Socioeconomic Baseline Report

for the

Rock Springs Field Office Resource Management Plan and Associated Environmental Impact Statement

July 2013

BLM

Wyoming High Desert District – Rock Springs Field Office

Mission Statement

The BLM's multiple-use mission is to sustain the health and productivity of the public lands for the use and enjoyment of present and future generations. The Bureau accomplishes this by managing such activities as outdoor recreation, livestock grazing, mineral development, and energy production, and by conserving natural, historical, cultural, and other resources on public lands.

SOCIOECONOMIC BASELINE REPORT

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Rock Springs Field Office
Resource Management Plan and Associated Environmental Impact Statement

Bureau of Land Management
Wyoming High Desert District
Rock Springs Field Office

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CHAPTER 1—INTRODUCTION

The Bureau of Land Management (BLM) Rock Springs Field Office (RSFO) is revising the existing Green River Resource Management Plan (RMP) and preparing an associated environmental impact statement (EIS). The revision will be known as the Rock Springs RMP. The Rock Springs RMP will replace the Green River RMP and will provide an updated and comprehensive framework for managing and allocating use of public lands and resources administered by the BLM in the RSFO. The need to develop a land use plan is established under the Federal Land Policy and Management Act of 1976 (FLPMA). In the 13 years since the Record of Decision (ROD) for the existing RMP was signed (August 1997), new data have become available, new policies established, and old policies revised. These, along with emerging issues and management concerns (e.g., renewable energy and transmission corridors), have resulted in the need to revise the existing plan.

This Socioeconomic Baseline Report has been prepared to assist in the planning process for the Rock Springs RMP and the associated EIS. Socioeconomic information will be used to inform the planning process, including the analysis of potential impacts of management alternatives.

Socioeconomics is not a BLM management decision; it is a contextual element for planning. This baseline report addresses social, cultural, and economic conditions and trends within the socioeconomic study area defined below. These conditions and trends affect current and future uses of resources on BLM-administered lands. Conversely, decisions made by the BLM in the planning process may have social, cultural, and economic impacts. These impacts may be positive or negative, depending on conditions and on the point of view of stakeholders regarding BLM land management decisions.

1.1 REGULATORY AND POLICY BASIS

A number of laws, regulations, and policies require social and economic analysis to support BLM land use planning and decisionmaking. FLPMA and the National Environmental Policy Act of 1969 (NEPA) provide the statutory framework for social and economic considerations in land use planning. Section 202(c)(2) of FLPMA requires the BLM to integrate physical, biological, economic, and other sciences in developing land use plans (43 United States Code [USC] 1712(c)(2)). FLPMA regulations at 43 Code of Federal Regulations (CFR) 1610.4-3 and 43 CFR 1610.4-6 require the BLM to analyze social, economic, and institutional information. Section 102(2) (A) of NEPA requires federal agencies to "ensure the integrated use of the natural and social sciences…in planning and decision making" (42 USC 4332(2) (A)). Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (February 11, 1994) requires federal agencies to identify and address disproportionately high and adverse human health or environmental effects of their programs, polices, and activities on minority populations and low-income populations in the United States. Appendix D, "Social Science Considerations in Land Use Planning Decisions," of the *BLM Land Use Planning Handbook* (BLM 2005) provides guidance on integrating social science information into the BLM planning process. Various BLM Instruction Memoranda (IM) provide additional policy guidance relevant to socioeconomic analysis.

1.2 SCOPE

The planning process for the Rock Springs RMP addresses all resources and resource uses on BLM-administered lands in the RSFO. Therefore, the socioeconomic analyses, including this Socioeconomic Baseline Report and the socioeconomic impacts analysis that will follow, are intended to address social, cultural, and economic aspects of the full range of management actions that will be considered in the

planning process. Likewise, the socioeconomic analyses are limited to conditions and trends relevant to resources and resource uses on BLM-administered lands.

1.3 STRUCTURE AND SOURCES

This report is divided into five chapters, as follows:

- Introduction—This chapter provides context for this document.
- Overview of the Socioeconomic Study Area— This chapter defines the geographic area covered and provides a high-level characterization of land ownership and current population.
- Social and Cultural Conditions— This chapter identifies and profiles socioeconomic study area population trends, demographics, and other social and cultural characteristics.
- Economic Conditions— This chapter characterizes the socioeconomic study area economy in terms of employment, earnings, sources of income, economic base, public finance, and economic indicators for specific economic sectors that are most relevant to the current planning action.
- Uses and Values of BLM-Administered Land— This chapter profiles uses of BLM-administered lands and describes some of the economic and social implications of those uses.

Within the social/cultural and economics chapters, most data are presented for each county within the socioeconomic study area. Wyoming and U.S. data are often presented for comparison. In some cases, data and qualitative information are presented for smaller geographies.

Multiple demographic and economic data sources are used in this report. The most prevalent sources are the following:

- Economic Profile System–Human Dimensions Toolkit (EPS-HDT)—This is an online tool sponsored by the BLM and the U.S. Forest Service. It draws on a wide variety of data sources, including many of the sources below, to provide economic and demographic data for user-selected counties or groups of counties.
- U.S. Census Bureau, 2010 Census—The Census Bureau has released some but not all information from the 2010 Census. It also does not cover all demographic and population topics. The source described next addresses many topics that the Census does not.
- U.S. Census Bureau, American Community Survey (ACS)—The ACS provides demographic and other data for the period between the decennial censuses, using samples of local populations. Smaller geographic areas, such as the five counties of the socioeconomic study area and communities in those counties, require combining data from samples taken in multiple years to provide the most accurate estimates. The most recent ACS data for these geographic areas are based on samples taken during the 5 years from 2006 to 2010.
- Bureau of Economic Analysis (BEA)—The BEA provides a wide range of data on economic conditions, generally gathered on a quarterly or annual basis. This report draws data from BEA's Regional Economic Information System (REIS) on a number of topics.
- Bureau of Labor Statistics—This source provides data on labor market conditions, e.g., employment and unemployment.
- State and local data sources—A variety of sources are used, including the Wyoming Department of Revenue, Wyoming Department of State Parks and Cultural Resources, Wyoming Economic Analysis Division (WEAD), Wyoming Housing Database Partnership, Wyoming State Treasurer's Office, Wyoming Office of Tourism, and local sources. Where appropriate, the nature of these sources is described in the text.

CHAPTER 2—OVERVIEW OF THE SOCIOECONOMIC STUDY AREA

The RSFO encompasses approximately 3.6 million acres of BLM-administered surface land and 3.5 million acres of BLM-administered mineral estate in portions of Fremont, Lincoln, Sublette, Sweetwater, and Uinta counties in southwestern Wyoming. Figure 2-1 shows the administrative boundary of the RSFO and surface land ownership within the boundary.

The *planning area* for the development of the RSFO RMP encompasses all land within the RSFO administrative boundary. Although the planning area encompasses all land within the RSFO administrative boundary, the management decisions that will be made by this planning action will address only BLM-administered lands within the planning area. BLM-administered lands include BLM surface land and BLM-administered federal mineral estate.[1] The latter includes geographic areas where the subsurface mineral estate, or a portion thereof, is owned by the Federal Government and the surface is under non-federal ownership.

2.1 DEFINITION OF THE SOCIOECONOMIC STUDY AREA

This baseline report primarily focuses on the *socioeconomic study area*, which is determined by the economic and social relationships among communities in the region and the surface land and subsurface federal mineral estate managed by the RSFO. A socioeconomic study area commonly extends beyond a field office boundary because decisions made by the BLM can affect socioeconomic conditions in proximate lands and communities, based on where monies flow and how and where services and goods are obtained. A socioeconomic study area may also be larger than the planning area because key socioeconomic data are available only for geographic areas (e.g., counties) that extend beyond the planning area.

A well-defined socioeconomic study area should capture most—but cannot capture all—of the economic activity and social relationships stemming from the BLM-administered land in the planning action. The study area definition is especially important in conducting the economic modeling necessary for an economic impact analysis (as described at the beginning of Chapter 5). The study area definition does not preclude consideration of economic and social relationships that cross the study area boundary.

The socioeconomic study area for this BLM RMP planning effort has been defined to include all five counties within the RSFO boundaries: Fremont, Lincoln, Sublette, Sweetwater, and Uinta. It is shown in Figure 2-2. Note that the socioeconomic study area extends considerably beyond the boundaries of the RSFO in most directions. Although only small portions of Fremont, Lincoln, Sublette, and Uinta counties are located within the RSFO, all of these counties are included in the socioeconomic study area for two important reasons:

- There are important economic and social linkages between each of these four counties and Sweetwater County.
- Important data for the socioeconomic analysis, particularly for economic conditions, are only available at the county-wide level.

[1] *Throughout this document, use of the term "BLM-administered lands" encompasses both BLM-administered surface land and BLM-administered federal mineral estate. Either or both components of "BLM-administered lands" are sometimes specifically mentioned when additional clarity is required.*

Figure 2-1. Planning Area for the RSFO RMP/EIS

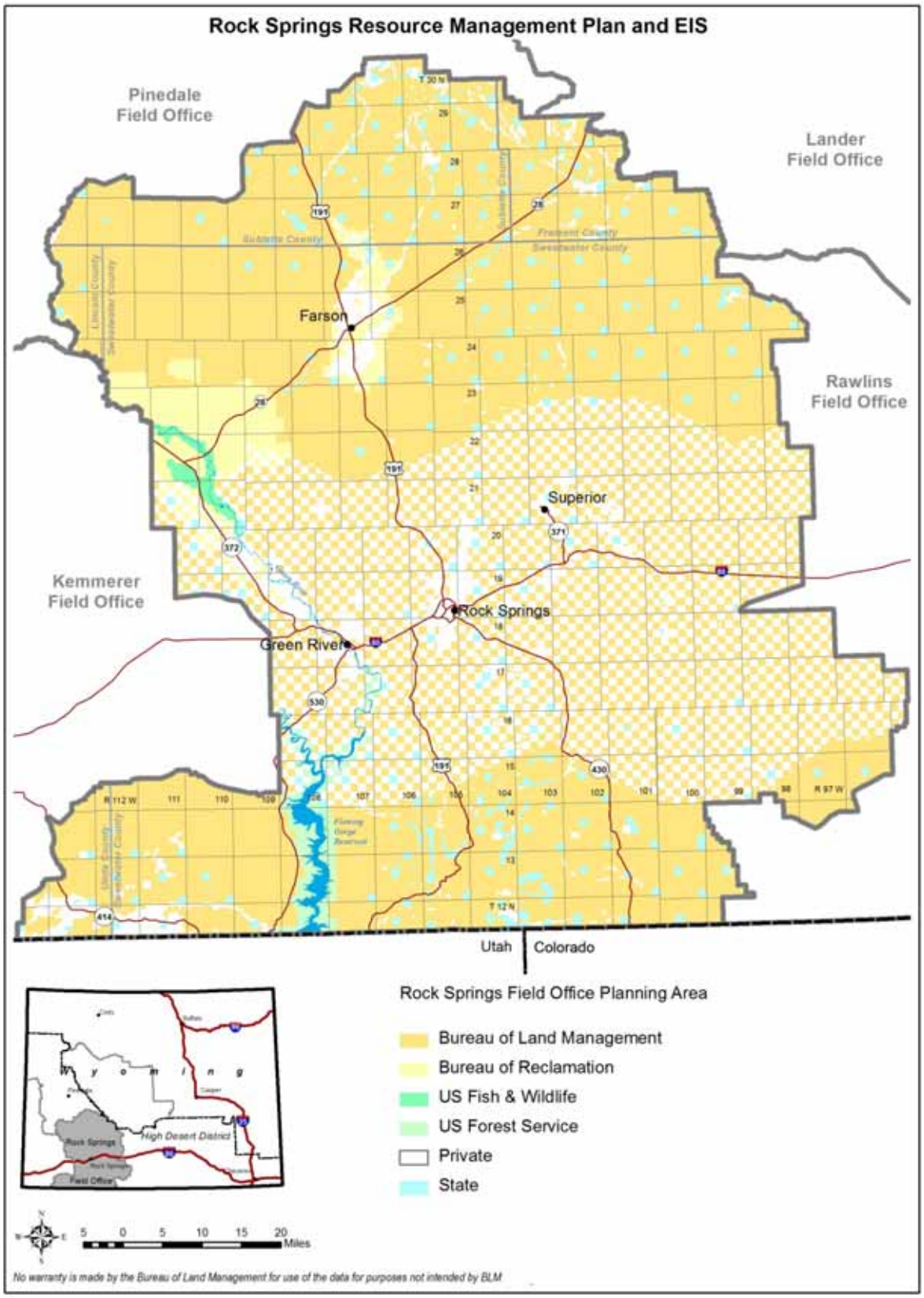
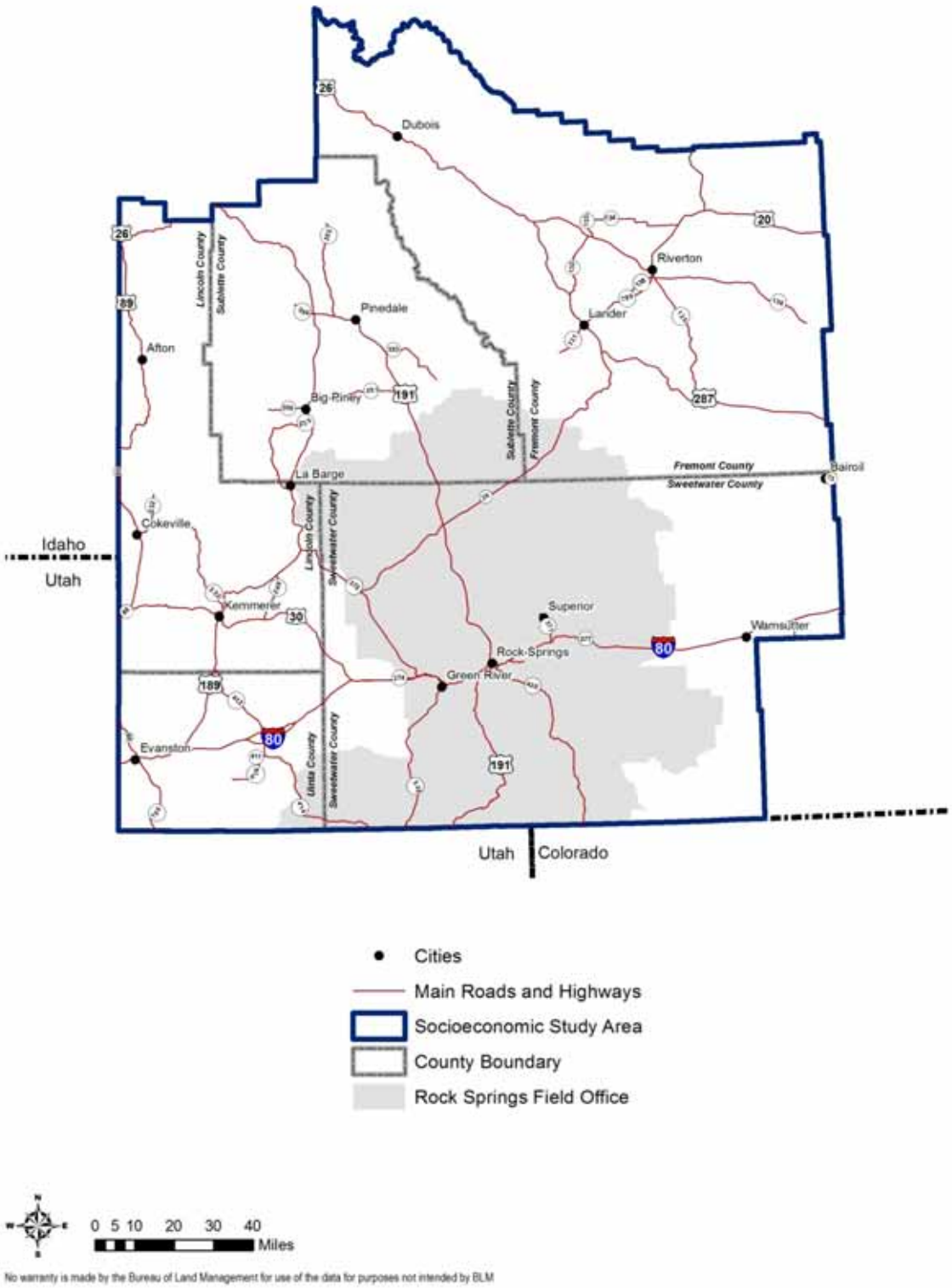


Figure 2-2. Socioeconomic Study Area Boundaries



The RSFO has linkages to other areas beyond the five-county socioeconomic study area. However, the available data indicate that the study area as defined is relatively self-contained. Appendix A provides an analysis that concludes that the available data provide substantial support for defining the study area as the five counties (Sidon 2012). The analysis assesses labor flows within and across the study area boundary from two perspectives: where workers who live in the socioeconomic study area work, and where the workers who fill study area jobs live. In summary, one data source shows that at least 89.5% of all workers that live in the five-county area have a job in one of the five counties. This proportion could be as high as 92.3%. In addition, of all jobs in the five-county area, at least 81.8% are filled by workers who live in one of the five counties. This proportion could theoretically be as high as 95.5%. (The ranges reflect workers whose county of residence and/or employment is not known.) These data come from the Wyoming Department of Workforce Services, Research & Planning Section, based on matching workers' workplace data (from the Quarterly Census of Employment and Wages, or QCEW) and driver's license residence data. The appendix also shows that analysis of data from the U.S. Census Bureau's Longitudinal Employer-Household Dynamics Program—using QCEW workplace location data and primarily tax records for worker residence—yields the same basic conclusions: Approximately 85.8% of the jobs filled by workers that live in the five-county area are located in one of the five counties, and approximately 84.3% of the jobs available and filled in the five-county area are filled by workers who live in one of the five counties.[2]

The analysis in Appendix A notes that according to the U.S. Department of Agriculture (USDA) Forest Service Protocols for Delineation of Economic Impact Analysis Areas (METI Corp/Economic Insights of Colorado 2010), an area may be considered "strongly self-contained" if 55% of total workers live in the area. The protocol recommends adding a county to the study area if: (1) 25% of employed residents commute into the study area or (2) 25% of jobs in the study area are filled by workers from the specific county. The five-county study area captures more than 80% of the workforce. No other counties outside the study area meet either of the two criteria above.

While the labor flow data in Appendix A provides substantial evidence that the five-county study area captures the vast majority of labor impacts related to activities within the RSFO, the data also demonstrate that there are connections to other counties. For example, approximately 4.4% of the workers who live in Carbon County commute to the study area for their jobs (369 jobs), and approximately 400 additional jobs are filled by residents of Rich (Utah), Daggett (Utah), Uintah (Utah), Moffat (Colorado), Bear (Idaho), and Caribou (Idaho) counties.

In addition, with specific respect to economic activity related to BLM-administered lands in the RSFO, there are many anecdotal reports of such economic activity taking place across the socioeconomic study area boundary:

- There is considerable traffic between Rock Springs, Wyoming, and Vernal, Utah, on U.S. Highway 191. According to cooperating agency representatives, an important portion of this traffic is related to oil and gas industry service companies located in the two communities.
- Significant traffic from Utah and Idaho flows through Lincoln County along U.S. Highway 189 because of development of the Jonah Field and Pinedale Anticline (Tiechert 2012).
- Some workers in the coal mines of Sweetwater County come from Carbon County, particularly Rawlins (Kot 2012).

[2] *A third source, not available at the time the appendix was prepared, is the commuting flow data from the 2006–2010 ACS (U.S. Census Bureau 2013). These detailed data show similar patterns. This source estimates that 94.9% of all workers who live in the five-county area have a job in one of the five counties. In addition, 92.6% of the jobs available and filled in the five-county area are filled by workers who live in one of the five counties.*

- Livestock grazing operators based in Idaho use grazing lands in the Red Desert, according to cooperating agency representatives.
- Recreational activity in the southern portion of the RSFO is often linked to recreation in Utah and Colorado because of Flaming Gorge Reservoir, which is located in both Wyoming and Utah; Browns Park National Wildlife Refuge, located in the extreme northwestern corner of Colorado; and key hunting areas in close proximity in all three states (Sweetwater County Board of County Commissioners, comment on draft Socioeconomic Baseline Report).
- High populations in "man camps" (concentrations of temporary housing and services for workers developing resources) and high hotel/motel occupancy rates during the oil and gas development boom of the mid-2000s indicate many workers in the industry are from outside the socioeconomic study area. These workers could be from nearby counties or much further away. For example, workers on the Ruby Pipeline project included crews from Texas and Arkansas (Tiechert 2012).

Important flows of capital and specialized goods into the socioeconomic study area to support economic activity on BLM-administered lands may come from far outside the five-county boundary. Salt Lake City, Utah; Grand Junction, Colorado; and Denver, Colorado were mentioned by cooperating agencies as sources of capital and goods for oil and gas development in the RSFO.

It is also apparent that firms within the socioeconomic study area support economic activity outside the socioeconomic study area. Rock Springs is a hub for companies that provide services to the oil and gas industry. These companies include Halliburton, Schlumberger, IPS, Baker-Hughes, Weatherford International, and many others. Halliburton is known to send crews from Rock Springs to Vernal, Utah; the Hiawatha and Powder Wash fields in Moffat County, Colorado; and even as far away as North Dakota (Kot 2012). As another example, some livestock operators within the RSFO use grazing lands in northern Colorado, according to cooperating agency representatives.

Expanding the socioeconomic study area would capture some additional economic activity that is relevant to the RSFO or to the socioeconomic study area generally, but also would dilute the descriptive statistics and analysis in this baseline report with economic activities that are unrelated to the RSFO. This dilution effect would reflect:

- Endogenous economic activity in the added counties. For instance, communities such as Vernal, Utah, have considerable self-generated economic activity apart from any economic activity related to southwestern Wyoming.
- Economic activity driven by relationships with additional areas. For example, the economies of northeastern Utah counties are strongly related to the economy of the Wasatch Front, and the economy of northwestern Colorado has important relationships with the Grand Junction economy. The economy of Carbon County, Wyoming, has ties to communities to the east in Wyoming.

Including additional counties in Wyoming, or in Utah, Colorado, or Idaho, would unnecessarily enlarge and complicate the study area and dilute attention to the social and economic conditions of the five counties of the defined socioeconomic study area, which are much more relevant to this RSFO-focused planning effort than the social and economic conditions of additional counties. In addition, including more counties in the socioeconomic study area would complicate the economic modeling to be undertaken for the impacts analysis without significantly affecting the findings in terms of the relative impacts of the management alternatives.

Given the results of the workforce flow data analysis, and the dilution and complication factors, it is not appropriate to expand the socioeconomic study area boundary beyond the five counties. However, key economic and social relationships that occur across the socioeconomic study area boundary can still be

considered through analysis conducted outside of the economic impact modeling effort. This analysis could include focused discussion of key relationships, for example, the role of oil and gas industry service companies located outside the study area boundary in development of RSFO-administered oil and gas resources. These discussions will be included in the socioeconomic impacts analysis, as needed and appropriate given the specific management actions contemplated in the management alternatives.

2.2 CHARACTERISTICS OF THE STUDY AREA

Spanning more than 19.7 million acres, the socioeconomic study area represents 32% of the total land area of Wyoming. Table 2-1 and Figure 2-3 show land tenure in the study area and in the planning area specifically. Of the total land in the study area, the majority is federally owned (71.1%). The BLM manages the largest portion (46.7%), followed by privately owned land (24.7%), other federal agencies (24.4%), and state and local governments (3.6%). Within the planning area portion, the percentage of privately owned land is similar (23.7%) to that of the study area, while BLM land makes up a larger proportion (67.3%) than in the study area. The percentage of land managed by other federal agencies is much less (4.9% versus 24.4%). This is because the study area features large areas of Indian reservation, national park, and national forest land, while the planning area has no Indian reservations or national parks and only a relatively small acreage of national forest.

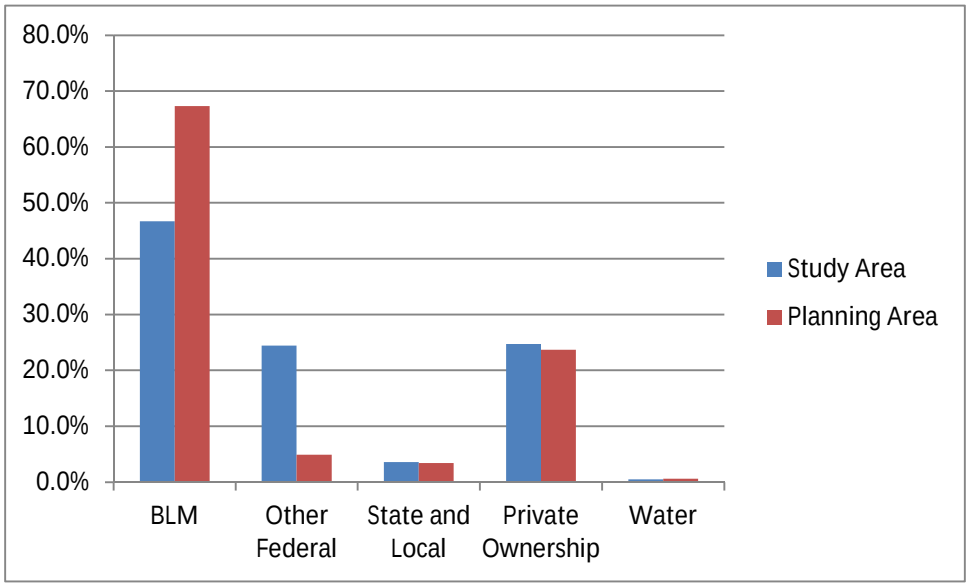
State land ownership in part reflects land ownership at statehood. When admitted to the Union, states were granted one to four sections of land in each township to be used for support of the public education system. Wyoming was granted 2 sections (16 and 36) in each township.

Table 2-1. Land Tenure in the Socioeconomic Study Area and Planning Area (Acres)

County	BLM	Other Federal	State and Local	Private Ownership	Water	Total
Socioeconomic Study Area						
Fremont	2,100,774	2,432,155	250,982	1,097,321	41,028	5,922,260
Lincoln	982,900	918,022	107,810	594,112	11,007	2,613,851
Sublette	1,266,323	1,166,682	112,270	601,400	8,016	3,154,691
Sweetwater	4,393,169	268,837	186,743	1,827,625	32,834	6,709,208
Uinta	479,925	37,439	54,068	762,480	1,509	1,335,421
Study Area	9,223,091	4,823,135	711,873	4,882,938	94,394	19,735,431
% of Study Area	46.7%	24.4%	3.6%	24.7%	0.5%	100.0%
RSFO RMP Planning Area						
Planning Area	3,607,345	264,921	184,671	1,268,711	32,914	5,358,564
% of Planning Area	67.3%	4.9%	3.4%	23.7%	0.6%	100.0%

Source: BLM Geographic Information System (GIS) data.
"Other Federal" for the study area consists of land managed by the Bureau of Indian Affairs (Wind River Indian Reservation), Bureau of Reclamation, Department of Defense, National Park Service (NPS), U.S. Forest Service, and the U.S. Fish and Wildlife Service (USFWS).
"Other Federal" for the study area consists of land managed by the Bureau of Reclamation, U.S. Forest Service, and USFWS.

Figure 2-3. Land Tenure in the Socioeconomic Study Area and Planning Area (Percentage)



Source: BLM GIS data.

Figure 2-1 above shows graphically the distribution of land tenure in the RSFO planning area. Note that the northern and southern portions of the planning area have large continuous areas of land that are managed by the BLM, and portions of state, private, and other land that are scattered and much smaller in area. The distribution of land tenure in the middle portion of the study area is considerably different. This area covers 20 miles to the north and south of the Union Pacific Railroad right-of-way (ROW) and is known as the "railroad checkerboard lands." The checkerboard occupies approximately 40% of the planning area stretching from the eastern to the western Field Office boundaries. Every other section of land (1 section = 1 square mile) for 20 miles on either side of the railroad ROW is privately owned. These private lands were originally granted to the Union Pacific Railroad by the Federal Government under the Pacific Railway Acts of 1862 and 1864 as a means for the railroad to raise capital for the construction of the transcontinental railroad route (Flores and Bader 1999). Over time, some of these lands have changed ownership through various disposal actions and company reorganizations. Lands previously held by Union Pacific Railroad are now owned by Anadarko Petroleum Corporation or have passed into private ownership.

The checkerboard land ownership pattern creates challenges and concerns for both the BLM and private landowners. A few examples of such issues are described below. The BLM tries to work with private landowners whenever such issues arise, but concerns for both parties may remain.

- Widely dispersed parcels of public land are less efficient for the BLM to manage in terms of staff time and expenses, contractor expenses, etc.
- Restrictions on certain activities on BLM-administered lands may result in resource users moving their uses to private lands, which can result in greater net impacts on the resource the BLM desires to protect. For instance, winter range restrictions on oil and gas drilling may result in operators putting drill pads on private land where the habitat resource values may be higher or the impacts greater.
- Restrictions on development of federal mineral rights pertain to split estate as well as federal surface lands. Private surface landowners may lose surface lease revenue if the underlying federal mineral estate is closed or restricted.

- The BLM requires clearance surveys of proposed development areas on public land to ensure sensitive species, cultural and historic sites, or other valuable resources are not affected. In some cases, private landowners do not like to provide access through their lands for these surveys, and in rare cases, the BLM also requires clearances of affected private land, to which landowners may object.
- Concerns may arise regarding access across public lands to private lands.
- If sensitive sites are found on public land, locations of well pads, roads, or other activities may be adjusted in ways that affect the location of related facilities on private land. For instance, a road may be rerouted on public land, which may mean it will have to move onto private land as well, and the adjusted location may be less desirable from the private landowner's point of view.
- Land management objectives of the BLM and private landowners may differ in ways that create operational conflicts. The BLM land management objectives are directed by FLPMA, as amended. This is the BLM's "organic act" that establishes the agency's multiple-use mandate to serve present and future generations. It directs the BLM to manage for multiple uses, not just certain groups or individuals. With proper Consultation, Cooperation, and Coordination (CCC), the BLM and the public can achieve a healthy balance to prevent many operational conflicts.

The issues and concerns associated with the checkerboard may need further consideration to determine socioeconomic impacts of BLM management actions during the impact analysis phase of the planning process.

Tribal lands are represented in the table and figure above in the federal category. However, the Eastern Shoshone and Northern Arapaho tribes exercise inherent sovereign powers over the lands of the Wind River Indian Reservation in Fremont County.

Land use in the study area varies on private, state, and federal land. Private land uses include agricultural lands, small urban communities, rural communities, individual homes, mining and other industrial development uses, and more. State and local land uses include several state parks, local parks, roads, airports, schools, government buildings and other facilities, and other public amenities. The major components of federal land use include multi-use lands managed by the BLM and the Forest Service, and protected lands such as national recreation areas, wilderness areas, and national wildlife refuges.

The major administrative components of federal land use include:

- BLM: Rock Springs Field Office, Kemmerer Field Office, Pinedale Field Office, Rawlins Field Office
- Forest Service: Bridger-Teton National Forest, Uinta-Wasatch-Cache National Forest, Ashley National Forest, Shoshone National Forest, and Flaming Gorge National Recreation Area
- Bureau of Indian Affairs: Wind River Indian Reservation
- Bureau of Reclamation: Flaming Gorge Reservoir, Fontenelle Reservoir, Big Sandy Reservoir, Eden Reservoir, Bull Lake, Pilot Butte Reservoir, Ocean Lake, and Boysen Reservoir
- USFWS: Seedskadee National Wildlife Refuge, Cokeville Meadows National Wildlife Refuge
- NPS: Fossil Butte National Monument.

The total population of the socioeconomic study area was 133,400 according to the 2010 Census, with Sweetwater County and Fremont County representing the most populous counties with 43,806 and 40,123 people, respectively. The socioeconomic study area has a few small urban areas, but is predominantly rural and sparsely populated. In 2010, the overall density of the socioeconomic study area averaged 4.4 people per square mile. Uinta County was the most densely populated at 10.1 people per square mile, and Sublette County the least densely populated at 2.1 persons per square mile. Wyoming as a whole is sparsely populated at 5.8 people per square mile, and all but one of the counties (Uinta) in the

socioeconomic study area are less densely populated than the state. Table 2-2 details population, land area, and population density information for 2010.

Table 2-2. Population, Area, and Population Density, 2010

Area	Total Population (2010)	Land Area (Acres)	Land Area, 2000 (Square Miles)	Persons Per Square Mile
Fremont	40,123	5,877,638.4	9,183.81	4.4
Lincoln	18,106	2,608,723.2	4,076.13	4.4
Sublette	10,247	3,127,385.6	4,886.54	2.1
Sweetwater	43,806	6,673,056.0	10,426.65	4.2
Uinta	21,118	1,332,006.4	2,081.26	10.1
Study Area	133,400	19,618,809.6	30,654.39	4.4
Wyoming	564,460	62,139,609.6	97,093.14	5.8
United States	308,745,538	2,260,419,475.2	3,531,905.43	87.4

Source: U.S. Census Bureau State & County QuickFacts 2010.

As noted above, the socioeconomic study area is sparsely populated, with a few small urban centers. It is also located at considerable distance from any large urban areas. The rough geographic and population center of the planning area, Rock Springs, is located approximately 180 miles from Salt Lake City, Utah, and other large communities of Utah's Wasatch Front region. Uinta County is much closer to this populated region. Evanston, for instance, is approximately 80 miles from Salt Lake City, but is also distant from much of the planning area. To the east, the nearest substantially larger communities are Casper, Wyoming (with a 2010 population of 55,316, compared with 23,036 for Rock Springs), at 225 miles from Rock Springs, and Cheyenne, Wyoming (with a 2010 population of 59,466), at 250 miles from Rock Springs. The heavily populated Front Range region of Colorado is somewhat further away, with Fort Collins and Denver at 270 and 350 miles from Rock Springs, respectively.

Regional access to the planning area is primarily by I-80, which runs east-west and passes through Rock Springs and Green River. The major north-south highway is U.S. Route 191, which passes through Rock Springs. Highway 191 runs north to Pinedale in Sublette County, and south to Vernal in Uintah County, Utah. The planning area also has railroad freight access via the Union Pacific Railroad, which roughly parallels I-80. Commercial airline service is available from Rock Springs, primarily to the air travel hubs of Denver and Salt Lake City. Many other portions of the socioeconomic study area, notably Fremont County, Sublette County, and much of Lincoln County, rely primarily on U.S. and state highways for regional access, and are more distant from major population centers.

CHAPTER 3—SOCIAL AND CULTURAL CONDITIONS

3.1 COMMUNITIES

Understanding the social development, culture, history, and geographic features of an area provides valuable insight into how events or changes to the area may affect the livelihood and quality of life of the residents. Historically, the socioeconomic study area developed with sparse populations, rural characteristics, small communities, and natural-resource-based economies. Many of the communities within the area share similar historical paths. This section is intended to give a general representation of the five counties and selected communities—the larger communities that have economies that are most closely tied to BLM-administered lands. All population figures cited are from the 2010 Census.

3.1.1 Fremont County

Fremont County was established in 1884. Covering 9,184 square miles of the western portion of Wyoming, with a population of 40,123, Fremont County is the second largest and second most populous county in the socioeconomic study area, after Sweetwater County. The county seat is Lander, with a population of 7,487, which is second only to Riverton with a population of 10,615. U.S. Highways 287 and 26 are the major roadways through Fremont County, which has no interstate highways.

Fremont County's unique geography offers access to a diversity of minerals, including uranium, oil and gas, jade, gold, and precious gems. Fremont County also has considerable agricultural land. Among the five counties, the largest number of farms, most land in farms, and the highest level of crop and livestock production, all occur in Fremont County (see Section 4.5.1). Economically, government and retail trade account for the largest percentage of employment in Fremont County.

Fremont County offers a wide range of rural resources and uses, including National Historic Trails, the Continental Divide National Scenic Trail, historic mining areas, rock climbing, hiking, mountain biking, hang gliding, livestock grazing, and wild horses. Fremont County also offers access to Bridger National Forest, Shoshone National Forest, and Teton National Forest, making it a popular destination for outdoor enthusiasts.

3.1.2 Lincoln County

Lincoln County was established in 1911, the same year Kemmerer was named as the county seat. Pioneers traveling west in the mid to late 1800s generally followed the Oregon Trail, which ran near Kemmerer. Early settlers established homesteads in the area in the late 1800s, and large sheep and cattle ranches took advantage of the vast rangeland. Extensive ranch settlement in the region followed the construction of the Union Pacific Railroad around 1867. Coal deposits at Kemmerer brought about its settlement in 1881.

U.S. Highways 30, 89, and 189 are the main roads through Lincoln County, and Highways 30 and 189 connect Kemmerer with I-80. Highway 30 bisects the lower portion of the county as it generally traverses east–west, while Highway 189 runs north–south through this portion of county. Highway 89 runs through the towns of Afton and Alpine in the northern portion of the county.

Three important rivers pass through Lincoln County: the Bear River, Snake River, and Green River. The Bear River flows into the Great Salt Lake. The Snake River, which originates in Yellowstone National Park, crosses the northern tip of the county and joins the Columbia River before flowing into the Pacific Ocean. The Green River, which passes the eastern border of the county, flows southward into Utah, where

it joins the Colorado River. Fontenelle Reservoir, created on the Green River system, is located in Lincoln County and is primarily surrounded by Bureau of Reclamation lands. Lincoln County comprises approximately 4,076 square miles and has a population of 18,106.

Kemmerer

Kemmerer is the largest community in Lincoln County but is relatively small with 2,656 people. It has a rich history. Explorer John C. Fremont first chanced upon coal here in 1843, but it was not until 1881 that the Union Pacific opened the first underground coal mine. Patrick J. Quealy and his partner, Mahlon S. Kemmerer, established the Kemmerer Coal Company. In 1950, the operation moved above ground, and the Kemmerer mine became the Pittsburg & Midway Coal Company, now a subsidiary of Chevron. Located 6 miles south of Kemmerer, the mine is North America's largest open pit coal mine. James Cash "JC" Penney founded his retail chain upon moving to Kemmerer in 1902 to open a dry goods store for the booming mining town. The original J.C. Penney store is still a thriving retail outlet.

Today, Kemmerer and the surrounding area offer plentiful recreational opportunities, including fly fishing on the Green River, Hams Fork River, Lake Viva Naughton, and Fontenelle Reservoir; big game hunting; a golf course; and many historical sites. The economy of Kemmerer is also driven by the oil and gas boom occurring in southwestern Wyoming.

LaBarge

LaBarge is located in the northern end of Lincoln County just south of the Lincoln-Sublette County border. Although it is not in Sublette County, LaBarge citizens share very close ties with Sublette County. LaBarge is in the same school district as Big Piney and Marbleton in Sublette County. It has its own elementary school, but the older students are bused 20 miles to the Big Piney Middle and High Schools. LaBarge's economy depends on the energy resource development in surrounding natural gas fields in Sublette, Lincoln, and Sweetwater counties. The community has a population of 551.

3.1.3 Sublette County

Sublette County was established in 1921. It comprises approximately 4,887 square miles and has a population of 10,247. Pinedale is the county seat. Pinedale is on U.S. Highway 191, a major north–south route through southwestern Wyoming. U.S. Highway 189 is another major north–south route in the region that also passes through Sublette County, including the communities of La Barge and Big Piney.

The first inhabitants of the area were Shoshone, Gros Ventre, Bannock, Sheepeater, and Crow Native American tribes. White explorers, mainly trappers and mountain men, arrived in the early 1800s, drawn to the area by the tales of streams rich with beaver. Later, ranchers and cattlemen began to winter their stock in the area and eventually settled there themselves. Tourism has become increasingly important in recent decades based on the many excellent outdoor recreation opportunities in the county. In the last few years, the level of oil and gas development has considerably increased, making it the dominant industry, with timbering and ranching declining in the area.

Pinedale

Located at the foot of the Wind River Mountain Range and close to the Bridger Wilderness, Pinedale is the largest community in Sublette County, with 2,030 residents. Pinedale was platted in 1899 and became the Sublette County seat in 1926. Ranching has historically been an important industry for the area. The tourism industry has played a large role in the economic development of Pinedale, with recreation opportunities that include fishing or boating in the many lakes surrounding Pinedale, snowmobiling in the surrounding mountain ranges, skiing at White Pine Ski Area (closed 2011–2012; projected to be re-opened for 2012–2013 by Citizens to Save White Pine), hiking in the Wind River Mountains, and wildlife

viewing. Development of gas resources in southern portions of Sublette County has brought a significant influx of new residents to Pinedale in recent years.

3.1.4 Sweetwater County

Sweetwater County was established in 1867. Green River is the county seat. Sweetwater County comprises approximately 10,427 square miles and has a population 43,806. It is the largest county by area and population in the socioeconomic study area.

Several early emigrant trails passed through the county, including the Oregon, California, Mormon, Overland, and Cherokee trails. In addition, the transcontinental railroad came in 1868, creating two major population centers—Green River and Rock Springs. Agriculture remains an important economic activity in Sweetwater County, as does mining for mineral commodities such as coal and trona, along with oil and gas.

I-80 traverses east–west through Sweetwater County. U.S. Highway 191, a major regional transportation corridor, runs north–south through the middle of the county. The Upper Green River watershed, which drains all of Sweetwater County, is an important feature of the planning area. The Seedskadee National Wildlife Refuge is located in Sweetwater County along the Green River and is primarily surrounded by Bureau of Reclamation lands. Much of Flaming Gorge Reservoir and the Flaming Gorge National Recreation Area (which is administered by the Forest Service) are located in Sweetwater County. Flaming Gorge Reservoir is an important attraction for water-based recreation such as fishing and boating.

Rock Springs

Conveniently located right off I-80, Rock Springs is a key commercial center in southwestern Wyoming. It has a population of 25,915 and is the largest community in the socioeconomic study area. Additional people live in several communities close to Rock Springs (e.g., Clearview Acres, North Rock Springs, and Reliance).

Rock Springs began as a stage stop in 1862 and developed as a coal-mining and ranching center after the arrival of the Union Pacific Railroad in 1868. The region around Rock Springs has rich underground stores of coal, oil, natural gas, trona, and phosphates. Its main economic contributors continue to be mining and coal-supporting companies, such trona mining and processing, the Bridger power plant and coal company, as well as Union Pacific Railroad, services for I-80, and other services, including schools and hospitals. As an energy and transportation center, Rock Springs is also the service center for the booming oil and gas development industry in southwestern Wyoming. Like most other mining and energy towns, Rock Springs has historically experienced booms and busts.

Rock Springs offers a variety of recreational opportunities for visitors and residents, including river activities, camping, hunting, wildlife viewing, and off-highway vehicle (OHV) riding. The Greater Sand Dunes, which can be accessed a few miles north of Rock Springs, is the largest such dunes feature in North America.

Green River

Green River is located 14 miles west of Rock Springs on I-80. It is situated on the Green River at about 6,200 feet in elevation. Green River is the county seat of Sweetwater County and is the second largest city in the county and in the socioeconomic study area after Rock Springs. Its population is 12,515.

Unlike Rock Springs, which grew up as a coal-mining town, Green River developed through its relationship with the Union Pacific Railroad. Incorporated in 1868, in what was then the Dakota Territory,

and named for the swift flowing greenish river that courses through town, the City of Green River has a long and varied history. Native Americans, indigenous animals (pronghorns, buffalo, deer, etc.), mountain men, pioneers, ranchers, railroad people, and miners have all left their footprints and their legacies in Green River. It was from Green River that John Wesley Powell started his famous explorations of the Green River, the Colorado River, and the Grand Canyon in the late 1800s. Today, the railroad still has a major presence. Mining, particularly of trona, is the major industry in the area. There are also many recreational amenities located in Green River, including a water park, golf course, walkway, and cultural attractions, and the Green River and nearby Flaming Gorge Reservoir offer a wide variety of fishing and boating opportunities.

3.1.5 Uinta County

Uinta County was established in 1869. Evanston is the county seat. Uinta County comprises approximately 2,081 square miles, and has a population of 21,118.

For early explorers traveling west along the Oregon Trail, Fort Bridger, the oldest settlement in the county, was an important trading post located in a valley on the Blacks Fork River. It is still in existence today. The Union Pacific Railroad has also been important to the history and economy of the county. Agriculture and energy production are the primary economic activities in Uinta County.

I-80 generally traverses east–west through Uinta County. State Highway 189 traverses north from I-80 between Evanston and Lyman toward Kemmerer. The Upper Bear River watershed drains the western portion of Uinta County. The Upper Green River watershed drains the central and eastern portions of the county.

3.2 POPULATION GROWTH

As show in Table 2-2 above, the 2010 Census population of the socioeconomic study area was 133,400. This is 23.6% of the population of Wyoming. The most populous county was Sweetwater County, with a population of 43,806, followed by Fremont County, with a population of 40,123. These populations amounted to 32.8% and 30.1% of the socioeconomic study area population, respectively. Sublette County had the lowest population at 10,247, or 7.7% of the socioeconomic study area.

Table 3-1 shows how the population of the socioeconomic study area has increased since the 1970s, as has the population of Wyoming and the United States. Figure 3-1 shows growth of the socioeconomic study area counties graphically. As a whole, the socioeconomic study area grew by nearly 132% from 1970 to 2010. This is a faster rate of growth than that of Wyoming (70%) or the nation (just over 50%).

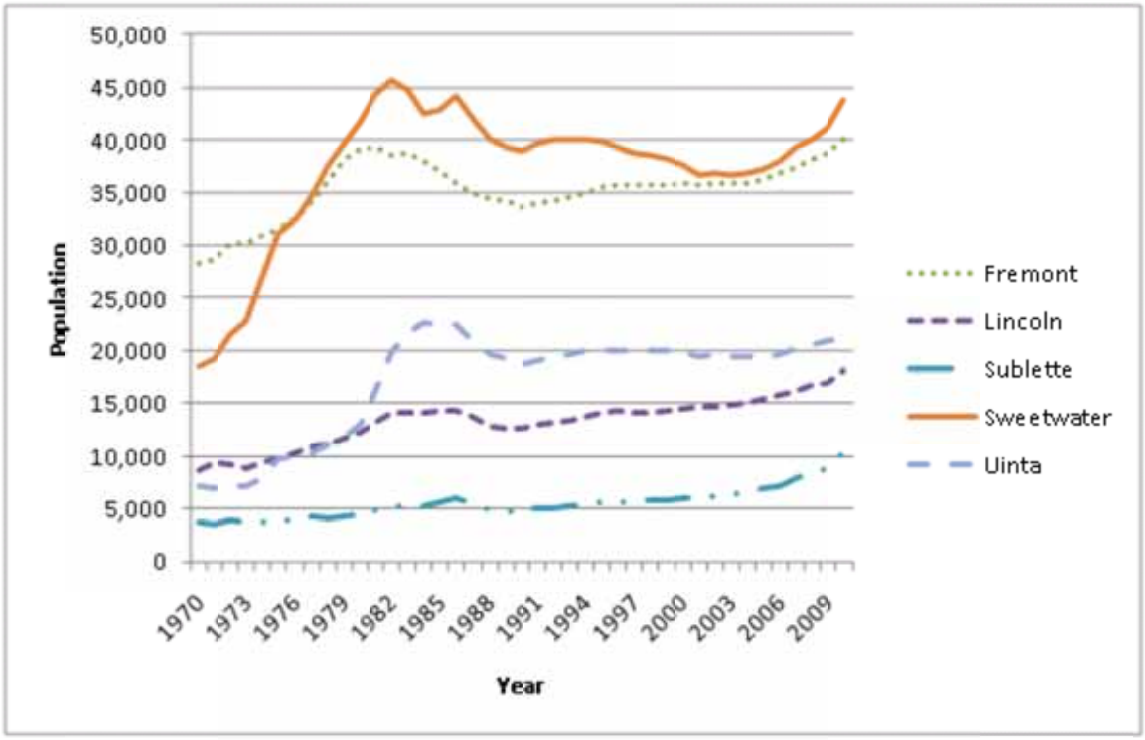
Every county within the socioeconomic study area saw positive population growth between 1970 and 2010. Four counties saw population growth of more than 100% (i.e., they more than doubled in population): Lincoln, Sublette, Sweetwater, and Uinta counties. These counties have seen some of the strongest growth in oil and gas development in the state. In terms of absolute growth, the largest changes were in Sweetwater County, with 25,415 persons added. Uinta County had the highest percentage growth, at more than 197%, with Sublette County second at nearly 173%.

Figure 3-1 shows that Sweetwater, Fremont, and Uinta counties, and to a lesser degree Lincoln County, had strong growth from the 1970s into the early to mid-1980s, followed by significant population declines. This is symptomatic of a "boom and bust" economic cycle, which many western U.S. communities experienced at this same time, largely because of changes in the mining sector (including coal, oil, and gas) as energy prices rose throughout the 1970s and then decreased in the 1980s. Stakeholders have suggested that a major factor in Sweetwater, Uinta, and Lincoln counties' contribution

to this boom and subsequent bust was the nearly concurrent development and construction of trona mining infrastructure and the Jim Bridger Power Plant, and the subsequent loss of jobs when these were completed and production was initiated.

The population decline lasted longest in Sweetwater County, into the early 2000s. Since that time, and from the 1990s in some of the counties, the population has been increasing. This is likely again because of growth in the mining sector, particularly the rapid development of gas resources in Sublette County and portions of Sweetwater County and the associated increases in employment.

Figure 3-1. Population Trends for Study Area Counties



Source: WEAD 2011a, WEAD 2011b, WEAD 2011c, WEAD 2011d, WEAD 2011e.

Table 3-2 shows recent population growth, from 1990 to 2010, for the major communities in each county. Rock Springs had by far the largest absolute population growth from 2000 to 2010, with 4,328 persons added. This corresponds with its status as the primary trade center/business hub for southwest Wyoming. In general, in the 2000s, the greatest numerical increases in population occurred in the largest communities (e.g., Rock Springs, Riverton, Evanston, and Green River), while the greatest percentage increases occurred in smaller communities, such as Star Valley Ranch, Wamsutter, Marbleton, Alpine, and Pinedale. However, it is very important to note that in several counties, substantial growth occurred outside the communities in Table 3-2 (see "Balance of County" rows). Growth from 2000 to 2010 in the balance of each county ranged from approximately 3% and 139 persons in Uinta County to approximately 94% and 3,191 persons in Sublette County. As a percentage of total county growth, growth in the balance of each county was low in Uinta and Sweetwater counties (10 and 14%, respectively), and high in Fremont County (52%), Lincoln County (60%), and Sublette County (74%).

Population growth projections prepared by WEAD (part of the Wyoming Department of Administration and Information), show continued growth in the 2010 to 2020 period (Table 3-1 and Table 3-2). These projections anticipate the socioeconomic study area as a whole will grow by more than 14%, adding

15,870 persons. The highest percentage growth is anticipated in Sublette County, at more than 35% (3,633 persons). The largest absolute growth is anticipated in Sweetwater County (5,474 persons, an increase of more than 12%). Gas and oil development will be the primary driver of growth.

Table 3-1. Population Growth of Study Area Counties

Area	1970	1980	1990	2000	2010	Change 1970–2010		2020	Projected Change 2010–2020	
						Persons	%		Persons	%
Fremont	28,352	38,992	33,662	35,804	40,123	11,771	41.5	44,360	4,237	10.6
Lincoln	8,640	12,177	12,625	14,573	18,106	9,466	109.6	19,170	1,064	5.9
Sublette	3,755	4,548	4,843	5,920	10,247	6,492	172.9	13,880	3,633	35.5
Sweetwater	18,391	41,723	38,823	37,613	43,806	25,415	138.2	49,280	5,474	12.5
Uinta	7,100	13,021	18,705	19,742	21,118	14,018	197.4	22,580	1,462	6.9
Study Area	66,238	110,461	108,658	113,652	133,400	67,162	131.9	149,270	15,870	14.3
Wyoming	332,416	469,557	453,588	493,782	563,626	231,210	69.6	622,360	58,734	10.4
United States	205,052,174	227,224,681	248,709,873	281,421,906	308,745,538	103,693,364	50.6	341,387,000	32,641,462	10.6

Source: U.S.: 1970—U.S. Census Bureau 1970; 1980—U.S. Census Bureau 1980; 1990—U.S. Census Bureau 1990; 2000—U.S. Census Bureau 2000; Wyoming and Counties: WEAD 2012a, WEAD 2012b.

