13,300 head worth an estimated $2.5 million (USDA 2014).

According to an analysis by the University of Wyoming, Wyoming's predator management program relating to livestock is cost effective. For each dollar spent in Wyoming on predation management, the benefit to livestock producers is $1.60 to $2.30 (Taylor et. al, 2009).

Economics

The median annual household income in WCCD is $47,104. Twelve percent of the county population is considered below the national poverty level. WCCD's main employers based on annual payroll are health care, manufacturing, construction and mining/quarrying and oil and gas extraction (American Fact Finder, US Census 2014). When based on the percent of the county population employed, the main employers are education and health care (24.4%) and agriculture/forestry/fishing/hunting/mining (12%), manufacturing (11%) and construction (10.9%).

When compared to the nation as a whole, Washakie County is very specialized in agriculture and mining/oil and gas extraction. Four times the national average of county residents are employed in agriculture and almost seven times the national average are employed in mining (US Dept. of Commerce 2014). The county is more dependent on these employment sectors than is evident based on numbers of employees per sector.

County revenue from property taxes are greatly impacted by the oil and gas industry. Over 40% of the county's property taxes came from the oil and gas industry in 2014 (Petroleum Association of Wyoming 2015). Oil and gas extraction/non-metal mining/petroleum and coal product manufacturing valuations totaled $6.8 million, food and beverage manufacturing valuations totaled $4.6 million, fabricated metals valuations totaled $3.2 million (Wyoming Dept. of Revenue, 2014). County PILT monies (discussed under **Public Lands** section) for 2014 were over $1.1 million

As a major natural resource producer, the state of Wyoming is significantly affected by the ups and downs in the national energy market, and the historic cycles of boom and bust in the oil/gas/coal industries are familiar to Wyoming residents. Agriculture is a stabilizing economic force in WCCD. Since the mid 1800's the vast open rangelands of Wyoming have been recognized for their ability to grow livestock and fiber for humans. As irrigation techniques evolved, the Bighorn Basin's climate was recognized as suitable for a variety of crops, and lowlands, usually along waterways, was turned into cropland.

Currently, agriculture provides a consistent economic base for local economies including county revenues to provide public services. In 2015, irrigated land valuations totaled $9.2

million, and non-irrigated agricultural land valuations totaled $1.9 million (Wyoming Dept. of Revenue, 2014). There are over 200 farms in WCCD. The market value of agricultural products sold in the county were over $51 million according to the 2012 Census of Agriculture (USDA, 2012).

The majority of croplands are privately owned. However, 85% of commercial agriculture operations in the county hold federal grazing permits (USDA, 1997). With over 66% of WCCD being federal lands, it is clear that changes to federal grazing opportunities directly affect local producers. A typical livestock operation grazes federal lands in the spring, summer, and fall, with livestock pastured on private land late fall through spring. This allows the private land to rest or go into hay or crop production during the growing season.

Any reduction in grazing on federal lands would place a burden on the private lands. Livestock producers would either have to purchase more hay to feed livestock on private lands; or lease pasture (usually at a distance away that precludes any profit); or reduce herd size.

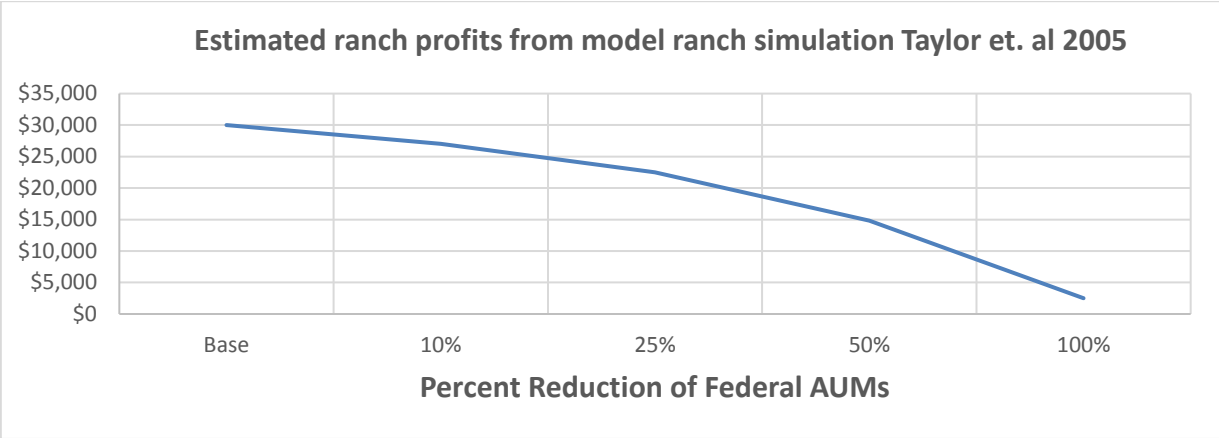
The ability of land to support grazing animals can be discussed in units called Animal Unit Months (AUM) which is standardized to mean approximately 800 lbs of forage (dry weight), derived from the amount of dry forage required by a 1000 pound cow with calf for one month.

The value of an AUM is more than simply the number of pounds of forage. Over 100,000 AUMs are permitted on BLM lands in the county. These AUMs are very important when considered on a seasonal dependency basis. Livestock production in the arid west was built on the availability of the open rangelands for seasonal grazing. The Taylor Grazing Act designated these lands for livestock grazing. The ability to graze federal lands is an integral part of the majority of Wyoming ranching operations, allowing them to be profitable and thus employ help, purchase goods and services in the community, and pay property taxes.

A detailed analysis of the economic impact of federal lands grazing was conducted in nearby Park County in 2005 (Taylor et. al). A ranch model was developed for a 504 head cow/calf operation (504 brood cows). Although Park and Washakie counties are different, Washakie County actually has a higher percentage of livestock operations that fit the model size (USDA, 2012). Washakie County also has a higher percentage of commercial operations holding federal grazing permits, so the conclusions reached in the study have significant bearing in WCCD.

The Park County model simulated 40 years of production with 100 iterations per year, for a total of 4,000 possible scenarios informing the outcomes. The scenarios included baseline AUMs of federal grazing, and 10%, 25%, 50% and 100% reductions in federal grazing AUMs. The model predicts that as grazing permits are reduced, herd size decreases, directly affecting profits (see Figure 1). The scenarios take into account increases in hay sales as herd size decreases, but the returns on hay sales is not enough to compensate for losses from

cattle sales. The impact of 100% reduction in federal grazing AUMs is obvious: profit margins decline to a negligible amount, forcing livestock operations out of business.



Ranching operations are a stabilizing industry in local economies. Profits from ranching move through the local economy in the form of purchases and employment. Taylor et. al (2005) calculated the effect of federal AUMs on the local economy of Park County in terms of maintaining ranch viability. They estimated the total of economic activity generated from one AUM at $361.40, and 0.004014 jobs. Using 2015 data, the BLM billed WCCD producers for 65,942 AUMs and the Forest Service billed for 6,712 AUMs. This represents 26.3 million dollars and 292 jobs to the local economy from grazing on federal lands.

1994, the Department of Agricultural Economics of the College of Agriculture at the University of Wyoming prepared a detailed report on the economic contributions of the federally managed lands within the four county region of Johnson, Big Horn, Sheridan and Washakie counties. The report provided an in-depth view of the economic and fiscal interdependencies coexisting among the private land-users and public land-managers and the local governments.

The report analyzed the economic effects of federal lands grazing, timber production, mineral development, and production of oil, natural gas, bentonite, coal and uranium, mining of sand and gravel, irrigation water/crop value, tourism, historical and recreational industries.

The summaries of each section of the report provides the reader with an undeniable vision of the direct and indirect negative economic effects of reduced grazing opportunities and oil/gas seismic, exploration, development, and production opportunities. The report also depicted a continued reliance on the overall price controlled irrigated agricultural industry (Fletcher et. al, 1994). The use of public lands for grazing, mineral development and other multiple uses in WCCD must be continued or steadily increased to sustain a viable natural resource and economic/fiscal future for the residents of WCCD.

Custom and Culture

Culture is defined as the customary beliefs, social forms and material traits of a group; an integrated pattern of human behavior passed to succeeding generations (*Webster's New Collegiate Dictionary*, 227, 1975). Custom is a usage or practice of the people, which by long and unvarying habit, has become compulsory and has acquired the force of law with respect to the place or subject-matter to which it relates (*Bouvier's Law Dictionary*, 417,1st ed. 1867).

Open spaces are a defining quality of Wyoming and WCCD. A 2004 poll conducted by the University of Wyoming reports that the preservation of farms and ranches, the western lifestyle, and protecting private property rights are of particular importance to Wyoming residents (Boelter and Mays, 2004). A more recent polling identified the loss of family farms and ranches as the issue of greatest concern to Wyoming residents (Reedman and Korfanta, 2014). Seventy-nine percent of the respondents in that poll described themselves as "personally benefitting from the presence of ranches and farms in Wyoming."

Due to the nature of WCCD's landscapes and ecology, agriculture goes hand in hand with maintaining the custom and culture of open space and its attendant values. Agriculture as practiced in harmony with WCCD's ecology, provides a basis for community while maintaining those values.

Agriculture production accounts for almost 90% of the private land in Washakie County (Suitewater 2016). Because agriculture is the dominant private land use in the county, the future of open spaces in WCCD will depend to a large extent on what happens to agriculture. A number of factors may adversely affect the retention of agricultural land in Wyoming including the continued uncertainty about livestock grazing on federal lands (Taylor, et al. 2003).

There has been recent interest in assigning monetary value to open space ecosystem services. It is recognized that open landscapes provide "natural goods and services" such as water filtration and wildlife habitat, along with livestock grazing and agriculture goods (Taylor, et al. 2011). A recent study estimates the value of natural goods and services at $22 per acre for native rangelands, $66 per acre for pasture and hay lands, and $55 per acre for cultivated cropland. These adjusted 2016 values are in addition to the actual market value of the land; jobs and income generated from the use of these lands. Using these values and 2012 Census of Agriculture data, natural goods and services provide a $8,840,986 value to WCCD residents.

Due to the historic and ecological nature of land use across public and privately owned land and the inherent impact on the custom, culture, and economic welfare on the residents of WCCD, we expect (1) to engage with the federal government, such as BLM and Forest Service through coordination, and (2) to be given early notification of any opportunities for cooperating agency status by all federal agencies as part of the NEPA process regarding any land use management policy or proposed projects.

Endangered Species Act

Animal species that are influenced by federal management or designation include candidate species, threatened and endangered species, species of concern, and critical habitat designations. Candidate species are species that are being considered for listing as a threatened or endangered species but are not yet the subject of a listing rule. A sensitive species or species of concern is a species for which either the Bureau of Land Management or Forest Service, through a land use plan, has established special management considerations.

These designations, along with listed threatened or endangered species, can significantly impact the use of private and federal lands by WCCD's constituents. The designation of large carnivores as threatened or endangered hampers the ability of livestock producers to protect their livelihood from predation. A ten year study on the Upper Green River Cattle Allotment estimated that forty percent of calf death losses were due to Grizzly bear predation (Sommers et. al, 2010).

Critical habitat is a specific geographic area that contains features (or may develop features) essential to the conservation and recovery of a listed species and may require special management or protection. Critical habitat can include areas that are not currently occupied by a listed species, but may be needed for its recovery. According to the ESA regulations issued on February 11, 2016, such habitat includes temporary habitat, ephemeral habitat, potential habitat, and migratory habitat. 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. Critical habitat includes private land as well as federal and state managed land.

WCCD is currently impacted by the following threatened, endangered, proposed, and candidate species and critical habitat designations (IPaC, 2016):

- Black-Footed Ferret – Experimental Population (IPaC, 2016)
- Canada lynx – Threatened, Area of Influence (WES, 2016)
- Ute Ladies' Tresses – Threatened, Area of Influence (WES, 2016)
- Gray wolf –Experimental Population (IPaC, 2016)

WCCD Goals and Policies

The WCCD Board of Supervisors have adopted the following general policies which will help in the operation and administration of WCCD.

i. Consults with stakeholders of WCCD, and may act as a cooperator with public institutions and government agencies in the conservation of the water, soil, plants and wildlife resources within budgetary constraints

ii. Facilitates the formation of stakeholder committees to help develop WCCD's natural resource planning documents

iii. Provides technical and material assistance in an equitable fashion for stakeholders

iv. Conducts our statutory responsibilities in cooperation and with the trust and acceptance of stakeholders

v. Reviews, studies and comments, when possible, on all local, state and federal legislation, rules and regulations promulgated or revised that may have an effect on this plan and stakeholders

vi. Considers historic uses, customs, and culture during decision making to maintain a sustained yield of renewable and natural resources

vii. Cooperates and consults with stakeholders, other interested parties, along with local, state, and federal governmental agencies in order to pursue the continued resource management and enhancement in the watersheds of WCCD in conjunction with existing or adopted resource management practices of all agencies within the jurisdictional boundaries of WCCD

viii. Recognizes the distinction between the land use management requirements for the Section 15 and Section 3 lands (Taylor Grazing Act of 1934, as amended). WCCD will strive to provide assistance to stakeholders in their continued historical use and management of the Section 15 lands.

ix. Maintains an awareness of natural resource issues and concerns and creates information sources to share with the stakeholders regarding their on-the-ground soil and water resource management projects, to help sustain the long term economic base for future generations

x. Coordinates with the Washakie County Commissioners and/or Washakie County Planning & Zoning Commission concerning the impacts of on-site sewage waste water systems on the groundwater and/or surface water resources of the lands affected by development

xi. Recognizes that many of our perennial, intermittent and ephemeral streams exist within a natural framework of highly erosive soils and strives to define the water cycle to include the natural background's effect on water quality in our jurisdiction

xii. Reserves the right to challenge local, state and federal decisions that are inconsistent with this plan

xiii. Provides a written copy of WCCD's Natural Resource Land Use Plan to every local, state, and federal agency doing business within Washakie County within 30 days after the plan is adopted

xiv. Requests timely notification from all local, state and federal agencies regarding legislation and rules and regulations promulgated or revised, that may have an effect on this plan and stakeholders

xv. Invites local BLM staff to WCCD monthly board meetings

xvi. Encourages the local, state, and federal agencies to share information they routinely collect (i.e. geographic information system mapping and the assessment of new management practices and techniques) with WCCD

Internal District Operations

Goal –

WCCD will carry out duties established by statutes, the local public, and Board of Supervisors to maintain a structural, stable and functioning Conservation District.

Internal District Operations Policy –

i Employs personnel to effectively carry out WCCD goals

ii Analyzes district supervisor and staff needs and makes every effort to secure assistance and/or training from private, local, state and federal sources

iii Reviews the powers and duties of conservation districts and supervisors annually, as clarified in 11-16-122 of the Conservation District Law

iv Budgets funds to carry out WCCD goals

v Reviews the development and/or revision of conservation plans and the implementation of those scheduled conservation practices

vi Completes and maintains an up-to-date Natural Resource Land Use Plan

vii Increases capacity of the WCCD Board of Supervisors by utilizing associate board members and steering committees

viii Convenes monthly board meetings in addition to special or emergency meetings as needed

ix Participates actively at meetings of organizations of which WCCD is a member

x Seeks funding for natural resource and conservation projects

xi Strives to improve its ability to provide services and operational programs and to work with Cooperating Agencies, Partners, and Associates

xii Reviews subdivision site areas and plans and makes recommendations on soil suitability, potential soil erosion during and after construction, potential flooding or wetland concerns to the Washakie County Commissioners/Washakie County Planning Office as clarified in 18-5-306 (a)(xii)(B)(b) of the Wyoming State Statutes.

Range and Irrigated Land Management Program

Goal –

WCCD will promote Best Management Practices (BMP) for the improvement and continued use of all rangelands and irrigated cropland to sustain agriculture productivity.

Range and Irrigated Land Management Program Policy -

i. Supports stakeholders in the pursuit of utilizing agriculture by-products. This will help provide economic stability and efficiency in agriculture practices.

ii. Assists and promotes local stakeholders' continued use of best management practices for erosion control and vegetation management on rangeland and irrigated cropland. WCCD supports livestock grazing as a tool for the sound management of private, state and federal lands.

iii. Works to increase productivity of land to increase and/or maintain Active Preference Animal Unit Months (AUMs) to maximum sustainable levels on rangeland in WCCD. WCCD will not support any action that causes the net loss of Animal Unit Months (AUMs) for livestock on any allotment, permit or lease on lands owned or managed by the State of Wyoming or the United States Government, which is not based on sound science.

iv. Discourages any action that results in a net loss of irrigated lands which produce food and fiber and affects the economic return of those lands within the district.

v. Discourages any action that results in a net loss of open space which is beneficial to wildlife, and vital to maintaining the viewshed and water quality.

vi. Supports the development and use of new technologies in range and irrigation management practices.

vii. Maintains partnerships with local, state and federal agencies to provide technical assistance and/or funding to local residents

Habitat/Wildlife

Goal -

WCCD encourages the control of predatory animals to reduce property damage, to protect wildlife and the local economy and tax base, including the viability of the agriculture community. WCCD is committed to proper habitat management by incorporating science, in the planning, programs, and projects.