Table 3-2. Population Growth of Key Socioeconomic Study Area Communities

Area	1990	2000	2010	2020	2030	Change 2000–2010		Projected Change 2010–2020	
						Persons	%	Persons	%
Fremont County	33,662	35,804	40,123	44,360	47,120	4,319	12.1	4,237	10.6
Dubois	895	962	971	1,074	1,140	9	0.9	103	10.6
Hudson	392	407	458	506	538	51	12.5	48	10.5
Lander	7,023	6,867	7,487	8,278	8,793	620	9.0	791	10.6
Pavillion	126	165	231	255	271	66	40.0	24	10.4
Riverton	9,202	9,310	10,615	11,736	12,466	1,305	14.0	1,121	10.6
Shoshoni	497	635	649	718	762	14	2.2	69	10.6
Balance of County	15,527	17,458	19,712	21,793	23,150	2,254	12.9	2,081	10.6

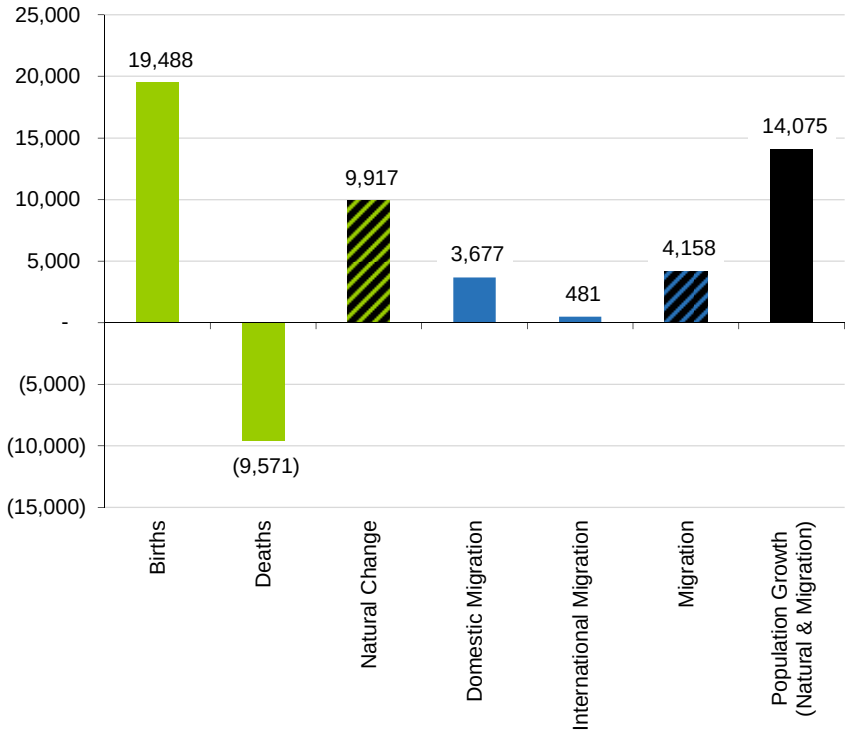
Area	1990	2000	2010	2020	2030	Change 2000–2010		Projected Change 2010–2020	
						Persons	%	Persons	%
Lincoln County	12,625	14,573	18,106	19,170	20,860	3,533	24.2	1,064	5.9
Afton	1,630	1,818	1,911	2,023	2,202	93	5.1	112	5.9
Alpine	200	550	828	877	954	278	50.5	49	5.9
Cokeville	493	506	535	566	616	29	5.7	31	5.8
Diamondville	864	716	737	780	849	21	2.9	43	5.8
Kemmerer	3,020	2,651	2,656	2,812	3,060	5	0.2	156	5.9
La Barge*	493	431	551	583	635	120	27.8	32	5.8
Opal	95	102	96	102	111	-6	-5.9	6	6.3
Star Valley Ranch	X	652[a]	1,503	1,591	1,732	851	130.5	88	5.9
Thayne	267	341	366	388	422	25	7.3	22	6.0
Balance of County	5,563	7,458	8,923	9,448	10,279	2,117	28.4	525	5.9
Sublette County	4,843	5,920	10,247	13,880	17,830	4,327	73.1	3,633	35.5
Big Piney	454	408	552	748	960	144	35.3	196	35.5
Marbleton	634	720	1,094	1,482	1,904	374	51.9	388	35.5
Pinedale	1,181	1,412	2,030	2,750	3,532	618	43.8	720	35.5
Balance of County	2,574	3,380	6,571	8,900	11,434	3,191	94.4	2,329	35.4
Sweetwater County	38,823	37,613	43,806	49,280	51,960	6,193	16.5	5,474	12.5
Bairoil	228	97	106	119	126	9	9.3	13	12.3
Granger	126	146	139	156	165	-7	-4.8	17	12.2
Green River*	12,711	11,808	12,515	14,079	14,845	707	6.0	1,564	12.5
Rock Springs*	19,050	18,708	23,036	25,915	27,324	4,328	23.1	2,879	12.5
Superior*	273	244	336	378	399	92	37.7	42	12.5
Wamsutter	240	261	451	507	535	190	72.8	56	12.4
Balance of County	6,195	6,349	7,223	8,126	8,566	874	13.8	903	12.5

Area	1990	2000	2010	2020	2030	Change 2000–2010		Projected Change 2010–2020	
						Persons	%	Persons	%
Uinta County	18,705	19,742	21,118	22,580	23,440	1,376	7.0	1,462	6.9
Bear River	X	443[a]	518	554	575	75	16.9	36	6.9
Evanston	10,904	11,507	12,359	13,215	13,718	852	7.4	856	6.9
Lyman	1,896	1,938	2,115	2,261	2,348	177	9.1	146	6.9
Mountain View	1,189	1,153	1,286	1,375	1,427	133	11.5	89	6.9
Balance of County	4,716	5,144	4,840	5,175	5,372	139	2.7	335	6.9

* Indicates community located within or immediately adjacent (La Barge) to the RSFO.
X: Indicates locality that was not formed or incorporated at the time of the Census; no population estimate is available.
[a] Star Valley Ranch and Bear River were not formed or incorporated at the time of the 2000 Census. Population estimate is from U.S. Census Bureau 2010.
Sources: WEAD 2012a, WEAD 2012b, except populations indicated by footnote (a).

In terms of the components of recent population growth, Figure 3-2 shows the role of natural change and migration in the population change in the socioeconomic study area from 2000 to 2011. Natural change (births minus deaths) has played a larger role than migration in the study area's population growth, accounting for 70.5% of the total increase.

Figure 3-2. Components of Population Growth, 2000–2011



Source: EPS-HDT Socioeconomic Measures Report, July 19, 2012, based on data obtained 2012 from the U.S. Census Bureau, Population Division.

3.3 DEMOGRAPHICS

A comparison of several demographic characteristics of the five socioeconomic study area counties, Wyoming, and the United States is shown in Table 3-3. The included parameters depict various elements of the socioeconomic makeup of the counties in recent years. Some data are from the 2010 Census. Other data are from the ACS, a U.S. Census Bureau program that samples populations and estimates various characteristics based on 1, 3, or 5 years of sample data. The 5-year estimates are the most reliable and are also the only estimates available for areas with populations under 20,000. The most recent 5-year estimate data are for 2006 to 2010. However, certain data, such as housing unit types, were only available from the 2005 to 2009 estimates at the time this report was prepared.

The male to female ratio varies somewhat across the geographic area. For the state, the percentage of males is 51.0%, somewhat above the U.S. percentage of 49.2%. The male percentage is within that range for Fremont and Uinta counties, and slightly above for Lincoln County (51.4%). The male percentage is noticeably higher (compared with the state) in Sweetwater County (52.3%) and Sublette County (54.2%). This difference probably reflects the high employment levels in the mining industry in these counties;

employment in this industry is strongly skewed toward males and often includes a significant population of transients and recent arrivals without spouses or families.

The age profile of counties within the socioeconomic study area varies somewhat. The highest median age is in Fremont County, at 38.5 years. (The median value is the value at which 50% of the population is below the value, and 50% is above.) In Fremont County, 14.5% of the population is over 65 years in age. Lincoln Counties has a similar median age (37.4 years) and percentage over 65 years (12.4%). These values are similar to the state and national values. Sweetwater and Uinta counties have significantly younger populations with, respectively, median ages of 32.8 and 33.9 years, and percentages over 65 years or 8.3 and 8.9%. These profiles likely reflect the strong mining industry in these counties, which attracts younger workers. Sublette County presents figures that may seem somewhat inconsistent: a median age (38.3 years) that is well above the state figure, and a percentage over 65 years that is well below the state figure. This probably reflects the relatively recent boom in mining activity in this county, with a substantial population of older, long-term residents keeping the median age high, but an influx of younger workers increasing the ranks of the younger population and thus reducing the percentage of the population that is over 65.

The average family size in Wyoming is 2.96 persons, compared with 3.14 persons for the United States. The variations in family size across the counties are relatively unremarkable. They are within or close to the Wyoming–U.S. range, from 2.99 persons in Sublette County to 3.19 persons in Uinta County.

Wyoming has a higher rate of high school graduates than the nation (91.1% compared with 84.6%), but a lower rate of college graduates at 23.2% compared with 27.5% nationally. With the exception of Sublette County (high at 94.1%), the rest of the socioeconomic study area is consistent with the statewide percentage of high school graduates and above the national rate. The percentage of college graduates is lower than the state figure in all the socioeconomic study area counties except Sublette County. Sublette County's higher rates of both secondary and post-secondary education may be attributable to its high median family income (see below).

Wyoming has a much lower percentage of residents who speak a language other than English at home than the nation (6.4% compared with 19.6%), and three of the five counties in the socioeconomic study area are even lower than the statewide percentage. This pattern is consistent with the predominantly white racial demographics of the state and the socioeconomic study area (see Table 3-5). Fremont County has a higher percentage, 8.3%, which is probably owing to the large American Indian population in the county. Sweetwater County also has a higher percentage, 7.7%, probably owing the significantly larger Hispanic population in this county (see Table 3-5).

Table 3-3. Demographics Overview of Socioeconomic Study Area Compared with State and Nation

	Sex		Age (Years)		Avg. Family Size	Education (Degrees)		Language Other Than English*
	Male	Female	Median	Over 65		Secondary	Post-Secondary	
Fremont	49.9%	50.1%	38.5	14.5%	3.07	88.9%	22.2%	8.3%
Lincoln	51.4%	48.6%	37.4	12.4%	3.11	91.2%	17.4%	4.2%
Sublette	54.2%	45.8%	38.3	10.1%	2.99	94.1%	26.2%	2.7%
Sweetwater	52.3%	47.7%	32.8	8.3%	3.09	89.5%	16.9%	7.7%
Uinta	50.5%	49.5%	33.9	8.9%	3.19	89.9%	17.3%	4.7%
Wyoming	51.0%	49.0%	36.8	12.4%	2.96	91.1%	23.2%	6.4%

	Sex		Age (Years)		Avg. Family Size	Education (Degrees)		Language Other Than English*
	Male	Female	Median	Over 65		Secondary	Post-Secondary	
United States	49.2%	50.7%	37.2	13.0%	3.14	84.6%	27.5%	19.6%

*Language other than English spoken at home.
Source: Sex, Age, Avg. Family Size—U.S. Census Bureau, Census 2010, Summary File 1, Tables: QT-P11, QT-P1; Education, Language Other than English—U.S. Census Bureau 2005–2009 American Community Survey.

The percentage of Wyoming residents born in Wyoming (42.0%) is lower than the percentage of people in the United States whose birth state is also their state of residence (59%), as shown in Table 3-4. This indicates strong migration into the area by persons born outside Wyoming. This strong migratory draw is consistent with the effects of strong mining and construction industries, low unemployment, and affordable housing that generally lure residents from other states. Uinta County (63.0%) has the highest percentage of residents born in another state. Fremont County (46.9%) has the lowest percentage of residents born in another state, but all socioeconomic study area counties are well above the national average of 27.3%. Wyoming has a very low percentage of foreign-born residents compared with the United States (3.5% versus 13.7%). Sweetwater County (5.2%) has the highest percentage of foreign-born residents in the socioeconomic study area but is still well below the U.S. average.

Table 3-4. Place of Birth of Socioeconomic Study Area Population

	State of Residence	Different State	Foreign Born
	Percentage	Percentage	Percentage
Fremont	51.3	46.9	1.8
Lincoln	41.7	54.7	3.7
Sublette	37.6	60.1	2.3
Sweetwater	42.9	52.0	5.2
Uinta	33.6	63.0	3.3
Wyoming	42.0	54.5	3.5
United States	59.0	27.3	13.7

Source: U.S. Census Bureau 2005–2009 American Community Survey 5-Year Estimates.

The vast majority of the Wyoming population (90.7%) is of the white race, compared with the United States (72.4%). As shown in Table 3-5, the socioeconomic study area county populations mostly have percentages of whites that are near or above the state percentage. Fremont County has a much lower percentage (74.3%), reflecting the large American Indian population there. The largest Hispanic population (15.3%) is in Sweetwater County. Hispanic populations in all other socioeconomic study area counties are lower on a percentage basis than in the state as a whole. Further analysis of minority populations is provided in the Environmental Justice section of this document (see Section 3.9).

Table 3-5. Population by Race in the Socioeconomic Study Area, 2010

Area	White	Black/ African American	American Indian/ Alaska Native	Asian	Native Hawaiian/ Pacific Islander	Some Other Race	Two or More Races	Hispanic
	%	%	%	%	%	%	%	%
Fremont	74.3%	0.3%	21.2%	0.4%	0.0%	1.0%	2.8%	5.6%
Lincoln	95.4%	0.2%	0.8%	0.3%	0.0%	2.0%	1.2%	4.3%
Sublette	93.2%	0.3%	0.8%	0.5%	0.0%	3.7%	1.4%	6.9%
Sweetwater	88.5%	1.0%	1.0%	0.8%	0.1%	6.4%	2.3%	15.3%
Uinta	92.4%	0.3%	0.8%	0.3%	0.2%	4.1%	2.0%	8.8%
Wyoming	90.7%	0.8%	2.4%	0.8%	0.1%	3.0%	2.2%	8.9%
United States	72.4%	12.6%	0.9%	4.8%	0.2%	6.2%	2.9%	16.3%

Source: U.S. Census Bureau State & County QuickFacts: Race—2010 Summary File 1, Table QT-P3.
Note: Hispanic population is an additional designation, not a race designation; the Hispanic population includes multiple races.

The median family income and per capita income for Wyoming is somewhat high relative to the United States ($65,964 median family income for Wyoming versus $62,982 for the nation), as shown in Table 3-6. All but one of the counties within the socioeconomic study area have median family incomes essentially at or above the state and national levels. Most of these counties have significant mining industries that pay good wages. Fremont County's median family income is well below the state and national average, likely because of a high rate of poverty on the Wind River Indian Reservation.

Table 3-6 shows that statewide, the percentage of individuals below the poverty level (9.8%) is low compared with the nation (13.8%). At 14.0%, Fremont County's percentage of population below the poverty level is significantly higher than the state's. Fremont County has a large American Indian population, a population that historically has a high rate of poverty. Fremont County also has a low percentage of employment from mining. Uinta County's poverty rate, 12.1%, is also high. The lowest level of poverty is found in Sublette County (4.2%), which also has the highest median income in the socioeconomic study area as a result of its mining industry. Additional detail regarding income is provided in the Economic Conditions chapter below, and poverty is discussed further in the Environmental Justice section of this document (see Section 3.9).

Table 3-6. Income Levels in the Socioeconomic Study Area, 2006–2010 (2010$)

Area	Median Family Income	Per Capita Income	Individuals Below Poverty Level (%)
Fremont	$55,531	$24,173	14.0%
Lincoln	$65,347	$24,421	8.1%
Sublette	$81,389	$31,433	4.2%
Sweetwater	$79,527	$30,961	8.2%
Uinta	$68,949	$24,460	12.1%
Wyoming	$65,964	$27,860	9.8%

Area	Median Family Income	Per Capita Income	Individuals Below Poverty Level (%)
United States	$62,982	$27,334	13.8%

Source: U.S. Census Bureau, 2006–2010 American Community Survey 5-Year Estimates, Table DP03.

3.4 HOUSING

Table 3-7 provides data showing that the housing stock in Lincoln and Sublette counties is dominated by conventional single-family detached homes to a much greater degree than the state or nation. The percentage of single-family detached homes in Sweetwater and Uinta counties is lower than the state or nation. In Sweetwater County's case, the percentage of mobile homes is much higher than in the state or nation. This is reflective of the fact that locally burgeoning construction and mining industries have new and/or transient workers who use mobile homes and other rapidly available or temporary housing.

Sublette County has the lowest percentage of owner-occupied homes, 68.0%, which is consistent with statewide and national figures (69.2 and 65.1%, respectively). The owner-occupied rate in the other four counties is higher than the state rate and particularly high in Lincoln County (78.9%). Sublette County's low rate is probably, again, reflective of the higher population of new and/or transient workers.

The table also shows the significant changes in housing units that occurred in parts of the socioeconomic study area over the 2000 to 2010 period. Four of the five counties in the study area added over 2,000 housing units during this period (the exception was Uinta County, with 702 units added). Sweetwater County led in unit growth, with 2,814 units added. Sublette and Lincoln counties, with considerably lower starting housing stocks in 2000, had the highest percentage increases, at 62% for Sublette County and 31% for Lincoln County. The percentage change in Sweetwater County, 18%, was similar to the statewide percentage change.

The percentage of vacant homes (as measured in April 2010 for the U.S. Census) is highest in Sublette (32.3%) and Lincoln (23.3%) counties. All other counties in the socioeconomic study area have vacancy rates in line with the state and national rates. The high vacancy rates in the two counties are associated with high numbers and percentages of housing units identified "for seasonal, recreational, or occasional use." In Sublette County, 25.1% of all units were in this category *and* vacant at the time of the Census; the comparable figure for Lincoln County is 13.3%. In comparison, the percentage of units for rent or for sale at the time of the Census was 3.2% in Sublette County and 6.3% in Lincoln County (U.S. Census Bureau, Census 2010, Summary File 1, Table DP-1).

Table 3-7. Key Housing Unit Types, Tenure, and Change 2000–2010

County	Types		Tenure		Change 2000–2010			
	Single Unit Detached (2005–2009)	Mobile Home (2005–2009)	Owner-occupied (2010)	Vacant (2010)	Total Housing Units (2000)	Total Housing Units (2010)	Net Change (2000–2010)	Net Change (2000–2010)
	%	%	%	%	Number	Number	Number	%
Fremont	70.5	18.0	71.2	13.2	15,541	17,796	2,255	14.5
Lincoln	78.8	12.0	78.9	23.3	6,831	8,946	2,115	31.0
Sublette	78.8	17.2	68.0	32.3	3,552	5,770	2,218	62.4

County	Types		Tenure		Change 2000–2010			
	Single Unit Detached (2005–2009)	Mobile Home (2005–2009)	Owner-occupied (2010)	Vacant (2010)	Total Housing Units (2000)	Total Housing Units (2010)	Net Change (2000–2010)	Net Change (2000–2010)
	%	%	%	%	Number	Number	Number	%
Sweetwater	58.5	23.8	72.1	12.1	15,921	18,735	2,814	17.7
Uinta	60.7	17.2	75.1	12.0	8,011	8,713	702	8.8
Wyoming	66.3	13.4	69.2	13.4	223,854	261,868	38,014	17.0
United States	61.4	6.6	65.1	11.4	115,904,641	131,704,730	15,800,089	13.6

Source: Housing unit types from U.S. Census Bureau 2009a (2005–2009 American Community Survey); percentage owner-occupied and percentage vacant from U.S. Census Bureau, Census 2010, Summary File 1, Tables DP-1 and DP-04; numbers of housing units from U.S. Census Bureau, Census 2010, Table DP-1 and U.S. Census Bureau, Census 2000, Table H001.

Values for single-family homes are shown in Table 3-8 based on actual sales. The median value column provides the best basis for comparison of socioeconomic study area values to statewide values because of the influence of very high Teton County values on the average values. As shown in that column, 2010 median values were above the statewide median value for all counties in the socioeconomic study area except Fremont and Uinta counties. The median value in Sublette County is particularly high. (The statewide data set shows it to be second in the state after Teton County.) This reflects the influence of nearby Teton County on housing prices in portions of the county, and the bidding up of housing prices in the 2000s as large numbers of new residents came to the county. The median value for Sweetwater County is slightly higher than that for Lincoln County. The average value in Sweetwater County rose considerably from 2004 to 2010, more on a percentage basis than the average value in Sublette or Lincoln counties. This increase and the high median value reflect the bidding up of home prices based on high demand owing to Sweetwater County's status as a "bedroom community" for the growing number of individuals employed in the mining sector, not only within Sweetwater County, but also in the mines of Lincoln County and the gas fields of Sublette County.[3] Another indicator of this status is the high number of multi-unit housing projects that are being built in Sweetwater County—the number of multifamily building permits issued by the county from 2006 to 2010 was among the highest in the state, and in 2009 Sweetwater County's 214 multifamily building permits was second only to Laramie County's 216 (Wyoming Housing Database Partnership 2011a).

[3] *Observations from stakeholders that, for instance, there is a considerable flow of workers from Rock Springs to the gas fields of Sublette County, would seem to contradict the data in Appendix A showing a net inflow of workers to Sweetwater County. However, as noted in Section 2.1, Rock Springs is a hub for companies that provide services to the oil and gas industry. Halliburton and Schlumberger have large regional service centers in Rock Springs, and other oil and gas companies also have facilities in Rock Springs. These companies send their crews out daily or weekly from those regional facilities, many of them to job sites in Sublette County and other locations outside Sweetwater County, including even to South Dakota (Kot 2012). It is highly likely that Sweetwater County is reported as the "workplace" of these workers because of the location of the company facilities. At the same time, many of these workers may have their homes outside the county. Commuting flow data from the 2006–2010 American Community Survey (U.S. Census Bureau 2013) shows that of 24,145 persons whose workplace is in Sweetwater County, 3,333 (13.8%) reside outside the county, 2,025 (8.4%) reside outside the study area, and 1,263 (5.2%) reside outside Wyoming (in 68 different counties in 25 states). Clearly many of these workers must be taking hotel rooms, apartments, or other quarters in Sweetwater County while away from their permanent homes. Thus, Sweetwater County <u>both</u> receives many workers from outside the county (reflected in the net worker inflow shown by workplace/residence data) and sends many workers out from regional facilities to job sites outside the county (the "bedroom community" phenomenon observed by stakeholders).*

Table 3-8. Single-Family Housing Unit Sales Prices in Wyoming, 2004–2010

County	Average Sales Price										2010 Median Price	Number of 2010 Sales
	2004	2005	2006	2007	2008	2009	2010	% Change 2004–2008	% Change 2008–2009	% Change 2009–2010		
Fremont	132,245	140,975	163,775	185,918	197,173	194,633	196,283	49.1%	-1.3%	0.8%	181,000	261
Lincoln	170,814	187,924	259,458	300,092	246,253	218,350	246,864	44.2%	-11.3%	13.1%	208,000	89
Sublette	218,343	249,029	269,795	334,073	296,638	247,842	257,988	35.9%	-16.4%	4.1%	237,500	55
Sweetwater	142,688	179,000	195,981	230,063	242,470	232,959	213,689	69.9%	-3.9%	-8.3%	211,500	313
Uinta	112,540	137,911	145,243	168,204	197,390	194,928	181,269	75.4%	-1.2%	-7.0%	170,000	137
Study Area Simple Average	**155,326**	**178,968**	**206,850**	**243,670**	**235,985**	**217,742**	**219,219**	**54.9**	**-6.82**	**0.54**	**201,600**	**171**
Statewide Simple Average	**142,501**	**159,776**	**187,869**	**239,019**	**258,082**	**239,624**	**261,532**	**81.1%**	**-7.2%**	**3.9%**	**189,900**	**195**

Note: Statewide average prices are strongly influenced by the very high average price of homes in Teton County (e.g., $1.97 million in 2010).
Source: Wyoming Housing Database Partnership 2011b, Table I.36.

3.5 PUBLIC SERVICES

Public services that could potentially be affected by BLM management decisions include roads, water and wastewater infrastructure, landfills, law enforcement, fire and emergency response, schools, and healthcare facilities and services. Impacts on public services may manifest in a variety of ways. They may be direct, such as wear and tear on roads from increased heavy truck traffic associated with resource development, or indirect, such increased demand on schools or healthcare facilities if resource development leads to significant population increases. The following material presents some basic indicators of the current status of some public services in the socioeconomic study area, followed by a high-level summary of some recent or possible impacts on the counties of uses of BLM-administered lands.

Table 3-9 presents selected statistics for law enforcement jurisdictions in the socioeconomic study area. Sublette County has significantly more officers per 1,000 residents than the state or the other counties of the study area. Sweetwater and Uinta counties have slightly more officers, and Fremont and Lincoln counties have slightly fewer. With the exception of Fremont County, all counties in the study area—Sweetwater County in particular—experienced more index crimes per officer in 2011 than did the state. Index crimes are serious violent crimes (murder, forcible rape, robbery and aggravated assault) and significant property crimes (burglary, larceny-theft, and motor vehicle theft). Within the study area, only Sweetwater County has a higher rate of population-based index crimes than the state, at 287.8 per 10,000 residents compared with 247.7. The rate in Lincoln County, 126.3, is particularly low.

Table 3-9. Crime and Law Enforcement Statistics, 2011

County/Jurisdiction	Index Crime Rate per 10,000 Population	Officers per 1,000 Population	Index Crimes per Officer
Fremont County	**240.5**	**2.0**	**11.7**
Sheriff	77.2	1.7	4.7
Lander	330.6	2.4	14.0
Riverton	510.7	2.6	19.4
Lincoln County	**126.3**	**2.1**	**49**
Sheriff	93.6	1.9	32
Afton	115.1	2.1	4
Diamondville	144.3	4.3	4
Kemmerer	206.8	2.7	8
Alpine	294.8	1.1	1
Sublette County	**171.7**	**3.8**	**41**
Sheriff	171.7	3.8	41
Sweetwater County	**287.8**	**2.7**	**150**
Sheriff	220.9	5.0	46
Green River	250.1	8.0	38
Rock Springs	335.2	2.1	66
Uinta County	**194.4**	**2.6**	**70**
Sheriff	125.3	3.2	37

County/Jurisdiction	Index Crime Rate per 10,000 Population	Officers per 1,000 Population	Index Crimes per Officer
Worland	234.7	2.2	33
Wyoming (Total)	**247.7**	**2.3**	**10.5**

Source: State of Wyoming Office of Attorney General, Crime in Wyoming Annual Report, January through December 2011, accessed June 2012 at http://attorneygeneral.state.wy.us/dci/CrimeInWyomingReports.html.

Table 3-10 provides a list of all the fire departments in the socioeconomic study area that have registered with the National Fire Department Census as of May 31, 2012. In general, the population centers within the study area are well-served. However, many homes and properties in the more rural portions of the study area are located at a considerable distance from a fire station, and response times are correspondingly long. Additional emergency responders, such as ambulance/paramedic services, are available in some communities of the study area, such as Rock Springs and Green River.

Major healthcare facilities in the socioeconomic study area are identified in Table 3-11. Additional facilities providing less intensive care, such as assisted living centers, nursing care facilities, and so on are not included, nor are medical practices. The occupancy rate figures in the table are simply snapshots in time, as of early June 2012. As in most rural parts of the United States, the socioeconomic study area is considered underserved by doctors, and doctor recruitment efforts take place. Indigent care can overburden local emergency rooms, and provision of healthcare services to residents located away from the main population centers is a challenge because of the distances involved (Kot, 2012).

Table 3-10. Fire Departments Within the Socioeconomic Study Area

County	Headquarters City	Fire Department Name	Department Type	Number of Stations	Active Firefighters—Career	Active Firefighters—Volunteer	Active Firefighters—Paid per Call
Fremont	Dubois	Dubois Volunteer Fire Department	Volunteer	1	0	23	0
	Jeffrey City	Jeffrey City Volunteer Fire Department	Volunteer	1	0	14	0
	Lander	Lander Volunteer Fire Department	Mostly Volunteer	1	1	40	0
	Riverton	Fremont County Fire Protection District	Mostly Volunteer	14	1	196	0
	Riverton	Riverton Fire Department	Volunteer	2	0	47	0
Lincoln	Afton	Afton Volunteer Fire Department	Volunteer	1	0	30	0
	Alpine	Alpine Fire Department Inc.	Volunteer	1	0	14	0
	Cokeville	Bear River Fire District	Volunteer	1	0	18	0
	Kemmerer	Kemmerer Volunteer Fire Department	Volunteer	1	0	21	0
Sublette	Big Piney	Big Piney-Marbleton Volunteer Fire Department	Volunteer	1	0	34	0
	Bondurant	Bondurant Volunteer Fire Department	Volunteer	1	0	14	0
	Boulder	Boulder Volunteer Fire Company	Career	1	8	0	0
	Daniel	Daniel Volunteer Fire Company	Volunteer	1	0	0	15
	Pinedale	Pinedale Volunteer Fire Department	Volunteer	1	0	21	0

County	Headquarters City	Fire Department Name	Department Type	Number of Stations	Active Firefighters—Career	Active Firefighters—Volunteer	Active Firefighters—Paid per Call
Sweetwater	Bairoil	Bairoil Fire Department	Volunteer	1	0	8	0
	Farson	Eden-Farson Fire Control District, Training Unit	Volunteer	1	0	15	0
	Granger	Granger Volunteer Fire Department	Volunteer	1	0	12	0
	Green River	FMC Fire Brigade	Mostly Volunteer	1	1	44	0
	Green River	General Chemical Corp Emergency Response Team	Volunteer	1	0	15	0
	Green River	Green River Fire Department	Mostly Volunteer	2	2	34	0
	Rock Springs	Rock Springs Fire Department	Career	3	35	0	0
	Rock Springs	Sweetwater County Fire Department	Mostly Volunteer	1	2	0	14
	Rock Springs	Sweetwater County Fire District #1	Mostly Volunteer	1	4	0	32
	Superior	Superior Volunteer Fire & EMS	Volunteer	1	0	13	0
	Wamsutter	Wamsutter Volunteer Fire Department	Volunteer	1	0	12	0
Uinta	Bear River	Bear River Fire Department	Volunteer	1	0	11	0
	Evanston	Uinta County Fire & Ambulance JPB	Mostly Volunteer	7	5	133	0
	Lyman	Uinta County Fire Protection - Lyman	Volunteer	1	0	0	25
	Mountain View	Mountain View Fire Department, Inc.	Volunteer	0	0	22	0

Source: Federal Emergency Management Agency, U.S. Fire Administration, National Fire Department Census Database, last updated May 31, 2012; accessed at http://apps.usfa.fema.gov/census-download/.

Table 3-11. Key Healthcare Facilities in the Socioeconomic Study Area

County	Facility Name	Location	Type	No. of Licensed Beds	Percentage Occupancy	Swing Beds
Fremont	Wind River Health Systems Inc.	Dubois	FQHC	NA	NA	NA
	Ambulatory Surgery Clinic	Lander	ASC	NA	NA	NA
	Lander Regional Hospital	Lander	HOSP	89	28%	Yes
	Community Health Center of Central Wyoming, Inc.	Riverton	FQHC	NA	NA	NA
	Riverton Community Health Center	Riverton	FQHC	NA	NA	NA
	Riverton Memorial Hospital	Riverton	HOSP	70	19%	Yes
Lincoln	Star Valley Medical Center	Afton	CAH	20	30%	Yes
	South Lincoln Medical Center	Kemmerer	CAH	16	4%	Yes
Sweetwater	Castle Rock Hospital District	Green River	RHC	NA	NA	NA
	Memorial Hospital of Sweetwater County	Rock Springs	HOSP	99	18%	No
	Sweetwater Surgery Center LLC	Rock Springs	ASC	NA	NA	NA
Uinta	Evanston Regional Hospital	Evanston	HOSP	42	18%	Yes

NA: Not applicable.
ASC: Ambulatory Surgical Center
CAH: Critical Access Hospital
FQHC: Federally Qualified Health Center
HOSP: Hospital
RHC: Rural Health Center
Source: Wyoming Department of Health, Healthcare Licensing and Surveys, Wyoming Healthcare Facility Directory, data updated as of early June 2012; accessed June 25, 2012 at http://www.health.wyo.gov/ohls/FacilitiesDirectory.html.

One indicator of school adequacy is the ratio of students to teachers. Table 3-12 shows the student–teacher ratio for kindergarten through third grade for the school districts in the socioeconomic study area. A ratio of 16:1 or less is mandated by Wyoming Statute 21-13-307. All districts in the study area that currently exceed this ratio have approved waivers and plans to achieve the 16:1 ratio effective for the 2012–2013 school year.

Table 3-12. Grades KG-3 Student-Teacher Ratio, 2011-12

District	Student–Teacher Ratio
Fremont #1	15.784
Fremont #2	13.741

District	Student–Teacher Ratio
Fremont #6	15.695
Fremont #14	14.286
Fremont #21	14.838
Fremont #24*	18.021
Fremont #25*	20.489
Fremont #38	13.747
Lincoln #1*	17.756
Lincoln #2*	17.799
Sublette #1*	17.171
Sublette #9	15.428
Sweetwater #1*	19.800
Sweetwater #2	14.608
Uinta #1*	16.860
Uinta #4	15.220
Uinta #6	16.154
Wyoming (Total**)	15.877

*Districts With Approved K-3 Waivers and Plans to Achieve the 16 to 1 Ratio of Wyoming Statute 21-13-307. Effective for the 2012–2013 school year.
**Average of all school districts.
Source: Wyoming Department of Education, 2011 Analysis District Summary, accessed June 2012 at: http://edu.wyoming.gov/DataInformationAndReporting/16_1_Waiver_K_3_Student_Teacher_Ratio.aspx.

County planning officials were consulted to obtain a very high-level picture of some recent or possible impacts on the counties of uses of BLM-administered lands. (Kot 2012; Myers 2012; Tiechert 2012; Atkinson 2012; Price 2012). Roads are a key concern, particularly in Sweetwater County, which has more miles of county roads (approximately 1,200 miles) than any other county in Wyoming. Many county roads in Wyoming were developed to service agriculture. They were not designed for heavy truck traffic or lots of vehicles traveling to popular recreation sites. Many are dirt, with various types of construction and differing levels of maintenance. Snow often closes roads in the region, and it also wets and softens dirt roads, making them subject to tire rutting and miring of vehicles. Key questions the counties face include how to absorb impacts of any increased use of county roads when budget resources are diminishing, and who should pay when needs increase.

Main highways are also subject to wear and tear and to capacity concerns. Portions of Highway 191 north of Rock Springs in Sweetwater and Sublette counties have been upgraded and also widened for safety. Resource development contributed to the need for these improvements.

Sometimes there are ways to mitigate impacts on roads. For instance, around the gas fields of Sublette County, the installation of a piped liquid gathering system for produced water has resulted in significant reductions in truck traffic.

Distance and time are important concerns for emergency medical services (EMS), law enforcement, and fire departments. Facilities for these services tend to be located in communities or other locations far from the oil fields. For instance, there is an ambulance barn/EMS facility in Sublette County at Sand Draw at the intersection of Routes 191 and 351. Although this is closer to the gas fields in the south of the county

than Pinedale, it is still a considerable distance from the fields. In addition to distance/response time concerns, such facilities could need additional personnel and/or equipment if there are significant increases in resource uses on BLM-administered lands and mineral estate. Also, organizations such as fire departments that serve small communities may be called on to assist outside their service areas—raising cost and liability concerns. Wildland fire is a particular concern in terms of stressing fire department capacities.

Impacts on schools depend on the level of development and the resulting impact on population, whether new employees bring their families or just move in temporarily, and where any new residents are housed. The same can be said for impacts on fixed infrastructure such as electricity, gas, and water and wastewater services. In general, the counties want to encourage growth where infrastructure and services are already in place. This is particularly true in Sweetwater County, which has had decades of development as an oil and gas industry services center and thus also has more developed infrastructure and public services than some other counties (Kot 2012). Fluid mineral development has been more recent in Sublette County, and there have been concerns that rapid growth in infrastructure (and also housing) could result in overbuilding. Thus, Sublette County has been more receptive to man camps—such as at the Jonah Field (Myers 2012).

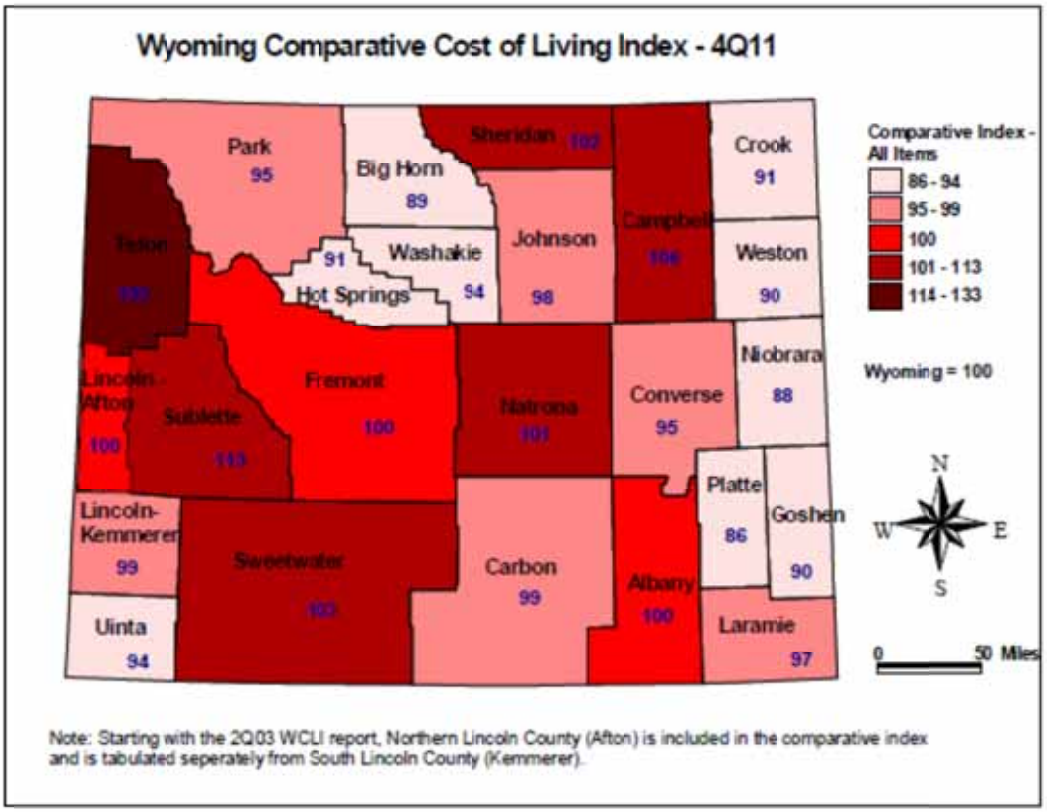
Landfills are another important public service concern. Landfills are expensive to develop, subject to high levels of developmental and operational regulation, and of limited capacity. Resource development activities and new residents generate solid waste, potentially putting increased pressure on limited landfill capacity.

3.6 QUALITY OF LIFE

Cost of living is an important component of local quality of life and typically varies from region to region within a state according to housing market conditions and various factors that drive the costs of goods and services up or down. The Wyoming Cost of Living Index is based on a survey of 140 items aggregated into six categories, which are then weighted according to their overall importance in the average consumer's budget. These categories, and their respective weight components, include Housing (47.5%), Transportation (17.3%), Food (13.7%), Recreation and Personal Care (9.9%), Medical (6.9%), and Apparel (4.7%). The Housing category, because of its relative importance in the average consumer's budget, carries the largest weight factor and is the most influential category in both the comparative index and the inflation rates (WEAD 2012c). The index allows assessment of the relative costs of living across Wyoming counties, with the statewide average is set equal to 100.

Figure 3-3 shows recent index values across Wyoming. It shows that Sublette and Sweetwater counties are among the counties in Wyoming with the highest relative costs of living. This is driven primarily by higher than average housing costs in these counties. Uinta County is one of the Wyoming counties with the lowest costs of living. Fremont County and the upper and lower portions of Lincoln County are at or very close to the average cost of living for the state.

Figure 3-3. Wyoming All-Items Cost of Living Index, Fourth Quarter of 2011



Source: WEAD 2012c.

Wyoming consists of predominantly rural communities and relatively small urban population centers. As one of the least populated states in the nation, Wyoming offers a unique way of life for its residents. The economy is dominated by oil and gas development, which has seen a significant boom over the last decade, along with mining such as coal production. As a result of the growing oil and gas industry, the state has seen a rise in revenue and out-of-state job seekers hoping to take advantage of job opportunities, the low cost of living relative to other states, and generally high levels of public services. According to a report by the Wyoming Heritage Foundation (2010), "in 2008, as a share of GDP, Wyoming spent more than the average state and its neighbors on K–12 education, highways, and natural resources." These increased spending levels can be directly attributed to the increase revenue from mineral severance taxes.

The Wyoming Rural Development Council conducts a community assessment process that provides a good summary of Wyoming residents' quality of life and satisfaction with conditions. The general findings apply well to the socioeconomic study area for this BLM planning action. The assessment process involves annual community surveys across Wyoming to determine the challenges, strengths, and goals of the citizens of these communities. The overall themes that emerged from these surveys over that last decade provide a glimpse of the quality of life Wyoming residents enjoy. According to a 2007 7-year synopsis of the annual surveys, Wyoming residents are impressed with the level of community leadership in their communities and feel the biggest community asset is the friendly people who pull together in times of need and demonstrate exceptional community involvement through volunteerism. Residents also appreciate the small size of their communities, which provides a safe environment, with low crime. Moreover, the location, rural atmosphere, natural resources, and outdoor recreational activities are considered a valuable part of the community (Wyoming Rural Development Council 2007).

On the other hand, the growth of the oil and gas industry has not benefitted all communities in the same way and has created a number of challenges. The influx of new residents lured by the promise of oil and gas jobs has created tensions in some communities struggling to adapt to the newcomers. For example, Sublette County has experienced significant growth owing to the oil and gas boom. The 2008 *Community Satisfaction and Quality of Life Survey of Long Term Residents of Sublette County* (Coburn 2008), suggested that long-term residents felt the influx of newcomers had had a negative effect on the community, and despite the economic advantages of the oil and gas industry, future growth is not viewed positively. Still other communities have not benefitted from the economic growth attributed to the oil and gas industry and are struggling to develop new industries for their small communities. In many instances, lack of infrastructure and economic development limit the quality of life.

The Wyoming Rural Development Council released its 10-year community assessment results in 2011. The following excerpt from the summary report is a wide-ranging synopsis of the quality of life across Wyoming that applies well to the socioeconomic study area:

> *The challenges facing rural Wyoming have many common themes to explore. Some of the overall major problems and challenges include lack of affordable housing, needed infrastructure improvements, the out-migration of youth due to lack of jobs and opportunities in their hometown, overall lack of good paying jobs in rural communities, the need for beautification in rural communities, lack of vision and planning, growth in the rural communities being decided by external forces, and an overall lack of activities and services for youth, families, and seniors.*
>
> *When exploring the overall strengths and assets in Wyoming's rural communities, it is easy to understand how proud the citizens of rural Wyoming are. The overall major strengths and assets include the people (biggest asset), friendly, people pull together in times of need, great volunteerism, small size of the community, safe, low crime, the location and rural atmosphere, natural resources, outdoor recreational activities of every possible type, and good community leadership.*
>
> …
>
> *[I]t was revealed that overall, Wyoming's rural communities have similar hopes and desires. Every community wants to grow in the way that they choose, not one that is decided by an external source. Also, each community wants to preserve its unique history and culture, while building a future where their children can return to and be proud to live. (Wyoming Rural Development Council 2011)*

3.7 SOCIAL ORGANIZATION AND INSTITUTIONS

Various government entities, institutions, social organizations, and interest groups are stakeholders in the management processes and decisions associated with the development and implementation of this RMP. The social organizations and institutions that have been identified in initial phases of the RMP revision process are listed below according to the following categories: government, and occupational and interest groups. Undoubtedly there are additional stakeholder organizations that are not mentioned because they do not meet the criteria noted below for inclusion *for this report*; this does *not* mean they are not important stakeholders and cannot participate in the RMP revision process.

3.7.1 Government

The government entities that were initially identified by the BLM as stakeholders and were invited to participate in the scoping process, or that provided comments as part of the scoping process, are listed below. The agencies that have formalized official cooperating agency status with the BLM as of mid-July 2012 are noted as such.

Federal Government

Cooperating Agencies

- U.S. Bureau Of Reclamation
- U.S. Environmental Protection Agency—Region 8
- U.S. Fish and Wildlife Service (USFWS)—Seedskadee National Wildlife Refuge
- NPS—National Trails System

Other Agencies

- Advisory Council on Historic Preservation
- U.S. Bureau of Indian Affairs
- U.S. Bureau of Reclamation
- U.S. Department of the Interior
- USFWS—Ecological Services
- U.S. Forest Service—Ashley National Forest
- U.S. Forest Service—Bridger-Teton National Forest
- U.S. Forest Service—Wasatch-Cache National Forest
- U.S. Geological Survey
- U.S. Natural Resources Conservation Service
- U.S. Representative Cynthia Lummis' Office
- U.S. Senator John Barrasso's Office
- U.S. Senator Michael Enzi's Office

State Government

Cooperating Agencies

- Wyoming Department of Agriculture
- Wyoming Department of Environmental Quality
- Wyoming Game and Fish Department
- Wyoming Governor's Office
- Wyoming State Geological Survey
- Wyoming State Parks and Cultural Resources—State Historic Preservation Office

Other Agencies

- Office of State Lands and Investments
- Wyoming Department of Administration and Information, Economic Analysis Division
- Wyoming Department of Revenue
- Wyoming Department of Transportation
- Wyoming Department of Workforce Services
- Wyoming State Engineer's Office
- Wyoming State Forestry Division

Local Government

Cooperating Agencies

- Fremont County Commissioners
- Lincoln County Commissioners
- Sublette County Commissioners
- Sweetwater County Commissioners
- Uinta County Commissioners

Other Agencies

- City of Green River
- City of Jeffrey
- City of Kemmerer
- City of Lander
- City of Riverton
- City of Rock Springs
- Town of Afton
- Town of Alpine
- Town of Bairoil
- Town of Barvleton
- Town of Bear River
- Town of Big Piney
- Town of Cokeville
- Town of Diamondville
- Town of Dubois
- Town of Granger
- Town of Hudson
- Town of La Barge
- Town of Lyman
- Town of Mountain View
- Town of Opal
- Town of Pavilion
- Town of Pinedale
- Town of Shoshoni
- Town of Thayne
- Town of Wamsutter

Special Districts and Commissions

Cooperating Agencies

- Lincoln County Conservation District
- Sublette County Conservation District
- Sweetwater County Community Development
- Sweetwater County Conservation District
- Uinta County Conservation District

Other Agencies

- Coalition of Local Governments
- Jamestown Riovista Water District
- Joint Powers Water Board

- Popo Agie Conservation District
- Wind River Environmental Quality Commission
- Wyoming Business Council
- Wyoming Game and Fish Commission
- Wyoming Livestock Board
- Wyoming Oil and Gas Conservation Commission
- Wyoming Public Service Commission
- Wyoming Recreation Commission
- Wyoming Water Development Commission

Tribal Organizations

Other Agencies

- Eastern Shoshone Tribal Council
- Eastern Shoshone Tribe Cultural Office
- Northern Arapaho Business Council
- Northern Arapaho Tribal Historic Preservation
- Shoshone-Bannock Cultural Resources
- Shoshone-Bannock Tribal Council
- Ute Tribal Council
- Ute Tribe Cultural Resources

3.7.2 Occupational and Interest Groups

The occupational and interest groups listed below were identified and invited by the BLM to participate in the scoping meetings and/or provided written comments as part of the scoping process for this BLM planning action. This extensive list gives some indication of the broad interest in the management of BLM-administered lands. However, some of the organizations included below may be on a BLM mailing list because of past interest in BLM activities and may not necessarily have an interest in the current RMP planning effort. In addition to the organizations listed, many businesses and individuals were invited or provided input as part of the scoping process.

- Alliance for Historic Wyoming
- American Bird Conservancy
- American Lands Alliance
- American Wind Energy Association
- Animal Protection Institute of America
- Biodiversity Conservation Alliance
- Bowhunters of Wyoming
- Colorado River Basin Salinity Control Forum
- Conservancy of the Phoenix
- Defenders of Wildlife
- Doris Day Animal League
- Earth Justice Legal Defense Fund
- Environmental Defense Fund
- Frontier Community Development Alliance
- Greater Little Mountain Coalition
- Greater Yellowstone Coalition
- Humane Society of the United States
- Mormon Trails Association
- Muley Fanatic Foundation of Wyoming

- National Historic Landmark Stewards Association
- National Outdoor Leadership School
- National Pony Express Association
- National Trust For Historic Preservation
- National Wildlife Federation
- Natural Resources Defense Council
- Oregon-California Trails Association
- Oregon-California Trails Association Crossroads Chapter
- Oregon-California Trails Association Wyoming Chapter
- Petroleum Association Of Wyoming
- Public Lands Advocacy
- Public Lands Foundation
- Rock Springs Grazing Association
- Rocky Mountain Elk Foundation
- Sierra Club
- Southwest Wyoming Mule Deer Foundation
- Southwestern Central Labor Council
- Sweetwater Mountain Bike Association
- The Cloud Foundation
- The Nature Conservancy
- The Wilderness Society
- Theodore Roosevelt Conservation Partnership
- Tracks Across Wyoming
- Trout Unlimited
- Upper Bear River Trout Unlimited
- Western Energy Alliance
- Western Watersheds Project
- Western Wyoming Community College
- Western Wyoming Mule Deer Foundation
- Wyoming Advocates For Animals
- Wyoming Farm Bureau Federation
- Wyoming Mining Association
- Wyoming Outdoor Council
- Wyoming Sportsman's Association
- Wyoming Stock Growers Association
- Wyoming Wilderness Association
- Wyoming Wildlife Federation
- Wyoming Wool Growers Association

3.8 SOCIAL VALUES, ATTITUDES, AND BELIEFS

Section 3.7 identified many organizations that are stakeholders in the use and management of BLM-administered lands. These stakeholder organizations and individuals have widely varying interests in the use and management of these resources.

Different types of stakeholders have distinct sets of attitudes, beliefs, values, opinions, and perceptions about public resources and the effects of various management policies and actions. These views reflect different cultural as well as economic linkages people have to public lands.

The social impact analysis that will be conducted later in the planning process will use categories of stakeholders as one means of identifying impacts of management actions under each alternative. By looking at the management actions from the different points of view of the various stakeholder groups, potential social and cultural impacts on each group can be identified.

Broad categories of stakeholders affected by the decisions to be made in this planning action are identified and characterized below. These categories and their descriptions are based primarily on comments made during the public scoping period.

The categorization of stakeholders is not meant to imply that all individuals and social groups fit neatly into a single category; many specific individuals or organizations may have multiple interests and would see themselves reflected in more than one stakeholder category. The point of categorization is to facilitate the impacts analysis phase of the planning process by allowing differentiation of social impacts based on broad differences in socio-cultural linkages to public lands and peoples' associated points of view.

3.8.1 Mineral Development and Production Stakeholders

These stakeholders believe mineral development is a vital component of the national, state, and local economies—creating jobs, generating income, and contributing tax and royalty payments to all levels of government. They also believe mineral development is socially important because it has been part of the social fabric of southwestern Wyoming for years, and because it supports the social systems of local communities by providing private sector livelihoods and revenues to government.

Public scoping comments from these stakeholders focused particularly on oil and gas development. Mineral development stakeholders are concerned RMP decisions involving restrictions and stipulations on oil and gas development could have adverse impacts on the industry in the planning area and on the local economies. Many are concerned about limitations that would reduce future development or increase the costs of development; some are concerned that restrictions could abrogate operators' valid existing rights.

3.8.2 Renewable Energy Stakeholders

This stakeholder group believes that renewable energy development is important for the nation's energy future. They highlight Wyoming's wind energy resources as some of the best in the nation and believe that the demand for wind energy will continue to grow. They note that developing this resource creates jobs and income and generates tax revenues, and thereby supports both local economies and social systems.

These stakeholders are concerned that RMP management decisions could have adverse impacts on this emerging industry. They point out there are many site-based, market, and regulatory constraints to wind development, so additional restrictions will further complicate that picture. They are concerned that management decisions could reduce access to the resource or affect industry's ability to develop the resource in the most economical manner. They believe that wind energy developers are already making good efforts to protect wildlife habitat and other values, and they want to work cooperatively with the BLM. The ability to obtain ROWs and build electric power transmission lines is also a very important matter to these stakeholders because this infrastructure is essential to getting power to market.

3.8.3 Livestock Grazing Stakeholders

These stakeholders believe that ranching and livestock grazing are essential components of the landscape, economy, and social fabric of the rural West. These stakeholders support the livelihoods and traditions associated with grazing and ranching, which they view as central to the vitality and values of local

communities. Some also point to the role of public lands livestock production as a sustainable food source supporting national food security in a world that faces future food shortages.

Livestock grazing stakeholders are concerned that BLM management decisions could reduce the amount of forage available for livestock or affect the ability of ranchers to operate effectively on BLM-administered lands. They believe that properly managed livestock grazing is compatible with other uses such as watersheds, wildlife, or recreation. They note that grazing on public lands helps ranchers maintain their operations on private lands and continue providing key wildlife habitat and other public values on those private lands. Livestock grazing stakeholders believe that livestock operators have irreplaceable long-term, on-the-ground knowledge that should be used to its full advantage to manage grazing and habitat values together. They point to improvements in rangeland health that have occurred through the coordinated efforts of the BLM and grazing permittees, and believe this collaborative approach is essential.

3.8.4 Habitat and Resource Conservation Stakeholders

These stakeholders have a number of conservation objectives, but most believe broadly that protecting at-risk species and maintaining habitats and ecosystems for all species is a fundamental value and should be a high priority in public policy. Most believe in the intrinsic value of wildlife, well-functioning ecosystems, and pristine areas. Some advocate resource conservation for human as well as wildlife needs, pointing to the beauty and solitude values of unspoiled areas of the Red Desert, for instance.

These stakeholders see a number of threats to species and habitat protection and resource conservation generally. A major concern for them is oil and gas development because of the impacts from roads, drilling pads, pipelines, etc. Another concern is OHV use, including habitat degradation from off-road use and stress to animals from noise and dust. Some of these stakeholders are concerned with the impacts of livestock grazing on riparian areas, the spread of noxious weeds, and competition with wildlife for forage. Additional resource conservation topics that are of interest to members of this stakeholder category include water, air, and soil resources; paleontological, cultural, and historic sites; wild and scenic rivers; and visual resource management.

These stakeholders favor designation of new protected areas and strong restrictions and stipulations on resource development. They advocate development of specific management actions (prescriptions, restrictions, and/or mitigations) to meet desired conditions for priority species and habitats, to support other species, and to protect the ecosystem and other resources (e.g., cultural, scenic).

3.8.5 Recreation Stakeholders

There are many types of recreational activities in the planning area. The primary concern of most recreation stakeholders is the degradation and loss of recreational use values. The impact of resource development is a great concern to these stakeholders, particularly oil and gas development because it often brings new roads to formerly roadless or lightly roaded areas, and because of its visual impacts. These stakeholders typically view resource development as having permanent impacts on recreation values. They seek protection of areas with high recreation values so that future generations can enjoy these values. For many recreationists, maintaining recreation values and habitat or ecosystem values go hand-in-hand; they say that healthy ecosystems support positive recreation experiences. Recreation stakeholders also point out how expenditures by hunters, fishermen, OHV riders, and other recreationists help support local businesses and the local economy.

For many recreation stakeholders, the preservation of natural soundscapes is important to provide users with adequate opportunities for quiet recreation. They see resource development and new roads as antithetical to this objective. Many also see OHV use as problematic, and favor development of OHV area

and route designations, and use of Special Recreation Management Areas, to reduce conflicts between quiet and motorized recreation.

For other recreation stakeholders, OHV recreation opportunities are very important. They advocate for maintaining open OHV play areas and are concerned that the BLM will reduce access to other areas. They believe in OHV user education to ensure that OHV riders are careful, responsible users of public lands.

3.9 ENVIRONMENTAL JUSTICE

The concept of Environmental Justice first became a required consideration for federal agencies with the publication of EO 12898 on February 11, 1994. The EO requires each federal agency to "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations" (EO 12898, §59 *Federal Register* 7629, 1994).

Fundamental principles of Environmental Justice require that federal agencies:

- Avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations
- Ensure the full and fair participation by all potentially affected communities in the decisionmaking process
- Prevent the denial of, reduction in, or significant delay in the receipt of benefits of the project by minority and low-income populations.

Evaluation of Environmental Justice impacts requires identification of minority and low-income populations (including Native American tribes) within the affected area and evaluation of the potential for the alternatives to have disproportionately high and adverse impacts on such populations.

This Socioeconomic Baseline Report provides the first step in the Environmental Justice analysis—a screening analysis of the socioeconomic study area for the planning action to identify the presence and location of any "Environmental Justice populations." Evaluation of potential adverse impacts on these populations will take place during the impacts analysis phase of the planning process.

The next section discusses the technical definitions used in identifying Environmental Justice populations, and the definition of "disproportionately high and adverse" effects. The concluding section presents the results of the screening analysis.

3.9.1 Definitions

Subsequent to publication of the EO, the Council on Environmental Quality (CEQ), part of the Executive Office of the President, issued guidance for considering Environmental Justice within the NEPA process (Council on Environmental Quality, 1997). This guidance defines minorities as individual(s) who are members of the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic. The guidance further defines a "minority population" as follows:

> *Minority populations should be identified where either: (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.*

The guidance also makes clear that Indian tribes in the affected area should also be considered in the Environmental Justice analysis.

The CEQ guidance states that "low-income" should be determined using the annual statistical poverty thresholds from the Bureau of the Census. That is, persons living under the poverty income threshold are potentially of concern. The guidance does not specify how to identify a "low-income population," but in practice the same approach used for minority populations can be followed—where persons in poverty status are greater than 50% of the area's total population, or where the percentage in poverty is meaningfully greater than the percentage in the general population or an appropriate comparison area.

The CEQ guidance does not define what constitutes "meaningfully greater." The definition of meaningfully greater should vary based on the likelihood of adverse impacts, with higher thresholds in situations when the chances of adverse impacts are negligible, and lower thresholds when the chances of adverse impacts are high (Winthrop 2010). In practice, meaningfully greater is often interpreted to identify an Environmental Justice population if the percentage of population in minority and/or poverty status in an area is at least 10 percentage points higher than in the comparison area (e.g., greater than or equal to 19% Hispanic in a study area geography compared with 9% Hispanic in the comparison area). This threshold has been used in many BLM RMP/EISs and is based on experience evaluating Environmental Justice indicators, the potential for adverse impacts on Environmental Justice populations from BLM decisions, and the sense that this threshold represents a significant difference between the affected and comparison populations.

As to "disproportionately high and adverse" effects, the CEQ guidance states:

> *Disproportionately high and adverse human health effects: When determining whether human health effects are disproportionately high and adverse, agencies are to consider the following three factors to the extent practicable:*
>
> > *(a) Whether the health effects, which may be measured in risks and rates, are significant (as employed by NEPA), or above generally accepted norms. Adverse health effects may include bodily impairment, infirmity, illness, or death; and*
> >
> > *(b) Whether the risk or rate of hazard exposure by a minority population, low-income population, or Indian tribe to an environmental hazard is significant (as employed by NEPA) and appreciably exceeds or is likely to appreciably exceed the risk or rate to the general population or other appropriate comparison group; and*
> >
> > *(c) Whether health effects occur in a minority population, low-income population, or Indian tribe affected by cumulative or multiple adverse exposures from environmental hazards.*
>
> *Disproportionately high and adverse environmental effects: When determining whether environmental effects are disproportionately high and adverse, agencies are to consider the following three factors to the extent practicable:*
>
> > *(a) Whether there is or will be an impact on the natural or physical environment that significantly (as employed by NEPA) and adversely affects a minority population, low-income population, or Indian tribe. Such effects may include ecological, cultural, human health, economic, or social impacts on minority*

> *communities, low-income communities, or Indian tribes when those impacts are interrelated to impacts on the natural or physical environment; and*
>
> *(b) Whether environmental effects are significant (as employed by NEPA) and are or may be having an adverse impact on minority populations, low income populations, or Indian tribes that appreciably exceeds or is likely to appreciably exceed those on the general population or other appropriate comparison group; and*
>
> *(c) Whether the environmental effects occur or would occur in a minority population, low-income population, or Indian tribe affected by cumulative or multiple adverse exposures from environmental hazards. (Council on Environmental Quality, 1997)*

The guidance and the presidential memo that accompanied the EO emphasize that agencies should provide opportunities for effective community participation in the NEPA process, including identifying potential effects and mitigation measures in consultation with affected communities.

3.9.2 Screening Analysis

Identification of potential Environmental Justice populations requires data on population makeup (numbers of persons by race), data on poverty (numbers of persons living under the poverty level), and identification of any special Indian tribal areas, such as reservations. The data must be sufficiently disaggregated to show any significant variations across the socioeconomic study area in concentrations of minority populations or populations living in poverty.

The most recent data broken down to the sub-county level in the socioeconomic study area are from the 2010 Census for minority populations and from the Census Bureau's 2006–2010 ACS for poverty. Both sources provide data for cities, towns, and Census Designated Places (CDP), which are notable population concentrations in unincorporated areas. This "place" level of geography is appropriate for a BLM Field Office planning-level action because it provides a reasonably disaggregated view of population variations across a large study area. Subsequent to the RMP/EIS, for implementation-level actions that consider highly localized activities, additional Environmental Justice analysis at an even finer geographic level may be warranted.

Table 3-13 shows data for race and Hispanic identification for study area cities, towns, and CDPs. Table 3-14 shows data on population below the poverty level. These tables also show the corresponding data for two reference populations: Wyoming and the United States.

In both tables, the data for each minority or poverty group are expressed as a percentage of the total population. For this screening analysis, the convention noted above has been adopted: if the minority population or population in poverty was 10 percentage points or more greater than for one of the reference populations (i.e., the lower percentage figure for either the state or the United States), the area is "flagged" as a potential Environmental Justice population and therefore an area of *potential* concern from an Environmental Justice perspective. The locations of all the places in Table 3-13 and Table 3-14 are shown in the maps in Figure 3-4 through Figure 3-6.

The adjective *potential* is emphasized here. No determination is made here regarding the likelihood of disproportionately high and adverse effects on these populations. That can only be determined once the management alternatives are defined and the impact analyses are performed.

Based on the available data and the definitions and threshold values noted above, the following places are flagged for further Environmental Justice consideration in the impacts analysis process. (Asterisks indicate places that are located within or immediately adjacent to the RSFO.)

Fremont County

- Arapahoe CDP for American Indian minority population and population in poverty (all ages, related children under 18, families).
- Atlantic City CDP for population in poverty (all ages, 65 and older, families).
- Boulder Flats CDP for population in poverty (all ages, related children under 18).
- Crowheart CDP for American Indian minority population and population in poverty (all ages, related children under 18, families).
- Ethete CDP for American Indian minority population and population in poverty (all ages, related children under 18, 65 and older, families).
- Fort Washakie CDP for American Indian minority population and population in poverty (65 and older).
- Hudson Town for population in poverty (families).
- Johnstown CDP for American Indian minority population.
- Shoshoni Town for population in poverty (all ages, related children under 18).
- In addition, the Wind River Indian Reservation is flagged because of its status as an Indian reservation.
- The county as a whole has an American Indian minority population that exceeds the threshold value as defined above. The place-specific data, including the presence of the Indian Reservation, likely provide the relevant analytical focus, but distributed populations can also be considered in Environmental Justice impacts analysis.

Lincoln County

- Afton Town for population in poverty (related children under 18).
- Alpine Northeast CDP for population in poverty (all ages).
- Auburn CDP for population in poverty (all ages, related children under 18, families).
- Bedford CDP for population in poverty (65 and older).
- La Barge Town* for population in poverty (related children under 18).
- Thayne Town for population in poverty (65 and older).
- Turnerville CDP for population in poverty (all ages, 65 and older).

Sublette County

- Big Piney Town for population in poverty (related children under 18).
- Daniel CDP for population in poverty (all ages).

Sweetwater County

- Bairoil Town for Hispanic minority population.
- Clearview Acres CDP* for Hispanic minority population.
- James Town CDP* for population in poverty (65 and older).
- Little America CDP for minority population (Some Other Race, and Hispanic).
- Purple Sage CDP* for minority population (Some Other Race, and Hispanic) and population in poverty (all ages, related children under 18, families).
- Wamsutter Town for Hispanic minority population.
- Washam CDP* for population in poverty (all ages, 65 and older, families).

Uinta County

- No places flagged for minority populations or populations in poverty.

Table 3-13. Environmental Justice Indicators, Minority Population, 2010 Census

Geographic Area	Total Population (2010)	Race							Hispanic (%)	All Minorities
		White (%)	Black/African American (%)	American Indian/ Alaska Native (%)	Asian (%)	Native Hawaiian/ Pacific Islander (%)	Some Other Race (%)	Two or More Races (%)		
United States	**308,745,538**	**72.4**	**12.6**	**0.9**	**4.8**	**0.2**	**6.2**	**2.9**	**16.3**	**36.3**
Wyoming	**563,626**	**90.7**	**0.8**	**2.4**	**0.8**	**0.1**	**3.0**	**2.2**	**8.9**	**14.2**
Fremont County	**40,123**	**74.3**	**0.3**	**21.2**	**0.4**	**0.0**	**1.0**	**2.8**	**5.6**	**28.5**
Arapahoe CDP	1,656	16.8	0.2	80.3	0.1	0.1	0.7	1.9	4.3	83.7
Atlantic City CDP	37	97.3	0.0	0.0	0.0	0.0	0.0	2.7	2.7	5.4
Boulder Flats CDP	170	21.3	0.2	73.3	0.0	0.0	0.0	4.4	4.2	78.9
Crowheart CDP	141	49.6	0.0	43.3	0.0	0.0	2.8	4.3	4.3	50.4
Dubois Town	971	95.8	0.4	0.9	1.2	0.0	0.2	1.4	0.4	4.4
Ethete CDP	1,553	4.5	0.1	93.7	0.1	0.0	0.2	1.4	2.6	96.2
Fort Washakie CDP	1,759	5.6	0.0	92.5	0.0	0.1	0.2	1.6	4.0	94.9
Hudson Town	458	90.2	0.0	6.8	0.0	0.0	1.1	2.0	3.7	11.8
Jeffrey City	58	96.6	0.0	1.7	0.0	0.0	0.0	1.7	0.0	3.4
Johnstown CDP	242	41.3	0.4	56.6	0.0	0.0	0.0	1.7	6.6	60.4
Lander City	7,487	88.0	0.2	7.3	0.6	0.0	1.0	2.9	4.8	14.9
Pavilion Town	231	93.1	0.0	3.0	0.4	0.0	0.4	3.0	5.6	11.7
Riverton City	10,615	83.5	0.5	10.4	0.3	0.1	1.8	3.5	9.0	21.3
Shoshoni Town	649	91.1	1.1	5.1	0.6	0.0	0.6	1.5	9.6	15.1
Lincoln County	**18,106**	**95.4**	**0.2**	**0.8**	**0.3**	**0.0**	**2.0**	**1.2**	**4.3**	**6.5**
Afton Town	1,911	94.1	0.2	0.7	0.2	0.0	2.6	2.2	4.2	6.7
Alpine Town	828	95.2	0.4	0.2	0.5	0.0	2.4	1.3	5.6	7.9
Alpine Northeast CDP	196	98.0	0.0	0.0	1.0	0.0	0.0	1.0	2.0	4.0
Alpine Northwest CDP	244	96.7	0.0	0.0	0.4	0.0	2.0	0.8	6.6	7.4
Auborn CDP	328	95.4	0.0	0.0	0.0	0.0	4.6	0.0	5.5	5.5

Geographic Area	Total Population (2010)	Race							Hispanic (%)	All Minorities
		White (%)	Black/African American (%)	American Indian/ Alaska Native (%)	Asian (%)	Native Hawaiian/ Pacific Islander (%)	Some Other Race (%)	Two or More Races (%)		
Bedford CDP	201	94.5	0.0	0.0	0.5	0.0	3.0	2.0	3.5	6.0
Cokeville Town	535	98.7	0.0	0.4	0.0	0.0	0.6	0.4	1.5	2.2
Diamondville Town	737	93.4	0.1	0.7	0.4	0.3	2.8	2.3	9.1	11.9
Etna CDP	164	91.5	0.0	0.6	0.0	0.0	6.1	1.2	7.3	9.1
Fairview CDP	275	97.8	0.0	0.0	0.0	0.0	1.5	0.7	3.3	4.0
Fontenelle CDP	13	92.3	0.0	0.0	7.7	0.0	0.0	0.0	0.0	7.7
Freedom CDP	214	96.3	0.5	0.0	0.0	0.0	2.8	0.5	3.7	4.2
Grover CDP	147	98.6	0.0	0.0	1.4	0.0	0.0	0.0	0.0	1.4
Kemmerer City	2,656	93.2	0.2	1.2	0.4	0.0	3.9	1.0	7.8	10.3
La Barge Town*	551	92.4	0.4	4.4	0.0	0.0	0.9	2.0	4.4	10.1
Nordic CDP	602	97.0	0.0	0.2	0.2	0.0	1.8	0.8	3.7	4.7
Oakley CDP	49	98.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0
Opal Town	96	92.7	0.0	1.0	1.0	0.0	3.1	2.1	7.3	10.4
Osmond CDP	397	97.5	0.5	1.0	0.0	0.0	0.0	1.0	1.3	3.3
Smoot CDP	195	97.9	0.0	0.0	0.0	0.0	0.0	2.1	0.5	2.1
Star Valley Ranch Town	1,503	96.3	0.1	0.8	0.6	0.0	1.3	0.8	3.4	5.4
Taylor CDP	90	87.8	0.0	0.0	0.0	1.1	1.1	8.9	13.3	15.5
Thayne Town	366	91.5	0.0	0.0	1.1	0.0	6.0	1.4	9.3	11.8
Turnerville CDP	192	99.0	0.0	0.5	0.0	0.0	0.0	0.5	0.5	1.5
Sublette County	**10,247**	**93.2**	**0.3**	**0.8**	**0.5**	**0.0**	**3.7**	**1.4**	**6.9**	**9.6**
Big Piney Town	552	92.8	0.9	0.0	0.4	0.0	4.0	0.5	6.7	9.7
Bondurant CDP	93	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Boulder CDP	170	92.4	0.0	0.6	0.0	0.0	0.0	7.1	6.5	11.1
Cora CDP	142	99.3	0.0	0.0	0.7	0.0	0.0	0.0	6.3	7.0

Geographic Area	Total Population (2010)	Race							Hispanic (%)	All Minorities
		White (%)	Black/African American (%)	American Indian/ Alaska Native (%)	Asian (%)	Native Hawaiian/ Pacific Islander (%)	Some Other Race (%)	Two or More Races (%)		
Daniel CDP	150	98.7	1.3	0.0	0.0	0.0	0.0	0.0	0.0	1.3
Marbleton Town	1,094	87.4	0.2	0.8	0.2	0.0	9.0	2.4	13.3	16.4
Pinedale Town	2,030	90.5	0.7	0.7	1.3	0.0	4.8	2.0	9.9	13.9
Sweetwater County	**43,806**	**88.5**	**1.0**	**1.0**	**0.8**	**0.1**	**6.4**	**2.3**	**15.3**	**19.1**
Arrowhead Springs CDP*	63	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bairoil Town	106	84.0	0.0	1.9	2.8	0.0	7.5	3.8	21.7	24.5
Clearview Acres CDP*	795	83.3	1.1	2.4	1.1	0.0	9.6	2.5	25.2	30.5
Eden CDP*	281	98.6	0.4	0.0	0.0	0.0	0.0	1.1	8.9	9.6
Farson CDP*	313	94.9	0.0	2.2	0.0	0.0	1.6	1.3	5.1	8.6
Granger Town	139	88.5	0.7	0.0	0.0	0.0	9.4	1.4	15.1	15.8
Green River City*	12,515	92.1	0.4	0.8	0.5	0.1	4.1	2.0	13.4	16.2
James Town CDP*	536	91.0	0.6	0.7	0.4	0.0	4.9	2.4	10.1	12.7
Little America CDP	68	75.0	4.4	0.0	0.0	0.0	20.6	0.0	45.6	50.0
McKinnon CDP*	60	86.7	3.3	0.0	1.7	0.0	1.7	6.7	1.7	13.3
North Rock Springs CDP*	2,207	92.4	0.5	1.5	0.1	0.0	3.9	1.7	10.5	12.9
Purple Sage CDP*	535	72.3	2.6	1.7	0.2	0.4	18.9	3.9	32.5	39.1
Reliance CDP*	714	89.9	0.4	0.7	0.1	0.0	7.0	1.8	12.3	15.6
Rock Springs City*	23,036	86.4	1.4	0.8	1.1	0.1	7.5	2.6	16.4	20.9
Superior Town*	336	91.4	0.6	1.8	0.6	0.0	2.7	3.0	12.8	18.4
Wamsutter Town	451	82.7	0.7	2.9	0.0	0.0	11.1	2.7	19.7	25.3
Washam CDP*	51	100.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	3.9
Uinta County	**21,118**	**92.4**	**0.3**	**0.8**	**0.3**	**0.2**	**4.1**	**2.0**	**8.8**	**11.5**
Bear River Town	518	95.8	0.2	0.4	0.2	0.0	1.4	2.1	5.2	7.5
Carter CDP	10	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Geographic Area	Total Population (2010)	Race							Hispanic (%)	All Minorities
		White (%)	Black/African American (%)	American Indian/ Alaska Native (%)	Asian (%)	Native Hawaiian/ Pacific Islander (%)	Some Other Race (%)	Two or More Races (%)		
Evanston City	12,359	89.8	0.3	1.0	0.3	0.2	5.9	2.5	12.3	15.4
Fort Bridger CDP	345	92.5	0.3	1.7	0.3	2.0	0.3	2.9	2.3	8.9
Lonetree CDP	49	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lyman Town	2,115	97.3	0.1	0.6	0.1	0.1	0.7	1.0	3.8	5.7
Mountain View Town	96	96.9	0.0	1.0	0.0	0.0	0.0	2.1	5.2	5.2
Robertson CDP	97	100.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
Urie CDP	262	99.6	0.0	0.0	0.0	0.0	0.4	0.0	1.1	1.2

* Indicates community located within or immediately adjacent (e.g., La Barge) to the RSFO.
Note: Hispanic population is an additional designation, not a race designation; the Hispanic population includes multiple races.
Note: “All Minorities” is defined as all persons other than Non-Hispanic White.
CDP: Census Designated Place
Yellow Shading: Relevant reference population statistics. Orange Shading: Statistics/places “flagged” for Environmental Justice impacts analysis.
Local area populations do not sum to county population (i.e., do not cover 100% of the county).
Source: Population, Race, Hispanic—US Census Bureau, 2010 Census, Summary File 1, Table QT-P3. All Minorities—U.S. Census Bureau, 2010 Census, Table QT-P6.

Table 3-14. Environmental Justice Indicators, Poverty, 2006–2010 American Community Survey

Geographic Area	Total Population (2010)	Percentage of Individuals in Poverty			Percentage of Families in Poverty
		All Ages	Related Children Under 18 Years	65 Years and Over	
United States	**308,745,538**	**13.8**	**18.8**	**9.5**	**11.3**
Wyoming	**563,626**	**9.8**	**12.0**	**6.3**	**6.1**
Fremont County	**40,123**	**14.0**	**20.6**	**6.4**	**10.3**
Arapahoe CDP	1,656	26.2	31.6	7.7	19.3
Atlantic City CDP	37	73.3	(x)	50.0	100.0
Boulder Flats CDP	170	24.5	44.0	15.4	10.6
Crowheart CDP	141	43.3	100.0	9.5	38.8
Dubois Town	971	10.6	7.5	1.7	3.4
Ethete CDP	1,553	29.6	36.1	22.7	25.5
Fort Washakie CDP	1,759	16.6	18.8	17.5	10.5
Hudson Town	458	17.4	18.2	0.0	17.4
Jeffrey City CDP	58	0.0	(x)	0.0	0.0
Johnstown CDP	242	7.6	0.0	0.0	0.0
Lander City	7,487	10.3	10.1	6.2	3.6
Pavillion Town	231	7.0	0.0	0.0	9.4
Riverton City	10,615	14.4	21.3	6.1	13.7
Shoshoni Town	649	19.8	49.0	0.0	15.5
Lincoln County	**18,106**	**8.1**	**14.2**	**6.2**	**4.6**
Afton Town	1,911	15.1	24.9	4.3	8.2
Alpine Town	828	2.6	0.0	13.0	0.0
Alpine Northeast CDP	196	35.0	(x)	0.0	(x)
Alpine Northwest CDP	244	0.0	(x)	0.0	0.0
Auburn CDP	328	31.6	46.2	0.0	34.6
Bedford CDP	201	13.3	(x)	52.6	0.0
Cokeville Town	535	0.7	0.0	9.5	0.0
Diamondville Town	737	11.3	21.3	3.3	7.9
Etna CDP	164	6.5	0.0	(x)	0.0
Fairview CDP	275	0.0	0.0	0.0	0.0
Fontenelle CDP	13	(x)	(x)	(x)	(x)
Freedom CDP	214	(x)	(x)	(x)	(x)
Grover CDP	147	0.0	(x)	0.0	0.0
Kemmerer City	2,656	3.0	6.0	0.0	1.9
La Barge Town	551	14.6	38.6	0	14.4
Nordic CDP	602	0.0	(x)	0.0	0.0
Oakley CDP	49	(x)	(x)	(x)	(x)
Opal Town	96	4.2	0.0	0.0	6.5
Osmond CDP	397	4.4	0.0	0.0	7.3
Smoot CDP	195	0.0	(x)	0.0	0.0
Star Valley Ranch Town	1,503	1.8	0.7	0.0	0.8
Taylor CDP	90	(x)	(x)	(x)	(x)

Geographic Area	Total Population (2010)	Percentage of Individuals in Poverty			Percentage of Families in Poverty
		All Ages	Related Children Under 18 Years	65 Years and Over	
Thayne Town	366	10.6	6.7	26.1	5.4
Turnerville CDP	192	20.2	0.0	100.0	0.0
Sublette County	**10,247**	**4.2**	**2.2**	**1.1**	**2.7**
Big Piney Town	552	12.4	23.0	1.5	11.4
Bondurant CDP	93	0.0	(x)	(x)	0.0
Boulder CDP	170	0.0	(x)	0.0	(x)
Cora CDP	142	0.0	(x)	0.0	(x)
Daniel CDP	150	28.8	0.0	(x)	0.0
Marbleton Town	1,094	1.5	1.8	0.0	2.8
Pinedale Town	2,030	5.5	0.0	4.3	0.0
Sweetwater County	**43,806**	**8.2**	**11.3**	**5.0**	**6.1**
Arrowhead Springs CDP	63	0.0	0.0	(x)	0.0
Bairoil Town	106	8.8	8.7	0.0	6.9
Clearview Acres CDP	795	3.2	0.0	0.0	0.0
Eden CDP	281	0.0	0.0	0.0	0.0
Farson CDP	313	0.0	0.0	0.0	0.0
Granger Town	139	9.9	0.0	0.0	0.0
Green River City	12,515	8.1	11.3	6.6	6.9
James Town CDP	536	3.6	0.0	19.6	0.0
Little America CDP	68	0.0	(x)	(x)	(x)
McKinnon CDP	60	0.0	(x)	(x)	0.0
North Rock Springs CDP	2,207	6.8	12.8	0.0	7.0
Purple Sage CDP	535	56.8	71.3	(x)	40.5
Reliance CDP	714	2.8	0.0	13.9	0.0
Rock Springs City	23,036	6.6	8.1	5.2	5.1
Superior Town	336	6.6	0.0	8.7	3.5
Wamsutter Town	451	1.9	0.0	0.0	0.0
Washam CDP	51	28.0	(x)	48.8	45.2
Uinta County	**21,118**	**12.1**	**14.3**	**7.7**	**8.2**
Bear River Town	518	10.1	9.3	0.0	8.2
Carter CDP	10	(x)	(x)	(x)	(x)
Evanston City	12,359	9.2	7.4	9.7	7.0
Fort Bridger CDP	345	3.8	0.0	16	5.4
Lonetree CDP	49	0.0	(x)	0.0	0.0
Lyman Town	2,115	11.6	16.6	4.7	6.6
Mountain View Town	96	14.5	21.5	2.9	10.8
Robertson CDP	97	0.0	0.0	0.0	0.0
Urie CDP	262	0.0	0.0	0.0	0.0

CDP: Census Designated Place
(x): Reliable data not available.
Yellow Shading: Relevant reference population statistics. Orange Shading: Statistics/places "flagged" for Environmental Justice impacts analysis.
Local area populations do not sum to county population (i.e., do not cover 100% of the county).
Source: Population—US Census Bureau, 2010 Census, Summary File 1, Table QT-P3. Poverty status—U.S. Census Bureau, 20062010 American Community Survey 5-Year Estimates, Tables GCT1701, GCT1702, GCT1704, and S1702.

Figure 3-4. Locations of Potential Environmental Justice Populations: Sweetwater County

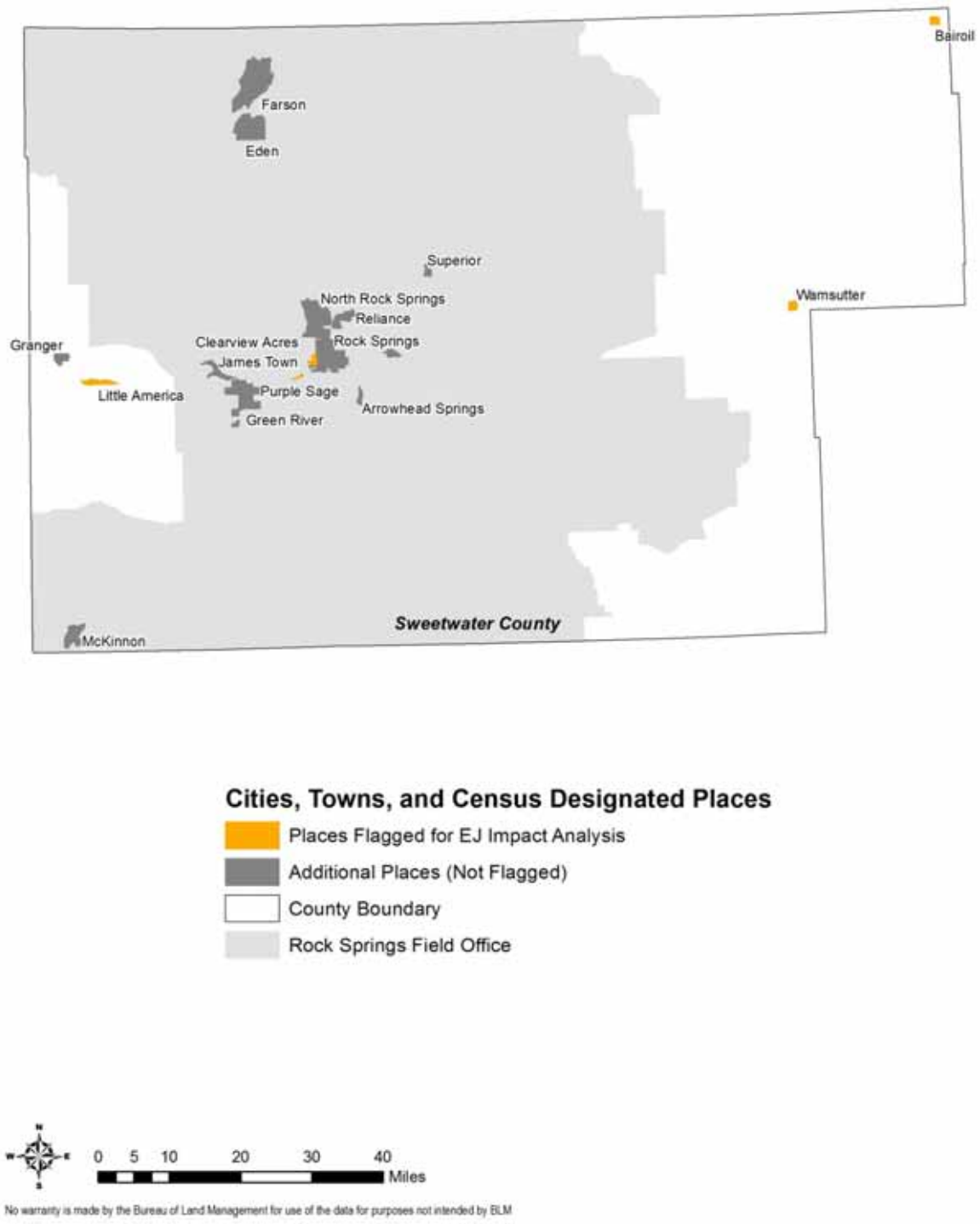


Figure 3-5. Locations of Potential Environmental Justice Populations: Fremont and Sublette Counties

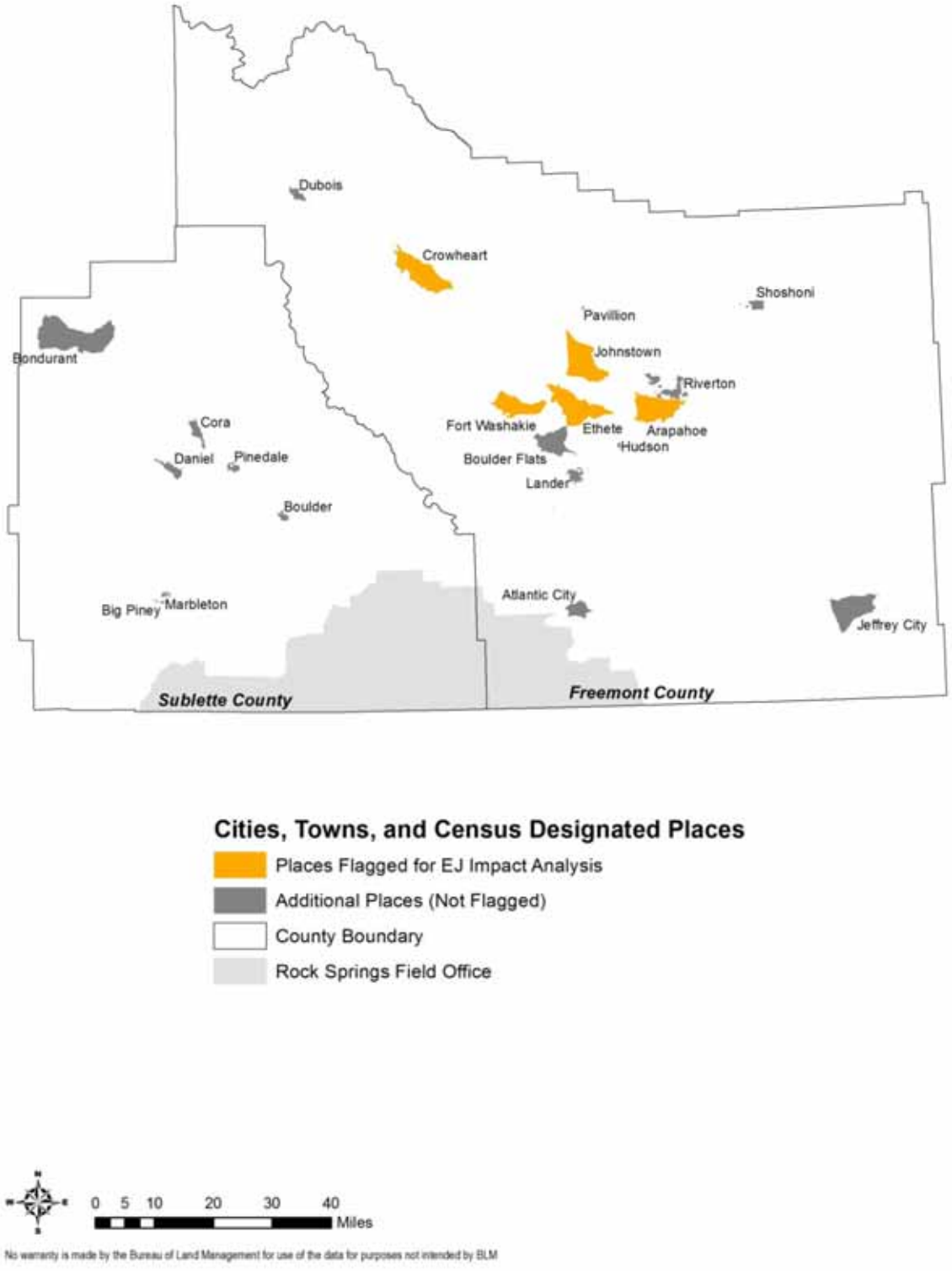


Figure 3-6. Locations of Potential Environmental Justice Populations: Lincoln and Uinta Counties

CHAPTER 4—ECONOMIC CONDITIONS

This chapter identifies and profiles the economy of the socioeconomic study area in terms of employment, earnings, sources of personal income, and economic base. Specific economic sectors that are most relevant to the decisions that will be addressed in the current BLM RMP planning effort are described. This chapter also includes data on sources of funds for state and local government, and briefly discusses BLM and local government expenditures. Data are provided at the county level. In some cases, data are also provided for Wyoming and the United States for comparative purposes.

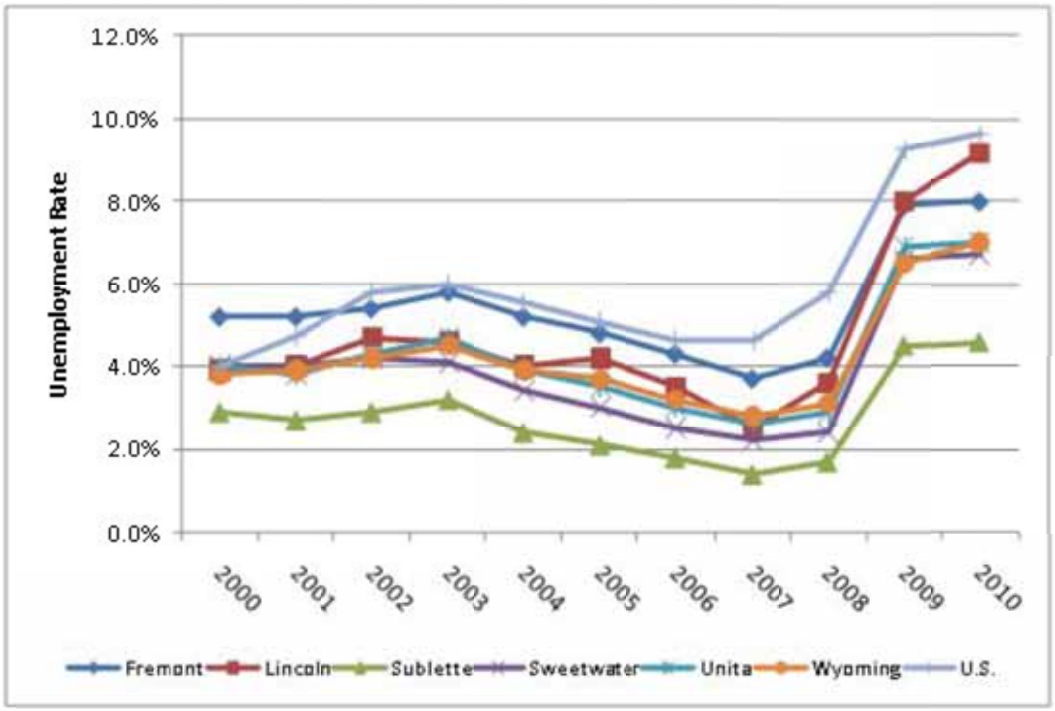
4.1 EMPLOYMENT

Figure 4-1 shows the annual unemployment rate since 2000 for the five counties of the socioeconomic study area, compared with the state and the nation. Throughout this period, unemployment rates within the socioeconomic study area were lower than the United States, with the exception of Fremont County in 2000 and 2001. The unemployment rate in Fremont County was substantially higher than the Wyoming rate through much of this period, and the rate in Sublette County was substantially lower than the state rate throughout this period.

Between 2007 and 2009, unemployment rates in all five counties increased substantially. The rates generally leveled off between 2009 and 2010. (The unemployment rate in Lincoln County continued to rise.) This overall pattern reflects the recession that affected the United States over this period of time.

Sublette County has consistently had the lowest unemployment rate in the socioeconomic study area. Even during the recent economic recession, it stayed below 5%, likely because of continued relative strength in the mining industry.

Figure 4-1. Annual Unemployment Rate—Study Area Counties, State, and Nation



Source: Wyoming Department of Employment 2011.

Historical data on jobs by industry demonstrate the relative importance of different industries to the socioeconomic study area over time. The tables and figures below provide several views of historical employment:

- Trends in employment for 1970 to 2000, for the five-county study area as a whole, by Standard Industrial Classification (SIC) code. These data provide a long-term historical perspective. (Table 4-1, Figure 4-2, Figure 4-3).
- Trends in employment for 2001 to 2009, for the five-county study area as a whole, by North American Industry Classification System (NAICS) code. These data show area-wide trends since 2001, including into the recession. (Table 4-2, Figure 4-4, Figure 4-5).
- Trends in employment for 2001 to 2009, for each county, by NAICS code. These data show details and differences in employment trends by sector at the local county level. (See tables and figures in Appendix B.)

The tables and figures use two different data sets because the BEA switched in 2001 from the SIC codes to the NAICS codes to better capture new industries that did not exist when the SIC classifications were created. The two data sets are not readily comparable.

Note that although BEA estimates annual employment for counties nationwide, BEA does not disclose some information (e.g., total employment for an industry sector that has few companies within a particular geography) to ensure that it does not violate confidentiality for those companies. However, the provider of the BEA data used in this report, Headwater Economics, has a methodology to provide estimates for non-disclosed data. These estimates are incorporated in various tables and figures throughout this report. Also note that the three sector categories—*Services related*, *Non-services related*, and *Government*—are categories created by Headwater Economics. Although not official BEA categories, they provide useful high-level groupings of roughly similar industries.

As shown in Table 4-1 and Figure 4-2, the *Services-related* sector was the largest sector and had the strongest employment growth from 1970 to 2000, with total jobs increasing by 21%. The *Government* sector was the smallest sector and grew by 11% in this period, and the *Non-services related* sector grew by nearly 9% from the beginning to end of this 30-year period. The *Non-services related* sector[4] saw a large increase in employment in the 1970s, followed by a significant decrease in the 1980s. This was driven by a very large rise and fall in employment in *Mining*, and lesser increases/decreases in *Construction*, as shown in the industry-specific trends in Figure 4-3. The changes in these two industries are largely explained by activity in the energy market and supporting construction activity, driven by energy price increases in the 1970s and decreases in the 1980s. Across the full 1970 to 2000 period, the largest and fastest growing individual industries were *Services*, *Government,* and *Retail trade*.

Table 4-1. Socioeconomic Study Area Employment by Industry, 1970–2000

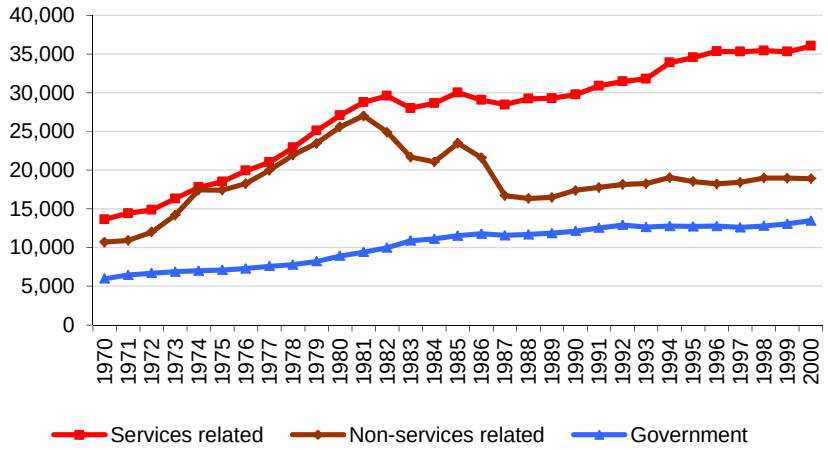
Industry (SIC Code)	1970	1980	1990	2000	Change 1990–2000
Total Employment (number of jobs)	30,327	61,578	59,306	68,351	9,045
Non-services related	10,711	25,594	17,389	18,909	1,520
Farm	2,999	3,054	2,854	2,903	49
Agricultural services, forestry, fishing & other	175	271	554	925	371
Mining (including fossil fuels)	3,933	14,173	7,715	6,135	-1,580

4 *Another commonly used term for "Non-services related" is "Goods producing."*

Industry (SIC Code)	1970	1980	1990	2000	Change 1990–2000
Construction	2,408	6,264	3,783	5,434	1,651
Manufacturing (including forest products)	1,196	1,832	2,483	3,512	1,029
Services related	13,641	27,076	29,766	36,039	6,273
Transportation & public utilities	2,215	4,253	3,994	4,056	62
Wholesale trade	628	1,645	1,275	1,389	114
Retail trade	4,934	9,520	9,962	12,208	2,246
Finance, insurance & real estate	1,074	2,305	2,835	3,326	491
Services	4,790	9,353	11,700	15,060	3,360
Government	5,979	8,908	12,128	13,480	1,352
Percentage of Total					**Percentage Change 1990–2000**
Total Employment					15.3%
Non-services related	35.3%	41.6%	29.3%	27.7%	8.7%
Farm	9.9%	5.0%	4.8%	4.2%	1.7%
Agricultural services, forestry, fishing & other	0.6%	0.4%	0.9%	1.4%	67.0%
Mining (including fossil fuels)	13.0%	23.0%	13.0%	9.0%	-20.5%
Construction	7.9%	10.2%	6.4%	8.0%	43.6%
Manufacturing (including forest products)	3.9%	3.0%	4.2%	5.1%	41.5%
Services related	45.0%	44.0%	50.2%	52.7%	**21.1%**
Transportation & public utilities	7.3%	6.9%	6.7%	5.9%	1.6%
Wholesale trade	2.1%	2.7%	2.1%	2.0%	9.0%
Retail trade	16.3%	15.5%	16.8%	17.9%	22.5%
Finance, insurance & real estate	3.5%	3.7%	4.8%	4.9%	17.3%
Services	15.8%	15.2%	19.7%	22.0%	28.7%
Government	19.7%	14.5%	20.4%	19.7%	**11.1%**

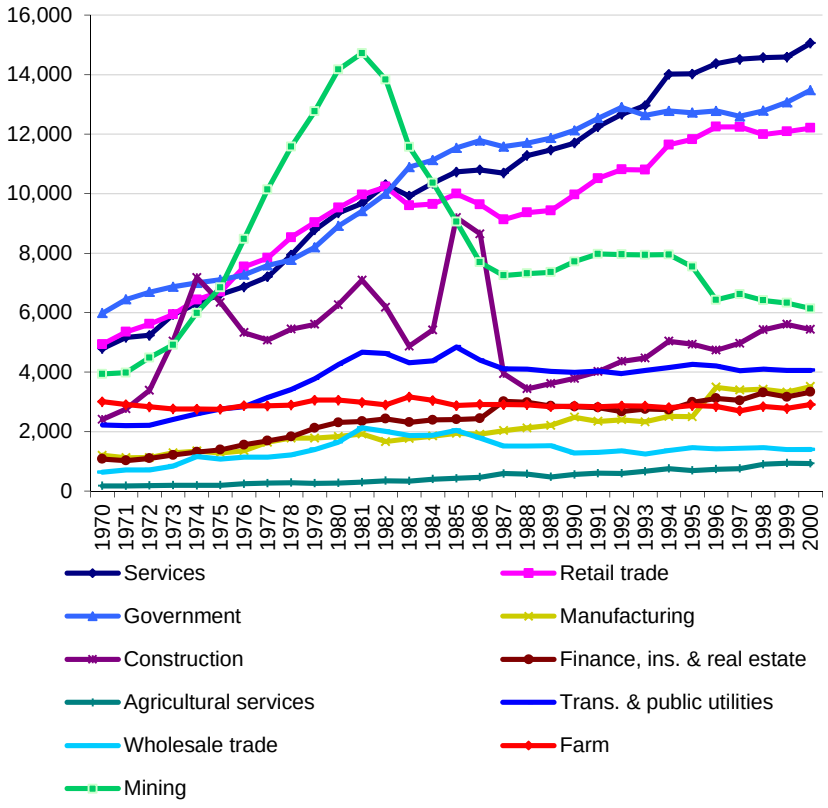
All employment data are reported by place of work.
Estimates for data that were not disclosed are shown in italics. Actual and estimated data do not necessarily add to totals.
Source: EPS-HDT Socioeconomic Measures Report, December 14, 2011, based on 2011 data from the BEA, Regional Economic Information System, Table CA25.

Figure 4-2. Socioeconomic Study Area Employment by Major Sector Categories, 1970–2000



Source: EPS-HDT Socioeconomic Measures Report, December 14, 2011, based on 2011 data from the BEA, Regional Economic Information System, Table CA25.

Figure 4-3. Socioeconomic Study Area Employment by Industry, 1970 – 2000



Source: EPS-HDT Socioeconomic Measures Report, December 14, 2011, based on 2011 data from the BEA, Regional Economic Information System, Table CA25.

Employment trends for the socioeconomic study area from 2001 to 2009 are shown in Table 4-2, Figure 4-4, and Figure 4-5. As noted above these data are based on NAICS codes and are not entirely comparable to the earlier year data based on SIC codes, although some industry definitions are similar. *Government, Mining, Construction, and Manufacturing* are similarly defined across the SIC and NAICS data sets.

During this 2001 to 2009 period, total employment grew by 23.0%. The *Services-related* sector was the largest sector and grew by 20.7%. *Non-services related* was the next largest sector and with a 27.3% increase in jobs, grew faster than the overall rate of employment increase. The *Government* sector was the smallest and grew by 18.6%.

At the individual industry level for the socioeconomic study area as a whole, *Government* was the largest industry, at 18.6% of total employment in 2009. This sector saw a net gain of 2,515 jobs, an 18.6% increase. *Mining* was the next largest industry in 2009, with 13.0% of total employment. It had the largest net gain in jobs, with 4,199 jobs added, a 59.6% increase, even after a slight decrease from 2008 to 2009. *Retail trade* was the third largest industry in 2009, with 9.9% of total employment; its number of jobs remained essentially flat throughout this period. The fourth largest industry in 2009 was *Construction*, at 9.1% of total employment. It had a net gain of 1,117 jobs during the period, or 16.5%. Notably, *Construction* grew substantially from 2004 to 2007, and then had a significant loss of jobs from 2007 to 2009 owing to the recession. *Accommodation and food services* had 7.1% of total employment in 2009, making it the fifth largest industry. Its growth was relatively modest, with 626 jobs gained, or 11.4%. All other industries were substantially smaller in 2009 than these top five industries and appear relatively flat in Figure 4-5 in terms of job growth. However, Table 4-2 shows that two other service industries had significant job growth over the period: *Real estate rental and leasing* grew by 1,373 jobs, or 59.1%, and *Finance and insurance* grew by 1,055 jobs, or 68.1%.