Habitat Management Policy -

i. Supports predator control efforts as a way to actively manage an imbalance to the ecosystem. Predators can have a negative impact on livestock and wildlife causing an economic loss.

ii. Works with government agencies, local cooperators, and other interested parties in the management, maintenance and improvement of habitat, emphasizing voluntary and incentive based programs

iii. Encourages the use of tools such as grazing, plantings, water development, fire, chemical application, and other best management practices for habitat management

iv. Supports the development and use of new technologies in land use management that are alternatives to permanent reductions in stocking rates

v. Supports cooperative effort with State, federal and private land managers to enhance cooperative weed management efforts countywide, coordinated with, and primarily managed by the Washakie County Weed and Pest Control District

vi. Supports and strongly encourages the control of noxious weeds, invasive species, and pests by owners, managers, and users of all private, state and federal lands including easements, right-of-way, and municipalities

vii. Supports wildlife management objectives and numbers based on what the range conditions and habitat can support. Wildlife habitats should be managed for sustainable wildlife populations that take into account obligations for livestock grazing and competing resource management objectives.

viii. Supports reasonable and science-based protection and restoration of critical winter range habitat, while respecting private property and considering the economic effects

ix. Supports game herd population objectives and management decisions that will benefit the wildlife resource, while taking into consideration competition between wildlife species and domestic livestock

Recreation

Goal –

WCCD encourages recreational activities that provide opportunities for economic development and maintains the custom and culture of Washakie County, while ensuring conservation of the rangeland, water, and soil resources.

Recreation Policy -

i. Recognizes that recreation is multiple use of state and federal lands and WCCD supports the historical access on these lands

ii. Promotes the value of natural resources through education of multiple use ethics (sharing of the land) and good stewardship by recreational users

Minerals and Oil and Gas Development

Goal-

WCCD supports minerals and oil and gas production and will provide information and education on the importance of natural resource conservation. The minerals and oil and gas industry is a significant part of the custom and culture of the district, and it provides economic opportunity to Washakie County.

Minerals and Oil and Gas Development Policy –

i. Supports the continued development and extraction of minerals, and oil and gas within federal and state jurisdiction in keeping with the local and regional custom and culture, in order to maintain the economic stability of Washakie County.

ii. Encourages mineral, and oil and gas production to be conducted in an environmentally responsible manner and to ensure industries continuance is compatible with the principles of multiple use on public lands.

Water Quality/Quantity

Goal-

WCCD will strive to increase the efficient use of water and maintain and improve the quality and quantity of waters within WCCD, through education, technical assistance, and Best Management Practices (BMPs).

Water Quality/Quantity Policy -

i. Promotes BMPs that reduce non-point source pollution and promote water conservation

ii. Supports water development projects that increase water quantities for beneficial use within the district, while considering the traditional custom, culture, ecology, and economy of the area

iii. Recognizes the importance of irrigation systems that make up a critical part of the water cycle within WCCD and supports the implementation of irrigation BMPs

iv. Recognizes only credible scientific data in regards to water quality, which examines the biological, chemical, and physical attributes of a watershed within the context of related historical records. WCCD will collect water quality data as determined by priorities and programs.

v. Opposes any federal governmental control over individual water rights within the boundaries of the district and within the boundaries of the State of Wyoming

vi. Supports Wyoming's beneficial uses of water as defined under administrative policy of the State Engineer's Office

vii. Recognizes that many of our perennial, intermittent and ephemeral streams exist within a natural framework of highly erosive soils and strive to define the water cycle to include the natural background's effect on water quality in our jurisdiction

Water Rights and Use

Goal -

WCCD supports the development, adoption, implementation of water storage, and water distribution that benefits individual, irrigators, irrigation and canal companies, industrial users, aquatic recreation users, municipalities, public land managers, and private landowners.

Water Rights and Use Policy –

i. Supports agency actions that analyze impacts on facilities such as dams, reservoirs, delivery systems, monitoring facilities, etc., located on, or down stream from, land covered by any water related proposal

ii. Recognizes and will protect the existence of all legal canals, laterals, or ditch rights-of-way

iii. Requires that historic and customary beneficial uses take precedence over any and all in-stream flow use designations established under current Wyoming State Law

iv. Works with local, state and federal government to encourage and support state control of water rights and to maintain opportunities for future water right allocations

Government Agency Interaction and Coordination

Goal –

WCCD will continue to represent local natural resource interests in the planning and implementation efforts of local, state, and federal government agencies within its boundaries. WCCD will facilitate efforts to participate in natural resource management planning in order to protect the natural resources, provide for the economic stability and to protect local customs and cultures.

Government Agency Interaction and Coordination Policy –

i. Participates with cooperators and government agencies in making sound natural resource decisions that are scientifically-based, legally defensible, sensitive to natural resource health, and responsive to multiple-interest users

ii. Works with local, state and federal government to encourage and support state control of water rights and to maintain opportunities for future water right allocations

iii. Coordinates with local, state and federal government on educating about the eradication of invasive species

iv. Works to ensure local input on state and federal land management issues to promote multiple use of public lands (grazing – wildlife and domestic, logging, minerals, recreation) and protect private property rights

v. Maintains partnerships with local, state and federal agencies to provide technical assistance and/or funding to local residents

vi. Develops, promotes and defends viable alternatives to the proposed actions of other government agencies where the proposed action would adversely impact any of the resource or economic bases of WCCD

vii. Provides comments, coordinates, or seeks to become a Cooperating Agency for federal land use planning affecting WCCD

viii. Provides local land use policy or plan for consistency review purposes

ix. Supports traditional multiple land uses as a means to maintain continuity in the local economy and assures the sustainability of existing agricultural, recreational, and industrial interests while maintaining or improving the present environmental quality of life

Special Projects

Goal -

WCCD will strive to meet the rural and urban public's conservation needs through education, assistance, and special project efforts to promote a healthy community through conservation practices that have a public benefit

Special Projects Policy -

i. Promotes and implements urban conservation and beautification projects

ii. Provides cost-share funding for on-the-ground natural resource conservation BMP projects

iii. Promotes the use of renewable alternative energy sources

Public Information and Education

Goal –

WCCD's goal is to share information and educate the public about natural resource issues. Natural resources and their related issues and concerns are dynamic.

Public Information and Education Policy -

i. Promotes agricultural and natural resource conservation in public schools, with youth organizations, and in other venues where youth and children receive formal education

ii. Provides education and information to the general public on natural resource issues and topics

iii. Promotes viable farming/ranching practices and business opportunities

iv. Ensures that stakeholders are made aware of technical assistance, and funding programs that are available

v. Recognizes natural resource and agricultural success stories through district programs and local media

vi. Promotes the development and application of BMPs

vii. Provides guidance, information, and education to elected government officials and decision makers on conservation and natural resource management issues, and the impacts and outcomes related to policies initiated by government

Tree Program

Goal -

WCCD will help alleviate and manage soil erosion, improve energy flow, improve the water and nutrient cycle within WCCD by providing education to the public on the benefits of trees.

Tree Program Policy –

i. Supports the use of tree plantings and the use of other plant materials to provide for improved natural resource conditions and community aesthetics within WCCD

ii. Provides stakeholders with information regarding selection of appropriate varieties of trees for the intended use, proper techniques of tree planting and maintenance, irrigation systems, program funding, wildlife interactions, and sources of trees through WCCD website, printed materials, educational workshops, and such other methods as may be appropriate

iii. Provides technical assistance, equipment, and cost share for tree planting projects

iv. Makes weed barrier and other essentials available to the community

Waste Management

Goal -

WCCD will coordinate, support and implement recycling, waste reduction, and proper waste disposal programs.

Waste Management Policy –

i. Promotes, maintains, and enhances recycling efforts

ii. Provides education/information regarding recycling awareness

iii. Promotes awareness of new technology and resources associated with waste management and recycling

Endangered Species Act – (Candidate, Threatened & Endangered, Species of Concern, Critical Habitat Designations)

Goal –

WCCD will be involved in the review of federal actions regarding ESA listings, delisting, and management plans.