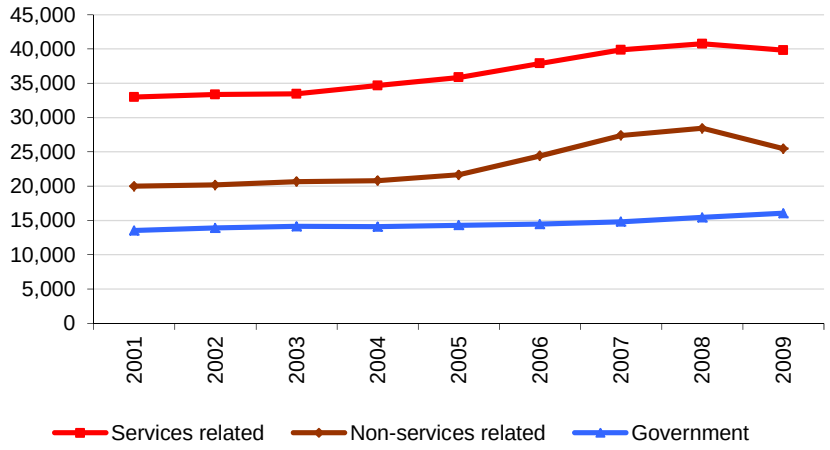
Table 4-2. Socioeconomic Study Area Employment by Industry, 2001–2009

Industry (NAICS Code)	2001	2009	Change 2001–2009
Total Employment (number of jobs)	70,196	86,311	16,115
Non-services related	19,997	25,465	5,468
Farm	2,839	3,155	316
Forestry, fishing, & related activities	480	592	112
Mining (including fossil fuels)	7,042	11,241	4,199
Construction	6,765	7,882	1,117
Manufacturing	2,872	2,595	-277
Services related	32,995	39,823	6,828
Utilities	66	209	143
Wholesale trade	230	831	601
Retail trade	8,615	8,519	-96
Transportation and warehousing	2,467	3,457	990
Information	978	1,014	36
Finance and insurance	1,550	2,605	1,055
Real estate and rental and leasing	2,324	3,697	1,373
Professional and technical services	2,288	3,023	735

Industry (NAICS Code)	2001	2009	Change 2001–2009
Management of companies and enterprises	154	146	-8
Administrative and waste services	1,870	1,855	-16
Educational services	138	248	110
Health care and social assistance	2,610	3,198	588
Arts, entertainment, and recreation	917	1,080	163
Accommodation and food services	5,471	6,097	626
Other services, except public administration	3,318	3,845	527
Government	13,534	16,049	2,515
Percentage of Total			**Percentage Change 2001–2009**
Total Employment			**23.0%**
Non-services related	28.5%	29.5%	27.3%
Farm	4.0%	3.7%	11.1%
Forestry, fishing, & related activities	0.7%	0.7%	23.4%
Mining (including fossil fuels)	10.0%	13.0%	59.6%
Construction	9.6%	9.1%	16.5%
Manufacturing	4.1%	3.0%	-9.6%
Services related	47.0%	46.1%	20.7%
Utilities	0.1%	0.2%	216.7%
Wholesale trade	0.3%	1.0%	261.9%
Retail trade	12.3%	9.9%	-1.1%
Transportation and warehousing	3.5%	4.0%	40.1%
Information	1.4%	1.2%	3.7%
Finance and insurance	2.2%	3.0%	68.1%
Real estate and rental and leasing	3.3%	4.3%	59.1%
Professional and technical services	3.3%	3.5%	32.1%
Management of companies and enterprises	0.2%	0.2%	-5.1%
Administrative and waste services	2.7%	2.1%	-0.8%
Educational services	0.2%	0.3%	79.6%
Health care and social assistance	3.7%	3.7%	22.6%
Arts, entertainment, and recreation	1.3%	1.3%	17.8%
Accommodation and food services	7.8%	7.1%	11.4%
Other services, except public administration	4.7%	4.5%	15.9%
Government	19.3%	18.6%	18.6%

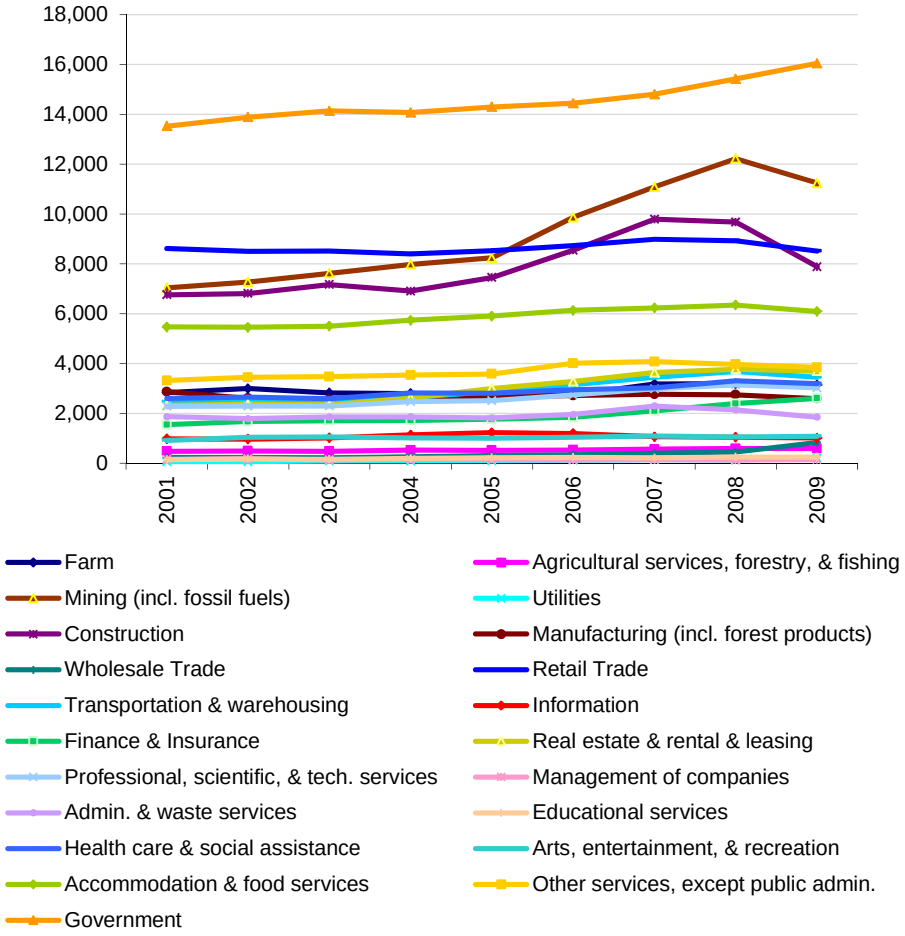
All employment data are reported by place of work.
Estimates for data that were not disclosed are shown in italics. Actual and estimated data do not necessarily add to totals.
Source: EPS-HDT Socioeconomic Measures Report, December 14, 2011, based on 2011 data from the BEA, Regional Economic Information System, Table CA25.

Figure 4-4. Socioeconomic Study Area Employment by Major Sector Categories, 2001–2009



Source: EPS-HDT Socioeconomic Measures Report, December 14, 2011, based on 2011 data from the BEA, Regional Economic Information System, Table CA25N.

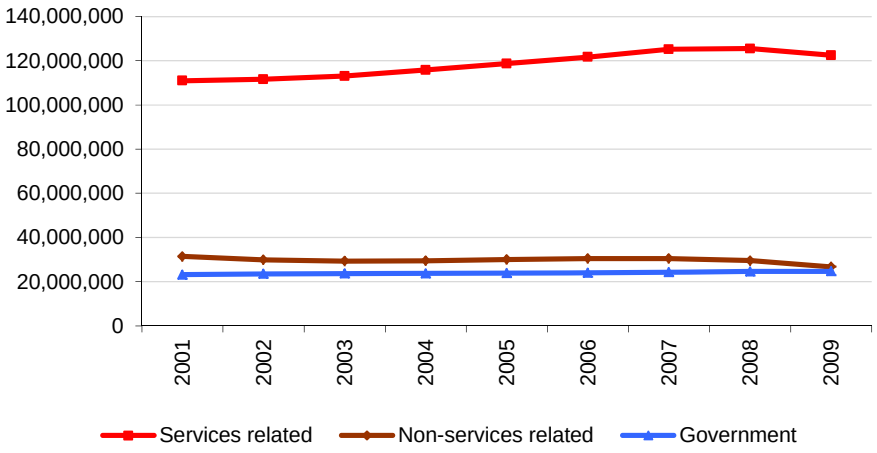
Figure 4-5. Socioeconomic Study Area Employment by Industry, 2001–2009



Source: EPS-HDT Socioeconomic Measures Report, December 14, 2011, based on 2011 data from the BEA, Regional Economic Information System, Table CA25N.

The overall picture of the socioeconomic study area shown by the employment shares and trends discussed above is of an economy that, like most of the nation, has the largest share of employment in the *Services-related* sector and has shown substantial increases in employment in that sector over recent decades. Like most of the nation, the socioeconomic study area has seen a modest but steady increase in *Government* sector employment. The *Non-services related* sector is, in relative terms, much more important to the study area economy than it is for the nation as a whole, and unlike most of the nation, the study area has seen substantial job growth in this sector (compare Figure 4-4 above to Figure 4-6 for the nation below). The earnings data in Section 4.2 and the discussion of the study area's economic base in Section 4.4 further emphasize the importance of the *Non-services related* sector, particularly the *Mining* industry, to the study area economy. Finally, while *Mining* and *Construction* showed decreases in employment since 2007–2008, in general the study area economy has been somewhat less affected by the recent recession than have many other areas of the country.

Figure 4-6. U.S. Employment by Major Sector Categories, 2001–2009



At the county level, a few observations on the 2001 to 2009 employment data in Appendix B are useful here. Sweetwater County had the largest total employment in 2009, with 29,977 jobs. It gained 5,660 jobs from 2001 to 2009, a 23.3% increase. Fremont County had the next largest employment, with 24,752 jobs in 2009, a 15.7% increase over 2001. Sublette County had the lowest employment in 2009, with 8,192 jobs, but had by far the largest percentage increase in jobs at 159.5% based on 3,931 new jobs.

Sublette County's job growth was driven by the *Mining* industry, which increased by 1,712 jobs to become the largest industry in the county in 2009. *Construction* and *Government* were the next largest industries and also had significant job increases, 439 and 387 jobs, respectively.

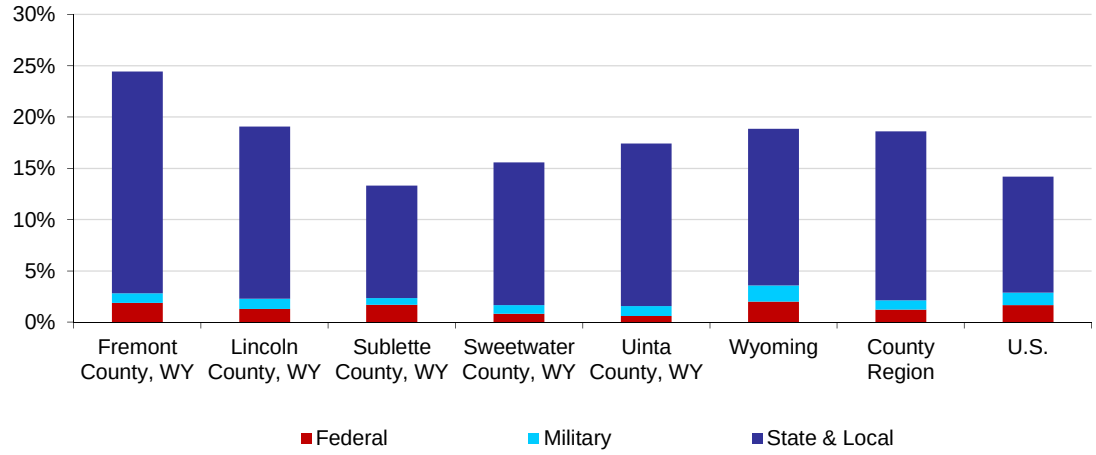
In Sweetwater County, *Mining* was the largest industry throughout the period and also showed substantial growth, gaining 1,028 jobs. *Government* was the next largest industry and gained 463 jobs. *Retail trade* was the third largest industry, in part reflecting the importance of Rock Springs as a commercial center for the southwest Wyoming region. However, *Retail trade* job growth was flat through the 2001 to 2009 period. *Construction* was the fourth or fifth largest industry during the period, with strong growth to 2008 and then a decline in 2009; it had overall growth of 442 jobs. *Accommodation and food services* and *Transportation and warehousing* were also significant industries in Sweetwater County, also reflecting its status as a commercial center. These industries grew by 352 and 657 jobs, respectively.

Notable employment characteristics of the other three counties of the socioeconomic study area include the following. In Fremont County, *Government* was by far the largest industry and had substantial growth from 2001 to 2009. In Lincoln County, *Government* was also the largest industry in 2009 and also grew. *Construction* grew sharply from 2005 to 2007, becoming the largest industry in 2007, but it declined sharply from 2007 to 2009. *Mining* had Lincoln County's largest employment increase in from 2001 to 2009, with 405 jobs added. In Uinta County, *Mining* and *Construction* had the largest job increases, with 421 and 283 jobs gained, respectively. *Government* was the largest industry. *Health care and social assistance* was relatively more important to Uinta County's economy, with 10.4% of employment in 2009, than in other counties (e.g., Sweetwater County with 4.6%).

Throughout the socioeconomic study area (and the state and nation), the *Government* sector is a significant employer, so understanding this sector is important. As shown in Figure 4-7, *Government* employment, as a percentage of total employment, varies from county to county in the socioeconomic study area. All counties except Sublette County have a higher percentage than the nation; this is often true

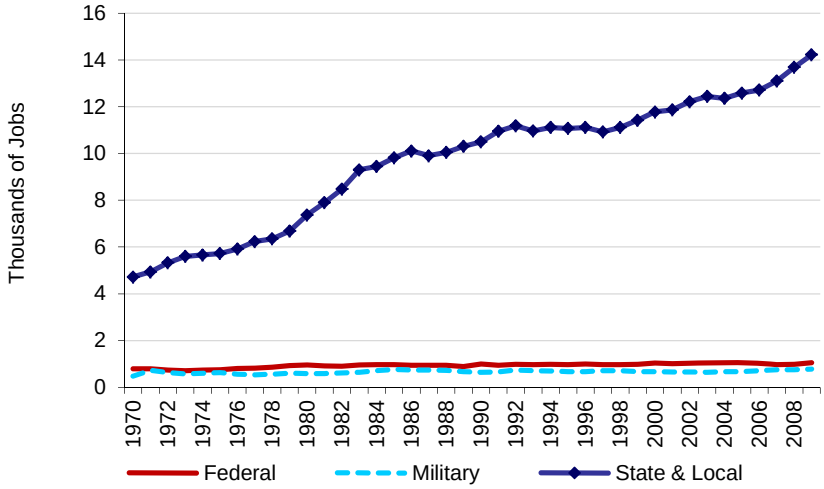
of rural counties with low populations. Fremont County has the highest percentage of jobs in *Government,* at nearly 25%, significantly exceeding the statewide figure of roughly 18%. Throughout the socioeconomic study area, state and local government employment constitutes a much larger segment of the overall sector than Federal Government employment. State and local government employment has also shown the most growth over recent decades (Figure 4-8).

Figure 4-7. Percentage of Total Jobs in Government, 2009



"County Region" represents all five counties of the socioeconomic study area.
Source: EPS-HDT Government Employment Report, December 14, 2011, based on 2011 data from the BEA, Regional Economic Information System, Table CA25N.

Figure 4-8. Government Jobs by Type, Socioeconomic Study Area



Source: EPS-HDT Government Employment Report, December 14, 2011, based on 2011 data from the BEA, Regional Economic Information System, Tables CA25, CA25N, and CA30.

4.2 EARNINGS AND PAY

Labor earnings (or simply, earnings) are defined as the sum of wage and salary disbursements, supplements to wages and salaries, and proprietors' income (BEA 2010). Table 4-3, Figure 4-9, and

Figure 4-10 show earnings for the socioeconomic study area as a whole for 2001 to 2009 in total dollars and as a percentage of total earnings. Appendix C provides figures and tables detailing earnings for each county.

At the level of major sector categories, note that *Non-services related* earnings are larger than *Services-related* earnings. This is the opposite of the size order for employment, and reflects the higher average earnings per job in the *Non-services related* sector. *Government* is the smallest sector in terms of earnings, as it is in terms of employment. All three sectors saw growth in earnings from 2001 to 2009, although both *Non-services related* and *Services-related* earnings declined recently due to the recession.

At the individual industry level, for earnings, *Mining* is the largest industry in the socioeconomic study area, followed by *Government*. This order is also the opposite of the order for employment. *Construction* was the third largest industry, by earnings, throughout the 2001 to 2009 period. All three of these industries saw significant earnings growth from 2001 to 2009, with increases of $418 million (64.4%), $301 million (53.0%), and $65 million (19.6%), respectively. However, both *Mining* and *Construction* experienced declines in earnings owing to the recent recession. The next largest industries for 2009 earnings were *Transportation and warehousing* and *Retail trade*. The former saw significant earnings growth in the period ($87 million, or 57.9%), while the latter saw modest growth ($20 million, or 9.5%). Another industry with significant absolute and percentage growth in earnings was the *Professional and technical services* industry, with $87 million (67.3%) in earnings growth.

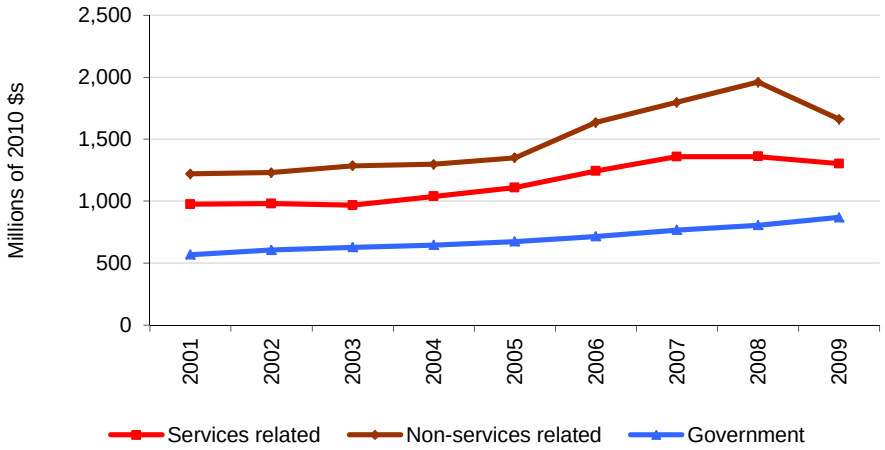
Table 4-3. Socioeconomic Study Area Earnings by Industry (Thousands of 2010$)

Industry (NAICS Code)	2001	2009	Change 2001–2009
Labor Earnings	2,854,771	4,090,265	1,235,494
Non-services related	1,218,302	1,660,502	442,200
Farm	28,585	-1,514	-30,099
Forestry, fishing, & related activities	7,241	10,227	2,986
Mining (including fossil fuels)	649,275	1,067,327	418,052
Construction	331,222	396,007	64,784
Manufacturing	201,979	188,456	-13,523
Services related	973,360	1,301,662	328,302
Utilities	5,791	21,267	15,477
Wholesale trade	11,814	49,079	37,265
Retail trade	210,632	230,738	20,106
Transportation and warehousing	149,484	236,007	86,523
Information	34,930	45,062	10,132
Finance and insurance	56,989	68,344	11,355
Real estate and rental and leasing	75,482	71,599	-3,883
Professional and technical services	87,738	146,742	59,005
Management of companies and enterprises	7,393	7,339	-54
Administrative and waste services	46,710	47,733	1,023
Educational services	1,345	3,677	2,332
Health care and social assistance	78,671	118,071	39,399

Industry (NAICS Code)	2001	2009	Change 2001–2009
Arts, entertainment, and recreation	25,998	26,568	570
Accommodation and food services	90,296	115,704	25,408
Other services, except public administration	90,089	113,732	23,643
Government	566,829	867,352	300,523
Percentage of Total			**Percentage Change 2001–2009**
Labor Earnings			43.3%
Non-services related	42.7%	40.6%	36.3%
Farm	1.0%	0.0%	-105.3%
Forestry, fishing, & related activities	0.3%	0.3%	41.2%
Mining (including fossil fuels)	22.7%	26.1%	64.4%
Construction	11.6%	9.7%	19.6%
Manufacturing	7.1%	4.6%	-6.7%
Services related	34.1%	31.8%	33.7%
Utilities	0.2%	0.5%	267.3%
Wholesale trade	0.4%	1.2%	315.4%
Retail trade	7.4%	5.6%	9.5%
Transportation and warehousing	5.2%	5.8%	57.9%
Information	1.2%	1.1%	29.0%
Finance and insurance	2.0%	1.7%	19.9%
Real estate and rental and leasing	2.6%	1.8%	-5.1%
Professional and technical services	3.1%	3.6%	67.3%
Management of companies and enterprises	0.3%	0.2%	-0.7%
Administrative and waste services	1.6%	1.2%	2.2%
Educational services	0.0%	0.1%	173.4%
Health care and social assistance	2.8%	2.9%	50.1%
Arts, entertainment, and recreation	0.9%	0.6%	2.2%
Accommodation and food services	3.2%	2.8%	28.1%
Other services, except public administration	3.2%	2.8%	26.2%
Government	19.9%	21.2%	53.0%

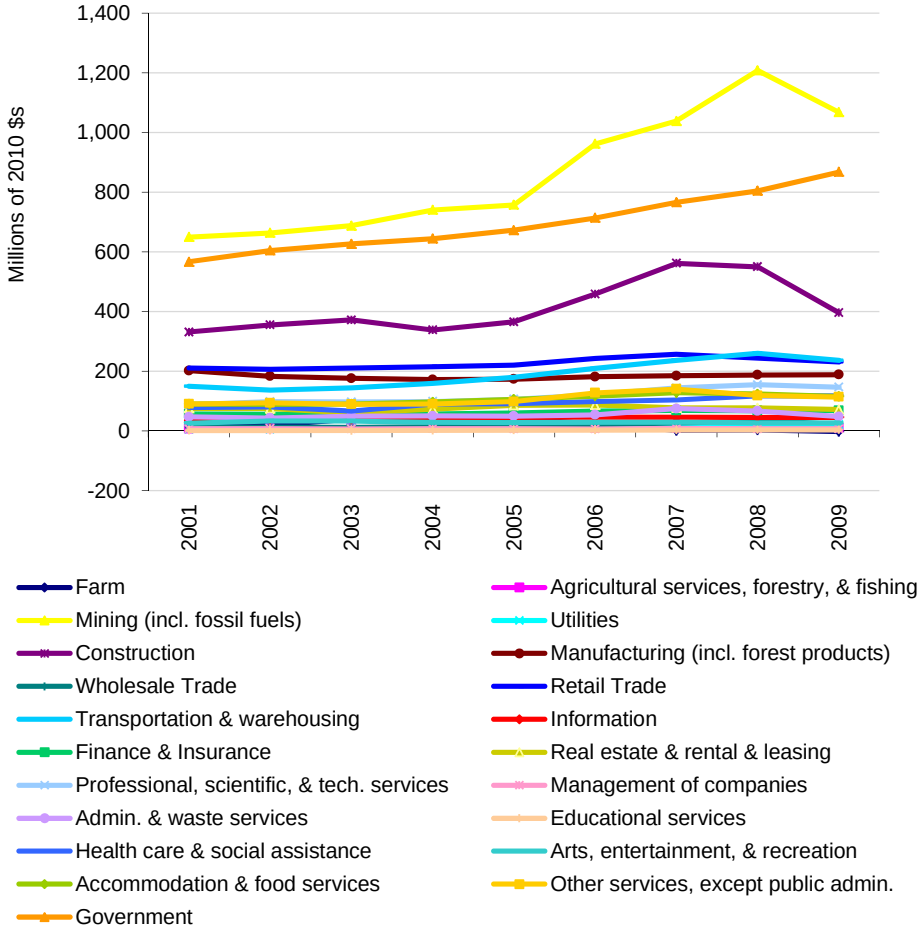
All earnings data are reported by place of work.
Estimates for data that were not disclosed are shown in italics. Actual and estimated data do not necessarily add to totals.
Source: EPS-HDT Socioeconomic Measures Report, December 14, 2011, based on 2011 data from the BEA, Regional Economic Information System, Table CA05N.

Figure 4-9. Socioeconomic Study Area Earnings by Major Sector Categories



Source: EPS-HDT Socioeconomic Measures Report, December 14, 2011, based on 2011 data from the BEA, Regional Economic Information System, Table CA05N.

Figure 4-10. Socioeconomic Study Area Earnings by Industry



Source: EPS-HDT Socioeconomic Measures Report, December 14, 2011, based on 2011 data from the BEA, Regional Economic Information System, Table CA05N.

The data in Appendix C show some important aspects of and differences in earnings patterns at the county level. Sweetwater County had by far the largest earnings in 2009, with $1.755 billion in total earnings. Fremont County had the next largest total earnings, at $891 million. Lincoln County had the lowest earnings, at $388 million. Sublette County saw the largest percentage increase in total earnings from 2001 to 2009: 204.4%. Earnings in Sweetwater County increased 39.4%. The other counties saw earnings increases of 27.8 to 33.0%.

As with employment growth, the dramatic earnings growth in Sublette County was dominated by a large and rapid increase in the *Mining* industry, an earnings increase that totaled $165 million. This earnings growth made *Mining* by far the largest industry in the county in 2009, accounting for 42.5% of total earnings.

In Sweetwater County, *Mining* was also the largest industry for earnings and also saw significant earnings growth ($117 million). *Mining* accounted for 34.4% of total earnings in the county in 2009.

In the other three counties, *Government* was the largest industry for earnings in 2009, and saw increases from 2001 to 2009. In Lincoln County and Uinta County, the *Mining* and *Construction* industries were nearly as large as *Government* (in some years, larger) in terms of earnings during the 2001 to 2009 period.

Table 4-4 shows average annual wages by industry for the socioeconomic study area in 2010. It also shows employment by industry to indicate the relative importance of each industry. The industry categories are different for this table than those in earlier tables because data were pulled from the Bureau of Labor Statistics (BLS), whereas the data for employment and earnings came from the BEA, which uses slightly different categories.

The average annual wage in the socioeconomic study area in 2010 was $45,261. The highest average wages were in the *Mining* industry, at $83,009, followed by *Manufacturing* ($62,098), *Federal Government* ($53,773), and *Construction ($51,384). Professional and business services* ($45,748) and *State Government* ($46,620) also had higher than average wages.

Table 4-4. Study Area Employment and Wages by Industry, 2010 (2010$)

Industry (per BLS)	Employment	Percentage of Total Employment	Avg. Annual Wages	Percentage Above or Below Avg.
Total	**61,026**		**$45,261**	
Private	**45,708**	**74.9%**	**$46,892**	**3.6%**
Non-services related	**16,963**	**27.8%**	**$69,298**	**53.1%**
Natural resources and mining	9,338	15.3%	$81,600	80.3%
Agriculture, forestry, fishing & hunting	231	0.4%	$26,065	-42.4%
Mining (incl. fossil fuels)	9,107	14.9%	$83,009	83.4%
Construction	5,603	9.2%	$51,384	13.5%
Manufacturing (Incl. forest products)	2,023	3.3%	$62,098	37.2%
Services related	**28,746**	**47.1%**	**$33,669**	**-25.6%**
Trade, transportation, and utilities	10,968	18.0%	$38,277	-15.4%
Information	825	1.4%	$38,874	-14.1%
Financial activities	2,159	3.5%	$44,729	-1.2%

Industry (per BLS)	Employment	Percentage of Total Employment	Avg. Annual Wages	Percentage Above or Below Avg.
Professional and business services	2,950	4.8%	$45,748	1.1%
Education and health services	4,844	7.9%	$31,854	-29.6%
Leisure and hospitality	5,549	9.1%	$14,545	-67.9%
Other services	1,452	2.4%	$34,026	-24.8%
Unclassified	0	0.0%	$0	-100.0%
Government	**15,320**	**25.1%**	**$40,388**	**-10.8%**
Federal government	1,127	1.8%	$53,773	18.8%
State government	1,836	3.0%	$46,620	3.0%
Local government	12,357	20.2%	$38,241	-15.5%

Note: This table shows wage data from the Bureau of Labor Statistics, which does not report data for proprietors and the self-employed or the value of benefits, and uses slightly different industry categories than those used by the BEA for employment and earnings data on previous pages of this report. As reported by the Bureau of Labor Statistics, wages include gross wages and salaries, bonuses, stock options, tips and other gratuities, and the value of meals and lodging.
Source: EPS-HDT Socioeconomic Measures Report, December 14, 2011, based on 2011 data from the Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

4.3 PERSONAL INCOME

Personal income is income received from all sources, including income received from participation in production as well as from government and business transfer payments. Total personal income includes labor earnings (detailed in Section 4.2) and non-labor income, which includes dividends, interest, and rent, and also transfer payments such as Social Security. The definitions of these categories, and important components of these categories, are provided in Appendix D.

Table 4-5 shows the prevalence of different types of personal income in socioeconomic study area households based on 2005 to 2009 data.[5] The income source patterns for households in the socioeconomic study area are largely similar to those for Wyoming and relatively similar for the United States, with a few exceptions. All study area counties except Fremont County have higher percentages of households with earnings than the United States. Sweetwater County has the highest percentage of households with earnings (88.2%). It also has the lowest percentage of households with Social Security income (20.0%), while Fremont County has the highest (31.1%). Fremont County also has the highest percentages of households with supplemental security income (3.7%) and retirement income (18.7%), although these figures are not dramatically different than those for the United States. However, Fremont County's percentage of households with public assistance income is substantially higher than that of any other county or the state, and is higher than the nation as well.

Table 4-6 shows trends in high-level categories of personal income for the socioeconomic study area as a whole. The definitions of these categories, and important components of these categories, are provided in Appendix D. The key trend shown in this table is the long-term decrease in labor earnings as a percentage of total personal income and the corresponding increase in non-labor income as a percentage of total personal income. The trend for non-labor income is shown graphically in Figure 4-11.

[5] *A household includes all the people who occupy a housing unit as their usual place of residence (U.S. Census Bureau 2010). Note that a household is different from a family, which is defined as a group of two or more people who reside together and who are related by birth, marriage, or adoption.*

This trend for the socioeconomic study area mirrors statewide and national trends. Statewide, the percentage of income from non-labor sources has increased from 24.2% in 1970 to 40.9% as of 2009 (BEA 1970–2008). Both components of non-labor income—dividends, interest, and rent; and transfer payments—have increased statewide. Within transfer payments, income maintenance benefits (welfare) and unemployment insurance compensation income have remained relatively stable as a percentage of total income, while retirement and other income have increased. These trends reflect an aging population. As the average age has increased, a greater percentage of the population has entered retirement and left the workforce. In addition, income from dividends, interest, and rent has increased in Wyoming and nationally, as the wealth of upper income and, to some extent, middle income portions of the population has increased over recent decades.

There are significant differences between the counties of the socioeconomic study area in non-labor income as a percentage of total income, as shown in Figure 4-12 for 2009. The percentages for Sublette County (31.2%), Sweetwater County (27.8%), and Uinta County (27.2%) are all lower than those of the state (40.8%) and nation (35.5%). The percentage for Fremont County (46.4%) is considerably higher than that of the state or nation, and the percentage for Lincoln County (40.3%) is higher than for the nation.

A number of factors no doubt contribute to these differences. As shown in Section 3.3, Fremont and Lincoln counties have higher percentages of population over 65 (14.5 and 12.4%, respectively) than the other three counties (Sublette, 10.1%; Sweetwater, 8.3%; and Uinta, 8.9%), likely indicating higher proportions of retired persons. In addition, Fremont County has the lowest median family income (at $55,531, more than $10,000 less than Lincoln County's figure, the next lowest) and the highest percentage of individuals in poverty (14.0%). The latter figure in particular suggests higher rates of public assistance, which is corroborated by Table 4-5 as discussed above. Uinta County has a large percentage of individuals in poverty (12.1%) but also has a low percentage of population over 65 (8.9%) and a relatively high median family income ($68, 949). Sublette and Sweetwater counties both have very high median family incomes and low percentages of individuals in poverty ($81,389 and $79,527; and 4.2 and 8.2%, respectively). In addition, the very robust mining industry in both these counties suggests a generally younger workforce that largely relies on labor earnings.

Table 4-7 provides a detailed breakdown of non-labor income in the socioeconomic study area for 2009. For the five-county region, dividends, interest, and rent make up 59.3% of total non-labor income, and transfer payments make up 40.7%. Transfer payments are often misunderstood; there is a tendency to associate them mainly with "welfare." As shown in Table 4-7, of the $777 million in transfer payments for the socioeconomic study area, income maintenance benefits (welfare) amount to $47 million, or 6.0%. (This figure is calculated from the numbers just noted; it is not shown directly in the table.) Medicaid payments, which also focus on low-income individuals, total $148 million, or 19% of total transfer payments. The largest components of transfer payments are retirement and disability benefits (Social Security) at $305 million and Medicare at $155 million, which together amount to 59.2% of total transfer payments. Across the five counties, income maintenance benefits, as a percentage of total non-labor income (these figures are shown directly in the table), do not vary considerably (ranging from 0.5% to 3.4%), but Medicaid payments do (ranging from 1.5% in Sublette County to 11.0% in Fremont County).

Table 4-5. Prevalence of Income Sources for Households in the Socioeconomic Study Area

Area	Total Households	With Earnings	With Social Security Income	With Supplemental Security Income	With Public Assistance Income	With Retirement Income
		%	%	%	%	%
Fremont	14,489	79.6%	31.1%	3.7%	3.8%	18.7%
Lincoln	6,475	83.7%	28.6%	2.2%	0.8%	14.8%
Sublette	2,564	82.3%	27.4%	0.4%	0.0%	18.0%
Sweetwater	15,495	88.2%	20.0%	1.8%	1.1%	15.6%
Uinta	7,251	86.6%	22.9%	2.0%	0.7%	13.8%
Wyoming	**208,269**	**83.4%**	**26.2%**	**2.4%**	**1.6%**	**16.3%**
United States	**112,611,029**	**80.1%**	**27.1%**	**3.8%**	**2.4%**	**17.4%**

Source: U.S. Census Bureau American Community Survey 2005–2009.

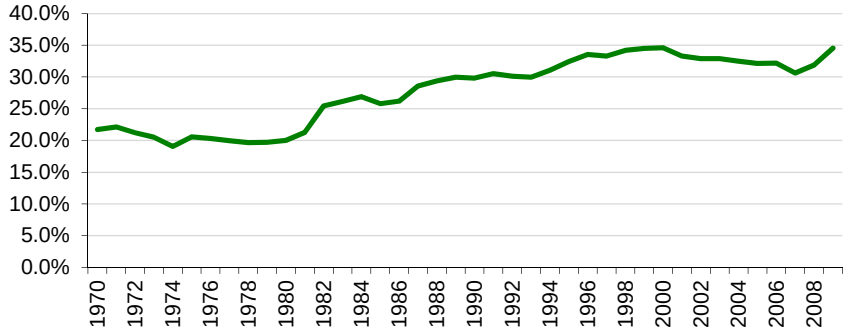
Table 4-6. Components of Personal Income, Study Area, 1970–2009 (Thousands of 2010$)

Income Component	1970	1980	1990	2000	2009	Change 2000–2009
Total Personal Income	**1,356,173**	**3,240,700**	**2,867,641**	**3,778,065**	**5,525,822**	**1,747,757**
Labor Earnings	1,061,320	2,592,937	2,012,733	2,470,567	3,616,520	1,145,953
Non-Labor Income	294,853	647,764	854,908	1,307,498	1,909,302	601,805
Dividends, Interest and Rent	187,967	432,658	534,195	808,627	1,132,286	323,658
Transfer Payments	106,887	215,105	320,712	498,870	777,016	278,146
Percentage of Total						**Percentage Change 2000–2009**
Total Personal Income						**46.3%**
Labor Earnings	78.3%	80.0%	70.2%	65.4%	65.4%	46.4%
Non-Labor Income	21.7%	20.0%	29.8%	34.6%	34.6%	46.0%

Income Component	1970	1980	1990	2000	2009	Change 2000–2009
Dividends, Interest and Rent	13.9%	13.4%	18.6%	21.4%	20.5%	40.0%
Transfer Payments	7.9%	6.6%	11.2%	13.2%	14.1%	55.8%

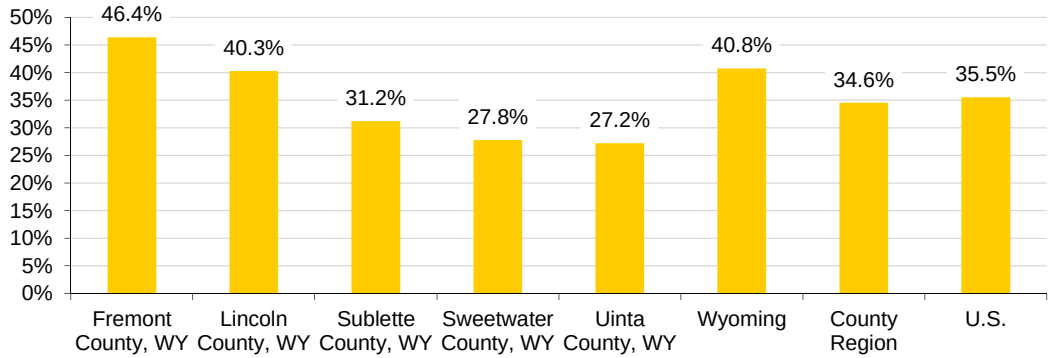
Source: EPS-HDT Socioeconomic Measures Report, December 14, 2011, based on 2011 data from the BEA, Regional Economic Information System, Tables CA05 and CA05N.

Figure 4-11. Trend in Non-Labor Income Share of Total Personal Income, Study Area



Source: EPS-HDT Socioeconomic Measures Report, December 14, 2011, based on 2011 data from the BEA, Regional Economic Information System, Tables CA05 and CA05N.

Figure 4-12. Non-Labor Income as a Percentage of Total Personal Income, 2009



Source: EPS-HDT Summary Report, December 15, 2011, based on 2011 data from the BEA, Regional Economic Information System, Tables CA05N and CA25N.

Table 4-7. Components of Non-Labor Income, Study Area, 2009 (Thousands of 2010$)

Income Component	Fremont County	Lincoln County	Sublette County	Sweetwater County	Uinta County	Wyoming	5-County Region	United States
Total Non-Labor Income ($1000)	696,214	257,880	176,030	536,753	242,426	10,892,997	1,909,302	4,395,767,376
Dividends, Interest, Rent	378,294	162,804	138,550	323,832	128,806	7,480,762	1,132,286	2,228,924,544
Total Transfer Payments	317,920	95,076	37,481	212,921	113,619	3,412,235	777,016	2,166,842,832
Government payments to individuals	310,753	91,929	35,855	205,290	109,745	3,312,032	753,572	2,110,157,188
Retirement & disability insurance benefits	105,595	43,522	19,593	92,851	43,862	1,385,257	305,423	710,991,112
Medical payments	147,666	33,151	9,714	69,923	44,734	1,289,859	305,187	907,045,524
Medicare	70,291	19,032	6,828	40,488	18,309	718,197	154,949	508,458,166
Medicaid	76,301	13,572	2,661	28,965	26,102	546,640	147,602	389,905,270
Military	1,073	547	225	470	322	25,022	2,637	8,682,089
Income maintenance benefits ("welfare")	23,469	3,950	966	11,026	7,656	202,295	47,065	221,430,871

Income Component	Fremont County	Lincoln County	Sublette County	Sweetwater County	Uinta County	Wyoming	5-County Region	United States
Unemployment insurance benefits	16,882	7,022	3,558	18,343	8,492	193,991	54,298	132,275,312
Veterans benefit payments	7,309	1,302	586	4,468	1,479	108,741	15,144	52,272,436
All other government payments to individuals	5,614	1,659	860	5,801	2,043	88,295	15,976	57,677,651
Payments to nonprofit institutions	4,215	1,851	956	4,487	2,279	58,933	13,788	33,338,936
Business payments to individuals	1,680	738	381	1,789	909	23,493	5,497	13,290,446
Percent of Total								
Dividends, Interest, Rent	54.3%	63.1%	78.7%	60.3%	53.1%	68.7%	59.3%	50.7%
Total Transfer Payments	45.7%	36.9%	21.3%	39.7%	46.9%	31.3%	40.7%	49.3%
Government payments to individuals	44.6%	35.6%	20.4%	38.2%	45.3%	30.4%	39.5%	48.0%
Retirement & disability insurance benefits	15.2%	16.9%	11.1%	17.3%	18.1%	12.7%	16.0%	16.2%
Medical payments	21.2%	12.9%	5.5%	13.0%	18.5%	11.8%	16.0%	20.6%
Medicare	10.1%	7.4%	3.9%	7.5%	7.6%	6.6%	8.1%	11.6%
Medicaid	11.0%	5.3%	1.5%	5.4%	10.8%	5.0%	7.7%	8.9%
Military	0.2%	0.2%	0.1%	0.1%	0.1%	0.2%	0.1%	0.2%
Income maintenance benefits ("welfare")	3.4%	1.5%	0.5%	2.1%	3.2%	1.9%	2.5%	5.0%
Unemployment insurance benefits	2.4%	2.7%	2.0%	3.4%	3.5%	1.8%	2.8%	3.0%
Veterans benefit payments	1.0%	0.5%	0.3%	0.8%	0.6%	1.0%	0.8%	1.2%
All other gov't payments to individuals	0.8%	0.6%	0.5%	1.1%	0.8%	0.8%	0.8%	1.3%
Payments to nonprofit institutions	0.6%	0.7%	0.5%	0.8%	0.9%	0.5%	0.7%	0.8%
Business payments to individuals	0.2%	0.3%	0.2%	0.3%	0.4%	0.2%	0.3%	0.3%

Source: EPS-HDT Non-Labor Income Report, December 16, 2011, based on 2011 data from the BEA, Regional Economic Information System, Tables CA05N and CA35.

4.4 ECONOMIC BASE

An area's economic base is composed of "basic industries" that bring outside income into the local economy. These industries export most or all of their goods and services outside the region, serving economic demand generated by non-local businesses and consumers. Manufacturing and mining are often thought of as basic industries because they usually export most of their goods outside the local area and are dependent on non-local economic factors. By bringing in outside income, basic industries help support "non-basic" industries, such as retail trade, housing, construction, and personal services, which, in most cases, primarily serve locally generated economic demand. (Re-spending of income creates a "multiplier effect," which is discussed further in the introduction to Chapter 5. The multiplier effect from outside income is often very important in a study area's economy.) Some industries may be partly basic and partly non-basic, depending on local conditions. For instance, restaurants and retail stores are largely non-basic when they primarily serve local businesses and residents; in other areas, they may be strongly basic if they respond to significant tourism-generated demand, thereby bringing expenditures from non-local tourists into the local economy.

Another way to think of economic base is in terms of specializations in the local economy compared with a larger economy, such as the national economy. The specialization of certain geographic areas in certain industries has traditionally been tied to such factors as the natural resource base, transportation and other infrastructure, and cost factors such as labor. In areas with a high proportion of public lands, industries such as mining, grazing, and tourism may be important local economic specializations that bring outside income into the local economy.

Calculation of "location quotients" (LQ) is one way to assess an area's economic base or specializations (Florida State University 2010). An LQ compares an industry's share of total local economic activity with the industry's share in a larger economy, such as the state or nation. The quotient is a ratio, where 1.0 indicates an equal share percentage between the local and larger economies. LQs less than 1.0 signify a smaller share locally than for the larger economy; figures greater than 1.0 signify a larger share locally, and thus some degree of specialization of the local economy in that sector compared with the larger economy.[6] The greater the ratio, the greater the degree of specialization. LQs, however, must be interpreted along with data on the size of an industry. An industry could have a very high LQ but not be especially important locally if it provides only a small amount of an area's jobs or earnings.

LQs for employment and earnings for the socioeconomic study area are shown in Table 4-8. These quotients are based on a comparison of the socioeconomic study area's economy with the national economy using 2009 data (the most recent available).

For the socioeconomic study area, the following industries have particularly high LQs *and* have a large share of employment or earnings (more than 5%) in 2009:

- *Mining*—This industry has LQs of 16.66 and 18.43 for employment and earnings, respectively, while providing 13.0% of jobs and 26.1% of earnings. Clearly, this industry is very important to the socioeconomic study area economy.
- *Construction*—Construction has LQs of 1.67 for employment and 1.79 for earnings, and provides 9.1% of jobs and 9.7% of earnings. This is clearly an important industry for the socioeconomic

[6] *Put another way, if a ratio of 1.0 indicates the "expected" amount of economic activity based on the profile of the larger economy, the amount of activity that brings the ratio up to 1.0 probably serves local needs, while the amount that increases the ratio beyond 1.0 probably serves non-local needs. However, this is not uniformly the case; some industries such as mining may serve non-local needs almost entirely.*

study area, although it should be noted some construction activity is dependent on demand generated by the robust mining industry.

- *Transportation and warehousing*—LQs of 1.27 for employment and 1.75 for earnings indicate this industry has "basic" characteristics for the socioeconomic study area. While it provides less than 5% of employment (4.0%), it provides 5.8% of earnings.

The following industries have high LQs, but small shares of employment or earnings:

- *Farming*—With an employment LQ of 2.41, farming has strong "basic" characteristics. However, it provides only 3.7% of employment (and typically many jobs in this industry are part-time) and zero percent of earnings. (Earnings were negative for this industry in 2009, reflecting economic losses in that year.)
- *Forestry, fishing, and related activities*—This industry has an employment LQ of 1.43, but its earnings LQ is less than one (0.90), and it provides only 0.7% and 0.3% of employment and earnings, respectively.

Two industries have large shares of employment and/or earnings, but relatively unremarkable LQs:

- *Government*—Government is a large sector, with 18.6% of employment and 21.2% of earnings. Its LQs are 1.31 for employment and 1.16 for earnings, indicating some "basic" aspects. However, an important portion of this sector is local government, which is largely supported by recirculation of local income rather than an influx of outside funds.
- *Accommodation and food services*—This industry has 7.1% of employment, but only 2.8% of earnings. This is indicative of a relatively high number of part-time jobs in this industry. The LQs—1.02 for employment and 0.96 for earnings—indicate shares of local economic activity that are very similar to this industry's shares in the national economy.

Table 4-8. Location Quotients for Employment and Earnings in the Socioeconomic Study Area, Relative to the United States (2009)

NAICS Category	Employment		Earnings	
	Location Quotient	Share of Total	Location Quotient	Share of Total
Non-services related	1.92	29.5%	2.24	40.6%
Farm	2.41	3.7%	-0.05	0.0%
Forestry, fishing, & related activities	1.43	0.7%	0.90	0.3%
Mining (including fossil fuels)	16.66	13.0%	18.43	26.1%
Construction	1.67	9.1%	1.79	9.7%
Manufacturing	0.42	3.0%	0.45	4.6%
Services related	0.65	46.1%	0.50	31.8%
Utilities	0.70	0.2%	0.59	0.5%
Wholesale trade	0.27	1.0%	0.24	1.2%
Retail trade	0.97	9.9%	0.95	5.6%
Transportation and warehousing	1.27	4.0%	1.75	5.8%
Information	0.61	1.2%	0.32	1.1%
Finance and insurance	0.56	3.0%	0.24	1.7%

NAICS Category	Employment		Earnings	
	Location Quotient	Share of Total	Location Quotient	Share of Total
Real estate and rental and leasing	0.99	4.3%	1.01	1.8%
Professional and technical services	0.51	3.5%	0.36	3.6%
Management of companies and enterprises	0.15	0.2%	0.08	0.2%
Administrative and waste services	0.38	2.1%	0.32	1.2%
Educational services	0.13	0.3%	0.06	0.1%
Health care and social assistance	0.34	3.7%	0.26	2.9%
Arts, entertainment, and recreation	0.57	1.3%	0.58	0.6%
Accommodation and food services	1.02	7.1%	0.96	2.8%
Other services, except public administration	0.78	4.5%	0.77	2.8%
Government	1.31	18.6%	1.16	21.2%

Italics indicates figures based on EPS-HDT estimates for data that were not disclosed by the BEA.
The Location Quotient (LQ) is calculated as LQ = (ei/e)/(Ei/E), where ei is equal to the local measure (i.e., employment or earnings) in industry i, e is equal to the total local measure, Ei is equal to the reference area measure in industry i, and E is equal to the total reference area measure.
Source: Employment and earnings data from EPS-HDT Socioeconomic Measures Report, December 14, 2011 (study area), and December 16, 2011 (United States), based on 2011 data from the BEA, Regional Economic Information System, Tables CA25 and CA05N.

4.5 SPECIFIC ECONOMIC SECTORS

This section discusses in greater detail the economic sectors most relevant to (and potentially affected by) the decisions that will be addressed in development of the RSFO RMP. These sectors include agriculture, mining, renewable energy, and tourism and recreation. This section addresses these sectors generally, across the socioeconomic study area or state as noted below. BLM-specific information is presented in the Uses and Values of BLM-Administered Lands section below.

4.5.1 Agriculture

Table 4-9 provides basic statistics on agriculture in the socioeconomic study area. Fremont County and Sweetwater County both have large acreages of land in farms. The value of agricultural production is much greater in Fremont County, which is ranked third among all Wyoming counties. All other counties in the study area are much lower in rank among Wyoming's 23 counties.

Table 4-9. Farms, Land in Farms, and Agricultural Value

County	No. of Farms[1]	Land in Farms[1]	Total Public Land[2]	Land Assessed as Agri-cultural Use[2]	Value of Livestock Inventory[3]	Value of Crop Produc-tion[3]	Total Value[3]	Rank Among Wyoming Counties by Total Value[3]
		1,000 Acres	1,000 Acres	1,000 Acres	$Million	$Million	$Million	
Fremont	1,394	1,800.5	5,108.1	734.4	117.1	32.4	149.5	3
Lincoln	535	342.6	2,030.3	505.7	53.2	13.8	67.0	16

County	No. of Farms[1]	Land in Farms[1]	Total Public Land[2]	Land Assessed as Agri-cultural Use[2]	Value of Livestock Inventory[3]	Value of Crop Produc-tion[3]	Total Value[3]	Rank Among Wyoming Counties by Total Value[3]
		1,000 Acres	1,000 Acres	1,000 Acres	$Million	$Million	$Million	
Sublette	366	599.3	2,568.7	542.4	60.5	9.0	69.5	15
Sweetwater	244	1,486.4	4,907.5	1,713.8	24.8	5.6	30.4	22
Uinta	344	742.8	580.3	716.6	58.6	7.8	66.4	17
State of Wyoming	**11,069**	**30,169.3**	**35,670.6**	**24,976.4**	**1,632.5**	**371.3**	**2,003.8**	**NA**

NA: Not applicable.
[1] 2007 Census of Agriculture.
[2] From *The Equality State Almanac* (WEAD 2010a).
[3] 2011 data from the National Agricultural Statistical Service.
Source: U.S. Department of Agriculture, National Agricultural Statistical Service, Wyoming Field Office, Wyoming Agricultural Statistics 2011, p. 30.

Table 4-10 shows trends in cattle production. Each of the counties, and the state as a whole, has seen some variation in production from 2004 to 2011. However, changes have not been especially large, nor is there a consistent trend across the counties. Sheep production has also been variable, as shown in Table 4-11, with a clear downward trend in production in Fremont County, Uinta County, and the state in the last few years.

Table 4-10. Total Cattle and Calves, January 1, 2004–2011

County	2004	2005	2006	2007	2008	2009	2010	2011
Fremont	90,000	85,000	80,000	80,000	97,000	100,000	97,000	96,000
Lincoln	39,000	40,000	44,000	42,000	36,000	37,000	36,000	35,500
Sublette	60,000	60,000	63,000	64,000	51,000	52,000	51,000	50,000
Sweetwater	15,000	14,000	15,000	15,000	19,300	19,900	19,500	19,100
Uinta	42,000	38,000	41,000	43,000	44,500	45,000	45,000	44,000
State of Wyoming	**1,350,000**	**1,300,000**	**1,400,000**	**1,400,000**	**1,310,000**	**1,350,000**	**1,320,000**	**1,300,000**

Note: Beginning in 2008, estimates were revised based on new estimation process.
Source: U.S. Department of Agriculture, National Agricultural Statistical Service, Wyoming Field Office, Wyoming Agricultural Statistics 2011, p. 47.

Table 4-11. Total Sheep and Lambs, January 1, 2004–2011

County	2004	2005	2006	2007	2008	2009	2010	2011
Fremont	40,000	40,000	42,800	34,500	23,000	23,000	21,000	20,000
Lincoln	32,800	40,500	36,000	37,000	45,000	44,000	39,000	38,000
Sublette	13,200	10,500	12,200	15,000	N/A	N/A	N/A	N/A
Sweetwater	11,100	10,000	10,100	9,000	N/A	N/A	N/A	N/A
Uinta	43,600	44,500	46,100	45,000	42,000	43,000	37,000	36,500
State of Wyoming	**430,000**	**445,000**	**450,000**	**440,000**	**425,000**	**420,000**	**375,000**	**365,000**

County	2004	2005	2006	2007	2008	2009	2010	2011

N/A: Not available.
Note: Beginning in 2008, estimates were revised based on new estimation process.
Source: U.S. Department of Agriculture, National Agricultural Statistical Service, Wyoming Field Office, Wyoming Agricultural Statistics 2011, p. 60.

Livestock production levels reflect complex judgments on the part of producers regarding returns on management of their herds and the resulting impacts on their net farm income. Actual net farm income is sensitive to many factors, including prices for livestock, the impacts of seasonal weather on the availability of forage on public and private lands, prices of additional feed and other inputs to production, government payments to agricultural producers, cost of capital, and many other factors. Net farm income tends to be highly variable from year to year. For instance, *Wyoming Agricultural Statistics 2012* (USDA NASS 2012) shows that annual net farm income for all Wyoming agriculture from 2005 to 2010 averaged $101 million, and ranged from $297 million in 2005 to negative $32 million in 2009.

4.5.2 Mining

The Wyoming mining industry is largely dominated by oil, gas, and coal; and to a lesser extent bentonite, sand and gravel, trona, and uranium. Table 4-12 provides the taxable value of mineral production in Wyoming from 2004 to 2010. Oil and natural gas taxable production value has risen substantially over that period, while coal and trona have also seen significant increases. Taxable production value is affected by physical production and prices, both of which have varied over time.

Table 4-13 and Table 4-14 show physical volumes for gas and oil production from 2000 to 2011 for the counties in the socioeconomic study area. Several points and trends are worth noting here. Gas production across the study area and the state has increased substantially since 2000. The socioeconomic study area provides most of the gas produced in Wyoming; this proportion has remained relatively constant (69% to 74%) over the period shown. Sublette County had by far the largest volume of gas production in 2011 of all counties in the study area and state—it accounted for nearly half of statewide gas production in 2011. Gas production in Sublette County also showed enormous growth (more than doubling) between 2000 and 2011. Sweetwater and Fremont counties—while producing much less than Sublette County—were the second and third largest gas producers in the state in 2011 (Wyoming Oil and Gas Conservation Commission 2012). Production in these two counties has seen some increases and decreases over the period shown.

Comparatively, oil production in the socioeconomic study area and state has been relatively steady through the 2000 to 2011 period, with a slight upward trend discernible in the study area. The study area has accounted for a smaller proportion of statewide oil production than the proportion for gas production, but its proportion of statewide oil production grew from 27% in 2000 to 38% in 2010. Oil production grew considerably in Sublette and Sweetwater counties, grew slightly in Fremont County, and declined in Lincoln and Uinta counties (considerably so in Uinta County).

Table 4-15 shows the number of oil and gas wells drilled ("spud" or "spudded") in the socioeconomic study area by county and statewide from 2000 to 2011. Statewide, drilling activity was at a high level, with some fluctuations, from 2000 to 2008. The peak was in 2001 (not shown), at 6,319 wells drilled. This dropped to 3,126 wells in 2003 (not shown), and then climbed steadily to 5,249 wells in 2008. Drilling activity dropped sharply in 2009 (to 1,481 wells) owing to the recession. Within the study area, drilling activity increased fairly steadily from 2000 to 2006, then increased sharply for 2007 and 2008, and dropped sharply in 2009. As a percentage of statewide drilling activity, the study area's activity grew from less than 10% in 2000 and 2001 to more than 40% by 2007, and has remained more than 40% since, with a peak of 60% in 2009. 2007 and 2008 were the peak drilling years in all counties of the study area

except for Fremont County, which saw drilling peak in 2006. Sublette and Sweetwater counties had by far the highest levels of drilling throughout the period shown, with roughly similar drilling activity from 2000 through 2004. In 2005, drilling activity in Sublette County began to substantially outpace that in Sweetwater County, although the drilling levels in Sweetwater County were still substantial through 2008. In both counties, drilling activity from 2009 to 2011 was roughly similar to that in 2006, before the drilling peaks of 2007 and 2008 and the onset of the recession in 2008.

Table 4-12. Taxable Valuation of Mineral Production, Wyoming, 2004–2010 ($Millions)

Mineral Type	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010
Oil	$1,634.1	$2,152.8	$2,533.1	$2,843.2	$4,089.3	$2,439.7	$3,272.8
Natural Gas	$7,039.1	$10,134.2	$8,770.2	$7,271.3	$12,003.5	$5,861.1	$7,601.4
Coal	$2,039.1	$2,280.1	$2,884.9	$3,279.5	$3,760.5	$3,834.5	$4,108.4
Bentonite	$38.2	$43.3	$45.2	$48.6	$58.1	$33.9	$64.2
Sand and Gravel	$14.6	$18.3	$25.0	$28.3	$30.9	$26.1	$22.9
Trona	$198.9	$255.2	$299.2	$339.7	$427.2	3$50.8	$376.0
Uranium	$9.3	$12.3	$17.0	$19.9	$11.4	$22.7	$32.7
All Other Minerals	$10.3	$10.1	$11.7	$14.8	$16.1	$15.1	$15.1
Total	**$10,984.0**	**$14,906.4**	**$14,586.4**	**$13,845.4**	**$20,396.9**	**$12,583.9**	**$15,493.5**

Source: Wyoming Department of Revenue 2011 Annual Report.

Table 4-13. Gas Production by County, 2000–2011 (MCF)

County	2000	2002	2004	2006	2008	2009	2010	2011
Fremont	133,886,976	153,914,149	196,122,118	198,137,736	142,013,802	164,074,285	157,359,039	170,826,435
Lincoln	99,151,194	86,752,866	81,391,972	85,741,567	89,774,994	83,875,812	78,362,895	67,595,370
Sublette	448,281,668	571,005,612	731,278,904	880,446,841	1,145,821,607	1,195,721,744	1,198,120,727	1,132,032,489
Sweetwater	233,453,423	229,597,363	233,500,641	237,821,949	241,447,926	231,472,264	244,983,641	246,813,957
Uinta	195,116,690	170,507,572	151,313,197	137,449,416	127,080,442	107,947,769	118,712,239	106,152,762
Study Area	**1,490,608,539**	**1,702,782,056**	**1,854,734,127**	**1,932,343,584**	**2,089,321,102**	**2,107,976,475**	**2,111,312,183**	**2,008,931,975**
As Percentage of Wyoming	**73.7%**	**69.3%**	**72.2%**	**72.8%**	**70.5%**	**70.1%**	**71.2%**	**72.5%**
Wyoming	**1,505,002,627**	**1,749,561,766**	**1,929,187,013**	**2,115,079,597**	**2,477,970,352**	**2,542,319,609**	**2,526,390,664**	**2,375,575,017**

Source: Wyoming Oil and Gas Conservation Commission (2012).

Table 4-14. Oil Production by County, 2000–2011 (Barrels)

County	2000	2002	2004	2006	2008	2009	2010	2011
Fremont	3,285,023	3,128,768	3,086,405	3,044,602	3,177,300	3,237,571	3,930,596	4,064,537
Lincoln	988,154	828,145	751,642	782,327	825,984	817,685	711,884	585,398
Sublette	3,345,063	4,378,710	4,823,833	5,770,042	7,673,864	7,962,065	7,621,104	7,324,675
Sweetwater	4,429,736	4,474,724	4,520,691	5,295,539	5,472,924	5,234,350	7,466,744	7,736,947
Uinta	4,437,208	3,079,892	2,601,731	1,911,747	1,338,800	1,120,845	1,100,583	982,716
Study Area	**51,319,009**	**46,775,008**	**44,400,791**	**45,589,227**	**45,748,418**	**45,010,536**	**48,983,154**	**50,269,922**
As Percentage of Wyoming	**27.1%**	**29.0%**	**30.3%**	**31.7%**	**34.8%**	**35.6%**	**37.7%**	**36.8%**
Wyoming	**60,765,977**	**54,801,275**	**52,058,379**	**52,976,263**	**53,068,479**	**51,564,966**	**55,303,056**	**56,235,522**

Source: Wyoming Oil and Gas Conservation Commission (2012).

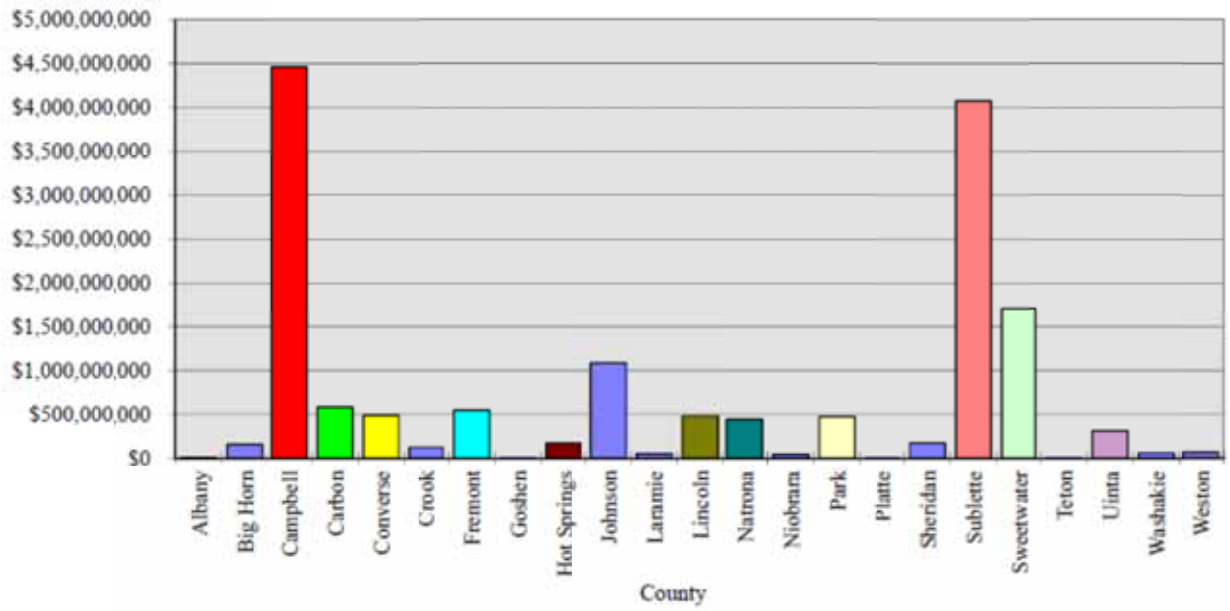
Table 4-15. Wells Spud (All Oil and Gas Wells) by County, 2000–2011

County	2000	2002	2004	2006	2008	2009	2010	2011
Fremont	45	14	169	118	89	59	40	45
Lincoln	39	17	72	97	216	4	1	14
Sublette	128	166	288	684	1,593	581	462	634
Sweetwater	126	197	230	295	595	228	364	255
Uinta	11	4	20	14	43	14	14	16
Study Area	349	398	779	1,208	2,536	886	881	964
As Percentage of Wyoming	7.7%	11.4%	18.6%	26.8%	48.3%	59.8%	44.6%	56.4%
Wyoming	4,504	3,505	4,182	4,514	5,249	1,481	1,976	1,709

Source: Wyoming Oil and Gas Conservation Commission (2013).

Figure 4-13 shows the total valuation of mineral production in Wyoming by county for 2010. Note the importance of Sublette and Sweetwater counties in the minerals economy of Wyoming. Sublette County's mineral valuation is dominated by gas and oil production. Sweetwater County's mineral valuation is dominated by gas, oil, trona, and coal production.

Figure 4-13. Total Mineral Taxable Valuation by County, 2010



Source: Wyoming Department of Revenue 2010–2011 Annual Report

The mining industry has a central role in the economy of the socioeconomic study area. As addressed Section 4.4, it is a basic industry that generates a disproportional amount of employment and earnings. This is also true for mining in the state as a whole. Furthermore, mineral production from the socioeconomic study area generates large amounts of revenue for the state. A small portion of this revenue is returned to local governments in the socioeconomic study area. Section 4.6.2 provides considerable detail on government revenues generated by the mining industry.

A dominant mining industry has both benefits and consequences. The benefit of large mining industry is a substantial revenue stream derived from an "exportable" tax burden. Wyoming's tax burden is second only to Alaska; however, because of "Wyoming's vast mineral deposits, the taxpayers in the state have been able to shift a significant portion of the state and local spending burden to residents of other states" through a substantial severance tax (Wyoming Heritage Foundation, 2010). Subsequently, the rapid growth of Wyoming's severance taxes since 2000 has allowed the state to significantly increase spending on education, public welfare, highways, and natural resources (Wyoming Heritage Foundation, 2010).

Furthermore, property owners benefit by granting access to private minerals and surface lands and obtaining mineral royalties and lease payments in return. One study estimated that 82% of these payments to Wyoming residents are spent in the Wyoming economy, amounting to $183.8 million of additional spending or economic activity within the state per year, or a total of $238.1 million when "downstream" impacts of the additional spending are included (Wyoming Heritage Foundation 2008).

On the other hand, a highly specialized mining economy is subject to the volatility of energy and other mineral markets. Anticipating public revenue levels is much more difficult when revenues are largely

dependent on mineral production-related taxes because the level of severance tax and mineral ad valorem tax collections[7] is highly dependent on the overall economy's influence on energy demand, and the strength or weakness of the dollar. As suggested by a 2010 Wyoming Heritage Foundation report, "a weak dollar tends to produce higher severance tax collections…due to the fact that a weaker U.S. dollar makes U.S. goods cheaper abroad and thus pushes up the prices of U.S. goods, especially energy commodities." For this reason, the Wyoming economy is much more susceptible to national and global economic changes. For example, "a ten percent increase in the value of the dollar would reduce severance tax collections by $185 million" (Wyoming Heritage Foundation 2010).

The oil and gas industry is the most significant of the mining industries throughout the state. Table 4-16 provides a detailed look at the economic contribution of oil and gas activities in the state, from a study conducted in 2008 using 2007 data and the IMPLAN (IMPact analysis for PLANning) economic impact model (Wyoming Heritage Foundation 2008). Oil and gas activities contribute directly to the economy in both the development and extraction (production) phases. In addition, oil and gas development and extraction produce indirect and induced economic impacts (from the inter-industry transactions to support the direct activity, and re-spending of household income, respectively, resulting from the direct economic activity). Furthermore, extraction taxes and private mineral royalty and lease payments provide additional economic contributions, to the extent these tax revenues and private payments accrue within Wyoming.

Table 4-16 shows economic output, employment, and earnings from direct, indirect, and induced economic activity attributable to oil and gas development and extraction in Wyoming in 2007, and also presents employment and earnings multipliers. Multipliers show the relationships between direct and total economic activity (which includes the indirect and induced activity). Note that the multipliers include the direct impacts. Thus, these figures should be read as follows, using the 2.86 employment multiplier for extraction as an example: For every job directly created as a result of oil and gas activity, 1.86 jobs are created elsewhere in the economy. The same can be said of the 1.75 multiplier for earnings: for every dollar earned from direct oil and gas activities, $0.75 is earned elsewhere in the economy. It is important to note that for the economic contributions analyses in Chapter 5 below and in the impacts analysis phase, different multipliers will be derived from current IMPLAN model data for the RSFO planning action study area. The figures for total economic contribution in Table 4-16 include the impacts of the re-spending of extraction taxes and private mineral royalty and lease payments. This additional activity is often not included in economic impact studies; thus, the multipliers for total economic contribution may appear larger than those derived in other studies.

Table 4-17 provides a look at the relative importance of the oil and gas industry to Wyoming, including the downstream impacts, from the same Wyoming Heritage Foundation report (2008) discussed above. According to that study, oil and gas activities within Wyoming in 2007 accounted for an estimated 32% of the state's total economic output or gross revenues, 20% of employment, 25% of total earnings, and 43% of Gross State Product. Furthermore, oil and gas accounted for 75% of severance taxes, 78% of mineral ad valorem levies, 55% of federal mineral royalties, and 65% of state mineral royalty revenues.

What these data suggest is that a vibrant mining industry in Wyoming has numerous benefits throughout the state and is responsible for a substantial share of private income, government revenue, and private and public spending. However, Wyoming's economy is also more susceptible to national and global economic conditions that affect the demand for minerals, particularly energy minerals.

[7] *Affecting especially state and local government, respectively; see Section 4.6.*

Table 4-16. Total Economic Contribution for Oil and Gas Activities in Wyoming (2007$)*

Type of Impact	Drilling, Completion, and Recompletions	Extraction	Private Mineral Royalty and Lease Payments[1]	Extraction Taxes[2]	Total Economic Contribution
Total Economic Output	3,513,052,106	$11,963,561,646	$231,827,774	$2,908,623,519	$18,617,065,044
Total Employment	26,701	11,765	1,447	33,316	73,229
Total Labor Earnings	$1,458,093,669	$736,813,207	$42,461,473	$1,677,264,966	$3,914,633,314
Earnings Per Worker	$54,608	$62,628	$29,344	$50,344	$53,457
Employment Multiplier	1.67	2.86	NA	NA	3.65
Earnings Multiplier	1.32	1.75	NA	NA	2.75

Source: Wyoming Heritage Foundation 2008.

* These figures encompass direct, indirect, and induced economic impacts.

1. These payments to households and companies are treated as all secondary induced impacts; that is, these payments are considered income of which a portion is spent in the economy.

2. These tax payments to state and local governments are treated as all secondary indirect impacts; that is, these payments are considered downstream beneficiaries of oil and gas activities.

Table 4-17. 2007 Oil and Gas Activity as a Fraction of Wyoming's Economy*

Indicator	All Oil and Gas Activities in Wyoming	All Economic Activity in Wyoming	Percentage of Oil and Gas to State	Source
Total Economic Output	$18,617,065,044	$58,831,050,621	31.60%	IMPLAN 2006
Total Employment	73,229	369,565[3]	19.80%	IMPLAN 2006
Total Labor Earnings	$3,914,633,314	$15,487,363,835	25.30%	IMPLAN 2006
Average Earnings	$53,457	$41,907	127.60%	IMPLAN 2006
Gross State Product (i.e., value added)	$13,329,075,050	$31,205,616,410	42.70%	IMPLAN 2006
Severance Tax	$666,397,115	$882,383,479	75.50%	WY Department of Revenue Annual Report 2007
Mineral Ad Valorem Levies	$712,637,118	$913,011,683	78.10%	WY Department of Revenue Annual Report 2007
Assessed Valuation (Taxable Value)[1]	$11,303,378,284	$21,491,267,438	52.60%	WY Department of Revenue Annual Report 2007
Federal Mineral Royalties (WY Disbursements, 50%)[2]	$515,500,646	$931,394,926	55.30%	Minerals Management Service, 2007
State Mineral Royalties	$90,031,996	$138,201,502	65.10%	Wyoming Office of State Lands and Investments 2007
Sales and Use Taxes	$50,344,215	$906,973,329	5.50%	Wyoming Depart of Revenue Annual Report 2007

Source: Wyoming Heritage Foundation 2008.

* These figures encompass direct, indirect, and induced economic impacts.

1. The assessed valuation, severance taxes, and ad valorem taxes are based on 2006 production. Severance and ad valorem taxes are paid to the state in 2007.

2. This estimate is from the Minerals Management Service (MMS), and it includes Federal Mineral Royalties from carbon dioxide, coalbed methane, condensate, gas plant products, oil, processed and unprocessed gas, and royalties associated with rents, bonuses, and other revenues. Fifty percent of royalties return to Wyoming, and 50% accrue to the Federal Government (U.S. Minerals Management Services, http://www.mrm.mms.gov/Stats/pdfdocs/formulas.pdf). Native American royalties are not included in this estimate, and therefore the receipts paid to reservations are not captured in this analysis.

3. This employment figure is from IMPLAN, whose estimates are derived from U.S. BEA. This includes full-time, part-time, self-employed, small business owners, and farm employment. The Wyoming Department of Employment figures are lower than those reported here (May, 2007 labor force estimate is 285,553) because they do not include farm employment, self-employed, and small business owners (Wyoming Department of Employment Labor Trends, Volume 45, No. 7, July, 2008). The Bureau of Economic Statistics estimates that Wyoming had 85,987 self-employed (proprietor) jobs in 2006.

4.5.3 Renewable Energy

Wyoming's renewable energy industry consists mostly of wind energy and hydroelectricity. The current BLM RMP planning effort may have implications for wind energy development but is unlikely to affect hydroelectric power generation.

Wyoming has long been recognized as an ideal location for wind energy development. The southern portion of the state, which includes the socioeconomic study area, is especially suited for wind development, with ample land area and consistent high winds. Furthermore, wind energy has benefitted the Wyoming economy in that Wyoming exports large amounts of wind energy to Colorado, Oregon, and Utah.

Wind energy generation in Wyoming has seen strong growth, from 617 megawatt hours in 2004 to 3,247 megawatt hours in 2010, as shown in Table 4-18. Table 4-19 details the 2010 capacity and generation of renewable energy throughout Wyoming. Wind accounted for 6.7% of all electrical energy generation capacity in 2010 but provided 17.9% of the electricity generated in that year.

Table 4-18. Wyoming Wind Energy Generation, 2004–2010 (Thousands Megawatt Hours)

Energy Source	2004	2005	2006	2007	2008	2009	2010
Wind	617	717	759	755	963	2,226	3,247

Source: U.S. EIA 2012a.

Table 4-19. Wyoming Renewable Electric Power Industry Statistics (2010)

Capacity	Value (megawatts)	Percentage of State Total
Total Existing Summer Electricity Capacity	7,896	100.0
Total Existing Summer Renewable Capacity	1,722	21.8
Hydro Conventional	307	3.9
Wind	1,415	17.9
Generation	**Value (thousand megawatt hours)**	**Percentage of State Total**
Total Electricity Net Generation	48,119	100.0
Total Renewable Net Generation	4,271	8.9
Hydro Conventional	1,024	2.1
Wind	3,247	6.7

Source: U.S. EIA 2012a; U.S. EIA 2012a.

Wind energy development and production benefit local economies. Local landowners and residents benefit by opening up their land to wind developers, generating revenue through property taxes, sales taxes, and royalty payments to landowners.

A number of wind energy projects have been proposed for BLM-administered lands in the planning area. Further information is provided in Section 5.5.

4.5.4 Tourism & Recreation

Tourism and recreation are important to the Wyoming economy. According to the *Wyoming Office of Tourism 2010 Year in Review,* travelers in Wyoming enjoyed 8 million overnight stays resulting in $2.6 billion in direct expenditures. The tourism industry supported 29,140 jobs, which accounts for almost 8% of Wyoming's total employment. Travel and tourism generated $690 million in payroll income in Wyoming in 2010. Local and state tax receipts from tourism-generated spending increased from $57 million in 1997 to $108 million in 2010—5.1% growth, per year, over the 13 years.

Within the study area, tourism and recreation make important contributions to the local economy and local government revenues. According to an economic impact study prepared for the Wyoming Office of Tourism (2012), travelers spent $526.1 million in the study area in 2011. This supported $125.7 million in direct earnings and 5,200 jobs. This spending also generated $6.5 million in local tax receipts and $13.6 million in state tax receipts. These figures do not include additional earnings, jobs, and tax receipts generated through the multiplier effect of re-spending of earnings within the local economy. A breakdown of these figures by county is provided in Table 4-20.

Table 4-20. Direct Economic Impacts of Traveler Spending in the Study Area, 2011

Area	Travel Spending ($Million)	Direct Earnings ($Million)	Direct Employment (Jobs)	Tax Receipts		
				Local ($Million)	State ($Million)	Total ($Million)
Fremont	$137.7	$41.9	1,560	$1.4	$3.2	$4.6
Lincoln	$70.7	$15.4	710	$0.6	$2.0	$2.6
Sublette	$44.3	$14.0	430	$0.5	$1.0	$1.5
Sweetwater	$178.7	$38.1	1,770	$2.9	$4.6	$7.5
Uinta	$94.7	$16.3	730	$1.1	$2.8	$3.9
Study Area	**$526.1**	**$125.7**	**5,200**	**$6.5**	**$13.6**	**$20.1**
State Total	**$2,938.1**	**$731.0**	**29,860**	**$52.0**	**$68.4**	**$120.4**

Source: Wyoming Travel and Tourism 2012.

In terms of outdoor recreation, for hunting and fishing specifically, a 2006 study by the Sonoran Institute and the Theodore Roosevelt Conservation Partnership showed the following:

- Total annual expenditures from hunting and fishing in Wyoming exceeded $335 million.
- Anglers accounted for $212 million total annual expenditures (34% equipment, 45% trip-related, 21% other).
- Hunters accounted for $123 million total annual expenditures (29% equipment, 58% trip-related, 14% other).
- Hunters in Wyoming spent 74% of their hunting days (960,000 days) on public lands.

A growing component of recreation on BLM-administered lands, and across Wyoming, is OHV use. Since January 2002, owners of "off-road vehicles" (ORV, a largely synonymous term with OHV) in Wyoming have been required to purchase a yearly permit to use ORV-designated trails. The registration program is administered by the Wyoming Department of State Parks and Cultural Resources. The revenue generated is used by the Wyoming Trails Program to develop, maintain, and manage ORV trails. Throughout the socioeconomic study area, ORV use has seen a dramatic rise as indicated by the increase in ORV permits sold (Table 4-21). As a whole, the State of Wyoming issued 6,767 ORV permits in 2002

and 54,177 permits in 2011, an 801% increase. Within the socioeconomic study area, 1,722 permits were issued in 2002 and 16,910 permits were issued in 2011, a 982% increase. Sweetwater County (4,675 permits) issued the most permits in 2011, suggesting the highest rate of ORV usage. Sublette County (1,552) issued the fewest permits in 2011. The number of out-of-state agent-issued permits for Wyoming increased from 11 permits in 2002 to 3,301 permits in 2011, suggesting increased interest in ORV usage by out-of-state residents. Of note, the number of permits issued in the study area, study area counties, and the state peaked in 2009 or 2010, with slight declines in 2011. Whether ORV permits have plateaued or will again increase is not clear.

Table 4-21. ORV Permits Sold in Socioeconomic Study Area, 2002–2011

Area	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Fremont	705	2,430	3,024	3,654	4,408	4,867	4,965	4,816	4,861	4,584
Lincoln	342	1,705	1,634	2,138	2,403	2,929	3,763	3,987	4,258	3,782
Sublette	145	682	808	1,074	1,009	1,318	1,389	1,514	1,540	1,552
Sweetwater	393	1,904	2,453	3,009	3,575	4,318	4,533	4,668	4,715	4,675
Uinta	137	1,111	1,571	1,905	2,253	2,659	2,553	2,602	2,557	2,317
Study Area	**1,722**	**7,832**	**9,490**	**11,780**	**13,648**	**16,091**	**17,203**	**17,587**	**17,931**	**16,910**
Wyoming (In-State)	**6,756**	**24,895**	**30,675**	**37,063**	**43,163**	**49,744**	**49,959**	**52,495**	**53,509**	**50,876**
Out-of-State Agents	11	1,572	1,718	2,153	1,848	2,199	2,367	2,565	2,859	3,301
Grand Total	**6,767**	**26,467**	**32,393**	**39,216**	**45,011**	**51,943**	**52,326**	**55,060**	**56,368**	**54,177**

Source: Wyoming State Trails Program 2012.

4.6 PUBLIC FINANCE

Lands and federal mineral estate managed within the socioeconomic study area affect local, county, state, and Federal Government budgets based on revenues from mineral royalties, taxes, Payments in Lieu of Taxes (PILT), fees, and other funding sources. Likewise, lands and federal mineral estate in the socioeconomic study area result in government expenditures for management, law enforcement, and other activities. This section addresses revenues; the next addresses expenditures. The information in this section is general, with a focus on natural resource-related revenues; information on revenues specifically from BLM-administered lands is covered in Chapter 5.

4.6.1 Federal Payments

Major sources of natural resource-related revenues collected and/or distributed by the Federal Government include royalties on federal mineral leases, and PILTs; these are covered below. The Federal Government collects additional revenue from other types of leases and sales of various permits for use of federal land; these are addressed in Chapter 5.

Leasable mineral production taking place on BLM-administered lands is assessed a federal mineral royalty. Oil and gas and surface-mined coal production is assessed at 12.5% of value after allowable deductions. Some other mineral production is assessed at lower rates. For example, production of coal mined underground is assessed at 8%, and federal royalties for trona production vary from 5% to 8%. Additional bonus payments are collected for some leases. Total federal mineral revenue collections for

mineral leases in the RSFO are given in Table 5-10 and Table 5-12 in Chapter 5. The following paragraphs address the distribution of federal mineral revenues back to the state and local governments.

The Federal Government returns 49% of the total collected royalties to the state in which the mineral production occurred.[8] In Wyoming, the allocation and distribution of the federal royalties is based on a formula promulgated by the Wyoming statutes. Large portions of the state's share of federal royalties are allocated to the Budget Reserve Account, the Foundation Fund,[9] the Highway Fund, and to school capital construction. The state allows portions of the federal royalties to be distributed directly to cities and towns, and to cities, counties, and special districts for capital construction. However, these shares (along with some other shares such as funding for the University of Wyoming) are small and are statutorily capped—they do not rise when overall federal royalty receipts increase.

Table 4-22 summarizes the statewide allocations and distributions of Federal Mineral Royalty revenues from 2005 to 2010. In 2010, the largest disbursements were to the Budget Reserve Account ($420 million), the Foundation Fund ($299 million), the Highway Fund ($60.1 million and $4.5 million from mineral royalties, and $1.9 million from mineral bonuses) and for school capital construction ($38.1 million). Cities and towns within Wyoming directly received $18.6 million from federal mineral royalty distributions. Cities, counties, and special districts received a total of $13 million for capital construction ($7.4 million from royalties and $5.6 million from bonuses). These payments to local governments totaled $31.6 million (the same as in all years in the table due to the statutory caps), or 3.6% of total federal mineral revenues. However, it should be noted that local communities also benefit from the distributions to schools and to the highway fund.

Table 4-22. Wyoming Federal Mineral Royalty Distribution, 2006–2010

Recipient	2006	2007	2008	2009	2010
Royalty Distributions					
Cities and Towns	$18,562,500	$18,562,500	$18,562,500	$18,562,500	$18,562,500
University of Wyoming	$13,365,000	$13,365,000	$13,365,000	$13,365,000	$13,365,000
Foundation Fund	$305,202,064	$268,388,138	$355,784,221	$310,204,537	$298,746,556
Highway Fund	$60,142,500	$60,142,500	$60,142,500	$60,142,500	$60,142,500
Highway Fund—State Roads	$4,455,000	$4,455,000	$4,455,000	$4,455,000	$4,455,000
Cities, Counties, and Special Districts Capital Construction	$7,425,000	$7,425,000	$7,425,000	$7,425,000	$7,425,000
School Districts—Grants	$5,346,000	$5,346,000	$5,346,000	$5,346,000	$5,346,000
1% General Fund	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000

8 *The state share is sometimes said to be 50%. However, since FY2008, Congress has annually required a 2%nt deduction from each year's state payments (equivalent to a one percentage point reduction to the state share of total mineral revenues) as part of the Interior, Environment, and Related Agencies Appropriations Acts to partially cover the costs of administering the federal mineral leasing program. This is a simpler form of an authority known as "net receipts sharing" that was in place until 2000. The state share was 50% between 2000 and 2008.*
See http://www.whitehouse.gov/sites/default/files/omb/budget/fy2012/assets/int.html, Mineral Leasing and Associated Payments section.

9 *The School Foundation Fund helps provide a guaranteed level of funding for all of Wyoming's K–12 school districts.*

Recipient	2006	2007	2008	2009	2010
Budget Reserve Account	$440,092,087	$371,530,741	$534,000,227	$424,874,535	$419,988,019
Bonus Payment Distributions					
Cities, Counties and Special Districts Capital Construction	$5,625,000	$5,625,000	$5,625,000	$5,625,000	$5,625,000
School Capital Construction	$198,653,794	$160,703,329	$175,791,080	$204,530,037	$38,122,169
Community College Commission	$1,600,000	$1,600,000	$1,600,000	$1,600,000	$1,600,000
Highway Funds	$1,875,000	$1,875,000	$1,875,000	$1,875,000	$1,875,000
Total FY Distributions	$1,064,343,945	$921,018,208	$1,185,971,528	$1,060,005,109	$877,252,744

Source: Wyoming State Treasurer's Office Annual Report 2005-2010.

Another federal payment stream is Payments in Lieu of Taxes (PILT), which are payments from the Federal Government to local governments to help compensate for lost property taxes resulting from tax-exempt federal lands located within the local jurisdiction (Department of the Interior [DOI] 2010). PILT payments are administered by the DOI and are made for lands managed by the BLM, NPS, and USFWS, as well as some federal water projects and military installations. Local governments use PILT payments to pay for various government services such as law enforcement and infrastructure. The payments are calculated based on acreage on eligible lands within the county, population, and other federal transfers such as mineral royalties. Table 4-23 contains PILT payments to the socioeconomic study area counties from 2005 to 2010. These PILT payment data are for all federal lands and cannot readily be segregated into BLM versus other federal lands. In 2010, Sweetwater County and Fremont County received the largest PILT payments, $2.7 million and $2.5 million, respectively. Sublette County had the lowest PILT payment at $0.9 million. In all counties, PILT payments increased substantially from 2005 to 2010.

Table 4-23. PILT Payments in the Socioeconomic Study Area, 2005–2010

County	2005	2006	2007	2008	2009	2010
Fremont	$1,546,803	$1,576,233	$1,576,233	$2,513,884	$2,513,884	$2,513,884
Lincoln	$757,883	$817,726	$817,726	$1,295,915	$1,295,915	$1,295,915
Sublette	$481,089	$491,999	$491,999	$778,011	$778,011	$778,011
Sweetwater	$1,624,031	$1,699,067	$1,699,067	$2,699,785	$2,699,785	$2,699,785
Uinta	$799,989	$813,730	$813,730	$1,285,407	$1,285,407	$1,285,407

Source: DOI, National Business Center, PILT County Payments 2005 through 2010.

4.6.2 State and Local Revenues

The Wyoming state government levies the following taxes: mineral severance taxes, sales tax, use tax, franchise tax, cigarette tax, and other taxes. Wyoming does not have individual or corporate income taxes and does not collect inheritance taxes. The Wyoming Department of Revenue collects excise taxes (sales, use, franchise, cigarette), mineral severance taxes, and certain designated taxes in accordance with Wyoming statutes and rules. Local governments collect ad valorem mineral taxes, as well as state

assessed and locally assessed property taxes, county levies, municipal levies, special district taxes, and education levies.

Production-Based Mineral Taxes

Mineral severance taxes are a key revenue source for the state. The state assesses the value of mineral production and applies and collects severance taxes against 100% of the value, minus certain exemptions. The severance tax rates range from 2.0% for many solid minerals, to 6.0% for most oil and gas production, to 7.0% for surface coal.

The socioeconomic study area generates a large portion of the state's severance taxes for oil and gas, as estimated in Table 4-24. The estimated 2010 severance taxes for both oil and gas in this table are based on 2009 state assessed valuations and the severance tax per unit as reported by the Wyoming Department of Revenue for 2009. Severance taxes generated by socioeconomic study area oil and gas operations were approximately $272 million and 56% of all severances taxes generated by oil and gas activities in the state. Oil and gas severance tax revenues varied substantially across the socioeconomic study area. Sublette and Sweetwater County production contributed $187 million and $50 million, respectively, to severance tax receipts. Lincoln County, however, generated only $1.8 million in severance tax revenue from oil and gas. In 2009, gas production accounted for 82% of all oil and gas severance tax receipts in the socioeconomic study area. Sublette County's gas production accounted for 61% of all socioeconomic study area severance taxes receipts.

Table 4-24. Estimated Severance Tax Revenue from Oil and Gas, 2010

Area	Oil	Gas	Total
Fremont	$8,342,839	$12,683,070	$21,025,910
Lincoln	$1,836,474	$8,180	$1,844,654
Sublette	$20,324,433	$166,816,382	$187,140,815
Sweetwater	$14,902,099	$34,824,480	$49,726,578
Uinta	$2,396,103	$9,722,464	$12,118,567
Study Area	$47,801,948	$224,054,576	$271,856,524
Wyoming	$133,112,871	$351,663,078	$484,775,949

Source: Wyoming Department of Revenue Annual Report 2010.
Note: Severance tax estimates are based on calculations of state assessed valuations and the severance tax rate per unit. A 6% tax rate was used for Crude Oil and Natural Gas, and a 4% tax rate was used for Stripper Oil. These estimates may be slightly higher than actual severance taxes due to lower tax rates (2%) for New Wells and Tertiary Production.

Table 4-25 shows how the state's mineral severance taxes were distributed in 2010. As with federal mineral revenues, most mineral severance tax revenue remains with the state. Direct payments to cities and towns were $14.3 million and direct payments to counties were $6.0 million. Payments to cities, towns, counties, and special districts for capital construction were $3.6 million, and state aid to county roads totaled $4.5 million. Together these distributions totaled $28.5 million, which was 3.1% of the total severance tax distributions. Although local governments benefit from some of the other distributions, such as the highway fund, those amounts are also small.

Table 4-25. Distributions of Mineral Severance Taxes, Fiscal Year 2010

Recipient	Amount
General Fund	$226,994,930

Recipient	Amount
Budge Reserve Account	$260,982,942
Permanent Wyoming Mineral Trust Fund[10]	$371,323,873
Water I	$19,297,696
Water II	$3,254,961
Water III	$775,191
Highway Fund	$6,711,030
Cities and Towns	$14,336,803
Counties	$6,014,028
School Foundation	$0
Community Colleges	$0
Cities, Towns, Counties, and Special Districts Capital Construction	$3,611,625
State Aid County Roads	$4,495,107
Others	$10,163,192
Totals	**$927,961,378**

Source: Wyoming Consensus Revenue Estimating Group 2012.

As noted earlier, some severance tax revenue is redistributed by the state to local government. Table 4-26 shows the total amount of severance taxes distributed by the state to the counties in the socioeconomic study area for the years 2005 through 2010. Severance tax distribution for the socioeconomic study area peaked in 2007, declined in 2008 and 2009, and turned upward in 2010. Additional severance tax revenue distributions were also made directly to cities and towns; to cities, towns, counties, and special districts for capital construction; and as state aid to county roads; but as described earlier, these distributions were not especially large.

Table 4-26. Severance Tax Distribution by County

Area	2005	2006	2007	2008	2009	2010
Fremont	$413,169	$423,863	$428,472	$413,966	$395,530	$411,137
Lincoln	$174,863	$179,921	$181,845	$174,685	$165,949	$171,660
Sublette	$71,902	$72,776	$73,055	$69,314	$66,099	$68,318
Sweetwater	$427,328	$438,560	$444,866	$432,096	$413,062	$425,873
Uinta	$232,631	$239,556	$243,389	$235,825	$224,308	$234,171
Study Area	**$1,319,893**	**$1,354,676**	**$1,371,627**	**$1,325,886**	**$1,264,948**	**$1,311,159**

Source: Wyoming State Treasurer's Office Annual Report, 2005–2010.

10 *The Permanent Wyoming Mineral Trust Fund (PWMTF) was established by a state constitutional amendment in 1974, which requires a 1.5% severance tax on oil, natural gas, coal, and other minerals designated by the legislature to be deposited to the PWMTF. As of 2005, an additional 1.0% is deposited. Thus, the total contribution to the fund is equivalent to a 2.5% severance tax on the value of all mineral production (and thus a variable portion of the 2.0% to 7.0% total severance tax rates) (Temte 2010). The 2011 year-end market value of the PWMTF was $5.326 billion. Investment income from the fund flows to the state general fund; in FY2011, this contribution was $216 million (Wyoming State Treasurer's Office 2011).*

Ad valorem taxes from mineral production are another source of revenue derived from mineral production. The state assesses the value of mineral production (the same value used for levies of the state's severance taxes). The counties then apply mill levies to 100% of the state-assessed value and collect the ad valorem tax. One percent of tax equals 10 mills. Table 4-27 summarizes the average mineral mill levy and the total amount of mineral ad valorem tax in the socioeconomic study area and in Wyoming. The mill levies shown for each county are the total of the mill levies of various taxing entities. Each total may include levies by the statewide School Foundation Program, local school districts, community colleges, counties, cities and towns, and special districts and joint powers boards.

The figures in Table 4-27 are shown in nominal dollars, which better describes the relative importance of the tax revenues to the local and state governments over time. The total mineral ad valorem taxes in the study area rose from $358 million in 2005 to $469 million in 2007 and dropped to $337 million in 2010. The variation is a function of total production and mineral prices in each year. Sublette and Sweetwater counties produced far larger amounts of ad valorem tax than the other counties in the study area. In 2005, mineral ad valorem production taxes in the socioeconomic study area accounted for 53% of all mineral ad valorem production taxes in the state. 2007 saw that percentage drop to 51% of the state total, and 2010 saw a continued decline to 43% of the state total.

Ad valorem taxes are also levied on other types of property (see the property taxes section below). Much of the total ad valorem tax revenue in Wyoming accrues to schools (mostly through the State School Foundation), with the remainder accruing to local governments and community colleges. According to a 2010 presentation by the Wyoming Legislative Service Office (Temte 2010), the total of $1.851 billion in ad valorem property taxes levied in 2009 based on statewide assessed values of approximately $11.4 billion for minerals and $8.8 billion for other property accrued as follows: 70.1% K–12 education, 18.3% counties, 7.1% special districts, 2.5% community colleges, and 1.2% cities and towns.

Table 4-27. Total Mineral Ad Valorem Production Tax; 2005, 2007, and 2010

Area	2005		2007		2010	
	Avg. Mineral Mill Levy	Ad Valorem Production Tax	Avg. Mineral Mill Levy	Ad Valorem Production Tax	Avg. Mineral Mill Levy	Ad Valorem Production Tax
Fremont	71.297	51,592,975	70.810	61,386,027	72.266	26,160,848
Lincoln	60.608	29,863,401	61.876	36,197,272	62.567	24,400,390
Sublette	58.476	159,931,009	59.270	224,804,720	59.558	186,118,882
Sweetwater	64.877	87,912,768	65.449	117,121,462	66.382	87,034,364
Uinta	61.237	28,303,507	62.706	29,059,972	63.964	12,968,409
Study Area	**63.299**	**357,603,660**	**64.022**	**468,569,453**	**64.947**	**336,682,893**
Wyoming	**65.903**	**679,817,058**	**62.593**	**913,011,683**	**62.375**	**784,912,412**
Study Area Percentage of Wyoming	**-**	**53%**	**-**	**51%**	**-**	**43%**

Source: Wyoming Department of Revenue Annual Report, 2005, 2007, 2010; Mineral Tax Division

Table 4-28 shows statewide oil and gas production valuations compared with all mineral valuations for 2005, 2007, and 2010. It also shows together the ad valorem and severance tax collections (not distributions, as shown above for severance taxes). These production taxes for oil and gas are shown as a percentage of total mineral production taxes collected. As shown in Table 4-28, statewide oil and gas

valuation was 16% of the total mineral valuation in 2005, followed by a small drop to 14% in 2007 and an increase to 19% in 2010. Oil and gas production accounted for 78% of all mineral production tax revenue in 2005, slowly declining to 65% in 2010.

Table 4-28. Statewide Oil and Gas Ad Valorem and Severance Taxes Collected as Percentage of Total Mineral Production Taxes Collected

Measure	2005			2007			2010		
	Oil/Gas Production	All Mineral Production	Oil/ Gas % of total	Oil/Gas Production	All Mineral Production	Oil/ Gas % of total	Oil/Gas Production	All Mineral Production	Oil/ Gas % of total
Total Valuation	$1,799,416,541	$10,984,017,888	16%	$2,069,911,273	$14,586,380,458	14%	$2,415,680,479	$12,583,815,584	19%
Ad Valorem Tax	$540,158,681	$679,817,058	41%	$712,637,118	$913,011,683	40%	$524,467,321	$784,912,412	34%
Severance Tax	$497,082,086	$649,282,411	37%	$666,397,115	$882,383,479	37%	$486,546,171	$769,807,595	31%
Total Tax	$1,037,240,767	$1,329,099,469	78%	$1,379,034,233	$1,795,395,162	77%	$1,011,013,492	$1,554,720,007	65%

Source: Wyoming Department of Revenue Annual Report, 2005, 2007, 2010; Mineral Tax Division

Property Taxes

Property taxes are collected in Wyoming on property values that are assessed by either the state or by local government. In the case of state-assessed values, the state certifies the values to local government, which then collects the taxes. The state assesses the value of mineral production and certain non-mineral properties. Non-mineral property the state assesses includes airlines, utilities, pipelines and gas distribution systems, railroads, and telephone service. State-assessed mineral production values and the ad valorem property taxes and severance taxes levied on those values are described above.

Another way of looking at state-assessed mineral valuation is shown in Table 4-29, which includes the other types of property the state assesses. This table lists the statewide total 2010 state-assessed values by type of company or production. Natural gas has the highest assessed value at $5.8 billion from 286 companies or producers. Coal, with only 17 companies or producers, has the second highest assessed value at $3.8 billion. Oil has the most companies or producers in the state (531) and an assessed value of $2.4 billion. In 2010, the total state-assessed valuation was $13.789 billion. Of this, the value of mineral production was $12.584 billion, or 91.2%.

Table 4-29. State Assessed Values by Type of Company or Production

Type of Company or Producer	No. of Companies or Producers	2010 Assessed Value
Natural Gas	286	$5,861,051,297
Coal	17	$3,834,477,312
Oil	531	$2,439,657,555
Private Electrics/Gas	32	$414,960,269
Trona	4	$350,783,487
Railroads	3	$259,627,196
Natural Gas Pipelines	19	$191,815,459
Rural Electrics	23	$160,110,614
Liquid Pipelines	18	$97,382,721
Bentonite	6	$33,864,379
Sand and Gravel	214	$26,146,507
Uranium	4	$22,702,505
Major Telephones	13	$20,094,951
Cell/Reseller Telephones	25	$19,273,437
Cable and Satellites	11	$16,639,330
All other minerals	28	$15,132,542
Rural Telephones	13	$12,800,742
Municipal Electrics	12	$7,320,473
Airlines	15	$5,494,169
Total	**1274**	**$13,789,334,945**

Source: Wyoming Department of Revenue 2010 Annual Report, Property Tax Division.

Locally assessed taxes are based on valuations of real and personal property, including agricultural land, residential property, commercial property, and industrial property. Table 4-30 shows locally assessed property valuations for real and personal property in Wyoming in 2010; the total locally assessed valuation was $7.527 billion. This valuation was 35.3% of the total assessed value in the state ($13.789 billion state assessed and $7.527 billion locally assessed, for a $21.316 billion total).

Table 4-30. Locally Assessed Property Valuations, 2010

Type of Property	Assessed Value
Real Property	$7,256,097,532
Personal Property	$271,045,154
Total	**$7,527,142,686**

Source: Wyoming Department of Revenue 2010 Annual Report, Property Tax Division.

Table 4-31 lists locally assessed property valuations for all property for the socioeconomic study area from 2006 to 2010. Throughout the socioeconomic study area values steadily increased over these 5 years.

Table 4-31. Locally Assessed Property Valuations, 2006–2010

Area	2006	2007	2008	2009	2010
Fremont	$265,090,829	$303,432,207	$344,770,320	$367,178,842	$381,990,364
Lincoln	$246,341,051	$299,520,738	$390,362,515	$410,462,460	$408,997,661
Sublette	$230,922,401	$289,027,314	$359,753,709	$409,685,452	$387,979,295
Sweetwater	$390,096,548	$472,134,020	$562,464,929	$627,661,731	$617,832,780
Uinta	$140,627,994	$165,137,637	$178,771,340	$197,318,818	$191,062,696
Study Area	**$1,273,078,823**	**$1,529,251,916**	**$1,836,122,813**	**$2,012,307,303**	**$1,987,862,796**

Source: Wyoming Department of Revenue 2010 Annual Report, Property Tax Division.

Table 4-32 shows locally assessed property valuations specific to minerals, by study area county, for 2005 and 2010. These valuations are primarily of mining equipment and machinery, mine buildings, and some mine land, not the mineral production itself. Total valuation increased substantially in most counties. For the socioeconomic study area, total mineral properties valuation increased from $0.411 billion to $0.853 billion, led by a large increase in the valuation of oil and gas properties. In 2010, the study area made up 59% of all oil and gas locally assessed property value in the state and 94% of all such valuations for non-metal, non-coal (i.e., primarily trona) mineral properties.

The total statewide mineral properties valuation of $1.714 billion in 2010 is 22.8% of the total locally assessed property valuation of $7.527 billion. Thus, mineral properties also account for about the same percentage of taxes collected on locally assessed property.

Table 4-32. Locally Assessed Valuations for Mineral Properties, 2005 and 2010 ($Thousands)

Area	2005						2010					
	Oil & Gas Extraction	Coal Mining	Metal Mining	Non-Metal Mining & Quarrying	Petroleum & Coal Product Manufac.	Total	Oil & Gas Extraction	Coal Mining	Metal Mining	Non-Metal Mining & Quarrying	Petroleum & Coal Product Manufac.	Total
Fremont	56,852	0	0	0	0	56,852	81,019	0	0	181	4,534	85,734
Lincoln	0	6,661	5,215	0	89,137	101,013	152,089	11,240	0	56	33,149	196,534
Sublette	61,299	0	0	0	0	61,299	235,022	0	0	0	0	235,022
Sweet-water	79,425	4,257	514	65,330	0	149,526	147,895	40,255	0	102,293	0	290,444
Uinta	5,261	0	0	0	36,738	41,999	45,411	0	0	0	10	45,421
Study Area	**202,837**	**10,918**	**5,729**	**65,330**	**125,875**	**410,689**	**661,436**	**51,495**	**0**	**102,530**	**37,693**	**853,155**
Percen-tage of State Total	**66.1%**	**5.7%**	**62.8%**	**83.0%**	**45.9%**	**47.7%**	**59.0%**	**13.9%**	**0.0%**	**93.6%**	**34.8%**	**49.8%**
Wyoming	**306,886**	**191,542**	**9,117**	**78,705**	**274,276**	**860,526**	**1,121,304**	**369,985**	**5,222**	**109,520**	**108,324**	**1,714,356**

Source: Wyoming Department of Revenue Annual Report; 2005, 2010.

Other Taxes

Other tax revenue sources that may be affected by management actions associated with BLM-managed lands include sales and use taxes, lodging taxes, and fuel taxes. In addition, Wyoming continues to refine its levy of a production tax on wind energy.

According to the Wyoming Taxpayers Association (2012), lodging and fuel taxes are relatively small compared with sales and use taxes, totaling $8.1 and $41.6 million statewide in 2011. Sales and use taxes are a much larger revenue source. The state has a 4 percent rate for sales and use tax. Counties may levy up to an additional 3 percent in the form of various option taxes, with voter approval. Table 4-33 shows sales and use tax collections for fiscal year 2010.

Table 4-33. Sales and Use Tax Collections by County, Fiscal Year 2010

Area	4% State Tax	Local Levies*	Total
Fremont	$28,165,025	$212,362	$28,377,387
Lincoln	$13,052,710	$3,261,730	$16,314,440
Sublette	$60,073,816	$0	$60,073,816
Sweetwater	$68,156,887	$27,584,486	$95,741,373
Uinta	$13,912,618	$3,477,223	$17,389,841
Study Area Total	**$183,361,056**	**$34,535,801**	**$217,896,857**
State Total	**$603,076,040**	**$178,927,524**	**$782,003,564**

*Local levies may consist of any of the following: lodging option tax, general purpose option sales and use taxes, specific purpose option sales and use taxes.
Source: WEAD 2012d.

Sales and use tax collections are split between the state general fund and local governments. Statewide, the distribution in 2010 was 54% to the state general fund and 46% to local governments (Wyoming Department of Revenue 2011). One example of such distributions is the Wyoming Impact Assistance Tax Program. Wyoming statutes provide for counties that have a major construction project of $170.3 million or larger to receive extra revenue in direct proportion to any increase in their tax collections to help with the impact caused by the project. These funds are transferred from the state general fund to the county treasurer of the affected county. These transfers totaled $16.3 million in fiscal year 2009, $2.2 million in fiscal year 2010, and $0.8 million in fiscal year 2011 (Wyoming Department of Revenue 2011).

There are clear, well-recognized linkages between sales and use taxes and both local consumer expenditures and tourism expenditures. It is also important to recognize the linkages between sales and use taxes and the capital investment and other activities associated with energy development and production. Sales and use taxes are generated from expenditures on labor and equipment as well as other goods and services required by the energy industry, but not always in proportion to needs for local or state government provision of infrastructure and services that are affected by energy development and production. There are some risks to state and local sales and use tax revenues and expenditures based on the level of energy development.

4.7 GOVERNMENT EXPENDITURES

4.7.1 State and Local Government Expenditures and Services

Management of BLM-administered lands may affect state and local expenditures. For instance, recreation on public lands requires some support from local government for road maintenance, law enforcement, and search and rescue. Heavy truck traffic from mineral development and production may significantly affect state and local roads. It is difficult to separate expenditures related to BLM-administered lands from expenditures related to other land. Depending on the nature of the management alternatives identified in RMP/EIS, and the scope and scale of potential impacts, this topic may require further consideration during the impacts analysis phase of the process.

The types of state and local expenditures that may be affected include:

- Maintenance of state and local roads
- Law enforcement personnel and equipment
- Emergency medical services
- Search and rescue teams
- Conservation and wildlife management
- Fire management
- Solid waste collection and disposal
- Public utilities
- Local government administration
- Judicial system.

These expenditures may be affected in two ways. First, increased use of BLM-administered lands may result in greater need for the types of services and infrastructure listed above. In addition, in less common cases where use of BLM-administered lands leads to substantially increased employment opportunities, populations in study area communities may increase, which often leads to increased demand for the services and infrastructure listed above and may lead to additional needs such as increased school space, teachers, and other public facilities and personnel.

4.7.2 BLM Expenditures

BLM expenditures related to federal lands benefit the local economy because federal salaries to land management staff that reside in the socioeconomic study area and federal contracts to businesses located in or with employees residing in the study area represent inflows of money. This new income to the study area recirculates through purchases made by BLM employees, contractors, and vendors.

Compensation to RSFO BLM employees totaled approximately $3.7 million in fiscal year 2010 and fiscal year 2011. Contracts and other purchases totaled more than $0.6 million in fiscal year 2010 and nearly $2.6 million in fiscal year 2011.

The impacts analysis phase of the planning process will consider whether there are differences between potential levels of BLM payroll and contract expenditures under the identified management alternatives. However, it is often very difficult to determine the percentage of BLM payroll and contracts that is attributable to a particular portion of the BLM-administered lands in a Field or District Office.

CHAPTER 5—USES AND VALUES OF BLM-ADMINISTERED LANDS

This chapter profiles the many uses made of BLM-administered lands in the planning area. It describes some of the economic and social implications of those uses, including quantitative values where available. This chapter also includes a discussion of non-market values, which are often overlooked when the economics of BLM-administered lands are discussed.

To describe the uses of BLM-administered lands and the values associated with those uses, the material below provides overviews of various BLM policies and programs, and their implementation in the RSFO. It also identifies some important resource use conditions and practices in the planning area. Additional information on each resource use is available in the Analysis of the Management Situation (AMS) and Chapter 3 of the Draft RMP/EIS.

The current impacts on the local economy of some of the resource uses are estimated using an economic impact analysis model. These economic impacts are specifically attributable to BLM-administered surface lands and BLM-administered federal mineral rights within the RSFO boundaries. These estimates are only possible for those resource uses for which sufficient data are available—grazing, oil and gas, coal, trona, and recreation.