Endangered Species Act Policy –

Sensitive Species/Species of Concern

i. Supports the use of credible data or information BLM and USFS can use on which to base a decision that a species should be designated a "species of concern" or "sensitive" beyond criteria provided in their respective handbooks

ii. Opposes 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 listed and protected by the rules of the Endangered Species Act

iii. Opposes the listing and supports the delisting of any species with insufficient, unsupported, or questionable data not meeting the minimum criteria for its listing or protection level

iv. Supports management plans not created for single species and are consistent with multiple use mandates

v. Supports creating a unified (cross-agency (i.e. BLM and Forest Service)) definition for "species of concern"

vi. Supports the development of local solutions to keep a species from being listed as a sensitive species/species of concern.

vii. Supports the development of management activities on federal lands as part of the local solutions to keep a species from being listed as a sensitive species/species of concern.

viii. Supports control of predators, zoonotic, and vector borne diseases that negatively impact sensitive species/species of concern.

Threatened or Endangered Species

v. Cooperates and/or coordinates with federal rulemaking, including any NEPA analysis related to the designation of critical habitat and development of recovery plans

vi. Recognizes threatened and endangered species that are listed based on clear, convincing, peer reviewed, scientific data. There is an additional financial burden imposed on private landowners by the listing of threatened or endangered species because of laws and regulations.

vii. Requires the full analysis of the economic impacts on all proposed critical habitat designations or species management plans

viii. Supports cooperation between private landowners and federal agencies to reduce the risk of listing under the Endangered Species Act

ix. Opposes the introduction or reintroduction of listed species into WCCD, unless WCCD deems no harm will come to its constituents, or WCCD consents to terms and conditions or standard operating criteria that avoid disrupting current land uses

x. Participates as a cooperating agency in all decisions and proposed actions which affect WCCD regarding threatened or endangered species

xi. Supports the development of recovery plans within 18 months of a species listing that include clear objectives to reach for delisting to occur; for species already listed, supports the development of a recovery plan within 18 months of the adoption of this Plan

xii. Requires the petition of the immediate delisting of a species when population or recovery plan objectives have been met

xiii. Supports the development of local solutions to keep a species from being listed under the Endangered Species Act

xiv. Supports the development of management activities on federal lands as part of the local solutions to keep a species from being listed under the Endangered Species Act

xv. Requires the avoidance of single-species management in all planning efforts and requires multiple uses of lands and resources as required by federal law

xvi. Requires the data used in any listing decision meeting the minimum criteria defined in (Bureau of Land Management 2006) Data Administration and Management and FS Handbooks FSH 1909.12 (United States Forest Service 2013) Supporting Land Management Planning

xvii. Supports control of predators, zoonotic, and vector borne diseases that negatively impact listed species

xviii. Supports involvement of WCCD in discussions and decisions regarding any proposed introduction of experimental populations

xix. Opposes management actions increasing the population of any listed species in WCCD without an approved recovery plan. Without a recovery plan, management cannot focus on increasing the species population or habitat, and cannot move closer to a potential delisting.

xx. Supports returning to existing approved management documents(s) when litigation is pursued (e.g., revert to the State or local plan rather than the BLM/USFS Sage-grouse Land Use Plan Amendment)

xxi. Requires the continued use of existing valid permits and lease rights on lands with listed species wherever possible

xxii. Requires copies of legal descriptions showing the exact boundaries of all designated critical habitat to WCCD for distribution to impacted private land owners

xxiii. Opposes the designation of potential habitat as critical habitat unless quantifiable data showing when and how features necessary for species recovery will be achieved on the property

xxiv. Requires completion of exclusion analysis regarding critical habitat designations for all lands within WCCD

Special Designation Areas

Goal –

WCCD supports special land use designations only when they are consistent with surrounding conservation management; do not preclude future conservation options for rangeland resources, soil conservation, and conservation, development and utilization of water resources; and contribute to sound policy of multiple use, economic viability and community stability.

Special Designation Areas Policy –

i. Supports not allowing federal agencies to engage in endless and repetitive wilderness review or studies that expand lands managed as wilderness or as *de facto* wilderness while reducing the land base available for multiple use

ii. Opposes any impairment or diminution by any wilderness or other special use designations to those interests associated with ditches, reservoirs, water conveyance facilities, and easements, or rights-of-way

iii. Supports the release of wilderness study areas that were not recommended for wilderness from non-impairment management, and supports an end to the informal *de facto* wilderness management of other "study areas"

iv. Opposes proposed special designations until it is determined and substantiated by verifiable scientific data that; a need exists for the designation, protections cannot be provided by other methods, and the area in question is truly unique when compared to other area lands

Travel Management/Access

Goal –

WCCD supports the historic right to travel over federal and state lands.

*Travel Management/Access Policy –*Supports access to and across public lands, as critical to the use, management, and development of those lands and adjoining state and private lands

i. Opposes closure, withdrawal, or abandonment of roads, trails, rights-of-way, easements or other traditional access for the transportation of people, products, recreation, energy or livestock, without full public disclosure and analysis

ii. Supports access to all water related facilities such as dams, reservoirs, delivery systems, monitoring facilities, livestock water and handling facilities, etc., for maintenance purposes

Wild Horses, Burros, and Estray livestock

Goal –

WCCD supports wild horse management for viable healthy herds that will not adversely impact the rangeland resource, wildlife habitat or wildlife, soil resources or other approved multiple uses.

Wild Horses, Burros, and Estray Livestock Policy –

i. Opposes the introduction or reintroduction of wild horses or burros or estray livestock on public lands within WCCD

ii. Supports herd management plans that include provisions for periodic gathers of all horses in the herd management area to limit populations to planned levels, remove trespass horses, and test for equine diseases as prescribed by the Wyoming state veterinarian and prevent habitat degradation

iii. Works to ensure that forage adjustments to livestock grazing also make proportionate adjustments for wild horses, when wild horses are a causal factor in the area not meeting the Wyoming Healthy Rangeland Standards

iv. Encourages wild horse management tools that will permit long-term, cost-effective solutions, but recommends use of short-term remedies to ensure that the wild horses are not left on the public or private lands

Forest Management (Wildfire, and Community Wildfire Planning)

Goal –

WCCD encourages proper rangeland, forest, and woodland management to ensure healthy and vibrant watersheds for current and future generations and to sustain the stability of ranching and agriculture.

Forest Management Policy –

i. Supports maintenance and restoration of watershed health by demonstrating active rangeland, forest, and woodland management

ii. Supports local, regional, state and federal partnerships in the manufacture and use of forest and forest by-products, including innovative ways to harvest timber

iii. Supports the use of fire, such as in prescribed burns, thinning, or as vegetative treatments, and salvage logging in burned forest areas

iv. Recognizes the benefits of wildfire in certain habitats

v. Supports aggressively suppressing and preventing wildfires when private property structures are threatened

vi. Encourages development of policies for grazing rest prescriptions related to either wildfires or prescribed burns on a site-specific basis taking into account the needs of the vegetation and flexibility to meet the needs of the rancher

vii. Encourages the development of vegetation treatments and use of livestock grazing to keep fuel loads within appropriate limits

Air Quality

Goal –

WCCD supports an air quality monitoring plan, as it is critical to the health and well-being of our residents.

Air Quality Policy -

i. Requires that air quality baselines for the area must be established with the full participation of WCCD

ii. Requires all air quality studies undertaken by or on behalf of a public land management agency by the Wyoming DEQ-Air Quality Division to be coordinated with WCCD

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Definition of Terms

AUM- animal unit months; the forage consumption on the basis of one standard mature 1,000-pound cow, either dry or with calf up to 6 months old as consuming 26 pounds of oven dry forage per day; Using these figures an AUM is 780 to 806 pounds of oven dry forage.

BLM-Bureau of Land Management

BMP-best management practices; those land management practices generally determined to be effective and practicable means to reduce negative impacts and maximize beneficial outcomes of various land uses

Category C- custodial allotment; a designation by BLM defined as an allotment where public lands produce less than 10 percent of the forage in the allotment or are less than 10 percent of the land area; An allotment is generally not designated Category C if the public land in the allotment contains: 1. Critical habitat for a threatened or endangered species, 2. Wetlands negatively affected by livestock grazing.

Category I- improve allotment; a designation by BLM defined as an allotment where current livestock grazing management or level of use on public land is, or is expected to be, a significant causal factor in the non-achievement of land health standards, or where a change in mandatory terms and conditions in the grazing authorization is or may be necessary

Category M- maintain allotment; a designation by BLM defined as an allotment where public land health standards are met or where livestock grazing on public land is not a significant causal factor for not meeting the standards and current livestock management is in conformance with guidelines

Checkerboard- a checkerboard pattern of alternating private and public land; a remnant of the Union Pacific Act of 1862 when the US Congress gave every other section of land within 20 miles of the railroad to Union Pacific, with the idea that sales of that land would fund the railroad project; Overtime Union pacific granted sections have been sold into private ownership with the remaining alternate sections retained by the federal ownership.

Cooperating agency- any agency that has jurisdiction by law or special expertise as per the National Environmental Policy Act of 1976; Cooperating agencies are to assist the lead Federal agency in developing EA's or EIS's as per the Council on Environmental Quality (40 CFR §1501.6).

Credible data- scientifically valid chemical, physical and biological monitoring data collected under an accepted sampling and analysis plan, including quality control, quality assurance procedures and available historical data. W.S. 35-11-103 (c) (xix)

EA- environmental assessment; the assessment of the environmental consequences (positive and negative) of a federal plan, policy, program or concrete project prior to the decision to move forward with the proposed action

EIS-environmental impact statement; the public review process when a proposed federal action is determined to significantly affect the quality of the human environment; The regulatory requirement for an Environmental Impact Statement are more detailed and rigorous than the requirements for an Environmental Assessment.

ESA-Endangered Species Act of 1973; provides for the conservation of species that are endangered or threatened (of extinction); "Endangered" means a species is in danger of extinction throughout all or a significant portion of its range. "Threatened" means a species is likely to become endangered within the foreseeable future.

FLPMA-Federal Land Policy and Management Act of 1976; the primary law that governs the management of federal lands administered by the Bureau of Land Management

Multiple Use- the mandate within the Federal Land Policy and Management and National Forest Management Acts that federal lands must be managed for a variety of uses including (but not limited to) energy development, livestock grazing, timber harvest, recreation, and wildlife habitat

NEPA- National Environmental Policy Act; the review process when a federal agency develops a proposal to take a major federal action; The NEPA process can involve three levels of analysis: Categorical Exclusion when the act is determined to not have a significant effect on the human environment; Environmental Assessment which determines the potential to cause significant environmental effects; and Environmental Impact Statement in which a proposed federal action is determined to significantly affect the quality of the human environment. The regulatory requirement for an Environmental Impact Statement are more detailed and rigorous than the requirements for an Environmental Assessment.

NFMA-National Forest Management Act of 1976; the primary statute governing the administration of national forests and was an amendment to the Forest and Rangeland Renewable Resources Planning Act of 1974

PILT-payment in lieu of taxes; federal payment to local governments that help offset losses in property taxes due to non-taxable federal lands within their boundaries

Rangeland- land on which the indigenous vegetation is predominantly grasses, grass-like plants, forbs, or shrubs and is managed as a natural ecosystem, dependent on naturally occurring precipitation and hydrologic regimes

Special Designation Areas- Special designations occur in two ways: Congressional designation and Administrative designations. Congressional designations include National Monuments, National Conservation Areas, National Recreation Areas, Cooperative Management and Protection Areas, National Wilderness Areas, Outstanding Natural Areas, National Wild and Scenic Rivers, Game Preserves, Forest Reserves, and National Scenic and Historic Trails. Administrative designations by the BLM and USFS include Wilderness Study Areas, Areas of Critical Environmental Concern, Scenic Byways, Back Country Byways, National Recreation Trails, Roadless Areas, Watchable Wildlife Viewing Sites, Wild and Scenic River Study Areas, Wild Horse and Burro Ranges, Recreation Areas, Natural Areas, Experimental Forests or Range, and Primitive Areas, etc. (DOI-BLM, 2005b; USDA-USFS, 2008) U.S. Fish and Wildlife may also designate Critical Habitat Areas.

Statutory- enacted, created, or regulated by law

Stakeholders- individuals or groups who may be affected by, or have an interest in, the policy or plans of a managing agency

RMP-Resource Management Plan; a blueprint plan explaining how the BLM will manage areas of public land over a period of time (generally 10-15 years); BLM Field Offices

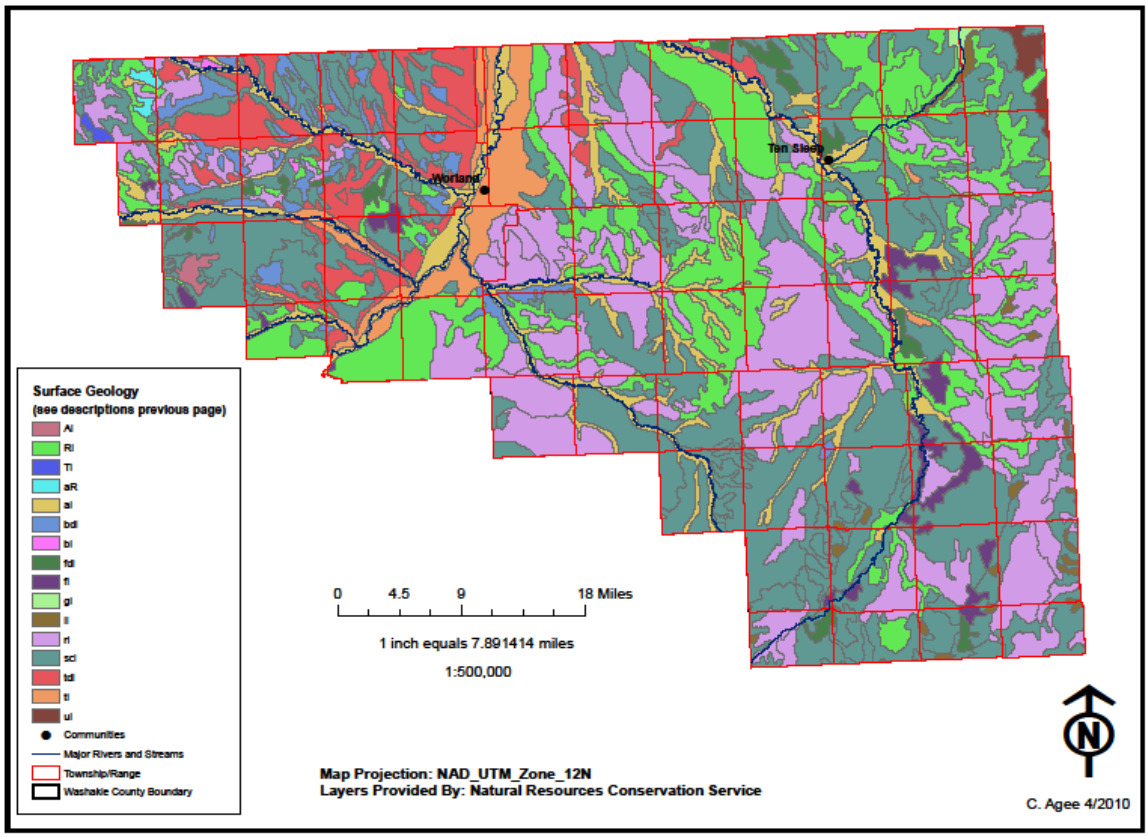
prepare RMPs for the lands within their boundaries. RMPs contain decisions that guide future management actions and subsequent site-specific implementation decisions. RMPs establish goals and objectives for resource management (desired outcomes) and the measures needed to achieve these goals and objectives (management actions and allowable uses).