The economic impact analysis model used for this analysis is IMPLAN. The IMPLAN model was originally developed by the Forest Service and is commonly used by the BLM and many other government and private sector organizations to estimate the total economic impacts of various activities, actions, and policies. The model tracks inter-industry and consumer spending in a local (or regional) economy, allowing estimation of indirect and induced economic impacts in the local economy that result from the original economic activity or a change in economic activity. Indirect impacts result from local inter-industry purchases caused by the direct impact, and induced impacts results from re-spending of labor income (i.e., local purchases by households of employees and proprietors of the affected industries). The re-spending represented by indirect and induced impacts is often referred to as the "multiplier effect." Outputs of the IMPLAN model include employment, income, and gross regional economic output.

The basic approach in using IMPLAN is to first quantify the primary (i.e., direct) impacts of the economic activity under study. These impacts become inputs to the model. For example, data on the number of oil and gas wells drilled per year and total wells in production, along with data on well drilling and completion costs and estimates of production quantities and unit values of the commodity, allow the analyst to estimate the direct monetary impacts. The analyst parses these impacts to the various applicable industrial sectors in the IMPLAN model, and runs the model to estimate the indirect, induced, and total economic impacts on the local economy. Estimates are produced for economic output, labor earnings, and employment (number of jobs). Labor earnings per job are also calculated. It is important to note that IMPLAN, based on some of its data sources, does not distinguish between full-time and part-time jobs. Sectors with higher labor earnings per job are likely to reflect a high proportion of full-time jobs, while sectors with low labor earnings per job often reflect a significant number of part-time jobs.

The IMPLAN model uses data specific to the local economy wherever possible, but also uses some data based on national-level economic relationships. Therefore, the model benefits from "calibration" of some of its data to better reflect the local economy. For this study, IMPLAN was calibrated based on work the University of Wyoming has done with the model in Wyoming over many years, and with data specific to this study. The local economy used in the model is composed of the five counties of the socioeconomic study area—Fremont, Lincoln, Sublette, Sweetwater, and Uinta. (See Section 0 regarding the definition of

the study area.) The general economic data in the model were from 2010. The IMPLAN modeling methodology will be described in detail in a Technical Appendix to the Draft EIS that will be prepared along with the analysis of the economic impacts of the RMP management alternatives.

The analyses here of the impacts on the local economy are simply "snapshots" of the current level of local economic activity attributable to use of BLM-administered resources. During the impacts analysis phase of the planning process, more extensive analyses will be conducted for the No Action Alternative and multiple Action Alternatives, including estimated total impacts over the planning period.

5.1 FORESTRY AND WOODLAND PRODUCTS

In general, forest and vegetative products in BLM field offices may include saw timber, pulpwood, fuelwood, decorative wood, corral poles, fence posts, tepee poles, Christmas trees, cones, transplants, boughs, berries, moss, mushrooms, seeds, and live plants. These materials are typically used in various construction, agriculture, decorative building, landscaping applications, crafts or hobbies, and cultural practices.

Under the BLM forest management program (43 CFR 5000), the removal of forest products is managed either by sales contracts or free use permits. Recreational collecting of some forest product material is also allowed, but the removal of volumes exceeding a specified threshold requires a forest/vegetative products sale. The BLM does not dispose of forest and vegetative products at less than fair market value.

In some cases (e.g., sale of seeds collected from BLM-administered lands, or rarely, sale of timber), a permittee may generate income from forest and vegetative product harvests. Forestry and vegetative product harvests also provide economic benefits to individual, non-commercial permittees, for instance, by avoiding the cost of paying commercial sources for the products. In addition, harvests of these products may be important culturally, for instance, Christmas tree cutting as a family activity, or use of native plants for medicinal or spiritual purposes by Native Americans. The permits and harvests may also generate revenue for the Federal Government, although the amounts of revenue are small in most field offices.

The forest products that are the most common in the RSFO planning area include fuelwood, Christmas trees, and to a much lesser extent, saw timber, posts, and poles. Most of the forest products are used locally for home heating and decorative uses. Forest products permits are processed on a case-by-case basis, with stipulations added to protect other resources. The current management practice is to issue exclusive use (competitive timber sales) contracts or non-exclusive permits to allow access to and removal of forest products. There have been no competitive timber sales in the RSFO in recent years. Table 5-1 presents information on non-exclusive permits over the last 3 years.

Table 5-1. Forest and Vegetative Product Permits

	2009	2010	2011
Christmas Tree Tags			
Permits	104	127	86
Revenue to BLM	$782.50	$962.50	$647.50
Vegetation Permits			
Permits	106 personal firewood 1 ornamental transplant 1 commercial native seed	94 personal firewood	66 personal firewood 1 commercial native seed

	2009	2010	2011
Revenue to BLM	$2,798.00	$2,617.50	$1,545.00

Source: BLM TSIS.

A special vegetative product activity taking place on BLM-administered lands in the RSFO is the collection of native plant seeds. Collection is regulated because excessive collection of seed from native shrubs, grasses, and forbs can diminish the soil seed banks, decrease recruitment, and reduce plant species. Two types of collection take place.

Seed collection has occurred on BLM-administered lands in the RSFO as part of the national Seeds of Success (SOS) program. Some of the seeds gathered through SOS are saved in such places as Kew Gardens in England as a representative sample for that species. Many of the more recent collections have been sent to several Plant Material Centers, such as the Bridger Plant Materials Center, run by the U.S. Department of Agriculture in Bridger, Montana. These seeds are available for return to the RSFO to use locally in reclamation projects. Although this has not been done to date, it is likely to occur in the future. SOS crews have made 112 collections over recent years, covering 73 species. Each collection represents more than 10,000 seeds.

Commercial collections also take place. The RSFO has issued eight commercial seed collection permits in the last 5 years. All of these permits have been issued to collectors from Utah collecting mainly for one Utah seed company. Species collected have included Gardner's Saltbush, Wyoming Big Sagebrush, and Rocky Mountain Beeplant. The total amount of seed collected was 2,340 pounds, for which the collectors paid about $600 to the BLM.

5.2 LIVESTOCK GRAZING

Grazing is an important use of BLM-administered lands in many BLM field offices. The kinds of livestock grazing on BLM-administered lands in the RSFO consist primarily of cattle and sheep, but also include domestic horses. Goats are sometimes authorized for the purpose of suppressing weeds. The relative numbers of these grazing animals have varied in response to their economic value as a commodity and their use in ranching operations.

Livestock grazing has been an important economic activity in the socioeconomic study area and continues as an economic contributor locally and a livelihood for persons in the industry. It is also very significant to the cultural identity of the region and especially to certain communities and stakeholder groups. Ranching has a long history in the socioeconomic study area and has played a key role in the economic and social development of the study area. Use of BLM-administered lands for grazing livestock has been a vital component of that history and remains important today.

The BLM allocates forage among uses based on the carrying capacity of the land. Carrying capacity reflects the maximum level of grazing and other uses of forage, such as wildlife, that the public lands can sustain on a long-term basis. Forage allocations for wildlife are accounted for and analyzed in the permitting process. A more specific definition of carrying capacity is "livestock carrying capacity," which means the maximum stocking rate possible without inducing damage to vegetation or related resources. It may vary from year to year on the same area because of fluctuating forage production. In addition, available forage for livestock grazing varies with changes in climatic conditions, forage production, and the availability of water.

Forage availability is expressed in animal unit months (AUM). According to BLM Grazing Regulations (43 CFR Part 4100) an AUM "means the amount of forage necessary for the sustenance of one cow or its equivalent for a period of 1 month." Typically, a cow and her calf consume an AUM in 1 month. In 1 month, a horse is usually considered to consume 1.25 AUMs, 5 sheep to consume 1 AUM, and 6 goats to consume 1 AUM.

Livestock grazing on specific allotments is authorized during different seasons. The grazing seasons vary with elevation and geographical change, resource needs, and user preference. The higher elevation allotments are generally grazed during summer and fall. The lower elevation areas may be grazed during any season, but are generally used in the fall, winter, and spring. The majority of the allotments in the planning area are operated under grazing strategies incorporating rest, seasonal rotations, deferment, and prescribed use levels that provide for adequate plant recovery time to enhance rangeland health. When rangelands are not meeting resource objectives, changes in grazing management are implemented.

Presently, the BLM administers 80 grazing allotment in the planning area. These allotments are used under the provisions of 119 grazing permits or leases issued to 93 individual operators. Grazing on BLM-administered lands is very important to most of these operators. The exact degree of dependence on BLM-administered lands (versus other lands) is unknown, but is high for some operators. A majority of the larger operators use public land year-round. The greatest use occurs between May 1 and October 3.

Permitted use is the amount of forage, in AUMs, available for livestock grazing under a permit or lease. Permitted use includes active use and suspended use. Active use is the maximum amount of forage generally available in any given year under a permit or lease. In any given year, more or less forage may be authorized for livestock grazing under a valid permit or lease because of fluctuating forage production. Actual use in the RSFO has varied from year to year, in part because the RSFO has experienced drought conditions. This has resulted in less forage available for livestock use and the need for permittees/lessees to exercise voluntary non-use. During drought years, the livestock operators and the BLM have worked closely to tailor the adjustments in livestock use to meet Wyoming Standards for Rangeland Health and the needs of the ranch operation. In addition, annual fluctuations in the AUMs used may develop from user demands, climatic conditions, and/or from the collection of monitoring information.

The Green River RMP authorized a total of 318,647 active use AUMs in 1997. (This number included some allotments outside the official RSFO administrative boundary.) The current maximum active use that can be authorized within the planning area boundary of the RSFO is 304,259 AUMs. An additional 103,468 AUMs are in suspended use status. The AUMs that are in suspension exist as a result of various grazing decisions, conversions, or agreements that have determined the present active preference. The suspended AUMs probably do not affect the local economy because approximately 40% of active AUMs currently available for permittees to use are not used. Given this high level of unused AUM supply, moving AUMs from suspended to active use—assuming such changes were allowable under regulations and rangeland health standards—would not necessarily result in additional use of AUMs on BLM-administered lands in the planning area.

Table 5-2 shows billed AUMs in recent years. Some billed AUMs may not be used by some operators, but billed AUMs is the best approximation available for actual AUM use.

Table 5-2. Billed AUMs in the RSFO

Grazing Year (beginning date)	Cattle	Horses	Sheep	Total AUMs
3/1/1997	125,159	670	76,269	202,098
3/1/1998	121,989	592	65,116	187,697

Grazing Year (beginning date)	Cattle	Horses	Sheep	Total AUMs
3/1/1999	112,853	567	66,577	179,997
3/1/2000	120,376	638	72,068	193,082
3/1/2001	106,133	534	58,970	165,637
3/1/2002	96,861	360	54,307	151,528
3/1/2003	88,328	442	54,364	143,134
3/1/2004	85,216	409	54,112	139,737
3/1/2005	94,159	417	61,267	155,843
3/1/2006	82,607	339	52,366	135,312
3/1/2007	95,577	509	57,452	153,538
3/1/2008	98,731	490	62,262	161,483
3/1/2009	96,118	331	55,369	151,818
3/1/2010	103,076	372	54,322	157,770
3/1/2011	102,148	308	55,345	157,801

Grazing fees are set annually by the Secretary of the Interior according to the provisions of 43 CFR 4130.8-1. The fee is equal to the $1.23 base established by the 1966 Western Livestock Grazing Survey, adjusted by indices for the value of forage, beef cattle prices, and livestock production costs, and subject to a minimum fee of $1.35 per AUM.

In accordance with 43 CFR 4130.8-1(f), the BLM adds a surcharge to the grazing fee bill for authorized grazing of livestock owned by persons other than the permittee or lessee, except where such use is made by livestock owned by sons and daughters of permittees and lessees as provided in 43 CFR 4130.7(f). The BLM adds the surcharge to the permittee's or lessee's grazing fee billing based on the number of AUMs being billed. The surcharge varies by state and equals 35% of the difference between the 2012 grazing fee and the 2011 private land lease rate for the state where the pasturing agreement occurs. The National Agricultural Statistics Service (NASS) publishes the state rates annually in January, based on lease rates for private, non-irrigated grazing land from the January Cattle Survey.

According to the NASS data, the average private land grazing fee in Wyoming in 2010 was $16.60 per AUM. This is more than the $1.35 grazing fee charged by the BLM in 2010, or the fee plus the surcharge ($5.13 in 2010), totaling $6.48 per AUM (BLM IM 2010-067). Thus, grazing on BLM-administered lands appears to provide value to BLM grazing permittees compared with leasing private land. The grazing fee for 2012 is $1.35 and the surcharge is $5.69. On the other hand, some recent research has shown that, in spite of differences in fees for grazing on public versus private land, when other factors are considered (such as animal loss, rangeland improvement and maintenance, moving livestock, and herding), the cost of forage on public land compared with private land is generally similar (Rimbey and Torell 2011).

Grazing fees and surcharges from use of BLM-administered lands generate some revenue for the Federal Government. Of the grazing revenues collected, 50% goes to the BLM Range Improvement Fund and is distributed to BLM District Offices according to their grazing receipts, 37.5% goes to the U.S. Treasury General Fund, and 12.5% goes to the state of origin and is distributed to local grazing boards.

5.2.1 Economic Impact

The value of cattle grazing in a specific area can be estimated based on the actual grazing use of the area in AUMs (one AUM is equal to the amount forage consumed by a cow and calf during a 1-month grazing period) and the value of an AUM. According to Workman (1986), it takes 16 AUMs to produce a marketable cow. Thus, the average value of an AUM can be estimated using data on the value of cattle production per bred cow and dividing by 16. These calculations are shown in Table 5-3. A similar procedure can be used to estimate the value of an AUM used for sheep production, using 3.2 AUMs per ewe to produce a marketable lamb, as shown in Table 5-4.

Table 5-3. Value of an AUM for Cattle Production

Year	Value of Production Per Bred Cow*	AUMs Per Cow**	Value of Production Per AUM	IMPLAN Deflator	Deflated Value of Production Per AUM
2001	$581.79	16	$36.36	0.817	$44.51
2002	$533.64	16	$33.35	0.831	$40.14
2003	$609.07	16	$38.07	0.848	$44.89
2004	$706.24	16	$44.14	0.872	$50.62
2005	$752.44	16	$47.03	0.901	$52.19
2006	$720.09	16	$45.01	0.930	$48.39
2007	$681.50	16	$42.59	0.957	$44.51
2008	$496.02	16	$31.00	0.978	$31.70
2009	$472.00	16	$29.50	0.989	$29.83
2010	$570.50	16	$35.66	1.000	$35.66
10-year Average					**$42.24**

*U.S. Department of Agriculture Economic Research Service, Commodity Costs & Returns, data for Basin & Range region, cow-calf pair.
** Workman 1986.

Table 5-4. Value of an AUM for Sheep Production

Year	Value of Production Per Ewe**	AUMs Per Ewe**	Value of Production Per AUM	IMPLAN Deflator	Deflated Value of Production Per AUM
2000	$127.48	3.2	$39.84	0.721	$55.25
2002	$127.75	3.2	$39.92	0.680	$58.71
2004	$134.08	3.2	$41.90	0.938	$44.67
2006	$138.81	3.2	$43.38	0.890	$48.74
2008	$136.53	3.2	$42.67	1.011	$42.20
2010	$185.65	3.2	$58.02	1.000	$58.02
10-year Average (based on available data for every other year)					**$51.26**

*University of Idaho Extension, Idaho Livestock Costs and Returns Estimates, Sheep—Range, gross receipts per ewe. Data only available for every other year.
** Workman 1986.

Multiplying the figures on billed AUMs from Table 5-2 by the values per AUM from Table 5-3 and Table 5-4 provides the total economic value of production, or direct economic impact, of grazing on BLM-administered lands. (The small number of horse AUMs shown in Table 5-2 was not included in the analysis.) The direct impacts were run through the calibrated IMPLAN model to estimate the economic impacts of grazing as shown in Table 5-5.

In summary, based on data for the last 10 years, on average the use of BLM-administered lands for grazing generates $16.2 million in economic output in the socioeconomic study area and supports 224 jobs and $4.8 million in labor income. Earnings per job ($21,300)[11] are very low compared with mineral sector earnings per job and are somewhat lower than recreation sector earnings per job (see those sections below). The low earnings per job likely reflects seasonal and part-time employment in grazing or related support industries. In addition, many farm and ranch hands receive room and board as part of their overall compensation.

These figures only reflect the market value generated by the time cattle spend grazing on BLM-administered lands, which only represents a portion of the overall contribution of livestock production to the local economy. Also, grazing employment in IMPLAN is paid employment only; it does not include unpaid family members involved in ranching operations.

Table 5-5. Economic Impacts of Grazing Within the RSFO

Indicator	Value
Output	
Direct	$8,685,360
Indirect	$5,579,348
Induced	$1,941,274
Total	$16,205,982
Multiplier	1.87
Employment	
Direct	118.7
Indirect	86.5
Induced	18.9
Total	224.1
Multiplier	1.89
Labor Income	
Direct	$2,518,801
Indirect	$1,685,274
Induced	$560,380
Total	$4,764,455
Multiplier	1.89
Average Earnings Per Job	
Direct	$21,223

11 *Earnings consist of wage and salary disbursements, supplements to wages and salaries, and proprietors' income.*

Indicator	Value
Indirect	$19,486
Induced	$29,663
Total	$21,264

Sources: Direct impacts calculated from 10-year averages of billed AUMs and value of production per AUM, as shown in tables above. Indirect, induced, and total impacts, and multipliers, calculated by application of the IMPLAN economic impact model as calibrated for this analysis.

Economic modeling is intended to provide a basic understanding of the value of livestock grazing and how changes to grazing management affects the local economy in the planning area. In accordance with BLM grazing regulations, changes to permitted use may be made as needed to manage, maintain, or improve rangeland productivity; to assist in restoring ecosystems to properly functioning condition; to conform with land use plans or activity plans; or to comply with the provisions of Fundamentals of Rangeland Health and the Standards and Guidelines for Grazing Administration. These changes must be supported by monitoring, field observations, ecological site inventory, or other data acceptable to the authorized officer.

5.3 WILD HORSES AND BURROS

The BLM is responsible for the protection, management, and control of wild horses and burros on public lands in accordance with the Wild Free-Roaming Horses and Burros Act (WFRHBA) of 1971 as amended (Public Law 92-195), which states that the BLM "shall manage wild free-roaming horses and burros in a manner that is designed to achieve and maintain a thriving natural ecological balance on the public lands." The WFRHBA directs the DOI and the Department of Agriculture to protect wild free-roaming horses and burros from capture, branding, harassment, or death, and to accomplish this in areas where they were found in 1971. BLM regulations and policy state that wild horses and burros shall be managed as viable, self-sustaining populations of healthy animals in balance with other multiple uses and the productive capacity of their habitat (43 CFR 4700.0-6).

Within the RSFO, wild horses (there are no burros) are also managed under the provisions of several agreements and court orders. These include a 1979 agreement with the Rock Springs Grazing Association, the International Society for the Protection of Mustangs and Burros, and Wild Horses Yes; a March 13, 1981, Order from the District Court of Wyoming regarding removal of wild horses from the checkerboard grazing lands; and an August 2003 Consent Decree confirmed by the U.S. District Court of Wyoming.

Based on the policies noted above and consistent with its multiple use mandate, the BLM has established appropriate management levels (AML) (i.e., numbers of animals) in five Herd Management Areas (HMA). Populations in each HMA are monitored to determine when a gather will take place to remove excess animals. Removing the excess wild horses helps maintain a healthy and viable population of wild horses remaining on the rangeland while maintaining or improving the health of the rangeland. Table 5-6 shows the number of horses removed in RSFO gathers for each year of the last 10 years. The variability of the numbers reflects the number of HMAs addressed each year and the particular HMAs involved (some have more animals than others). In the years with very low numbers, the BLM did not conduct any large gathers but did remove a few nuisance animals.

Table 5-6. Wild Horse Gathers—Numbers by Year

Year	Wild Horses Captured
2002	2
2003	3,062
2004	881
2005	1,197
2006	518
2007	1,439
2008	706
2009	1
2010	7
2011	2,460

Source: RSFO Records

The BLM hires contractors to conduct the wild horse and burro gathers. The animals are placed in an adoption program or sold. The minimum adoption fee is $125. However, some of the wild horses go on to compete in the Mustang Heritage Foundation's Extreme Mustang Makeover events, and those animals have been adopted at fees up to $50,000. The BLM is also authorized to sell "without limitation" animals that are either more than 10 years old or that have been passed over for adoption at least three times. The BLM does not sell wild horses or burros to slaughterhouses or to "killer buyers." The proceeds from the sale of eligible animals go back to the BLM's wild horse and burro adoption program. Animals that are not adopted or sold are held in short-term corrals or long-term holding pastures.

Successful adoption and sale of wild horses and burros is a clear indication that people place social and economic value on these animals. Wild horses and burros also provide value in their natural settings. Some people derive enjoyment from seeing these animals on the range. The BLM has designated and established a "Wild Horse Loop Tour" auto route on White Mountain. This Scenic Loop Byway offers the public a unique opportunity to view wild horses while also offering views of other sights with social, geologic, or historical importance. Some people also value knowing these animals exist, even if they do not see them; this is called "existence value" by economists (see Section 5.10 on nonmarket values).

5.4 MINERALS

The BLM permits mineral extraction on BLM-administered federal mineral estate through three programs—Saleable Minerals, Locatable Minerals, and Leasable Minerals.

- *Leasable minerals* are minerals for which the BLM issues leases, often through a competitive bidding process, allowing producers to access the mineral. Leasable minerals are divided into fluid and solid minerals. Leasable fluids include oil, gas, and geothermal resources. Solid leasables include coal, phosphate, potash, and sodium (e.g., trona). Excepting coal, most solid leasables are used to make fertilizer and as feedstock for other industrial processes. Revenues from the leases are shared by the Federal Government and the state of origin. Many states direct portions of these revenues to local government.
- *Locatable minerals* include hard-rock minerals, such as gold, silver, molybdenum, and uranium, and other minerals such as gypsum, silica, and specialized clay products. Miners locate and stake (file) claims to acquire the right to develop the mineral values in a specified area, under the

provisions of the General Mining Law of 1872 as amended. Locatable minerals include both metallic minerals (precious and base metals) and non-metallic minerals (gemstones and industrial minerals). Locatable minerals may produce severance taxes and other revenues for state governments, but other than small claim staking and maintenance fees, produce little to no revenue for the Federal Government.

- *Salable minerals, also known as mineral materials*, consist of common varieties of sand, stone, gravel, cinders, clay, pumice, and pumicite as described under the Materials Act of 1947 and the Surface Resources Act of 1955. No mining claims are required for their extraction. They are used in everyday building and other construction. These materials generally are bulky, and their sheer weight makes their transportation costs very high. Adequate local supplies of these basic resources are vital to the economic life of any community. Saleable minerals are disposed of through a variety of contracted sales; most of the revenue goes to the Federal Treasury.

The RSFO handles a large federal mineral estate that encompasses surface and subsurface mineral estates. The BLM manages the subsurface federal mineral estate for BLM public surface lands. In addition, the BLM manages minerals for additional land where the surface has passed into other ownership but the Federal Government has retained the subsurface mineral estate.

Mineral exploration, development, and production on BLM-managed federal mineral estate have many socioeconomic implications:

- Mineral exploration and mineral production generate economic activity through payments to labor and to capital both inside and outside of the socioeconomic study area.
- Mineral production generates tax revenue. Direct taxes on mineral production in Wyoming include severance taxes and ad valorem taxes. Additional tax revenues include property taxes on mining equipment and other mine-related assets, and sales taxes.
- Some mineral production on federal mineral estate generates revenues to the Federal Government. This is generally true for leasable minerals and salable minerals, but federal revenues for locatable minerals are very limited. Some of these federal revenues are shared with the state, which may, in turn, share the revenues with local governments. The types of revenues and revenue sharing are described in Section 4.6 on public finance.
- Mineral exploration and production have social significance as livelihoods for persons in the industry, and to the cultural identity of certain communities and stakeholder groups.
- Mineral exploration and production may result in environmental impacts, demands on physical infrastructure, increased traffic, “boom and bust” economic cycles, and other impacts that have economic and social costs.

The BLM and the state apply various fees and requirements to some or all mining operations. These include, but are not limited to, the following:

- Claim staking and maintenance fees—For locatable minerals, a claim staking fee of $170 per claim is applied BLM-wide and a maintenance fee of $140 per year per claim.
- Reclamation bond—Most mining operations, excluding some sand and gravel operations, must post a bond with the BLM or the state that ensures adequate funds are available to reclaim the mine site when the mining operation is completed. The bonds are reviewed within specific timeframes and reflect the current costs to reclaim these sites. These costs include inflation, labor, equipment, and administrative costs so the BLM can contract out, via a third party, to reclaim a site if it becomes abandoned.
- Reclamation fee—A payment made in lieu of a bond for some sand and gravel production.

- Cost recovery—The BLM charges cost recovery fees when permitting many types of mineral production. The fees cover the cost of BLM staff time for the NEPA process (when applicable), for claim validity examinations, and some other mineral program costs.

Mineral potential and current and projected minerals development and production vary across the socioeconomic study area. The following subsections address current production and economic impacts for various classes of minerals.

5.4.1 Leasable Fluid Minerals

Fluid minerals include oil, gas, and geothermal resources. There are no outstanding applications or active federal geothermal leases within the planning area at this time. A lack of leasing activity is often indicative of a low to non-existent demand for federal geothermal resources and a lack of economically important geothermal resources in the area. No entities have currently expressed interest in leasing or developing geothermal resources in the RSFO.

Oil and gas resources generate economic activity through several phases: exploration; drilling and completion; production; and well plugging, abandonment, and site restoration. The economic value generated from the drilling/completion and production phases far exceeds the value generated during the other phases.

Oil and gas production within the planning area mainly comes from conventional oil and gas reservoirs. These resources include the structural or stratigraphic trapping of hydrocarbons in reservoir rocks. The planning area does contain coalbed natural gas (CBNG); however, no projects within the planning area have produced CBNG in economic quantities. The RSFO has not proven to be an important source of CBNG given current technologies for CBNG yield.

The planning area contains 14 lithostratigraphic units with the Almond, Lance, and Frontier being the main economic formations. Wells in the planning area are drilled as conventional wells; however, infill field development is typically directional drilled from multi-well pads. Typically these wells range in depth from 7,000 to 13,000 feet in true vertical depth. There is a high success rate—93%—in the planning area for spud (beginning of drilling) to completed wells. This is because the majority of the wells spudded in the last 10 years are drilled within existing oil and gas fields.

Oil and gas reservoirs can be discovered by either direct or indirect exploration methods. Direct methods include mapping surface geology, making seep observations, and gathering information on hydrocarbon observed in drilling wells. Indirect methods, such as gravity, magnetic, and seismic surveys, are used to delineate subsurface features that may contain oil and gas that are not directly observable. The approved number of Notices of Intent to conduct geophysical exploration operations has been declining since 2001. There has been a decrease in the number of seismic ventures in the planning area. This decline is attributed to the increased activity of infill drilling and lack of interest in exploring outside existing fields. Two to 4 Geophysical Notices of Intent were filed with the BLM per year from 2007 to 2010, compared with 13 in 2001.

Oil and gas operators depend on the ability to produce federal minerals under the BLM's leasing program as enacted by the Mineral Leasing Act of 1920 (as amended). These leases are sold by parcel to interested parties through a public auction held four times a year in Cheyenne, Wyoming. The parcels are nominated by interested parties and are then reviewed by the Wyoming State Office and the RSFO prior to lease offering.

The general policy of the BLM oil and gas program is to foster a fair return to the public for its resources, to ensure activities are environmentally acceptable, and to provide for conservation of the fluid mineral resources without compromising the long-term health and diversity of the land. The RSFO fluid leasable management objective in the 1997 Green River RMP is to provide for leasing, exploration, and development of oil and gas while protecting other values.

Under current management, BLM-administered lands in the planning area are open to oil and gas leasing and exploration except for the 13 wilderness study areas (WSA), Wind River Front Range (Eastern Portion), the Red Creek Portion of the Greater Red Creek Area of Critical Environmental Concern (ACEC), the Mechanically Mineable Trona Area (MMTA), and Area 3 as defined by the Jack Morrow Hills (JMH) Coordinated Activity Plan (CAP) EIS. The sum of these areas establishes 721,919 acres that are closed to oil and gas leasing in the planning area. The aforementioned total comprises 20% of the 3,607,334 acres of federal mineral estate in the planning area. This does not include the 81,307 acres of "large contiguous blocks" declared as no leasing by the Wyoming State Director to Governor Freudenthal in December 2009. With this additional acreage, the percentage increases to 22%. Portions of the leasable area within the planning area are subject to restrictions such as, but not limited to No Surface Occupancy (NSO), Controlled Surface Use (CSU), Timing Limitation Stipulations (TLS), and Seasonal Restrictions Areas (SRA).

Currently, 85 operators are producing oil and gas resources in the planning area. As of October 2010, federal oil and gas leases encompassed 1,722,313 acres or 48% of the entire planning area (including No Leasing Areas). Once an operator has obtained a lease, the operator identifies drilling sites and files an Application for Permit to Drill (APD) with the BLM. After the BLM approves an APD, the developing company may proceed with drilling in accordance with the conditions of the APD approval.

Based on data from the Automated Fluid Minerals Support System (AFMSS), there was an upward trend in the number of APDs approved on federal oil and gas leases in the planning area since 2003, particularly after passage of the National Energy Policy Act of 2001 and the Energy Policy Act of 2005 (EPAct). The peak occurred in 2006, with 99 APDs approved. However, in 2009 to 2010, there was a decrease in APD submissions. Wells spudded (drilling initiated) followed a similar pattern, with a peak of 102 in 2006. These trends are shown in Table 5-7. The table also shows a general upward trend in the number of wells plugged and abandoned, with a peak of 32 in 2010.

Table 5-7. Planning Area Oil and Gas Annual Well Count Data

Year	APDs Approved	Wells Spudded	Wells Plugged
1999	36	39	3
2000	44	42	3
2001	39	45	10
2002	56	48	12
2003	61	74	12
2004	72	81	9
2005	77	65	13
2006	99	102	8
2007	68	70	26
2008	82	81	29
2009	48	8	18

Year	APDs Approved	Wells Spudded	Wells Plugged
2010	33	40	32
Average 1999–2010	**60**	**58**	**15**
5-Year Average, 2006–2010	**66**	**60**	**23**

Source: BLM AFMSS.

AFMSS also provides figures for wells completed each year. However, these figures include "recompletions," which may be anything from a minor action to a complete refurbishment of a well. For the purposes of economic analysis, completion is defined as the development of a newly drilled well into a producing well. Based on this definition, BLM observations indicate that about 93% of the wells drilled in the planning area are completed. This high percentage is the result of most wells being drilled as infill to known fields; therefore, the success rate is high.

Economic Impact

Table 5-8, Table 5-9, and Table 5-10 show the most recent 5 years of data on oil and gas production from wells on BLM-administered federal mineral rights within the RSFO. These data were obtained from the DOI's Office of Natural Resources Revenue (ONRR). These data show that oil production dropped somewhat from 2007 to 2008 and has remained relatively steady since then. Unprocessed gas production has been relatively stable for 5 years, while processed gas production has been variable. Sales values (and thus also royalty values) for both oil and gas have been highly variable over the 5 years, reflecting production levels and variations in the prices of oil and gas.

Table 5-8. Sales Volumes of RSFO Oil and Gas Leases

Product	2007	2008	2009	2010	2011	5-Year Average
Oil (bbl)	274,412	229,460	216,687	213,031	227,756	232,269
Condensate (bbl)	198,802	143,608	155,168	121,968	127,035	149,316
Processed (Residue) Gas (mcf)	12,089,150	14,633,976	8,181,353	6,875,958	7,525,592	9,861,206
Unprocessed (Wet) Gas (mcf)	29,687,654	31,075,275	29,214,497	28,007,173	26,269,737	28,850,867
Drip or Scrubber Condensate (bbl)	0	(252)	(2,356)	(2,557)	(244)	(1,352)
Gas Plant Products (gal)	6,658,160	6,512,834	6,903,581	6,919,318	6,791,652	6,757,109
Sulfur (long ton)	(14)	(37)	0	0	0	(26)
Coalbed Methane (mcf)	2,456	576	0	1	0	1,011

Source: DOI, Office of Natural Resources Revenue, royalty data FY2007 through FY2011 by sales date, as of March 26, 2012.

Table 5-9. Sales Value of RSFO Oil and Gas Leases

Product	2007	2008	2009	2010	2011	5-Year Average
Oil	$16,802,478	$22,073,261	$9,915,688	$14,584,548	$19,257,504	$16,526,696
Condensate	$12,002,878	$13,833,104	$7,042,807	$7,970,802	$10,264,942	$10,222,906
Processed (Residue) Gas	$37,544,107	$59,088,538	$26,953,785	$30,211,703	$31,621,283	$37,083,883
Unprocessed (Wet) Gas	$138,291,264	$213,265,141	$95,156,168	$124,717,310	$110,656,589	$136,417,294
Drip or Scrubber Condensate	0	-$27,235	-$124,912	-$171,671	-$17,474	-$85,323
Gas Plant Products	$6,104,238	$8,537,894	$4,332,327	$6,488,583	$7,990,206	$6,690,650
Sulfur	-$976	-$2,551	0	0	0	-$1,763
Coalbed Methane	$13,731	$3,325	0	$4	0	$5,687

Source: DOI, Office of Natural Resources Revenue, royalty data FY2007 through FY2011 by sales date, as of March 26, 2012.

Table 5-10. Royalties Paid on RSFO Oil and Gas Leases

Product	2007	2008	2009	2010	2011	5-Year Average
Oil	$2,074,309	$2,716,866	$1,221,439	$1,816,810	$2,407,187	$2,047,322
Condensate	$1,509,072	$1,727,735	$871,331	$989,115	$1,280,825	$1,275,616
Processed (Residue) Gas	$4,550,961	$7,126,004	$3,007,727	$3,417,818	$3,536,281	$4,327,758
Unprocessed (Wet) Gas	$16,651,832	$25,897,628	$11,215,935	$14,810,810	$13,117,420	$16,338,725
Drip or Scrubber Condensate	0	-$3,404	-$15,520	-$21,459	-$2,184	$94,954
Gas Plant Products	$517,337	$760,521	$336,772	$534,985	$651,018	$570,824
Sulfur	-$1	-$3	0	0	0	-$2
Coalbed Methane	$1,716	$416	0	$1	0	$711

Source: DOI, Office of Natural Resources Revenue, royalty data FY2007 through FY2011 by sales date, as of March 26, 2012.

Appendix E provides the parameters for oil and gas development (drilling/completion) and production that were used in the IMPLAN model to estimate the economic impact of these activities. Sources for these parameters included the ONRR data provided above and various state and federal agencies. In addition, the BLM obtained data on typical drilling and completion costs from oil and gas operators.

The economic impacts on the socioeconomic study area are shown in Table 5-11.[12] In summary, based on data for the last 5 years, on average, the development of BLM-administered oil and gas in the RSFO generates $118.2 million annually in economic output in the socioeconomic study area and supports 749 jobs and $45.6 million in labor income. Earnings per job are high for jobs directly in oil and gas development ($73,600) and more modest for indirect and induced jobs in support industries and the general local economy. Oil and gas production generates considerably more economic output ($224.6 million) but many fewer jobs (146). The jobs figure is lower because operating oil and gas wells is far less labor intensive than drilling and completing them. The average earnings per job directly involved in oil and gas production is very high ($123,400) and relatively modest for indirect and induced jobs in support industries and the general local economy. Further, the Wyoming share of federal mineral royalties along with ad valorem and severance taxes amount to $33.2 million in annual revenues to the State of Wyoming.

Table 5-11. Economic Impacts of Oil and Gas Resources Within the RSFO

Indicator	Development	Production
Output		
Direct	$95,265,665	$209,808,704
Indirect	$11,083,246	$11,332,468
Induced	$11,814,136	$3,414,061
Total	**$118,163,046**	**$224,555,233**
Multiplier	1.24	1.07
Employment		
Direct	525.8	40.7
Indirect	96.1	71.0
Induced	126.8	34.2
Total	**748.7**	**145.9**
Multiplier	1.42	3.58
Labor Income		
Direct	$38,679,875	$5,021,166
Indirect	$3,704,439	$3,844,033
Induced	$3,249,791	$982,494
Total	**$45,634,105**	**$9,847,693**
Multiplier	1.18	1.96
Average Earnings Per Job		
Direct	$73,568	$123,370
Indirect	$38,541	$54,141
Induced	$25,620	$28,728
Total	**$60,948**	**$67,496**

12 *The multipliers shown here differ from those in Section 4.5.2. The multipliers here are derived from current IMPLAN model data for the RSFO planning action socioeconomic study area.*

Indicator	Development	Production
Wyoming Tax Revenue		
Federal Mineral Royalties	NA	$12,198,812
Ad Valorem	NA	$11,170,086
Severance	NA	$9,844,232
Total Revenue to the State	**NA**	**$33,213,129**

Sources: Direct impacts and tax revenues calculated from parameters provided in table above, including use of ONRR data. Indirect, induced, and total impacts, and multipliers, calculated by application of the IMPLAN economic impact model as calibrated for this analysis.

It is important to note that the oil and gas industry has additional economic impacts within the socioeconomic study area that were not addressed with the IMPLAN model and are not reflected in Table 5-11. Prior to the development phase, the industry generates some economic activity through exploration, permitting, and other pre-disturbance actions. Information obtained by the BLM from one operator indicates typical direct costs of about $15,000 per well for land surveying, title searches, clearance surveys (e.g., for cultural, wildlife, paleontological resources), and permits. Another operator indicated costs of $39,000 for permitting and regulatory work, and $256,000 for engineering services. (The figure for engineering appears to be atypical for a single well, and engineering may already be accounted for in the drilling cost estimates used in Table 5-11).

In addition, there are costs associated with plugging and abandoning a well (P&A) and restoring the well site. The BLM obtained information from several operators that indicates P&A costs ranging from $90,000 to $150,000 per well, and site restoration costs ranging from $30,000 to $50,000 per pad for grading and seeding and $8,000 to $10,000 per mile of road.

Assuming 60 new wells developed per year and 23 wells abandoned per year (Table 5-7), and assuming the mid-range for the three types of costs above (surveying/other pre-development, P&A, well site restoration) and 1 mile of road restoration per well, the total expenditures per year are $5.5 million. To the extent these pre-development and post-production activities use local labor and purchases, they provide economic benefits to the study area. For instance, assuming 70% local expenditures, the industry would generate an additional $3.85 million of direct economic activity that is not reflected in Table 5-11, and additional indirect and induced activity as well.

5.4.2 Leasable Solid Minerals

Coal

Coal mining has been ongoing in the planning area since the arrival of the railroad in the early 1860s. Coal was originally extracted from numerous underground mines scattered across the Rock Springs Uplift, mostly concentrated on the high-grade deposits contained within the Rock Springs Formation. Almost all of these mines were eventually closed by the early 1960s largely because of the reduced demand for coal as a result of the conversion of railroad locomotives to diesel fuel. Surface coal mining in the area began in earnest during the early 1970s to fuel the newly completed Jim Bridger Power Plant located about 35 miles east of the city of Rock Springs.

Coal in the planning area is recovered exclusively from mines operating in deposits located on the northeastern flank of the Rock Springs Uplift in Sweetwater County. Two operators, the Bridger Coal Company and the Black Butte Coal Company, are recovering coal from the Almond and Fort Union

Formations using several different mining techniques. The Bridger Coal Company operates a surface mine and an underground mine. The Black Butte Coal Company operates a surface mine.

Almost all of the coal produced is shipped to the Jim Bridger Power Plant, while a smaller portion is sent to other customers. The combined coal production from all of the mines in the planning area for 2009, on both federal and non-federal mineral rights, totaled about 9.2 million tons.

Coal leasing, exploration, and development on public lands is conducted under the authority of the Mineral Leasing Act of 1920, as amended, the Federal Coal Leasing Amendments Act of 1976, and the Federal Coal Management Program as codified in the 43 CFR 3400 regulations. There are currently eight federal coal leases totaling about 28,471 acres within the planning area. Six of these leases are actively producing coal, one is currently not producing, and one is mined-out and abandoned.

Trona (Sodium)

Trona is a relatively rare sodium-rich carbonate mineral found in the United States, Africa, China, Turkey, and Mexico that is mined and then processed into soda ash. Soda ash is a significant economic commodity because of its applications in manufacturing glass, chemicals, paper, detergents, textiles, food processing, and water conditioning. It is the main ingredient in both sodium bicarbonate (baking soda) and sodium phosphate (detergents).

Trona was discovered in Sweetwater County in 1938 during oil and gas exploration drilling operations. The first mine shaft was excavated in 1946, and commercial soda ash production began in 1948. Until that time, all soda ash in the United States was produced synthetically. The trona-bearing deposits are confined to the southern half of the Green River Basin and cover about 1,100 square miles, mostly in Sweetwater County. According to the U.S. Geological Survey (2011), this is the largest deposit of trona in the world.

Currently four major operators are mining trona and producing soda ash in the Green River Basin. These operators include FMC Corp., Tata Chemicals (Soda Ash) Partners, Inc., OCI Wyoming LP, and Solvay Chemicals Inc. The final products created by these companies include, but are not limited to, baking soda, caustic soda, and a variety of soda ash types that have differing grades and chemical properties. The majority of the soda ash produced is sent to numerous customers in North America while the rest is exported to consumers abroad.

Sodium prospecting permits, preference right leases, exploration licenses, and competitive and noncompetitive leases are issued for federally owned trona reserves under the authority of the 43 CFR 3500 regulations. The Known Sodium Leasing Area (KSLA), which became effective on April 24, 1978, defines an area in the Green River Basin where trona deposits are known to occur that are at least four feet in thickness. The entire KSLA is located within Sweetwater County and covers an area of about 684,180 acres, of which 356,960 acres are in the RSFO planning area. The remainder of the KSLA is in the Kemmerer Field Office but is managed by the RSFO.

Currently, there are a total of 61 federal sodium leases within the KSLA covering 74,317.69 acres. Sixteen of these leases, totaling 18,306.92 acres, are within the RSFO planning area. Of these 16 leases, 2 are currently producing, 6 are active but not producing, and 8 are inactive. Production occurs on federal leases throughout the KSLA and on non-federal minerals in the region.

Solid Minerals Economic Impact

The BLM obtained 5 years of data for ONRR on coal and soda ash production on BLM-administered federal mineral rights located within the RSFO boundary. These data have been combined for the two minerals to protect the confidentiality of data from individual operators. Table 5-12 presents the combined data. The combined sales volume has been variable over the last 5 years. Sales value (and therefore also royalty value) has been even more variable.

Table 5-12. Sales Volume and Value, and Royalty Value, for Coal and Sodium

Product	2007	2008	2009	2010	2011	5-Year Average
Sales Volume (tons of coal, soda ash, and purge liquor)	3,730,332	4,300,012	3,260,200	3,349,601	3,937,923	3,715,614
Sales Value	$121,880,484	$304,617,638	$265,614,223	$227,309,380	$347,725,367	$253,429,418
Royalty Value	$8,770,482	$11,394,163	$9,049,280	$9,563,907	$14,752,955	$10,706,157

Note: Royalty Data Fiscal Year 2007 through Fiscal Year 2011 by Sales Date as of 03/26/2012

Although the data in Table 5-12 are combined, the IMPLAN model was run separately for the coal industry and the trona/soda ash industry to account for the differences between the industries. Some of the model parameters are presented in Appendix E; however, some of the values are withheld to protect confidentiality. Note that some of the parameters for coal production were based on underground coal mining, which is more costly than surface coal mining. For this reason, the economic impact values for coal production may be somewhat overestimated. Without additional cost data from the mine operators, it is not possible to quantify the overestimate or produce more accurate estimates. However, many of the parameters used for the economic impact analysis are based on the sales value of the minerals. The 5-year average sales value of trona is considerably higher than the value for coal; this mitigates the influence on the overall combined results of any overestimation due to the coal data used.

Table 5-13 shows the economic impacts of coal and trona (soda ash) production on the socioeconomic study area. In summary, based on data for the last 5 years, on average, the production of coal and soda ash in the RSFO generates $312.1 million annually in economic output in the socioeconomic study area and supports 777 jobs and $57.2 million in labor income. Earnings per job are high for jobs directly involving coal and trona production ($103,000) and more modest for indirect and induced jobs in support industries and the general local economy. Further, the Wyoming share of federal mineral royalties along with ad valorem and severance taxes amount to $18.4 million in annual revenues to the State of Wyoming.

Table 5-13. Economic Impacts of Coal and Trona Production Within the RSFO

Indicator	Production
Output	
Direct	$255,122,376.62
Indirect	$37,123,991.00
Induced	$19,837,573.00
Total	**$312,083,940.62**

Indicator	Production
Multiplier	1.22
Employment	
Direct	396.0
Indirect	182.4
Induced	198.7
Total	**777.1**
Multiplier	2.00
Labor Income	
Direct	$40,760,679
Indirect	$10,769,997
Induced	$5,709,739
Total	**$57,240,415**
Multiplier	1.42
Average Earnings Per Job	
Direct	$102,931
Indirect	$59,046
Induced	$28,735
Total	**$73,659**
Wyoming Tax Revenue	
Federal Mineral Royalties	$5,291,270
Ad Valorem	$8,365,513
Severance	$4,738,923
Total Revenue to the State	**$18,395,706**

Sources: Direct impacts and tax revenues calculated from parameters provided in table above, including use of ONRR data. Indirect, induced, and total impacts, and multipliers, calculated by application of the IMPLAN economic impact model as calibrated for this analysis.

5.4.3 Locatable Minerals

Exploration activities and limited mining operations on claims containing locatable mineral deposits have occurred sporadically throughout the past. There are currently three active Plans of Operation and one active Notice on placer gold claims located in the extreme northern portion of the planning area. No other proposed or outstanding Notices or Plans of Operation are under consideration at this time according to current BLM records. Most of the activity concerning placer gold in the planning area involves recreational gold panning by local residents and tourists, which is considered to be casual use requiring no formal approval. No active exploration or mining activities for any other type of locatable mineral is occurring at this time. No patented mining claims or claims are undergoing validity examinations in the planning area.

Other minerals that have shown some level of interest in the past include diamonds found within scattered kimberlite pipes located in the southern portion of the area, semi-precious stones found in the volcanic deposits of Sweetwater County, zeolite minerals found in the Tertiary age rocks of the Washakie Basin, and uranium minerals found mostly in the northern and the eastern parts of the area. Recently, the prices for both gold and uranium have increased substantially in the commercial marketplace. These price increases, in conjunction with an increase in demand, could potentially spur more interest for the exploration and development of locatable minerals within the planning area at some point in the future.

5.4.4 Salable Minerals

Management of salable minerals in the planning area must comply with the Material Sales Act of 1947, Mining and Mineral Policy Act of 1970, and all other relevant state and federal laws. Salable mineral permit applications are processed on a case-by-case basis, with stipulations added to protect other resources. The current management practice is to issue exclusive use (negotiated sales) permits or non-exclusive (free use) permits to allow for the access and production of salable mineral deposits.

The planning area contains a unique and wide range of geological features and landforms that give rise to a diverse assortment of salable minerals. The primary salable minerals found in commercial quantities are sand and gravel (aggregate), and to a lesser extent decorative and dimension stone ("moss rock" and flagstone). Other salable minerals known to occur in the planning area, but in lesser quantities, include topsoil and decorative boulders.

Sand and gravel deposits are found scattered along various drainage channels throughout the planning area, but are mostly concentrated along the Green River and its major tributaries. Pockets of sand and gravel can also be found in the outwash material that originated from the glaciations and erosion of the Wind River and the Uinta Mountains. Smaller gravel deposits occur on buttes and plateaus scattered throughout the area that are capped by the Bishop Conglomerate. Most of the sand and gravel production that occurs in this area is used locally for road construction and maintenance, while the decorative and dimension stone has been used in the commercial and the residential construction industry throughout the region and beyond.

Currently, there are two active negotiated sales contracts totaling 165,000 in-place tons of material and seven active free use permits totaling 349,000 in-place tons of material within the planning area. The negotiated sales contracts are issued to private entities, and the sand and gravel produced is used primarily in construction projects and in road maintenance. The free use permits are issued to various government entities, with Sublette County holding one, the Wyoming Department of Transportation (WYDOT) holding one, and Sweetwater County holding five at this time. The material removed under these permits is used almost exclusively for road construction and maintenance projects in the local area. Numerous older, inactive gravel pits occur throughout the area, many of which were originally permitted for use by WYDOT.

Currently, the BLM maintains a common use (non-exclusive sale) area for decorative and dimension stone on Aspen Mountain located south of the city of Rock Springs. There is also a small common use area for topsoil material located near Highway 191 South in the Miller Mountain area. Non-exclusive sales are conducted mostly with local residents seeking landscaping materials and topsoil for their private property. Collection of material from both these sites is restricted to hand tools only; no mechanized earth-moving equipment is allowed. No community pits are currently established in the Planning Area, and none are proposed in the future.

At present, extraction of salable minerals averages about 3,800 tons per year for negotiated sales, and 65,800 tons per year for free use permits. These mineral material cases are all sand and gravel.

The current price charged by the BLM throughout Wyoming for sand and gravel is $0.63 per ton (BLM IM WY-2010-038). This price is based on comparable sales from other sand and gravel operations. In addition, there is a processing fee for negotiated sales permits. This fee is determined on a case-by-case basis based on provisions for cost recovery established in BLM WO IM 2006-106.

5.5 RENEWABLE ENERGY

Renewable energy development on public lands is tied to land availability, power line access, and reasonable access to utility markets. This also varies with the type of renewable energy development. Solar energy installations need relatively flat lands with less than 2% slope. Wind energy installations are typically cited in hilly areas. However, not all BLM-administered lands are open to renewable energy development because of restrictions on ROW development and other considerations.

Key BLM policy and planning documents with respect to renewable energy include the Final Programmatic Environmental Impact Statement—Geothermal Leasing in the Western United States (2008); Final Programmatic Environmental Impact Statement—Wind Energy Development on BLM-Administered Lands in the Western United States (2005); BLM Instruction Memorandum 2009-043—Wind Energy Development Policy; and BLM Instruction Memorandum 2007-097—Solar Energy Development Policy. A Solar Energy Development Programmatic EIS is under way.

Much of Wyoming has fair to excellent wind energy potential, with some areas having outstanding to superb potential as identified by the Department of Energy's National Renewable Energy Laboratory. Currently, most of the interest has focused on southern Wyoming. Wind energy is the form of renewable energy that has received the most interest for use of BLM-administered lands in the RSFO in recent years.

At present, no wind energy projects are producing power or are under construction on BLM-administered lands in the RSFO. Therefore, wind energy on RSFO-managed land is not a current contributor to the local economy, except for minor economic activity associated with site testing and monitoring, or planning and permitting activities carried out locally.

Five site testing and monitoring ROW grants are currently active in the planning area. These authorizations cover approximately 28,707 acres of BLM-administered lands in the RSFO. All of the projects are within the checkerboard landownership area, so they involve private and, in some cases, state lands in addition to BLM-administered lands.

Three commercial wind energy development applications are being processed in the RSFO, involving approximately 9,100 acres of BLM-administered lands. All of the projects are within the checkerboard area. The projects range in size from 53–72 turbines, and peak generating capacity is expected to range from 80–110 megawatts per project. Table 5-14 details the wind energy project applications currently under consideration on BLM-administered lands in the RSFO.

Table 5-14. BLM RSFO Wind Projects

Project Name	Status	Number	Projected Scale/Capacity
Quaking Aspen (Aspen Mountain)	Processing	WYW-167692	53 turbines; 80 MW
White Mountain (Teton)	Processing	WYW-167597	72 turbines; 110 MW

Source: RSFO records as of March 6, 2013.

Wind energy development may have significant economic implications for the socioeconomic study area once projects are constructed and built. Both construction activities and maintaining and running turbines for electricity production generate jobs, income, and tax and royalty payments.

5.6 RECREATION

BLM-administered lands are used for a wide variety of recreational pursuits. The BLM categorizes recreation in three primary ways: dispersed recreation, developed recreation, and activities managed under special recreation permits.

- Dispersed Recreation—This refers to all recreation occurring outside developed recreation sites. Popular dispersed uses include hiking, backpacking, mountain biking, OHV riding, hunting, rock climbing, photography, automobile touring/sightseeing, bird watching, camping, rock hounding, and visiting archeological sites.
- Developed Recreation—Developed recreation sites incorporate visitor use infrastructure such as roads, parking areas, and facilities to protect the resource and support recreational users in their pursuit of activities, experiences, and benefits. Visitor use infrastructure is a management tool that can minimize resource impacts, concentrate use, and reduce visitor conflicts.
- Special Recreation Permits (SRP)—Five types of uses requiring SRPs are authorized by the Federal Lands Recreation Enhancement Act of 2004: commercial, competitive, vending, individual or group use in special areas, and organized group activity and event use. SRPs are issued to manage visitor use, protect natural and cultural resources, and accommodate commercial recreational uses. They may be issued for 10 years, or less with annual renewal. Commercial SRPs are issued to outfitters, guides, vendors, recreation clubs, and commercial competitive event organizers providing recreational opportunities or services without employing permanent facilities. SRPs for competitive and organized group events are also included in this category.