USFS-United States Forest Service

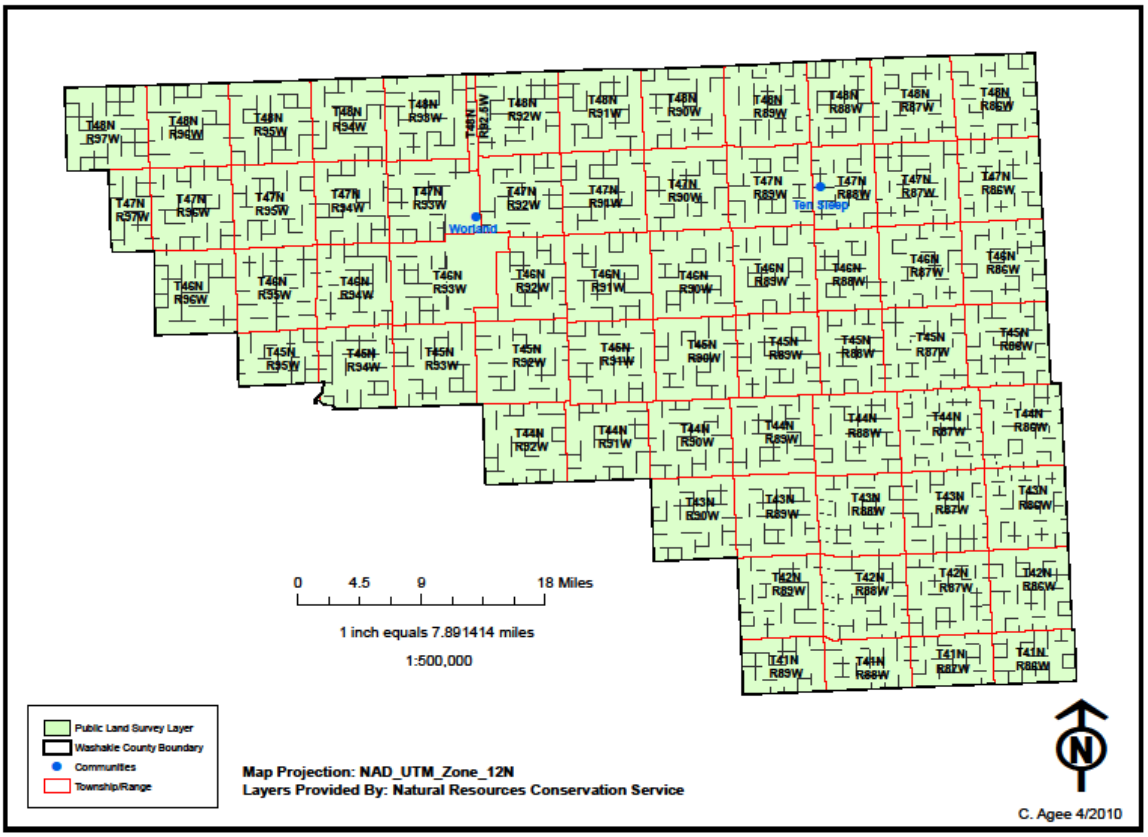
Viewshed- the area visible to an observer from a certain vantage point

WCCD-Washakie County Conservation District

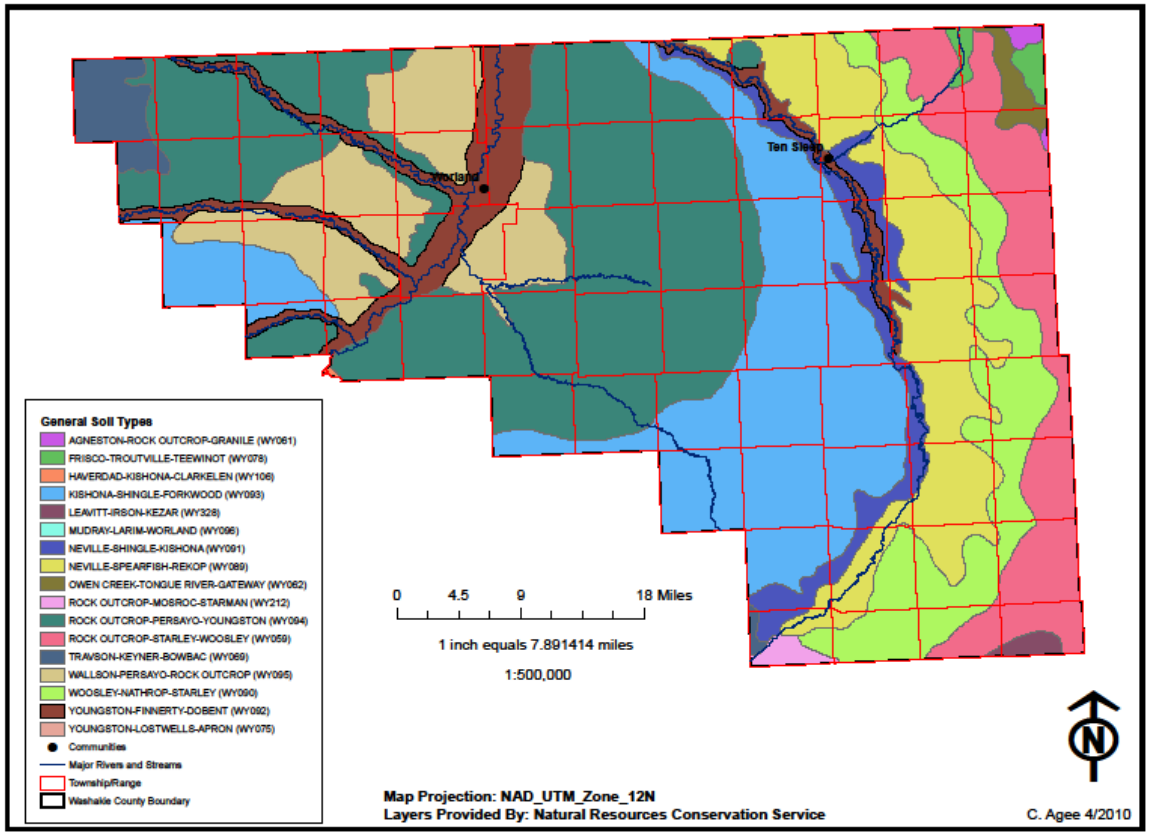
APPENDIX A



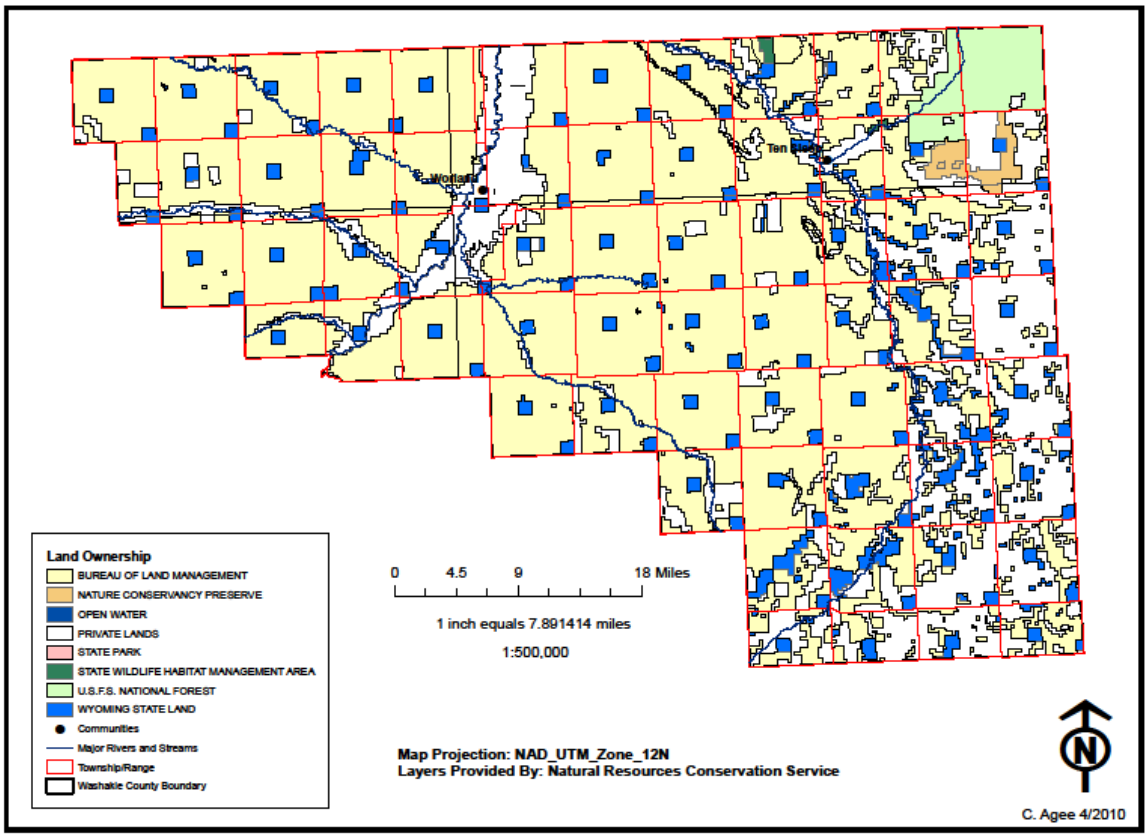
Washakie County Conservation District, Surface Geology Map, Washakie County Wyoming



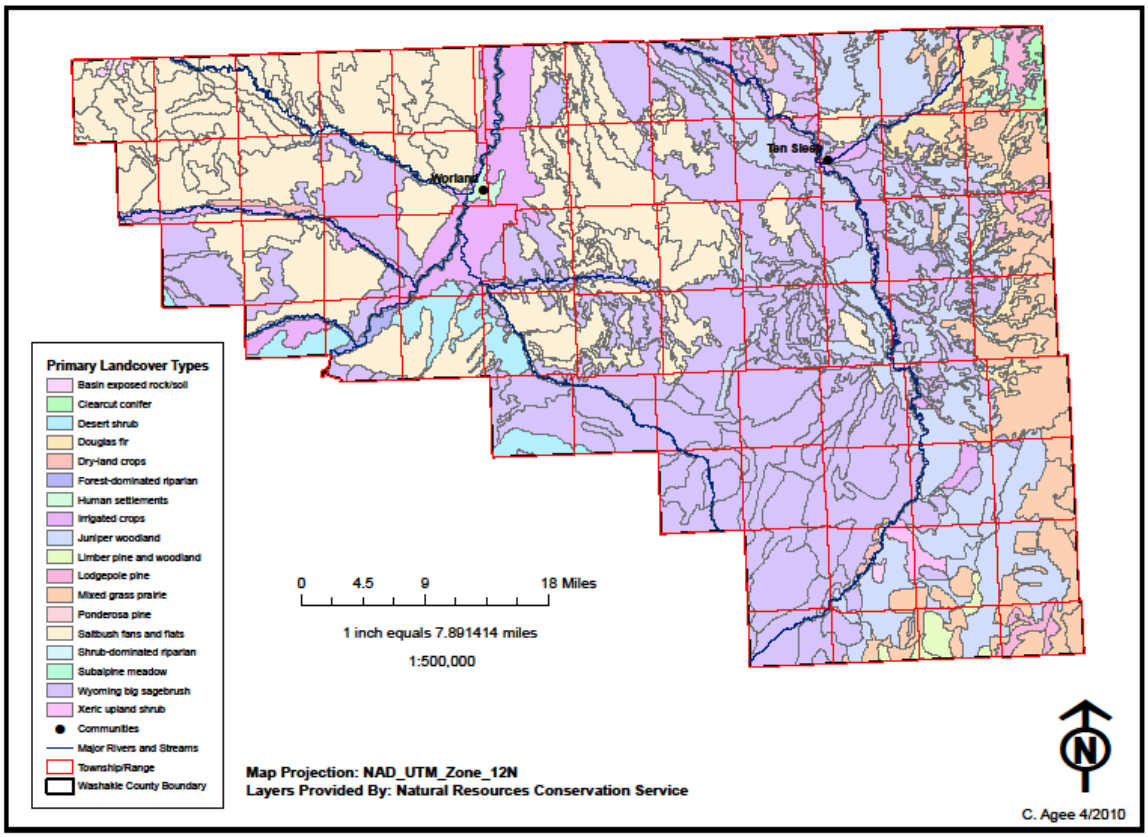
Washakie County Conservation District, Jurisdictional Map, Washakie County Wyoming



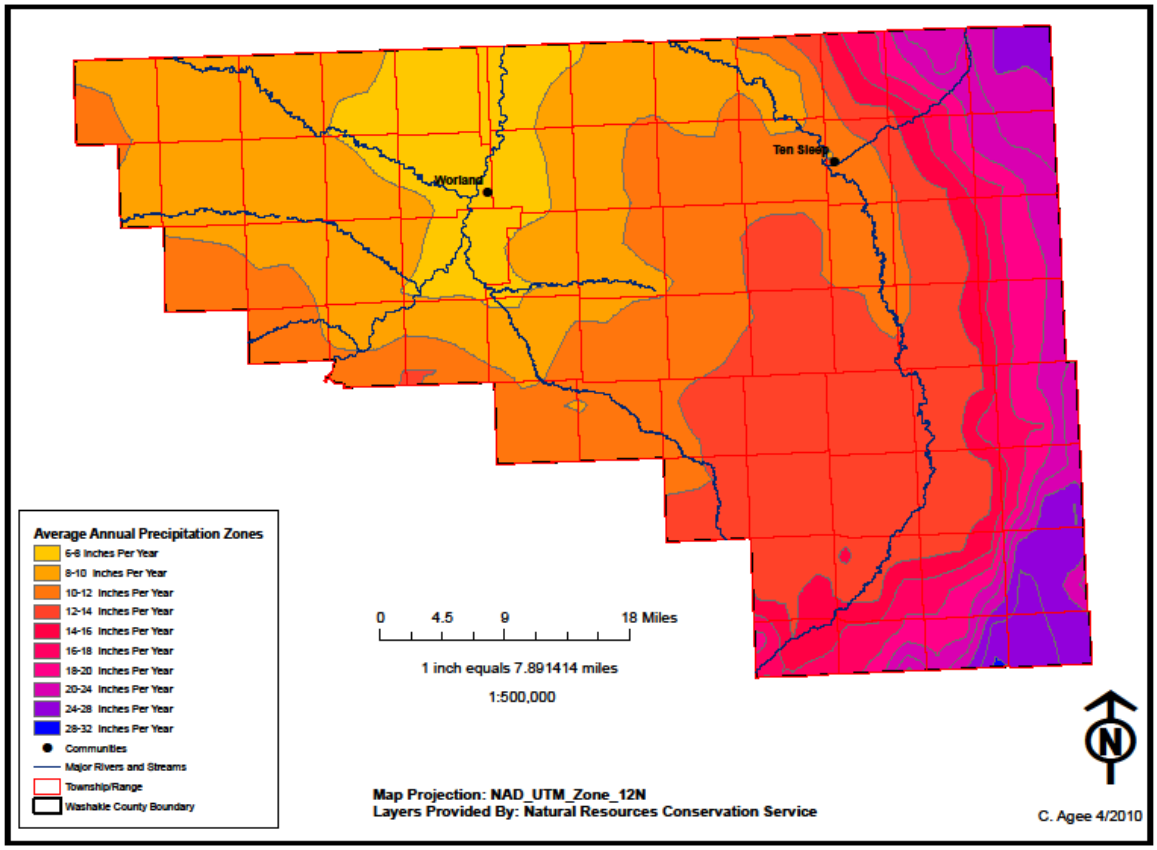
Washakie County Conservation District, General Soils Map, Washakie County Wyoming



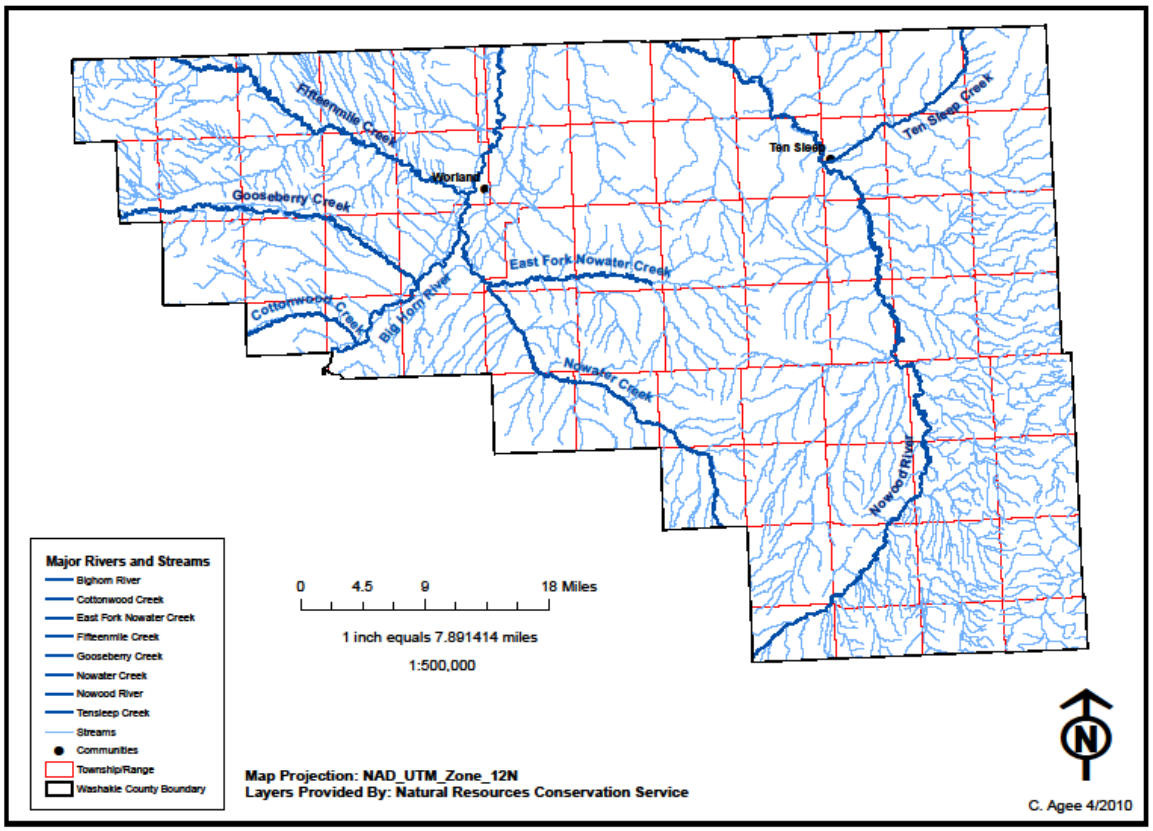
Washakie County Conservation District, Land Ownership Map, Washakie County Wyoming