In addition, recreation on BLM-administered lands is managed through designation of Special Recreation Management Areas (SRMA), and an Extensive Recreation Management Areas (ERMA). SRMAs are the BLM's primary means for managing recreation use in areas of high recreation use. SRMAs are areas that require a recreation investment, where intensive recreation management is needed, and where recreation is a principal management objective. These areas often have high levels of recreation activity or are valuable natural resources for recreation. An ERMA within a BLM field office constitutes all BLM-administered lands outside SRMAs and other special designation areas. Throughout the ERMA, recreation is non-specialized, dispersed, and does not require intensive management. Recreation may not be the primary management objective, and recreational activities are subject to few restrictions. Both SRMAs and the ERMA may include developed recreation sites, but SRMAs are more likely to include such sites and use them to manage recreation.

All recreation activities provide socioeconomic value. The value may be as simple as increased quality of life for the participants. This can be measured as described in the section on non-market values. In addition, recreationists often spend money to recreate. Local recreationists pay for gas to reach a site and may buy equipment, purchase food and drink, and make other purchases locally. Non-local recreationists may do all of this, and pay for lodging, restaurants, guides and outfitters, and so forth. All these actions generate local economic activity. Expenditures by non-local recreationists are particularly important because they represent new income in the region.

Most recreation on BLM-administered lands is free, but in some situations, recreationists pay fees to use BLM-administered lands. At present, there are no fees for recreation sites in the RSFO. There are fees associated with SRPs.

5.6.1 Key Recreation Resources of the RSFO

BLM-administered lands within the RSFO provide a broad spectrum of outdoor opportunities affording visitors the freedom of recreational choice with minimal regulatory constraints. Recreational activities occurring on BLM-administered lands are multifaceted and generally considered by the public as non-consumptive. Following are some of the key recreation resources of the RSFO.

SRMAs

The following SRMAs are designated in the current RMP (the Green River RMP):

- Wind River Front
- Continental Divide National Scenic Trail
- Wyoming Continental Divide Snowmobile Trail
- The Green River
- Greater Sand Dunes
- Oregon—Mormon Pioneer—California—Pony Express National Historic Trails.

Recreation Use Areas

The following recreation use areas are designated in the current RMP:

- Cedar Canyon
- Oregon Buttes
- Honeycomb Buttes
- Steamboat
- Boar's Tusk
- Leucite Hills
- Emmons Cone
- Pilot Butte
- Little Mountain
- Pine Mountain.

Developed Recreation Sites

The following are some of the developed recreation sites currently maintained by the RSFO:

- Blucher Creek Campground
- Killpecker Sand Dunes Open Play Area Campground
- Sweetwater Bridge Campground
- Sweetwater Guard Station Campground
- Three Patches Picnic Area.

Dispersed Recreation

The portion of the RSFO not in SRMAs is managed as an ERMA and features mainly dispersed recreation. Recreation management for the ERMA is reactive and custodial, addressing visitor health and safety, resource protection, and use and user conflicts. Occurring in combination with other resource activities, dispersed recreation in the RSFO ERMA includes, but is not limited to, sightseeing, touring, backpacking, horseback riding, geocaching, hiking, OHV use, photography, wildlife viewing, fishing other water-related activities, hunting, and camping. These recreational opportunities are offered to the public on all BLM-administered lands within the RSFO as long as legal access is available.

5.6.2 SRPs in the RSFO

The RSFO has a very active SRP program and administers about 20 SRPs per year (average for the last 8 years) for activities and events such as outfitting and guiding for hunting activities, fishing, floating, horseback rides, wild horse viewing tours, interpretive tours, livestock drives, horseback fundraising events, horse endurance rides, yoga trips, and llama treks. Past SRPs have also included motorcycle hill climbs, triathlon events, mountain bike races, and wagon trains. These permits are issued to manage visitor use, protect natural and cultural resources, and achieve the goals and objectives of the Field Office recreation program as outlined in land use plans. At present there are 12 active SRPs in the RSFO: commercial (2), competitive (2), individual or group use in special areas (3), organized group activity (3), and event use (2).

Demand for and the diversity of commercial and competitive SRPs is expected to increase over time as the population in the county increases and as new recreational activities become popular. The RSFO collects about $3,000 to $4,000 per year in SRP fees; the revenue is spent on visitor services, maintenance, monitoring, and law enforcement.

Regulations and rules of conduct are applicable to all SRPs as outlined in 43 CFR Subpart 2932.57, BLM Manual Recreation Permits and Fees 2930, and BLM Handbook H-2930-1. Durations of SRPs depend on activities proposed, area in question, and past record of the potential permittee, and may be issued for periods from 1 to 10 years. In the RSFO area, the maximum length of time used has been 5 years. Guided hunting permits continue to constitute the biggest percentage of SRPs processed annually.

5.6.3 Recreation Use Levels

The BLM tracks recreation use in the Recreation Management Information System (RMIS). In the RSFO, estimates of recreation use entered into RMIS are based primarily on data from traffic counters at popular recreation sites. Adjustments to the raw data are made for one-way (e.g., loop) and two-way roads, and for average numbers of occupants per vehicle. Estimates of types of recreation use are based on the traffic counter data and the main uses of specific sites. Total estimated recreation visits on BLM-administered lands for the last 5 years are shown in Table 5-15. Table 5-16 shows estimates of the number of participants by type of recreation activity in fiscal year 2011. Several things should be kept in mind when viewing these data. First, recreation levels have varied considerably in the RSFO (as elsewhere) in recent years due to the impact of the recession. In addition, the RSFO has increased the number of traffic counters over time, so more recent years probably have more complete counts of recreation across the Field Office. Second, the formulas used to convert traffic counter data to annual person-visits and to estimate the breakdown by type of use rely on a number of assumptions and thus are approximations.

Table 5-15. Annual Recreation Visits on BLM-Administered Lands in the RSFO

Year	Visits
2007	220,554
2008	392,826
2009	357,236
2010	374,664
2011	429,861

Source: BLM RMIS, Report 23c.

Table 5-16. Recreation on RSFO BLM-Administered Lands by Activity, Fiscal Year 2011

Activity Use Grouping	Number of Participants	Percentage
Camping & Picnicking	40,560	9.4%
Driving For Pleasure	50,073	11.6%
Fishing	19,550	4.5%
Hunting	63,744	14.8%
Interpretation, Education & Nature Study	158,602	36.8%
Non-Motorized Travel	16,471	3.8%
Off-Highway Vehicle Travel	64,607	15.0%
Snowmobile & Other Motorized Travel	2,419	0.6%
Specialized Non-Motor Sports, Events & Activities	11,828	2.7%
Winter/Non-Motorized Activities	2,772	0.6%
Totals	**430,626**	**100.0%**

Source: BLM RMIS, Report 20.

5.6.4 Economic Impact

Estimation of the economic impacts of recreation requires data on recreation use levels and data on expenditures of recreationists within the socioeconomic study area. The BLM has some use data, as discussed above. The BLM does not have data on expenditures of recreational users of BLM-administered lands. Thus, proxy data must be used.

Data compiled by the U.S. Forest Service for the National Visitor Use Monitoring (NVUM) program are considered among the best recreational demographic and expenditure data and are available for most National Forests. These data are developed from surveys of National Forest recreationists.

NVUM data were gathered for the three National Forests with land in and near the RSFO socioeconomic study area: the Bridger-Teton National Forest, the Wasatch-Cache National Forest, and the Ashley National Forest. Recreation in these National Forests varies in terms of similarity to recreation on BLM-administered lands in the RSFO. For instance, two of the National Forests have significant downhill skiing use, but this use can be excluded from the data used for the RSFO analysis. The National Forests also vary significantly in their market segmentation (e.g., proportions of local day use versus non-local overnight use). The characteristics deemed most relevant to a comparison with the RSFO are summarized as follows:

- Wasatch-Cache National Forest: After excluding downhill skiers from the data, the recreation segmentation for this National Forest is probably close to that for the RSFO—it has a high proportion of local day use, which is typical for most BLM-administered lands nationally compared with National Forest lands (White 2012). Also, the expenditure profile is categorized as "low" (compared with other National Forests nationwide), which is probably applicable to the RSFO given that the RSFO socioeconomic study area largely lacks high-cost places (resorts, etc.) for visitors to spend money when not on BLM-administered lands.
- Ashley National Forest: This National Forest has an "average" expenditure profile. Its segmentation is more balanced between local/non-local and day/overnight use than that of the

Wasatch-Cache National Forest. These two factors provide a somewhat higher dollar comparison for analysis of economic impacts of RSFO recreation. Fishing is a higher-frequency activity in the Ashley National Forest than occurs on RSFO lands, due no doubt to the presence of the Flaming Gorge Reservoir, which is administered by the Forest Service. However, there is less motor-boating activity (a higher-cost activity typically) in the Ashley than one might expect given Flaming Gorge.

- Bridger-Teton National Forest: Even after excluding downhill skiers from the data, the recreation segmentation for this National Forest has a lot of non-local overnight use, and the expenditure profile is "high." These factors reflect the influence/role of the Jackson resort area in Bridger-Teton National Forest recreational use.

In summary, the Bridger-Teton National Forest was judged to be an inappropriate analog for recreational expenditures for the RSFO. The Wasatch-Cache National Forest and the Ashley National Forest were judged to be somewhat analogous. The Wasatch-Cache provides recreational market and expenditure patterns that may represent a low estimate for the economic impacts of RSFO recreation, while the Ashley probably provides a high estimate. All things considered, it is likely that actual RSFO recreational patterns and economic impacts are more similar to the Wasatch-Cache National Forest than the Ashley National Forest. Nonetheless, and given the uncertainties, data from both National Forests was used to provide a range for the economic impacts of RSFO recreation.

Table 5-17 and Table 5-18 provide the application of the NVUM market segment and expenditure data for the two National Forests to the recreational use figures for the RSFO. Total recreational visit data for the most recent year available for the RSFO were used. Because the BLM has been adding more traffic counters over the years, the most recent year's data are the most complete data.

Note that Table 5-17 and Table 5-18, in addition to using data from two different National Forests, also present two versions of the economic effects of recreation. Economic contribution includes the expenditures made by local residents (roughly, individuals who live within the socioeconomic study area), as well as the role of new income from outside the study area. In this case, direct economic contribution is the spending of local residents on local recreation and the spending of non-local residents on local recreation. Economic impact measures only the new income in the study area; in this case, this is only the spending of non-local residents on local recreation. Economic impact is the measure used in the analyses above of livestock grazing, oil and gas development and production, and coal and trona production. Local residents buy only a very small proportion of the total output of those industries, so a measure of economic contribution would be only slightly greater than the measure of economic impact. In the case of recreation, however, local residents make considerable recreation-related expenditures (gas, food, and so on while on local trips), so it is fair to include those expenditures in an analysis of the economic role of recreation. Put another way, expenditures by local and non-local recreationists alike help keep local businesses going.

Table 5-17 and Table 5-18 can be summarized this way. If the estimates based on the Wasatch-Cache and the Ashley National Forest data are considered "book ends" to the likely range for the economic effects in the socioeconomic study area of recreation on BLM-administered lands, then the direct economic impact of this resource use is between $4.3 million and $15.8 million annually, and the economic contribution is between $9.5 million and $19.3 million.

Table 5-19 shows the total economic effect of recreation, including direct, indirect, and induced economic activity. Total jobs generated by recreation on BLM-administered lands range from 46 to 188 when viewed in terms of economic impact, or from 104 to 225 jobs in terms of economic contribution. Labor income ranges from $1.2 to $5.1 million in terms of economic impact, or $2.6 million to $6.1 million in terms of economic contribution. From any perspective, the labor earnings per job that are generated by

recreation are modest. They are greater than the labor earnings per direct and indirect job for livestock grazing, but considerably less than the earning per direct and indirect job for oil and gas, and for coal and trona. For all these resource uses, the labor earnings per induced job are similar, which is to be expected because induced effects are from the re-spending of household income. Most households in the socioeconomic study area likely buy similar things from a similar set of industries (groceries, financial services, healthcare, etc.), thus the earnings per job are similar because mostly the same jobs are involved.

Table 5-17. Estimated Recreation Visitor Spending for RSFO Based on Wasatch-Cache NF Data

Trip Type (Market Segment)	National Forest Segment Proportions	Applied to RSFO Total Visits	National Forest Segment Party Size	Estimated RSFO Party Visits	National Forest Spending Per Party Visit (2010$)	Estimated RSFO Direct Economic Contribution (2010$)	National Forest Out-of-Area Substitution*	Estimated RSFO Direct Economic Impact (2010$)
Non-local Day Trips	1.0%	4,299	2.6	1,653	$57.87	$95,679	100.0%	$95,679
Non-local Overnight on Forest	4.0%	17,194	3.3	5,210	$167.09	$870,600	100.0%	$870,600
Non-local Overnight off Forest	4.0%	17,194	2.7	6,368	$312.36	$1,989,218	100.0%	$1,989,218
Local Day Trips	79.0%	339,590	2.2	154,359	$32.91	$5,080,260	17.0%	$863,644
Local Overnight on Forest	5.0%	21,493	3.2	6,717	$163.41	$1,097,555	36.0%	$395,120
Local Overnight off Forest	0.0%	0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Non-Primary Visits	7.0%	30,090	2.8	10,747	$32.91	$353,689	17.0%	$60,127
Total	**100.0%**	**429,861**	**N.A.**	**185,054**	**N.A.**	**$9,487,002**	**N.A.**	**$4,274,388**

*Out-of-Area Substitution: The portion of spending of local recreation visitors that would be lost to the region in the absence of the local recreation opportunities. If local visitors were to go outside the region because of the absence of the local recreation opportunities (rather than spending their money on something else locally), their spending would constitute a loss to the local economy and should therefore be included in an impact analysis.
N.A.: Not applicable.
Sources: RSFO total visits from BLM RMIS data, 2011. National Forest Out-of-Area Substitution: White and Stynes 2010. All other National Forest data: White *et al.* 2012, adjusted to 2010 dollars using IMPLAN inflators.

Table 5-18. Estimated Recreation Visitor Spending for RSFO Based on Ashley NF Data (2010$)

Trip Type (Market Segment)	National Forest Segment Proportions	Applied to RSFO Total Visits	National Forest Segment Party Size	Estimated RSFO Party Visits	National Forest Spending Per Party Visit (2010$)	Estimated RSFO Direct Economic Contribution (2010$)	National Forest Out-of-Area Substitution*	Estimated RSFO Direct Economic Impact (2010$)
Non-local Day Trips	10.0%	42,986	3.1	13,866	$64.47	$893,929	100.0%	$893,929
Non-local Overnight on Forest	33.0%	141,854	2.8	50,662	$241.14	$12,216,859	100.0%	$12,216,859
Non-local Overnight off Forest	2.0%	8,597	3.0	2,866	$538.37	$1,542,821	100.0%	$1,542,821
Local Day Trips	37.0%	159,049	2.7	58,907	$33.61	$1,980,117	17.0%	$336,620
Local Overnight on Forest	9.0%	38,687	3.1	12,480	$166.38	$2,076,389	36.0%	$747,500
Local Overnight off Forest	0.0%	0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Non-Primary Visits	9.0%	38,687	2.4	16,120	$33.61	$541,856	17.0%	$92,116
Total	**100.0%**	**429,861**	**N.A.**	**154,901**	**N.A.**	**$19,251,971**	**N.A.**	**$15,829,844**

*Out-of-Area Substitution: The portion of spending of local recreation visitors that would be lost to the region in the absence of the local recreation opportunities. If local visitors were to go outside the region because of the absence of the local recreation opportunities (rather than spending their money on something else locally), their spending would constitute a loss to the local economy and should therefore be included in an impact analysis.
N.A.: Not applicable.
Sources: RSFO total visits from BLM RMIS data, 2011. National Forest Out-of-Area Substitution: White and Stynes 2010. All other National Forest data: White *et al.* 2012, adjusted to 2010 dollars using IMPLAN inflators.

Table 5-19. Economic Effects of Recreation on BLM-Administered Lands in the RSFO

Indicator	Estimated with Wasatch-Cache National Forest Recreation Expenditure Data		Estimated with Ashley National Forest Recreation Expenditure Data	
	Economic Contribution	Economic Impact	Economic Contribution	Economic Impact
Output				
Direct	$9,487,002	$4,274,388	$19,251,971	$15,829,844
Indirect	$806,328	$371,452	$1,824,594	$1,537,616
Induced	$921,936	$416,891	$2,104,330	$1,762,209
Total	$11,215,265	$5,062,731	$23,180,894	$19,129,668
Multiplier	1.18	1.18	1.20	1.21
Employment				
Direct	86.9	38.2	185.2	154.9
Indirect	7.8	3.6	17.9	15.2
Induced	9.6	4.3	21.7	18.2
Total	104.3	46.1	224.9	188.2
Multiplier	1.20	1.21	1.21	1.22
Labor Income				
Direct	$2,144,470	$968,827	$4,906,678	$4,105,610
Indirect	$248,006	$113,053	$554,589	$467,789
Induced	$265,243	$119,941	$605,434	$507,004
Total	$2,657,719	$1,201,821	$6,066,701	$5,080,403
Multiplier	1.24	1.24	1.24	1.24
Average Earnings Per Job				
Direct	$24,676	$25,363	$26,496	$26,512
Indirect	$31,905	$31,376	$30,923	$30,782
Induced	$27,710	$27,964	$27,838	$27,867
Total	$25,494	$26,075	$26,979	$26,988

Sources: Direct impacts are based on the tables above for estimated recreation visitor spending. Induced and total impacts, and multipliers, calculated by application of the IMPLAN economic impact model as calibrated for this analysis.

5.7 TRANSPORTATION (OHV USE)

The national BLM objectives for OHV[13] management are to protect the resources of public lands, promote the safety of all users of those lands, and minimize conflicts among the various uses of those lands (BLM, 2001). OHVs are defined as "any motorized vehicle capable of or designated for, travel on or immediately over land, water, or other natural terrain, excluding (1) any non-amphibious registered

13 *For many years, the term "off-highway vehicle" (OHV) has been used by the public, industry, and the BLM interchangeably with the term "off-road vehicle" (ORV). The term "off-road vehicle" has a legally established definition in the Presidential Executive Order 11644 (1972) and BLM regulations. BLM has chosen to use OHV in most planning contexts, partly because it is a more popular term, but also because the regulations address vehicles that use roads and trails on BLM-administered land, and are, therefore, not just "off-road."*

motorboat; (2) any military, fire, emergency, or law enforcement vehicle when being used for emergency purposes; (3) any vehicle whose use is expressly authorized by the authorized officer, or otherwise officially approved; (4) vehicle in official use; and (5) any combat or combat support vehicle when used in times of national defense emergencies" (43 CFR 8340.0-5).

The majority of OHV use on public lands occurs on unpaved roads and two-track trails. In the planning area, the most common vehicles used are four-wheel drive trucks, all-terrain vehicles (ATV), and sport utility vehicles. Snowmobile use is another popular OHV activity. Typical recreational OHV activities within the planning area include casual ATV and motorcycle trail riding, enduro races, trial competitions, and snowmobiling. OHV use, in itself, has become a popular method for exploring public lands.

OHVs are used within the planning area for non-recreational purposes as well. Non-recreational OHV use in the planning area includes agricultural management, energy development, and land management activities. Based on Onshore Order Number 1, oil and gas interests can access their leases without a permit but are strongly encouraged to confer with the BLM. OHVs also are used for noncommercial collection of decorative rock and native plant materials. Employees of government agencies, ranchers, timber companies, energy companies, and utility providers are permitted users who use OHVs to access and maintain the infrastructure required for the continued operation and maintenance of their facilities. The BLM uses OHVs for range inspections, vegetation treatments, surveying and mapping, inventories, monitoring, fire suppression, project construction, and maintenance.

The BLM has established OHV and snowmobile area designations in accordance with the BLM Land Use Planning Handbook requirements and 43 CFR 8342.1. These designations outline management prescriptions and set restrictions on OHV use. Possible OHV designations are open, limited, or closed, as follows.

- **Open:** Areas used for intensive OHV use where there are no compelling resource needs, user conflicts, or public safety issues to warrant limiting cross-country travel.
- **Limited:** Areas or trails where the BLM must restrict OHV use to meet specific resource management objectives. These limitations may include limiting the time, number, or types of vehicles; limiting the time or season of use; permitted, licensed use only; limiting to existing roads and trails; and limiting use to designated roads and trails. The BLM may place additional limitations, as necessary, to protect other resources, particularly in areas that OHV enthusiasts use intensely or where they participate in competitive events. Limited use can be broken into three categories:
  - **Existing.** Vehicle travel is permitted only on existing roads and vehicle routes that were in existence before the date of designation in the *Federal Register*.
  - **Designated.** Vehicle travel is permitted only on roads and vehicle routes designated by BLM. In areas where final designation has not been completed, vehicle travel is limited to existing roads and vehicle routes as described above.
  - **Administrative.** Vehicle travel off existing vehicle routes is permitted only to accomplish necessary tasks and only if such travel does not result in resource damage. Random travel from existing vehicle routes is not allowed. Creation of new routes or extensions and/or widening of existing routes is not allowed without prior written agency approval.
- **Closed:** This designation is used if closure to all vehicular use is necessary to protect resources, ensure visitor safety, or reduce conflicts. Seasonal closures also exist in the planning area, which restrict OHV use in certain areas (generally crucial and critical wildlife areas) on a seasonal basis. The dates for these closures vary based on the area and species that they were instituted to protect.

People with disabilities may be allowed to travel on OHVs in otherwise closed areas on a case-by-case basis. This would require a request to a Field Office to initiate the exception.

OHV access to public lands is important to economic activity and quality of life. For instance, access to ROWs, communication sites, mining sites, and other commercial sites may affect the commercial viability of the operations at these sites, and thereby affect the contributions of these sites to the local economy. Recreational use of OHVs also contributes to the local economy when OHV users make local expenditures for goods and services associated with their use of BLM-administered lands for OHV riding. These expenditures also generate tax revenues.

The section on recreation above includes estimates of OHV use on BLM-administered lands in the RSFO. The economic effects of this use are included within the broader recreation sector economic effects estimated in the recreation section. No other use data or economic impact estimates specific to OHV use on BLM-administered lands in the RSFO were identified during preparation of this document.

OHV use can also have negative impacts. OHV damage occurs as a result of the follow activities: driving off established roads and trails and pioneering unauthorized roads and trails, and includes associated damage to vegetation and soils. Certain environments are more susceptible to OHV damage, including crucial winter ranges, wildlife breeding areas, riparian habitats, and areas with steep slopes or sensitive soils. These negative impacts have negative economic effects when they result in increased expenditures for damage control and repair. They also have negative social effects by affecting the values and enjoyment of other BLM resource users.

5.8 LANDS AND REALTY

The lands and realty program of the BLM is a support program to all other resources and resource uses. It responds to requests from other programs and/or outside entities. The mission of the lands and realty program is to manage BLM-administered lands in support of the goals and objectives of other resource programs, provide for uses of public lands in accordance with applicable laws and regulations while protecting sensitive resources, and to improve management of public lands through land tenure adjustments. The primary responsibilities of the lands and realty program include:

- Land tenure adjustments—Sales, exchanges, and purchases to dispose of or acquire land or interests in land.
- Withdrawals—Reserving public land for a certain use by removing it from the operation of one or more of the public land laws.
- Land Use Authorizations—ROWs, communication sites, corridors, leases, and permits.

BLM lands and realty actions and policies can have important socioeconomic effects. Land disposals, ROWs, leases, and permits allow for economic activity and may further the economic development of communities within the socioeconomic study area or serve other important social purposes. Withdrawals and acquisitions may be pursued to protect important resources of economic or social significance to the public.

Lands and realty actions also have important implications for public finance. Leases of BLM-administered lands and federal mineral estate produce revenue for the government. Disposal of BLM-administered land to private ownership may reduce PILTs by the Federal Government to local government, but also result in payments of property taxes to local government by the new private property owner(s). Acquisition of private land by the BLM reduces property taxes paid to local government but typically increases PILT payments.

5.8.1 Land Tenure Adjustments

The land-ownership pattern in the planning area is mostly large blocks of public land surrounding scattered parcels of private and state lands, with the checkerboard landownership pattern through the middle. In addition to these large blocks, there are areas of scattered public lands within state and private lands. These scattered parcels can be difficult to manage as part of the public land system. The small size of the scattered parcels and their isolation from other parcels of public land make them of marginal utility to the public. Lack of legal public access also diminishes their public utility.

Land tenure adjustments are often associated with accommodating public and private needs, enabling community expansion, consolidating public land, acquiring and protecting important resources, acquiring access to public lands, or serving a national priority. All land tenure adjustments must be in conformance with applicable land use plans and be subject to valid existing rights. The BLM uses several authorities to make land tenure adjustments through disposal and acquisition actions such as sales, exchanges, grants, donations, color of title, state In Lieu selections, and desert land entries.

Disposals

Federally owned lands can be disposed of through various disposal authorities, including FLPMA of 1976, as Amended (P.L. 94-579); the Recreation and Public Purposes Act (R&PP) of 1926 as amended; the Federal Land Transaction Facilitation Act (FLTFA) of 2000 (P.L. 106-248); or through other targeted federal legislation. Regulations found at 43 CFR 2700, and BLM policy and guidance also apply to land disposals.

Public lands have potential for disposal when they are isolated and/or difficult to manage. Disposal actions are usually in response to public requests, such as community expansion or individual needs. Disposals result in a title transfer, wherein the lands leave the public domain. All disposal actions are coordinated with adjoining landowners, local governments, and current land users. If a parcel of land is to be disposed of, a hazardous material evaluation pursuant to section 120(h) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) is prepared. Disposal actions require an environmental analysis in accordance with NEPA. This NEPA analysis may reveal resource conditions that could not be mitigated to the satisfaction of the authorized officer and may therefore preclude disposal.

Public lands determined suitable for sale are offered on the initiative of the BLM unless their disposal was specifically directed by federal legislation. The lands are not sold at less than fair market value unless otherwise provided for by law. Specific lands suitable for sale must be identified in the applicable land use plan (e.g., RMP). Any lands to be disposed of through sale that were not identified in the land use plan would require a plan amendment before a sale could occur.

Approximately 19,598.34 acres of public land are identified for disposal by sale in the current Green River RMP. However, little public land has been actually offered for sale. Four parcels have been sold since October 1997, as follows:

- August 23, 2000, 0.06 acres to the David J. Palmer to expand parcel for residential purposes
- July 1, 2004, 722.50 acres to PacifiCorp for the flue gas ponds at the Jim Bridger Plant
- November 29, 2007, 40 acres to G&E Livestock to resolve an occupancy trespass
- October 22, 2009, 29.42 acres to Magagna Bros Inc. to resolve occupancy trespass.

Land Exchanges

Exchange is the process of trading lands or interests in lands. Public lands may be exchanged for lands or interests in lands owned by corporations, individuals, or government entities. Exchanges are the primary means by which land acquisition and disposal are carried out. Except for those exchanges that are congressionally mandated or judicially required, exchanges are voluntary and discretionary transactions with willing landowners. Exchanges serve as a viable tool for the BLM to accomplish its goals and mission. The lands to be exchanged must be of approximately equal monetary and resource value and located within the same state. Exchanges also must be in the public interest and conform to applicable BLM land use plans.

Land exchanges are used to (1) bring lands and interests in land with high public resource values into public ownership, (2) consolidate land and mineral ownership patterns to achieve more efficient management of resources and BLM programs, and (3) dispose of public land parcels identified for disposal through the planning process. Exchange activity has been low in recent years within the planning area, although interest in exchanges continues to increase. There has been only one exchange in the last 10 years, in which the BLM acquired 26.5 acres with riparian/wetland and historic values in exchange for 40 federal acres with riparian/wetland values. The total appraised value in the transaction was $7,000.

Acquisitions

Acquisition of lands and/or interest in lands can be pursued to facilitate various resource management objectives. Acquisitions, including easements, can be completed by negotiated purchase, exchange, donation, cooperative agreements, and transfers from other federal agencies. Funding sources for acquisitions include revenue pursuant to the FLTFA, the Land and Water Conservation Fund (LWCF), and support from benefitting resource areas, which is especially important in exchanges and easement (including access) acquisition programs. Within the RSFO, there have been no purchases of land since the early 1980s. The BLM acquired one easement in 2011of less than one-quarter mile to allow access to a historic site acquired through exchange.

5.8.2 Withdrawals

A withdrawal is a formal land designation that has the effect of reserving land for a particular use. Withdrawals remove public lands from the operation of one or more of the public land laws. Withdrawals exclude public lands from settlement, sale, location, or entry, including actions under the general mining laws and mineral leasing laws. Withdrawals are used to protect major federal investments in facilities or other improvements, reserve lands for specific proposes and use, support national security, protect resources, and provide for public health and safety.

Section 204(l) of FLPMA requires the review of existing withdrawals to determine whether they are still serving the purposes for which they were made. If the withdrawals are no longer serving their intended purpose, they are to be revoked and the lands opened or partially opened to the uses that were previously prohibited. If withdrawals are determined to still be meeting the purposes for which they were made, they are recommended for extension for a specific term. While the BLM can make recommendations to designate, revoke, or extend withdrawals, only the Secretary of the Interior has the authority to actually take these actions.

The Analysis of Management Situation (AMS) provides a list of existing and proposed withdrawals. The largest existing BLM withdrawals are for public water reserves (4,240 acres), protection of special status plants (4,666 acres), the Sweetwater River Segment (4,943 acres), and stock driveways (8,196 acres). All existing withdrawals to other federal agencies are to the Bureau of Reclamation. These withdrawals,

ranging in size from 20 to 148,111 acres, are for the Eden Project, the Seedskadee Project, and the Colorado River Project. Additional withdrawals have been proposed for cultural and historic sites, ACECs, quarries, recreation sites, public water reserves, and special status plants.

5.8.3 Land Use Authorizations

Rights-of-Way and Easements

A ROW grant is an authorization to use a specific piece of public land for specific projects, such as roads, pipelines, transmission lines, and communication sites. ROWs facilitate economic activity and economic development. A ROW grant authorizes rights and privileges for a specific use of the land for a specific period of time. Generally, a BLM ROW is granted for a term appropriate for the life of the project. The vast majority of ROWs granted are authorized by Title V of FLPMA (43 USC 1761-1771), and Section 28 of the Mineral Leasing Act of 1920, as amended (43 USC 185). It is the policy of the BLM to authorize ROW applications at the discretion of the authorized officer in the most efficient and economical manner possible.

ROWs exist within the RSFO that have been granted to various entities for a range of purposes. As of mid-December 2011, a total of 3,224 ROW authorizations existed in the RSFO. The largest number of ROWs (1,476) is for oil and gas pipelines; the second largest number is for roads and highways (807).

The RSFO typically receives 75 to 150 applications for ROWs per year, usually for roads, power lines, pipelines, compressor stations, and telecommunications facilities. Authorizations for access roads, pipelines, and compressor stations are typically directly related to the level of mineral development. Applications for telecommunication facilities are on the rise with the increased use of digital communication and the need to provide communication capability to rural areas. Historically, the field office in the planning area has not received applications for easements.

Whenever feasible, the BLM encourages joint use and placement of new facilities in existing use areas that have already been disturbed, such as existing communication sites, roads, and highways. The BLM does not issue exclusive use ROWs; therefore, more than one grant may be issued for the same area, resulting in the same acreage being counted more than once. For example, a fiber optic cable, a water pipeline, a power transmission line, and a telephone line may all exist within the same footprint, resulting in the same acreage being counted for each individual use. In such instances, the actual acreage affected will appear inflated.

ROW users pay rents to the BLM on an annual or 10-year payment schedule. The rental schedule varies by county, with a county's "zone" depending on average property values in the county. The RSFO includes zones 1 through 3; the annual rents for these zones range from $8.15 per acre to $32.59 per acre as of 2012 (BLM 2012).

Communication Sites

Communication site authorizations are issued under a "communications use lease"; however, older authorizations may be issued by a ROW grant. Both authorizations are administered under the ROW regulations and are referred to as a ROW authorization.

Communication sites host communication equipment and facilities for various uses, such as television, radio, microwave, seismograph, cellular, and Internet. In some instances, these authorizations include ancillary facilities, such as roads, power lines, and fuel storage facilities, necessary to sustain the

operation of the site that are factored into the total acreage granted to the site. As of mid-December 2011, the RSFO had issued 38 authorizations for communication sites.

The BLM issued final regulations on November 13, 1995, establishing a rental schedule for communication uses located on public lands. The schedule establishes a rental amount based on the population of the area served and the type of communication use. Currently there are 10 categories of use and 9 population strata areas represented by the schedule. The rent schedule is adjusted annually based on changes in the Consumer Price Index–Utilities (CPI-U) index.

Corridors

Corridors are established to bring together within a designated area several linear ROWs. They are established to minimize acreage disturbance, provide for the needs of future users, and respond to concerns of the private and local agency landowners. The intent of the corridor identification process is to restrict the random distribution and proliferation of ROWs in an unorganized pattern. Identification of utility corridors provides specific areas for future linear ROWs, such as powerlines, pipelines, and fiber optic and other communication lines. There is one designated corridor in the RSFO. It is the West Wide Energy Corridor, which encompasses a total of 117,967 acres, of which 58,505 acres (49.5%) are on BLM-administered lands.

Leases and Permits

The FLPMA, Section 302 authorizes the BLM to issue leases and permits for the use, occupancy, and development of BLM-administered lands. BLM-wide, leases and permits are issued for a wide range of purposes, such as advertising displays, commercial or noncommercial croplands, apiaries, livestock holding or feeding areas not related to grazing permits and leases, commercial filming, harvesting of native or introduced species, temporary or permanent facilities for commercial purposes (does not include mining claims), residential occupancy, ski resorts, construction equipment storage sites, assembly yards, oil rig stacking sites, and mining claim occupancy if the residential structures are not incidental to the mining operation.

One important use of permits in the planning area is for commercial filming. The western deserts and mountain terrain are strong attractions to national and international television and film production companies. The RSFO issued 20 permits for filming between 1989 and 2011.

The R&PP of 1926, as amended, is a commonly used authority for leases. It authorizes the sale or lease/ conveyance of public lands for recreational or public purposes to state and local governments and to qualified nonprofit organizations. Examples of qualified uses under the act are historic monument sites, campgrounds, schools, fire houses, law enforcement facilities, municipal facilities, landfills, hospitals, parks, fairgrounds, and churches. Leases are issued for a specific time, allowing the lease holder adequate time to substantially build and follow its approved plan of development. Lands are leased or conveyed for less than fair market value or at no cost for qualified uses. Lands usually are leased first until development of the area is completed and then, if appropriate, a title may be conveyed. The RSFO administers 11 patents covering 572.12 acres and 16 leases covering 1,804.28 acres with 1 pending application for 8 acres. The AMS details these grants.

5.9 SPECIAL DESIGNATIONS

Special designations, whether legislative designations, such as national parks, wilderness areas, and national conservation areas, or administrative designations, such as ACECs, usually result in additional protections to the ecological and open space values of the areas so designated. A common concern with

special designations is that protections that may be put in place may affect traditional, commodity-based uses of public lands; for example, mining, fluid mineral development, grazing, etc. Restrictions on these activities may reduce economic activity for individual resource users and for local or regional communities. They may also have social impacts; for instance on local customs and culture surrounding mining and ranching.

It is important to recognize the potential for negative economic and social impacts from special designations. It is also important to recognize that special designations may have positive economic and social effects. These effects are typically less obvious, and therefore merit additional discussion.

A growing body of evidence suggests that "natural amenities" such as scenery, access to recreation, and the presence of protected areas have positive economic benefits for communities possessing such amenities. Most of these studies have focused on legislative designations such as national parks and wilderness areas, but their findings may well apply to natural amenities protected under other designations such as ACECs. A study by Headwaters Economics (2007) summarizes much of the available research and reaches several conclusions:

- Entrepreneurs and employees who are not dependent on a particular workplace location ("cyber-commuters") are attracted to areas that possess high levels of natural amenities.
- Retirees are attracted to areas that possess high levels of natural amenities.
- A positive relationship exists between environmental protection and in-migration, retaining businesses, and attracting new businesses.
- There is no evidence to suggest that protection of public lands is detrimental to local economies.

The above conclusions are reinforced by several other comprehensive studies, including those by the Sonoran Institute (2004) and the Wilderness Society (2007). A study of second-home ownership in central Colorado (Venturoni, Long and Perdue 2005), while not addressing protected public lands, concludes that access to scenery and recreation are prime motivators behind second-home ownership in the areas studied. This paper further concludes that the second-home ownership phenomenon, although not without its negative impacts, is an important economic engine in job creation and income generation. Data from the U.S. Bureau of Labor Statistics reinforce the importance of second-home owners to local economies, particularly in terms of spending (Francese 2003).

Recent research on communities surrounding national monuments (Headwaters Economics 2011) provides additional evidence that special designations are not incompatible with economic growth and, in some cases, help such growth. This research examined the 17 national monuments in the 11 western continental states that are larger than 10,000 acres and were established in 1982 or later. The research found:

- Economic growth, as measured by employment and personal income, followed the creation of every national monument studied.
- Compared with benchmark counties in the state where each monument is located, in nine cases these two indicators grew faster than the benchmark, in three cases the indicators were tied or split, and in five cases the indicators grew slower.
- In one case—El Malpais National Monument in New Mexico—leading indicators (population, employment, personal income, and per capita income) after designation reversed declines experienced in the years before designation.

Another economic benefit of natural amenities is the enhancement effect of open space, including protected lands, on property values. The studies noted above, among others, have demonstrated that homes and properties located close to open space are more valuable relative to properties located further

away, holding all else constant. This relationship varies based on the various characteristics (type, size, location, etc.) of open space resources, including the quality of views provided by the open space near a property. Open space can indirectly affect property tax revenues realized by local jurisdictions through the effect open spaces have on property value assessments.

5.10 NON-MARKET VALUES

Market values of BLM-administered surface lands and federal mineral estate are relatively easy to understand and assess. Commodities produced through use of BLM-administered lands (such as oil and gas, hard rock minerals, mineral materials, livestock, timber, electricity from renewable energy projects, etc.) have a price in the marketplace that can be easily determined. Economic methods are readily available for measuring the flow of income and employment resulting from the production of commodities; e.g., production of electricity from renewable energy projects. A renewable energy development EIS presumes a certain number of wind turbines or solar panels developed over a specified period of time and constructed and operated by a workforce that can be estimated reasonably well. Using economic impact models, economists can then work "upstream" to estimate the purchases that renewable energy developers and operators will make from other firms, and work "downstream" to estimate how much their employees' wages will contribute to other businesses throughout the local economy.

The term *nonmarket values* refers to the benefits individuals attribute to experiences of the environment or uses of natural and cultural resources that do not involve market transactions and therefore lack prices. Examples include the benefits received from wildlife viewing, hiking in a wilderness, or hunting for recreation. Nevertheless, such values are important to consider because they help tell the entire economic story. Estimates of nonmarket values supplement estimates of income generated from commodity uses to provide a more complete picture of the economic implications of proposed resource management decisions.

Many of the subsections above address market values associated with uses of BLM-administered lands. Examples include the value of livestock attributable to grazing on BLM-administered lands, and the market expenditures of recreationists. To provide the more complete picture just noted, it is important to also discuss nonmarket values.

To follow the example above, if renewable energy development represents one use, other uses may involve managing for some combination of habitat conservation and recreation. Although this may be relatively straightforward from a management standpoint, for determining economic impacts this is problematic. Herds of elk do not pay user fees to graze on public lands. Visiting fishermen, hunters, and climbers may spend money on motels and restaurants, but for the most part, recreation on BLM-managed lands comes free or at a nominal charge. Thus, much of the value that humans might place on maintaining lands for conservation and recreation is never measured in the market economy. The BLM is increasingly asked to consider these values; in effect, to replace that "zero" with a more useful number for planning and analysis purposes.[14]

Clearly, it is often useful for BLM planning purposes to evaluate the market expenditures associated with activities on BLM-administered lands (e.g., spending by recreationists, mineral development expenditures) or the market value of products taken from BLM-administered lands such as timber and minerals. Economic models can then be used to estimate the total economic activity generated by these expenditures or production values.

14 *BLM has recently issued guidance on considering nonmarket values: Instruction Memorandum No. 2010-061, Guidance on Estimating Nonmarket Environmental Values, February 16, 2010 (BLM 2010). This discussion draws on that guidance.*

It may also be useful to address the additional nonmarket economic values derived from BLM-administered lands. In some cases, these values can be calculated if appropriate information is available. In other cases, this is not possible, but it may be helpful to discuss these values qualitatively or to provide examples of these values in analogous situations.

Although there are difficulties associated with measurement of nonmarket values, it is well-accepted that the natural and cultural resources of an area and the open space the area may provide can have dollar values. For example, it is common for real estate investors to pay more for view lots or property adjacent to open space, or for people to make financial donations to help protect old-growth forests, endangered species, or other sensitive resources.

In examining nonmarket values, economists often distinguish between "use values" and "non-use values." *Use value* refers to the benefits an individual derives from some direct experience or activity, such as climbing a spectacular peak, hunting, or wildlife viewing. In contrast, *non-use value* refers to the utility or psychological benefit some people derive from the existence of some environmental condition that may never be directly experienced: an unspoiled Grand Canyon or the continued presence of an endangered species.

Economists measure nonmarket use values by estimating the "consumer surplus" associated with these activities, which is defined as the maximum dollar amount, above any actual payments made, that a consumer would be willing to pay to enjoy a good or service. For instance, hikers pay a market price for gasoline used to reach a trail, but pay nothing to use the trail. Any amount that a recreationist would be willing to pay to use this otherwise free resource represents the nonmarket consumer surplus value of that resource to that consumer. There are many techniques for measuring this nonmarket use value. One common way is to collect data on variations in what recreationists do pay (gasoline, hotels, restaurants, entry fees, guides or outfitters, etc.); economists then use quantitative techniques to impute the additional willingness to pay that constitutes consumer surplus.

Nonmarket use values have been studied extensively for a wide variety of recreation "goods." To help the reader understand the potential nonmarket value of some of the planning area's natural and cultural resources, an example of a range of typical nonmarket use values for recreation activities is summarized in Table 5-20, derived from a U.S. Forest Service report titled *Updated Outdoor Recreation Use Values on National Forests and Other Public Lands* (Loomis 2005). That study summarizes the findings from 1,239 studies covering much of the nation from 1967 to 2003, and separates out the studies by region. Table 5-20 provides summary statistics for the Intermountain Region, in which the socioeconomic study area is situated.

Table 5-20. Average Consumer Surplus Values and Additional Statistics, Per Person Per Day, Intermountain Region, 1967–2003

Activity	N	Mean	Standard Error	Minimum	Maximum
Camping	21	$34.72	$6.64	$2.03	$116.66
Cross-Country Skiing	7	$29.88	$4.58	$14.05	$46.49
Downhill Skiing	3	$39.62	$13.88	$15.05	$63.11
Fishing	48	$49.57	$6.96	$8.96	$227.28
Non-motorized Boating	22	$67.70	$14.33	$2.70	$316.42
General Recreation	12	$48.46	$20.92	$7.91	$257.51
Hiking	7	$38.53	$7.84	$12.85	$75.76

Activity	N	Mean	Standard Error	Minimum	Maximum
Hunting	109	$48.55	$3.35	$2.60	$169.31
Motorboating	7	$53.68	$25.93	$5.29	$203.62
Mountain Biking	6	$184.48	$41.05	$65.88	$295.69
OHV Driving	7	$22.81	$4.31	$7.96	$40.86
Other Recreation	10	$56.35	$17.36	$12.17	$206.82
Picnicking	5	$28.27	$4.09	$136.61	$38.76
Driving for Pleasure	4	$69.74	$33.23	$26.41	$167.24
Rock Climbing	3	$50.45	$7.58	$35.78	$61.14
Sightseeing	11	$23.58	$8.65	$0.65	$100.73
Snowmobiling	8	$36.29	$13.24	$10.79	$124.44
Swimming	1	$29.54	N/A	$29.54	$29.54
Waterskiing	2	$56.96	$13.09	$43.87	$70.07
Wildlife Viewing	61	$37.24	$3.30	$5.26	$193.91
All Wilderness Activities	32	$41.68	N/A	N/A	N/A

N: Number of studies measuring specific recreation activity.
N/A: Not available.
Mean: Average (arithmetic mean) consumer surplus per visitor day for that activity.
Standard Error: Standard error of the mean, with larger values relative to the mean indicating larger response variability.
Minimum: Average minimum consumer surplus per visitor day for that activity.
Maximum: Average maximum consumer surplus per visitor day for that activity.
Source: Loomis 2005, Table 3. All dollar figures are in 2004 dollars.

By applying the range of values in Table 5-20 to recreational usage figures (visitor days), or a range from specific individual studies that are most comparable to the planning area, an estimate of the recreation-related non-market use value, the consumer surplus, can be derived for the planning area. The resulting figure represents the total nonmarket use value recreationists derive from these activities, or alternatively, can be seen as the total additional amount recreationists would likely be willing to pay for the related recreation activities if a fee for participation were required. Those who are accustomed to free access and use of public land tend to forget that it represents a recreation opportunity and experience for which many would be willing to pay.[15] This type of calculation must be done very carefully, with great attention to the reliability of the recreational usage numbers and the validity of the consumer surplus values derived from the literature. The results must also be carefully interpreted, because consumer surplus estimates are not directly comparable to estimates of income derived from commodity uses (BLM 2010). Nonmarket use value calculations will be considered for relevancy in the economic impact analysis phase of the RMP revision process, and undertaken if useful to decisionmaking and if possible with available data.

With respect to non-use values, economists differentiate various types, including option values and existence values. Option value represents the benefits from having natural or cultural resources available for future use, while existence value reflects the benefits derived from knowing these resources simply exist. Evidence for the existence of these non-use values is ample. Local, state and national taxpayers support a large variety of conservation and protection programs (e.g., NPS, state parks, local parks and

15 *This observation is not meant to suggest that such fees should be charged. There are many philosophical and practical issues associated with charging fees for recreational use of public land.*

parkways, open space initiatives, etc.) through their tax dollars—programs that are very popular but support many resources that many taxpayers will never visit. A large number of nonprofit organizations are devoted a wide variety of conservation and wildlife-related causes; many if not most donors to these groups derive no direct benefit from their contributions. Based on Internal Revenue Service filings, Giving USA reported charitable contributions by individuals, foundations, and corporations totaled $298.42 billion in 2011, of which $7.81 billion went to the "environment/animals" sector (Giving USA 2012). Examples of individual organizations receiving substantial contributions include the World Wildlife Fund (WWF) with more than $221 million in contributions from all sources in 2009 (WWF 2009). The Nature Conservancy (TNC), with more than 1,000,000 members, primarily in the United States, received more than $665 million in contributions (TNC 2009). Although this generalized evidence of non-use values is clear, estimating non-use values for specific resources is difficult and often controversial. BLM guidance recommends that use values be emphasized rather than non-use values (BLM 2010).

Nonmarket values of open space and well-managed natural resources also include a broad range of human benefits resulting from healthy ecosystem conditions and functions. These benefits include potable water from groundwater recharge, flood control from intact wetlands, and carbon sequestration from healthy forests and certain agricultural lands. These human benefits from ecosystems are known as "ecosystem services" (Ruhl et al. 2007). Ecosystem services are receiving increasing attention from economists. As with the nonmarket values discussed above, there are many techniques available for estimating the dollar value of these ecosystem services.[16] It may be useful in the planning process to further consider the economic value of maintaining or improving the functional benefits of ecosystems.

5.11 TRIBAL USES

Wyoming has one reservation, the Wind River Reservation, housing two federally recognized tribes, the Eastern Shoshone and the Northern Arapaho. The reservation is not within the RSFO planning area, but most of the reservation is located within the socioeconomic study area in Fremont County. The two tribes are actively involved in consultations regarding proposed projects and their effects on sites and areas of tribal interest within the planning area because the planning area includes lands in their traditional territories. Two other tribes have requested to be consulted on undertakings in the planning area that may affect sites and areas of interest to the tribe because the planning area includes lands in their traditional territories. They are the Shoshone Bannock of the Fort Hall Indian Reservation (south-central Idaho) and the Ute Tribe of the Uinta and Ouray Reservation (northeastern Utah). Typically, tribal consultation on projects and planning documents involves all four of these tribes, although the Shoshone-Bannock have frequently deferred to the decisions/involvement of the Eastern Shoshone.

Consultation through the years has demonstrated a wide range of tribal interests are present in the planning area. These include concerns about potential impacts on resources associated with practices such as gathering medicinal plants or native foods, and other natural products; access to traditional hunting and ceremonial areas; the availability of water and healthy plant and animal populations; as well as potential impacts and threats to Native American archeological sites, sacred sites, and traditional cultural properties (TCP). Individual tribal members are known to visit certain petroglyph sites, presumably for ceremonial purposes. It is likely that other locations are being used for modern purposes (ceremonial, plant gathering, etc.) that the BLM is not aware of because there are many places of importance to the tribes, including TCPs, sacred sites, and other places of importance. Areas located on Steamboat Mountain, Steamboat Rim, White Mountain Rim, Essex Mountain, Monument Ridge, Joe Hay Rim, and the Indian Gap Trail have been identified as respected places, which may include Native American sacred sites or TCPs.

16 *The ecosystem services framework actually encompasses the amenity, recreational, and other values discussed above. For purposes of this brief discussion, the emphasis is on the additional functional benefits ecosystems provide.*

CHAPTER 6—CONCLUSIONS

The socioeconomic study area has many significant economic and social conditions that affect the uses and values of BLM-administered surface lands and mineral estate in the RSFO RMP planning area. Some basic but important characteristics of the socioeconomic study area and the planning area are as follows:

- The socioeconomic study area includes five counties in southwestern Wyoming: Fremont, Lincoln, Sublette, Sweetwater, and Uinta.
- A large majority of the land in the socioeconomic study area is federally owned (71% overall). The BLM manages the largest amount of land (47%), followed by private ownership (25%), and other federal agencies (24%).
- Within the planning area portion of the study area, the percentage of privately owned land is similar (24%) to that of the study area, while BLM land makes up a larger proportion (67%) than in the study area and the percentage of land managed by other federal agencies is much less (5%).
- The checkerboard land ownership pattern in the middle portion of the planning area creates challenges and concerns for both the BLM and private landowners.
- The socioeconomic study area has a 2010 Census population of more than 133,400, which is 23.6% of the total Wyoming population.
- Sublette County has the smallest population, 10,247, and Sweetwater County has the largest population, 43,806.
- The socioeconomic study area is very sparsely populated, with a few small urban centers. The population density is 4.4 persons per square mile, compared with figures of 5.8 for the state and 87.4 for the nation.
- The socioeconomic study area, and particularly the planning area, is located at considerable distance from any large urban areas.

Some important social conditions and trends in the socioeconomic study area include the following:

- The study area counties and communities have rich social and economic histories.
- Since at least 1970, the socioeconomic study area has grown at a much faster rate than the state or the United States.
- Sublette, Sweetwater, and Uinta counties have seen the largest growth, in percentage terms.
- The study area has experienced “boom and bust” economic cycles, where growth fueled by in-migration to serve a booming minerals industry has been followed by declines or stagnation in growth.
- Population growth picked back up in the 2000s as the fluid mineral energy industry saw considerable growth. In this period, natural growth (births minus deaths) was a larger factor in growth than in-migration, although in-migration was also strong.
- Population growth for much of the socioeconomic study area is projected to continue.
- The percentage of socioeconomic study area residents born in Wyoming is much lower than the percentage of people in the United States for whom their birth state is also their state of residence. This indicates strong long-term migration into the area by persons born outside of Wyoming.
- With the exception of Fremont County, with its large American Indian population, the socioeconomic study area county populations are strongly White (88% to 95%), compared with the proportion of the U.S. population that is White (72%).
- The Hispanic population is the largest percentage minority population but this percentage is still much lower than proportion in the nation (4% versus 15%).
- Average income levels in the socioeconomic study are similar to or higher than the nation. Sublette and Sweetwater counties have a much higher average income level than the nation, partly as a result of the oil and gas boom.

- Average single-family home prices in Lincoln, Sublette, and Sweetwater counties are significantly higher than average prices for the state as a whole.
- County and local governments in the socioeconomic study area generally provide adequate public services, but often struggle to do so given low and widely dispersed populations and the impacts of growth of the mining industry.
- The average cost of living in Sublette and Sweetwater counties is above the average for the state.
- Although there are many challenges, many residents of the socioeconomic study area generally enjoy and appreciate a high quality of life.
- The area's communities want to grow in the way they choose and preserve their unique history and culture.
- There are many types of stakeholders with an interest in BLM-administered lands. At a high level, key types of stakeholders include Mineral Development and Production Stakeholders, Renewable Energy Stakeholders, Livestock Grazing Stakeholders, Habitat and Resource Conservation Stakeholders, and Recreation Stakeholders. These categories are not mutually exclusive; many specific individuals or organizations have multiple interests and have views that place them in more than one stakeholder category.
- A number of places (population concentrations) in Fremont, Lincoln, Sublette, and Sweetwater counties have minority populations and/or populations in poverty that may qualify as Environmental Justice populations. These places are primarily smaller communities. They have been flagged for further consideration in the impacts analysis phase of the planning process.