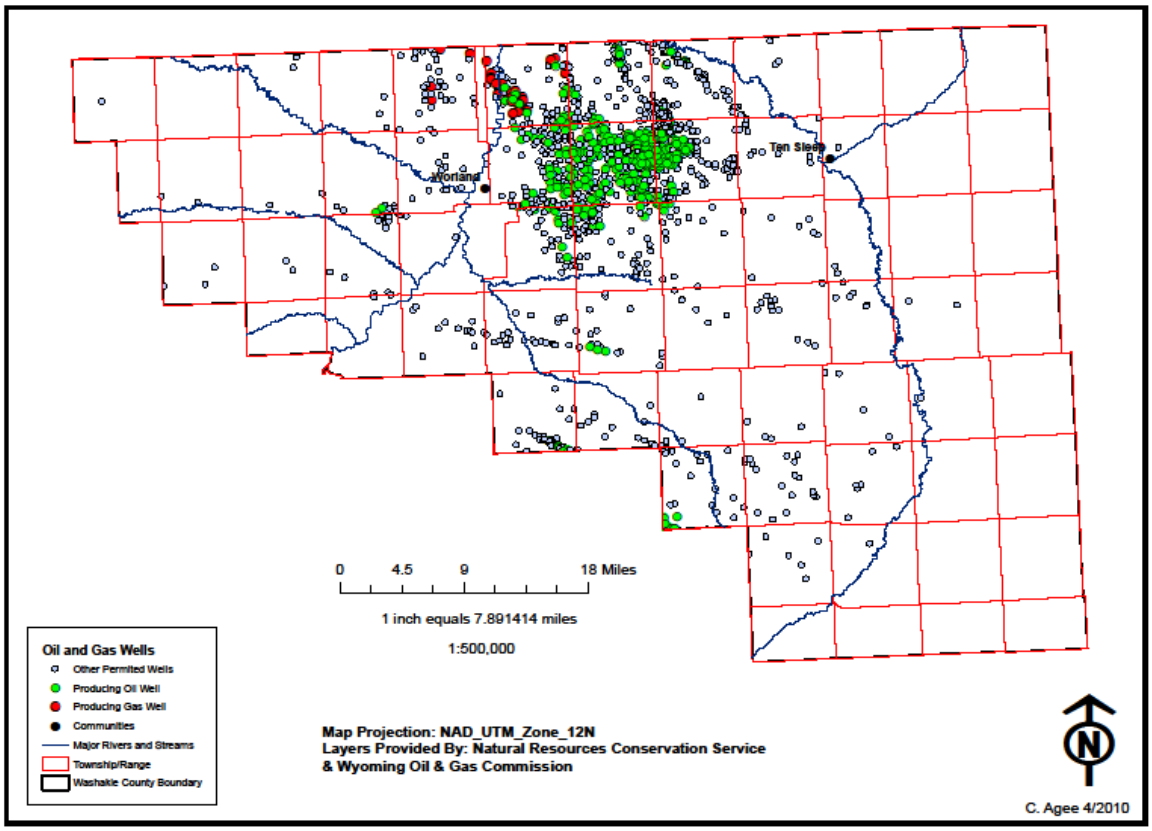
Washakie County Conservation District Primary Landcover Map, Washakie County Wyoming



Washakie County Conservation District, Annual Precipitation Map, Washakie County Wyoming



Washakie County Conservation District, Hydrography Map, Washakie County Wyoming



Washakie County Conservation District,Oil and Gas Wells, Washakie County Wyoming

APPENDIX B

Washakie County Profile

Population

8,289 (64% urban, 36% rural)
Population Density: 4 persons per square mile
Median resident age: 41.0
White Non-Hispanic Alone (83.9%)
Hispanic or Latino (13.6%)
Two or more races (1.1%)
American Indian and Alaska Native alone (0.6%)
Asian alone (0.5%)

Source: http://www.city-data.com/county/Washakie_County-WY.html#ixzz4LgFhre23

Income

Median household income of $47,104
12% of population below the poverty level
Unemployment 3.4%
Cost of Living Index 82.7
Type of workers: Private salary: 73%, Self-employed, not incorporated: 24%, Government: 3%

Top Employers Based on Annual Payroll:

Health care
Manufacturing
Construction
Mining, quarrying and oil and gas extraction
Transportation and warehousing

Source: U.S. Census Bureau, 2013 County Business Patterns.

Top Employers Based on Percent of Population Employed:

Educational services, and health care and social assistance 24.4%
Agriculture, forestry, fishing and hunting and mining 12%
Manufacturing 11%
Construction 10.9%
Followed by retail, Professional Public admin and Transportation and warehousing

Source: U.S. Census Bureau, 2013 County Business Patterns.

Revenue

County taxes levied 2014 $1,842,294 (12 mills)
Municipal taxes levied $212,665

Assessed Valuations

Minerals $56,853,090
Total Residential $47,878,826
Commercial land $14,522,826
Industrial property $13,927,881
Residential land valuation $11,884,289
Non minerals $10,383,859
Total Ag Land $9,958,015
RR $3,432,546
Beverage Manufacturing $3,151,320
Oil and Gas extraction $3,135,230
Fabricated Metal manufacturing $2,740,617
Liquid Pipelines $2,468,559
Petroleum and Coal Product manufacturing $2,181,529
Electric $1,980,340
Non metal mining and quarrying $1,268,270
Food Manufacturing $768,905
Gas pipelines $651,372
REA $444,931

https://sites.google.com/a/wyo.gov/wy-dor/dor-annual-reports

Agriculture

Market Value of Ag products sold (annual) $51,864,000
209 farms in county
341,347 acres of land in farms (23.8% of county area)
average size of farm is 1,633 acres
110 farms over 100 acres, 85 farms over 260 acres
Range lands (“permanent pasture”) 291,022 acres
Total Cropland 39,942 acres (Annually harvest cropland 18,006 acres + Hay 21,942 acres)
Total irrigated lands 41,389 acres, Valuation is $7,889,231
Total dry farms 2,420 acres, Valuation is $58,956
Total rangelands 300,881 acres Valuation is $2,009,828
Total agricultural lands 344,690 acres Valuation is $9,958,015

Sources: 2012 Census of Agriculture - County Data USDA, National Agricultural Statistics Service
https://sites.google.com/a/wyo.gov/wy-dor/dor-annual-reports

Average value of agricultural products sold per farm: $137,343
Average value of crops sold per acre for harvested cropland: $301.46
The value of livestock, poultry, and their products as a percentage of the total market value of agricultural products sold: 57.54%
Average total farm production expenses per farm: $117,077
Non irrigated harvested cropland as a percentage of land in farms: 8.35%
Irrigated harvested cropland as a percentage of land in farms: 99.94%
Average market value of all machinery and equipment per farm: $107,560
The percentage of farms operated by a family or individual: 67.93%
Average age of principal farm operators: 55 years
Average number of cattle and calves per 100 acres of all land in farms: 6.91

Source: http://www.city-data.com/county/Washakie_County-WY.html#ixzz4LgFPYp7l

Wyoming is the third largest producer of domestic wool, and 15th for beef cattle
Predator losses all sheep= 42% (27% of total from coyotes)

Oil and Gas

Oil & Gas Industry's Share of Property Assessed for Taxation, 2014 Washakie County = 40.67%
Barrels of Oil produced (2015) 258,994
Million Cubic Feet gas produced 1,109,371

Sources: Wyoming Oil and Gas Commission, Petroleum Association of Wyoming 2015

Federal Lands

Bureau of Land Management 922,258 acres
Forest Service 36,108 acres
Bureau of Reclamation 1,083 acres
Billed AUMs Worland Field Office (2012) $144,516
2014 PILT $1,115,731 covering 959,449 acres:

Source: Dept of Interior website: https://www.doi.gov/pilt

State Lands

State Non Forested Land 101,629 acres
State Forested Lands 4,703 acres