Some important economic conditions and trends in the socioeconomic study area include the following:

- Since 2002, unemployment in the socioeconomic study area counties has been lower than the national average.
- Sublette and Sweetwater counties have generally had the lowest unemployment rates during this period, typically two to five percentage points below the national rate.
- The largest employment sectors in the socioeconomic study area from 1970 to 2000 were services and professional, government and government enterprises, retail trade, and mining. Mining was the largest sector from the mid-1970s to the early 1980s but shrank considerably from 1981 through 2000.
- In the 2000s, similar sectors (but under a different classification system) as well as construction were also the largest sources of employment and earnings. Mining and construction grew considerably from 2001 to 2008, but saw significant declines after 2008.
- From 1970 to 2009, the percentage of total personal income from labor earnings in the socioeconomic study area declined from 78% to 65%, and the percentages of personal income from both transfer payments and dividends/interest/rent increased significantly. These trends generally correspond to national trends, reflecting the aging population, which relies more on non-labor income than working persons.
- At the county level, in 2009 the percentage of personal income from non-labor sources was well above the national average in Fremont and Lincoln counties and well below the national average in Sublette, Sweetwater, and Uinta counties.
- Analysis of location quotients for industries in the socioeconomic study area in 2009 shows that the following industries are most important to the economic base (bringing in outside income): mining, construction, and transportation and warehousing. These industries had both high LQs and a large share of the study area's employment or earnings. Two other industries—farming; and forestry, fishing, and related activities—have high LQs but small shares of employment or earnings.
- Sublette and Sweetwater counties have the second and third highest levels in Wyoming of taxable valuation of mineral production. As such, they contribute large amounts of federal mineral revenues, state severance taxes, and state ad valorem taxes to state and local budgets.

- Most of these mineral revenues are retained by the State of Wyoming. Portions are returned to local government, including the counties, towns, school districts, and special districts.
- Management of BLM-administered lands may affect state and local expenditures for maintenance of roads, law enforcement and emergency response services, and other services.

The biophysical characteristics of BLM-managed lands in the planning area, coupled with social and economic conditions and trends within the socioeconomic study area (e.g., mining industry growth, local recreation demand, broader tourism patterns), together strongly affect the many uses and values of BLM public resources. Particularly notable aspects of those uses and values include:

- While no commercial timber harvests have taken place in the RSFO in recent years, many non-commercial use permits for forest products are issued each year.
- Livestock grazing is an important use of RSFO lands. It contributes approximately $16 million in total output to the local economy and supports approximately 224 full- or part-time jobs.
- The RSFO has a large number of wild horses, which have both social and economic value.
- Oil and gas development and production, as well as coal mining and trona mining, are major uses of BLM-administered lands and play significant roles in the local and Wyoming economies. Oil and gas development and production currently produce approximately $343 million in economic output and support 894 jobs in the study area. Coal and trona production produce approximately $312 million in economic output and support 777 jobs in the study area.
- Demand for BLM-administered lands for siting of renewable energy projects is growing, with several projects under active consideration.
- Recreation (including OHV use) is an important use of RSFO lands and contributes economic output in the study area totaling between $5 million to $19 million in economic impact, or $11 million to $23 million in economic contribution. Recreation supports between 46 to 188 full- or part-time jobs in terms of economic impact, or 104 to 225 full- or part-time jobs in terms of economic contribution.
- Special designations (protected areas) of federal land have been shown in a number of studies to not hurt and potentially assist local economic development.
- BLM-administered lands in the RSFO undoubtedly have nonmarket values that, while difficult to quantify, are important to recognize in making planning decisions about management of BLM-administered lands.
- Tribal uses of BLM-administered lands exist and are important to recognize in planning.

The various factors and characteristics noted above are key drivers that affect management of BLM public resources. Many additional factors addressed in this Socioeconomic Baseline Report also affect use and management of these resources. Analysis of the RMP management alternatives will need to take into account these many considerations to accurately assess the potential social and economic impacts of the alternatives.

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APPENDIX A—DEFINING THE RSFO SOCIOECONOMIC STUDY AREA

The following document presents an analysis of the definition of the RSFO socioeconomic study area.

Defining the Social and Economic Study Area for the Rock Springs Resource Management Plan

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BLM

Rock Springs Field Office

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Revised November 2012

Defining the Social and Economic Study Area for the Rock Springs Resource Management Plan

Background. Fundamental to conducting a social and economic analysis for a Resource Management Plan is the selection of the socioeconomic study area (SESA). In general, this selection should be based on:

- Comments received during the public scoping process related to potential social and economic concerns; and
- Identification of the economic and social relationships between communities in the region and the surface land and subsurface mineral estate managed by the BLM.

These two guidelines are very much related and should be used in combination to identify the appropriate study area. The SESA commonly extends beyond the decision area because decisions made by the BLM can impact socioeconomic conditions in proximate lands and communities, based on where monies flow and how and where services and goods are obtained. A socioeconomic study area may also be larger than the planning area because key socioeconomic data are only available for geographies (e.g., counties) that extend beyond the planning area.

The SESA for the Rock Springs Resource Management Plan (RS RMP) has been defined as a five-county area to include Sweetwater, Fremont, Lincoln, Sublette, and Uinta counties (Figure 1). These five counties contain surface land and mineral estate managed by the BLM Rock Springs Field Office. Note that the SESA extends considerably beyond the boundaries of the Field Office in most directions.

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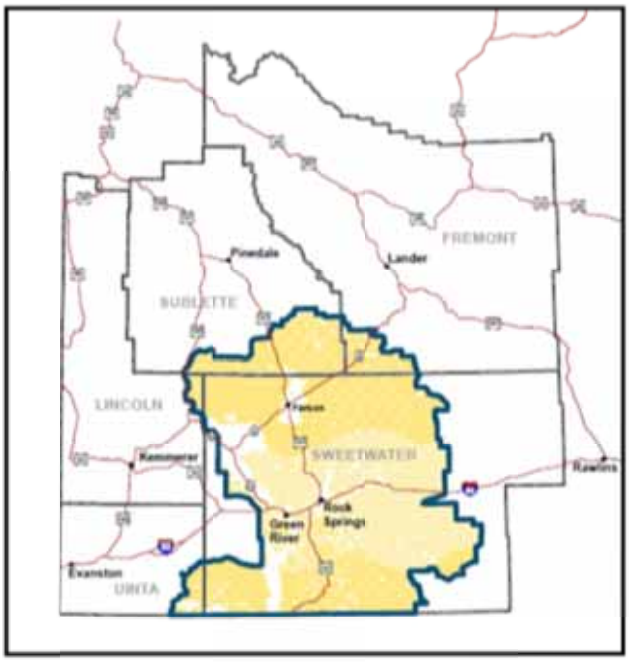
Figure 1: Current SESA for the RS RMP



During the Economic Strategies Workshop held in Rock Springs on January 9, 2012, several participants suggested the study area should be expanded to include additional counties in Wyoming (primarily Carbon County) and counties in Utah, Colorado, and Idaho. These participants indicated that the management decisions made in the Rock Springs planning area have both social and economic implications to these counties.

To address this concern, the BLM took a standard approach to quantitatively and systematically investigate the appropriate study area definition.[1] This approach focused on using commuter data to conduct a labor shed analysis. The BLM utilized data from the Wyoming Department of Workforce Services, Research & Planning (WY R&P) and from the U.S. Census Bureau's "OnTheMap" (http://onthemap.ces.census.gov).

Findings – WY R&P. Tables 1 and 2 summarize labor flows for the five counties in the current RS RMP SESA.

Outflow represents the jobs of workers who live in the area identified in the column title to other Wyoming locations. For example, workers that live in Sweetwater County filled 23,152 jobs in Wyoming. Of these jobs, 20,720 were in Sweetwater County, 1,853 were outside of Sweetwater County, and it's not known where the remaining 580 jobs were located.

[1] See METI Corp/Economic Insights of Colorado, LLC. 2010. USDA Forest Service Protocols for Delineation of Economic Impact Analysis Areas.

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Inflow represents the jobs filled in the area identified in the column title. For example, there were 27,379 jobs filled in Sweetwater County. Of these jobs, 20,720 were filled by workers who live in Sweetwater County, 3,285 were filled by workers who live outside of Sweetwater County, and it's not known where the workers live that filled the remaining 3,375 jobs.

The two numbers reported for "Net flow" reflect the range of net commuting workers/jobs. A range exists to account for those jobs for which the location is not known. A positive number indicates more workers/jobs coming into the area. Continuing with Sweetwater County, workers commuting into the county exceeds workers leaving the county for work by at least 852 jobs and by at most 4,806 jobs.

Table 1: Labor Flow Analysis using WY R&P Data (Total All Jobs; Ave 2010Q4-2011Q3)

	Jobs (count)					
	Sweetwater	Fremont	Lincoln	Sublette	Uinta	Study Area
Outflow						
Live and work in area	20,720	15,440	4,956	3,688	7,831	56,402
Live in area, work outside area	1,853	1,921	1,959	866	1,964	4,796
Unknown	580	576	219	111	305	1,791
Workers living in area	23,153	17,937	7,134	4,665	10,100	62,988
Inflow						
Live and work in area	20,720	15,440	4,956	3,688	7,831	56,402
Work in area, live outside area	3,285	1,210	691	755	918	3,091
Unknown	3,375	2,093	788	1,503	1,679	9,437
Workers working / jobs in area	27,379	18,743	6,434	5,946	10,427	68,929
Net Flow*						
Flow of workers / jobs**	852	-1,287	-1,488	-222	-1,351	-3,496
Flow of workers / jobs***	4,806	1,382	-481	1,391	633	7,731

Source: Wyoming Department of Employment, Research & Planning. 2011. Commuting in Wyoming, 2005Q1 to 2011Q3. Accessed at: http://doe.state.wy.us/lmi/commute/2012/default.htm.

* Positive net flow reflects more workers coming into the area to work than leaving

** If negative then = max leaving; if positive then = min coming in

*** If negative then = min leaving; if positive then = max coming in

Table 2: Flow Analysis using WY R&P Data (Share of Total Jobs; Ave 2010Q4-2011Q3)

	Jobs (share)					
	Sweetwater	Fremont	Lincoln	Sublette	Uinta	Study Area
Outflow						
Live and work in area	89.5%	86.1%	69.5%	79.1%	77.5%	89.5%
Live in area, work outside area	8.0%	10.7%	27.5%	18.6%	19.4%	7.6%
Unknown	2.5%	3.2%	3.1%	2.4%	3.0%	2.8%
Workers living in area						
Inflow						
Live and work in area	75.7%	82.4%	77.0%	62.0%	75.1%	81.8%
Work in area, live outside area	12.0%	6.5%	10.7%	12.7%	8.8%	4.5%
Unknown	12.3%	11.2%	12.2%	25.3%	16.1%	13.7%

Source: Wyoming Department of Employment, Research & Planning. 2011. Commuting in Wyoming, 2005Q1 to 2011Q3. Accessed at: http://doe.state.wy.us/lmi/commute/2012/default.htm.

Based on these data, the following observations can be drawn:

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- At least 89.5 percent of the jobs filled by workers that live in the 5-county area are located in one of the 5 counties. This proportion could be as high as 92.3 percent.
- At least 81.8 percent of the jobs available and filled in the 5-county area are filled by workers who live in one of the 5 counties. This proportion could theoretically be as high as 95.5 percent.

Carbon County does not contain any land or mineral estate managed by the BLM RS Field Office. However, the county resides just east of Sweetwater County and contains the City of Rawlins – an important service center for southwest Wyoming. Based on the R&P data, approximately 4.4 percent of the workers that live in Carbon County commute to the study area for their jobs (369 jobs). Alternatively, approximately 2.9 percent of workers that reside in one of the five-county SESA commute to Carbon County for their jobs (215 jobs). While these data demonstrate a connection between Carbon County and the SESA, the data also demonstrates that this connection is relatively small compared to the flow of workers within the five-county SESA. Therefore, adding Carbon County would not substantially influence the social or economic analysis. However, the BLM does recognize that Carbon County is connected to the SESA and will recognize this connection qualitatively in the analysis.

R&P also reports the flow of wages across counties. The BLM conducted a similar analysis using these data. The findings were comparable.

A later section of this document provides a brief discussion of how R&P derives these estimates as well as some of the limitations of data.

Findings – OnTheMap. The OnTheMap data application is developed by the U.S. Census' Longitudinal-Employer Household Dynamics Program. The labor flow analysis using these data tells a similar story to the data from WY R&P. The data indicate the following:

- Approximately 85.8 percent of the jobs filled by workers that live in the 5-county area are located in one of the 5 counties.
- Approximately 84.3 percent of the jobs available and filled in the 5-county area are filled by workers who live in one of the 5 counties.

As part of this analysis, the BLM analyzed commuter inflow from some of the counties in the vicinity of the SESA. Table 3 shows the level of inflow from these counties.

Table 3: Labor Flow Analysis using OnTheMap (2009) - Inflow to SESA from Select Surrounding Counties

		Jobs to SESA	
County	**Jobs Total**	**Total**	**% of total**
Rich, UT	972	184	19%
Daggett, UT	347	27	8%
Uintah, UT	14,159	108	1%
Moffat, CO	6,655	15	0%
Bear, ID	2,173	27	1%
Caribou, ID	3,442	47	1%

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Source: U.S. Census Bureau. 2011. OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002-2010). Accessed at: http://onthemap.ces.census.gov/.

As shown in the table, as a percent of total jobs, only Rich County relied somewhat substantially on the SESA for jobs in 2009. About 20 percent of the jobs of Rich County residents were located in the SESA – or 184 jobs in total. Given the number of jobs relative to total jobs in the five-county SESA, adding Rich County or any of the other counties to the study area would not substantially influence the social or economic analysis. However, the BLM does recognize that Rich and Daggett counties are connected to the SESA and will recognize this connection qualitatively in the analysis.

Data sources and potential limitations. This section provides a brief discussion of the data source used by both WY R&P and OnTheMap. Also, the limitations of these data are identified.

WY R&P. Research & Planning's commuting data model uses wage records to determine a person's place of employment and driver's license records from the Wyoming Department of Transportation (primarily) and Colorado Department of Transportation to determine place of residence.

Worker job location information comes from the Quarterly Census of Employment and Wages (QCEW). A key assumption of these data is that county location of employer facility coincides with county location of actual work. Worker residence location information comes from Wyoming and Colorado drivers' licenses data. A key assumption of these data is the address associated with the worker reflects current residence.

WY R&P link these two pieces of information to identify commuters. Workers/jobs contained in the QCEW data that could not be linked to a WY or CO driver's license are classified as "Underdetermined Location" in inflow tables. It is not known if these workers/jobs commute into the county (and from where) or live in the county.

OnTheMap. This data application also utilizes QCEW data for worker/job location. Worker residence location information primarily comes from tax records.

Limitations Common to Both. These two data sources are on the cutting edge of commuter flow analysis. Both have strategies for improving these estimates over time. However, the current approaches do have some recognized limitations.

- Some workers/jobs are not covered. The QCEW does not contain data on: federal civilian employees, uniformed military, railroad employees, self-employed workers, and informally employed workers. Of particular note, many workers in the agriculture sector are self-employed workers or informally employed workers and are likely not included in these data.

- Temporary workers and man camps. Workers who live outside the 5-county area and commute weekly or live in man camps during a project's duration are likely reported as in-commuters (or may fall into the "unknown" group). The BLM recognizes the importance of this limitation, but no readily available data is currently collected or reported to address these workers.

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- Employment of illegal immigrant workers. These data do not contain information on the possible presence of illegal immigrant workers.

Conclusion. While there are recognized limitations to the analysis presented in this document, available data provides substantial support for defining the SESA for the RS RMP as the five-county SESA including Sweetwater, Fremont, Lincoln, Sublette, and Uinta counties.

As described in *USDA Forest Service Protocols for Delineation of Economic Impact Analysis Areas*, an area may be considered "strongly self-contained" if 55 percent of total workers live in the area. The protocol recommends adding a county to the study area if: (1) 25 percent of employed residents commute into the study area or (2) 25 percent of jobs in the study area are filled by workers from the specific county. The analysis above indicated that the five-county SESA captures over 80 percent of the workforce. In addition, no other counties in the near vicinity meet either of the two criteria above.

In conclusion, capturing a significantly higher percentage of activity may require considerable expansion of the size of the study area, with diminishing returns in terms of analytical value and likely with considerable additional complexity in understanding the economy of a much larger area.

It is recommended that the BLM consider the implications of the limitations cited above and recognize these issues in the social and economic analysis. However, expanding the SESA would not be the appropriate path to addressing these factors.

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APPENDIX B—EMPLOYMENT DATA BY COUNTY

The following pages present tables and figures detailing 2001–2009 employment data by county.

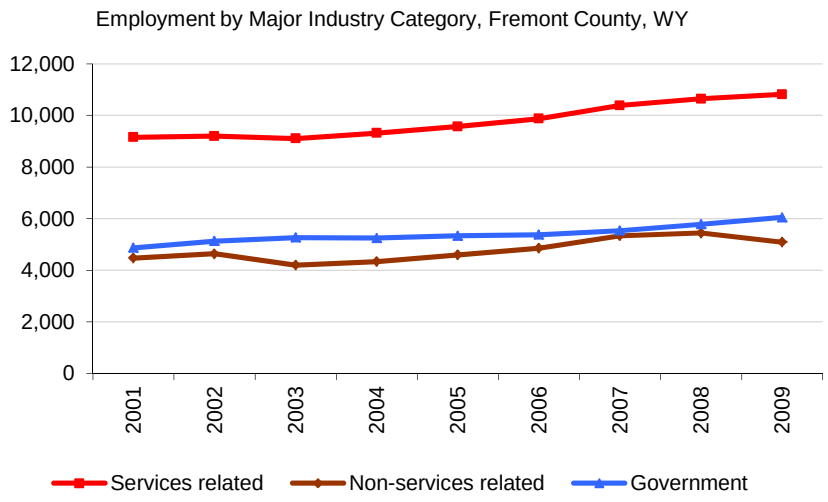
FREMONT COUNTY

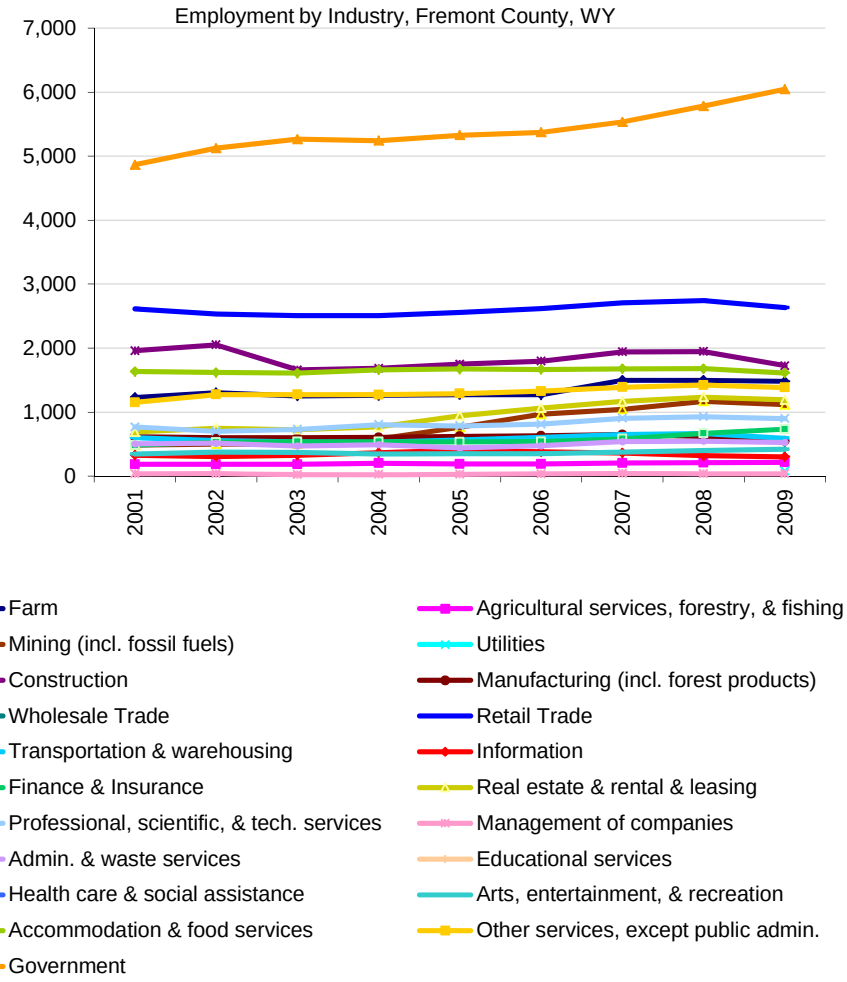
Employment by Industry, 2001-2009

	2001	2009	Change 2001-2009
Total Employment (number of jobs)	21,395	24,752	3,357
Non-services related	4,466	5,086	620
Farm	1,228	1,481	253
Forestry, fishing, & related activities	184	215	31
Mining (including fossil fuels)	484	1,117	633
Construction	1,958	1,724	-234
Manufacturing	612	549	-63
Services related	*9,150*	*10,819*	1,669
Utilities	*na*	78	na
Wholesale trade	*na*	416	na
Retail trade	2,615	2,631	16
Transportation and w arehousing	598	591	-7
Information	326	301	-25
Finance and insurance	484	733	249
Real estate and rental and leasing	688	1,192	504
Professional and technical services	767	899	132
Management of companies and enterprises	*37*	37	0
Administrative and w aste services	*504*	526	22
Educational services	*na*	*na*	na
Health care and social assistance	*na*	*na*	na
Arts, entertainment, and recreation	344	418	74
Accommodation and food services	1,636	1,613	-23
Other services, except public administration	1,151	1,384	233
Government	4,867	6,047	1,180

Percent of Total			% Change 2001-2009
Total Employment			15.7%
Non-services related	20.9%	20.5%	13.9%
Farm	5.7%	6.0%	20.6%
Forestry, fishing, & related activities	0.9%	0.9%	16.8%
Mining (including fossil fuels)	2.3%	4.5%	130.8%
Construction	9.2%	7.0%	-12.0%
Manufacturing	2.9%	2.2%	-10.3%
Services related	*42.8%*	*43.7%*	18.2%
Utilities	*na*	0.3%	na
Wholesale trade	*na*	1.7%	na
Retail trade	12.2%	10.6%	0.6%
Transportation and w arehousing	2.8%	2.4%	-1.2%
Information	1.5%	1.2%	-7.7%
Finance and insurance	2.3%	3.0%	51.4%
Real estate and rental and leasing	3.2%	4.8%	73.3%
Professional and technical services	3.6%	3.6%	17.2%
Management of companies and enterprises	*0.2%*	0.1%	1.3%
Administrative and w aste services	*2.4%*	2.1%	4.3%
Educational services	*na*	*na*	na
Health care and social assistance	*na*	*na*	na
Arts, entertainment, and recreation	1.6%	1.7%	21.5%
Accommodation and food services	7.6%	6.5%	-1.4%
Other services, except public administration	5.4%	5.6%	20.2%
Government	22.7%	24.4%	24.2%

All employment data are reported by place of work.
Estimates for data that were not disclosed are shown in italics. Actual and estimated data do not necessarily add to totals.
Source: EPS-HDT Socioeconomic Measures Report, December 14, 2011, based on 2011 data from the BEA, Regional Economic Information System, Table CA25N.





Source: EPS-HDT Socioeconomic Measures Report, December 14, 2011, based on 2011 data from the BEA, Regional Economic Information System, Table CA25N.

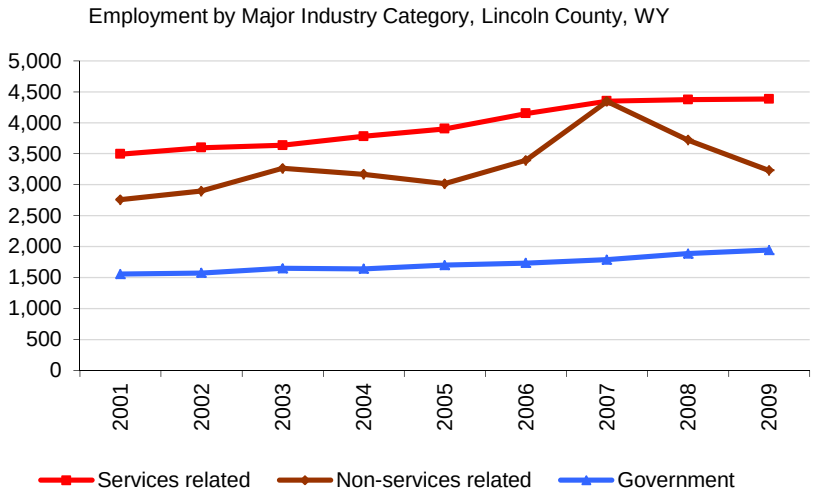
LINCOLN COUNTY

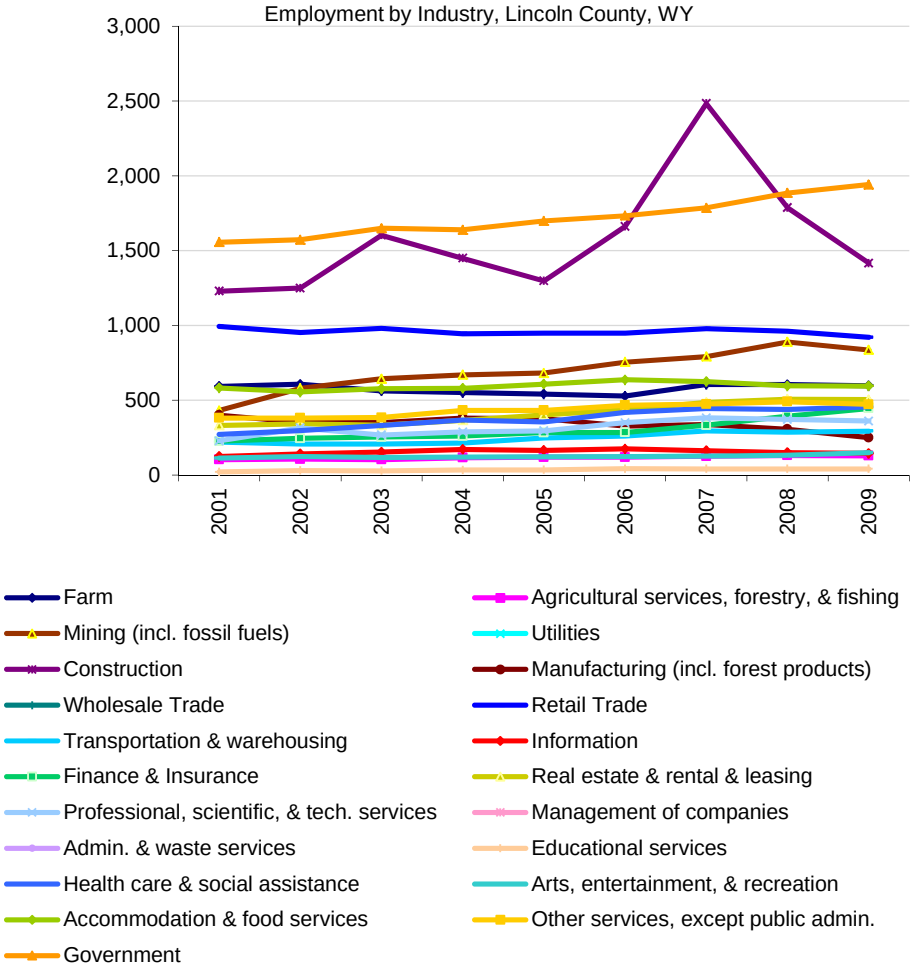
Employment by Industry, 2001-2009

	2001	2009	Change 2001-2009
Total Employment (number of jobs)	8,325	10,192	1,867
Non-services related	2,758	3,229	471
Farm	593	597	4
Forestry, fishing, & related activities	103	129	26
Mining (including fossil fuels)	431	836	405
Construction	1,230	1,417	187
Manufacturing	401	250	-151
Services related	*3,493*	*4,383*	890
Utilities	*na*	*na*	na
Wholesale trade	*na*	*na*	na
Retail trade	993	921	-72
Transportation and warehousing	221	294	73
Information	125	145	20
Finance and insurance	226	445	219
Real estate and rental and leasing	332	504	172
Professional and technical services	228	361	133
Management of companies and enterprises	*na*	*na*	na
Administrative and waste services	*na*	*na*	na
Educational services	21	42	21
Health care and social assistance	*271*	455	184
Arts, entertainment, and recreation	113	149	36
Accommodation and food services	582	595	13
Other services, except public administration	381	472	91
Government	1,556	1,942	386

Percent of Total			% Change 2001-2009
Total Employment			22.4%
Non-services related	33.1%	31.7%	17.1%
Farm	7.1%	5.9%	0.7%
Forestry, fishing, & related activities	1.2%	1.3%	25.2%
Mining (including fossil fuels)	5.2%	8.2%	94.0%
Construction	14.8%	13.9%	15.2%
Manufacturing	4.8%	2.5%	-37.7%
Services related	*42.0%*	*43.0%*	25.5%
Utilities	*na*	*na*	na
Wholesale trade	*na*	*na*	na
Retail trade	11.9%	9.0%	-7.3%
Transportation and warehousing	2.7%	2.9%	33.0%
Information	1.5%	1.4%	16.0%
Finance and insurance	2.7%	4.4%	96.9%
Real estate and rental and leasing	4.0%	4.9%	51.8%
Professional and technical services	2.7%	3.5%	58.3%
Management of companies and enterprises	*na*	*na*	na
Administrative and waste services	*na*	*na*	na
Educational services	0.3%	0.4%	100.0%
Health care and social assistance	*3.3%*	4.5%	67.6%
Arts, entertainment, and recreation	1.4%	1.5%	31.9%
Accommodation and food services	7.0%	5.8%	2.2%
Other services, except public administration	4.6%	4.6%	23.9%
Government	18.7%	19.1%	24.8%

All employment data are reported by place of work.
Estimates for data that were not disclosed are shown in italics. Actual and estimated data do not necessarily add to totals.
Source: EPS-HDT Socioeconomic Measures Report, December 28, 2011, based on 2011 data from the BEA, Regional Economic Information System, Table CA25N.





Source: EPS-HDT Socioeconomic Measures Report, December 28, 2011, based on 2011 data from the BEA, Regional Economic Information System, Table CA25N.

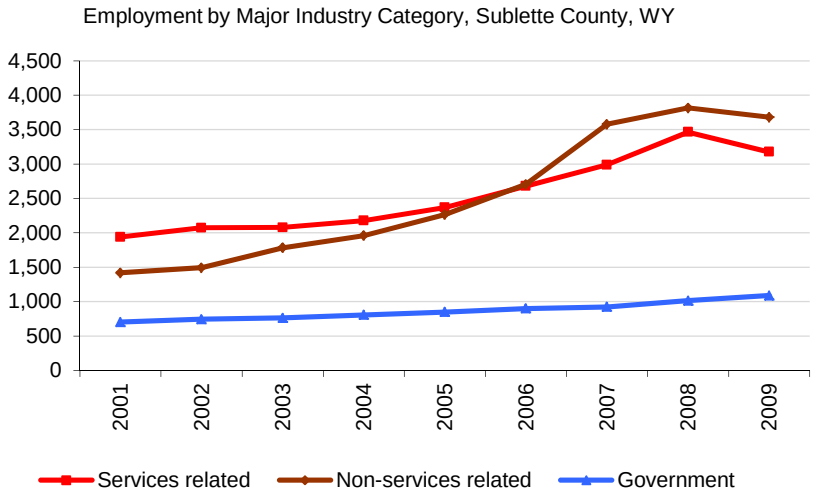
SUBLETTE COUNTY

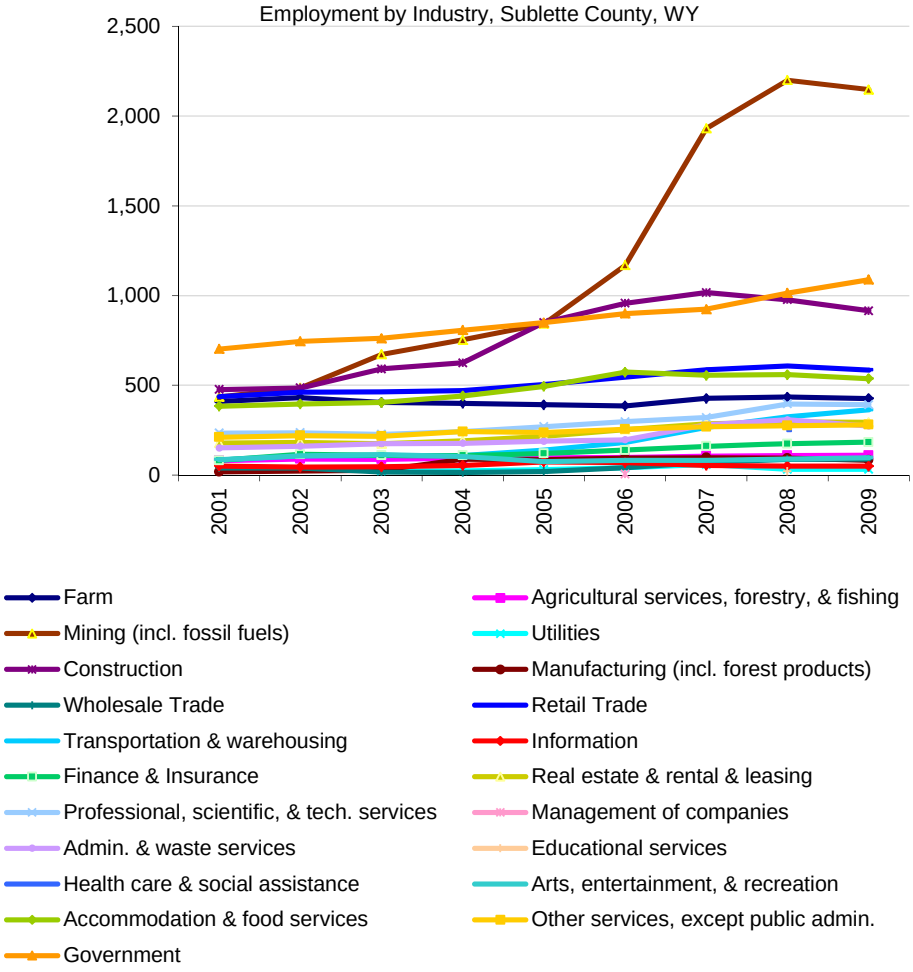
Employment by Industry, 2001-2009

	2001	2009	Change 2001-2009
Total Employment (number of jobs)	4,261	8,192	3,931
Non-services related	*1,419*	3,681	2,262
Farm	409	426	17
Forestry, fishing, & related activities	81	110	29
Mining (including fossil fuels)	435	2,147	1,712
Construction	476	915	439
Manufacturing	*18*	83	65
Services related	*1,938*	*3,175*	1,238
Utilities	*na*	32	na
Wholesale trade	*40*	89	49
Retail trade	436	585	149
Transportation and warehousing	84	363	279
Information	51	50	-1
Finance and insurance	82	183	101
Real estate and rental and leasing	179	294	115
Professional and technical services	234	*392*	158
Management of companies and enterprises	*na*	*na*	na
Administrative and waste services	*151*	*274*	123
Educational services	*na*	*na*	na
Health care and social assistance	*na*	*na*	na
Arts, entertainment, and recreation	86	97	11
Accommodation and food services	384	537	153
Other services, except public administration	211	280	69
Government	702	1,089	387

Percent of Total			% Change 2001-2009
Total Employment			92.3%
Non-services related	*33.3%*	44.9%	159.5%
Farm	9.6%	5.2%	4.2%
Forestry, fishing, & related activities	1.9%	1.3%	35.8%
Mining (including fossil fuels)	10.2%	26.2%	393.6%
Construction	11.2%	11.2%	92.2%
Manufacturing	*0.4%*	1.0%	367.3%
Services related	*45.5%*	*38.8%*	63.9%
Utilities	*na*	0.4%	na
Wholesale trade	*0.9%*	1.1%	124.6%
Retail trade	10.2%	7.1%	34.2%
Transportation and warehousing	2.0%	4.4%	332.1%
Information	1.2%	0.6%	-2.0%
Finance and insurance	1.9%	2.2%	123.2%
Real estate and rental and leasing	4.2%	3.6%	64.2%
Professional and technical services	5.5%	*4.8%*	67.3%
Management of companies and enterprises	*na*	*na*	na
Administrative and waste services	*3.5%*	*3.3%*	81.2%
Educational services	*na*	*na*	na
Health care and social assistance	*na*	*na*	na
Arts, entertainment, and recreation	2.0%	1.2%	12.8%
Accommodation and food services	9.0%	6.6%	39.8%
Other services, except public administration	5.0%	3.4%	32.7%
Government	16.5%	13.3%	55.1%

All employment data are reported by place of work.
Estimates for data that were not disclosed are shown in italics. Actual and estimated data do not necessarily add to totals.
Source: EPS-HDT Socioeconomic Measures Report, December 14, 2011, based on 2011 data from the BEA, Regional Economic Information System, Table CA25N.





Source: EPS-HDT Socioeconomic Measures Report, December 14, 2011, based on 2011 data from the BEA, Regional Economic Information System, Table CA25N.

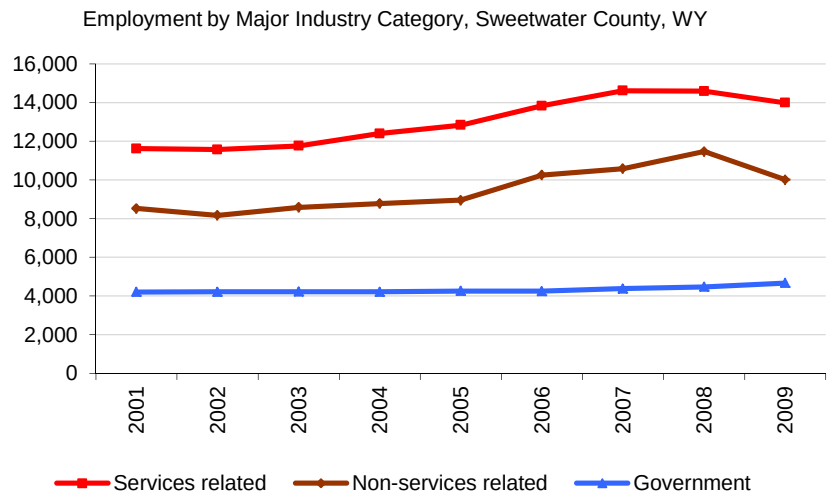
SWEETWATER COUNTY

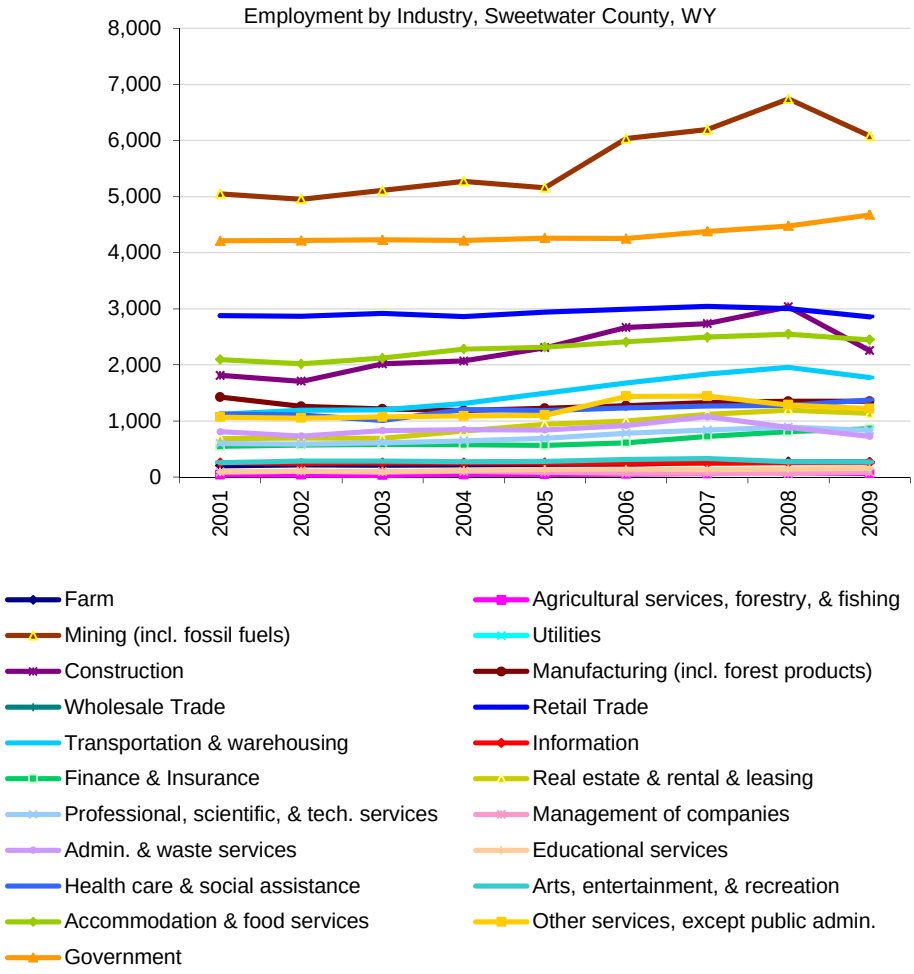
Employment by Industry, 2001-2009

	2001	2009	Change 2001-2009
Total Employment (number of jobs)	24,317	29,977	5,660
Non-services related	*8,526*	*10,015*	1,489
Farm	201	266	65
Forestry, fishing, & related activities	*39*	*65*	26
Mining (including fossil fuels)	*5,051*	6,079	1,028
Construction	1,812	2,254	442
Manufacturing	1,424	1,351	-73
Services related	*11,614*	*13,987*	2,373
Utilities	*na*	*na*	na
Wholesale trade	*na*	*na*	na
Retail trade	2,878	2,856	-22
Transportation and warehousing	1,116	1,773	657
Information	256	257	1
Finance and insurance	546	861	315
Real estate and rental and leasing	686	1,134	448
Professional and technical services	598	833	235
Management of companies and enterprises	91	85	-6
Administrative and waste services	809	727	-82
Educational services	91	153	62
Health care and social assistance	1,122	1,375	253
Arts, entertainment, and recreation	259	267	8
Accommodation and food services	2,095	2,447	352
Other services, except public administration	1,067	1,219	152
Government	4,211	4,674	463

Percent of Total			% Change 2001-2009
Total Employment			23.3%
Non-services related	*35.1%*	*33.4%*	17.5%
Farm	0.8%	0.9%	32.3%
Forestry, fishing, & related activities	*0.2%*	*0.2%*	68.3%
Mining (including fossil fuels)	*20.8%*	20.3%	20.4%
Construction	7.5%	7.5%	24.4%
Manufacturing	5.9%	4.5%	-5.1%
Services related	*47.8%*	*46.7%*	20.4%
Utilities	*na*	*na*	na
Wholesale trade	*na*	*na*	na
Retail trade	11.8%	9.5%	-0.8%
Transportation and warehousing	4.6%	5.9%	58.9%
Information	1.1%	0.9%	0.4%
Finance and insurance	2.2%	2.9%	57.7%
Real estate and rental and leasing	2.8%	3.8%	65.3%
Professional and technical services	2.5%	2.8%	39.3%
Management of companies and enterprises	0.4%	0.3%	-6.6%
Administrative and waste services	3.3%	2.4%	-10.1%
Educational services	0.4%	0.5%	68.1%
Health care and social assistance	4.6%	4.6%	22.5%
Arts, entertainment, and recreation	1.1%	0.9%	3.1%
Accommodation and food services	8.6%	8.2%	16.8%
Other services, except public administration	4.4%	4.1%	14.2%
Government	17.3%	15.6%	11.0%

All employment data are reported by place of work.
Estimates for data that were not disclosed are shown in italics. Actual and estimated data do not necessarily add to totals.
Source: EPS-HDT Socioeconomic Measures Report, December 29, 2011, based on 2011 data from the BEA, Regional Economic Information System, Table CA25N.





Source: EPS-HDT Socioeconomic Measures Report, December 29, 2011, based on 2011 data from the BEA, Regional Economic Information System, Table CA25N.

UINTA COUNTY

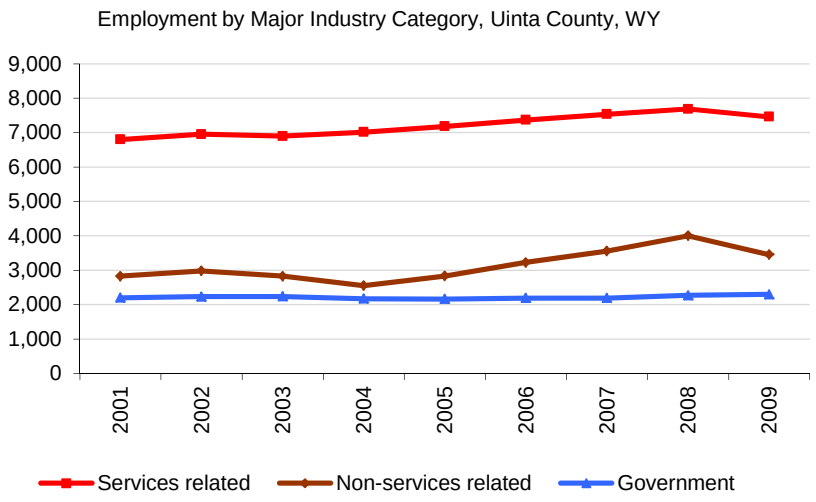
Employment by Industry, 2001-2009

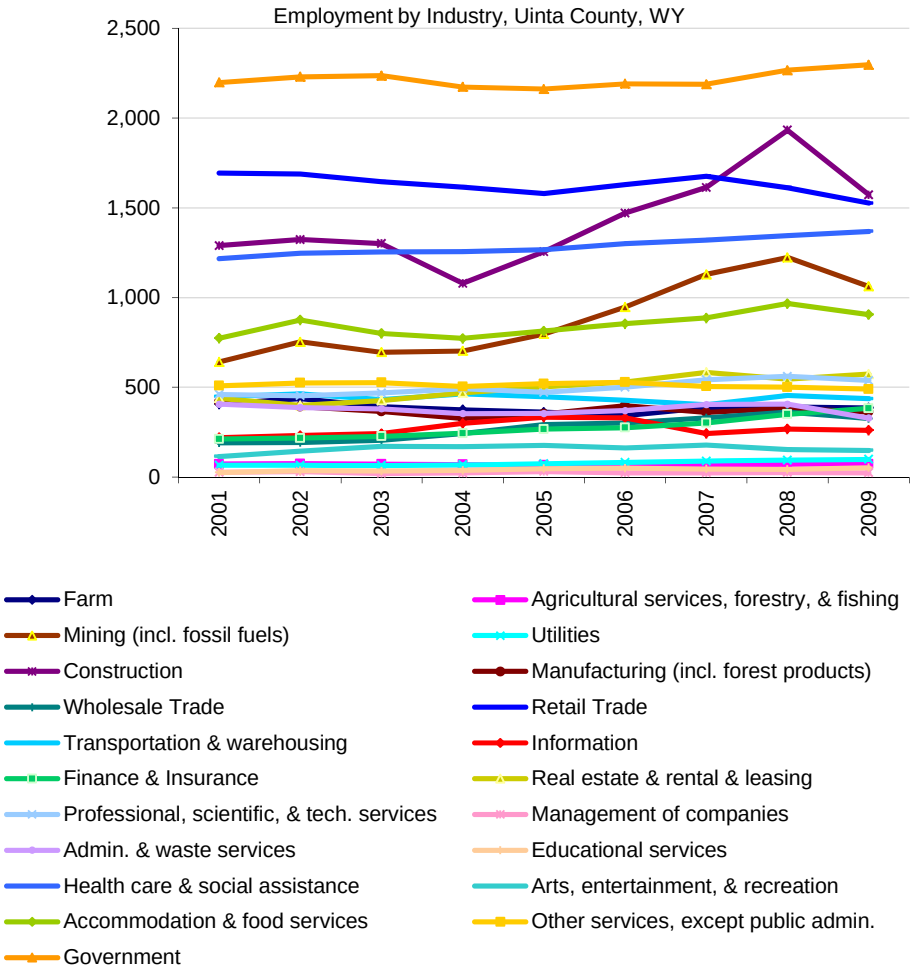
	2001	2009	Change 2001-2009
Total Employment (number of jobs)	11,898	13,198	1,300
Non-services related	2,828	*3,454*	626
Farm	408	385	-23
Forestry, fishing, & related activities	73	*73*	0
Mining (including fossil fuels)	641	1,062	421
Construction	1,289	1,572	283
Manufacturing	417	362	-55
Services related	*6,800*	*7,459*	659
Utilities	66	99	33
Wholesale trade	190	326	136
Retail trade	1,693	1,526	-167
Transportation and warehousing	448	436	-12
Information	220	261	41
Finance and insurance	212	383	171
Real estate and rental and leasing	439	573	134
Professional and technical services	*461*	538	77
Management of companies and enterprises	*26*	24	-2
Administrative and waste services	406	328	-78
Educational services	*26*	*53*	27
Health care and social assistance	*1,216*	*1,368*	152
Arts, entertainment, and recreation	115	149	34
Accommodation and food services	774	905	131
Other services, except public administration	508	490	-18
Government	2,198	2,297	99

Percent of Total

			% Change 2001-2009
Total Employment			10.9%
Non-services related	23.8%	*26.2%*	22.1%
Farm	3.4%	2.9%	-5.6%
Forestry, fishing, & related activities	0.6%	*0.6%*	0.0%
Mining (including fossil fuels)	5.4%	8.0%	65.7%
Construction	10.8%	11.9%	22.0%
Manufacturing	3.5%	2.7%	-13.2%
Services related	*57.2%*	*56.5%*	9.7%
Utilities	0.6%	0.8%	50.0%
Wholesale trade	1.6%	2.5%	71.6%
Retail trade	14.2%	11.6%	-9.9%
Transportation and warehousing	3.8%	3.3%	-2.7%
Information	1.8%	2.0%	18.6%
Finance and insurance	1.8%	2.9%	80.7%
Real estate and rental and leasing	3.7%	4.3%	30.5%
Professional and technical services	*3.9%*	4.1%	16.8%
Management of companies and enterprises	*0.2%*	0.2%	-8.9%
Administrative and waste services	3.4%	2.5%	-19.2%
Educational services	*0.2%*	*0.4%*	103.1%
Health care and social assistance	*10.2%*	*10.4%*	12.5%
Arts, entertainment, and recreation	1.0%	1.1%	29.6%
Accommodation and food services	6.5%	6.9%	16.9%
Other services, except public administration	4.3%	3.7%	-3.5%
Government	18.5%	17.4%	4.5%

All employment data are reported by place of work.
Estimates for data that were not disclosed are shown in italics. Actual and estimated data do not necessarily add to totals.
Source: EPS-HDT Socioeconomic Measures Report, December 29, 2011, based on 2011 data from the BEA, Regional Economic Information System, Table CA25N.





Source: EPS-HDT Socioeconomic Measures Report, December 29, 2011, based on 2011 data from the BEA, Regional Economic Information System, Table CA25N.

APPENDIX C—EARNINGS DATA BY COUNTY

The following pages present tables and figures detailing 2001–2009 earnings data by county.

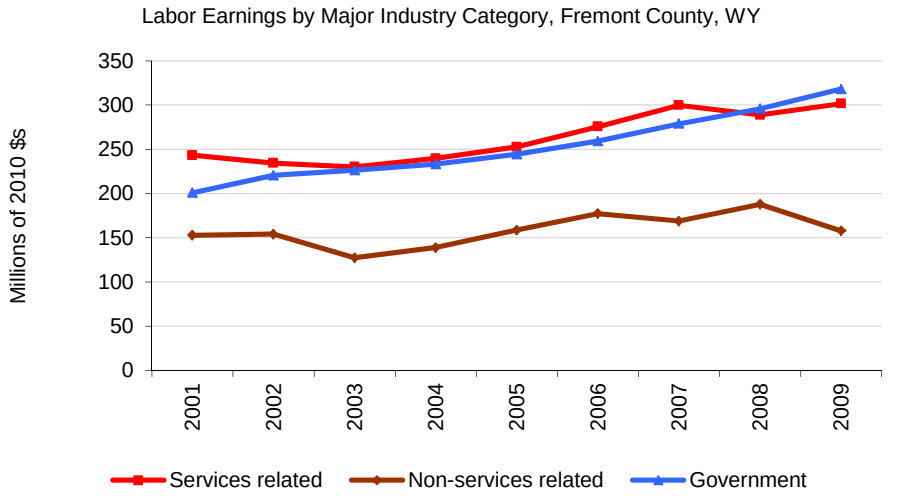
FREMONT COUNTY

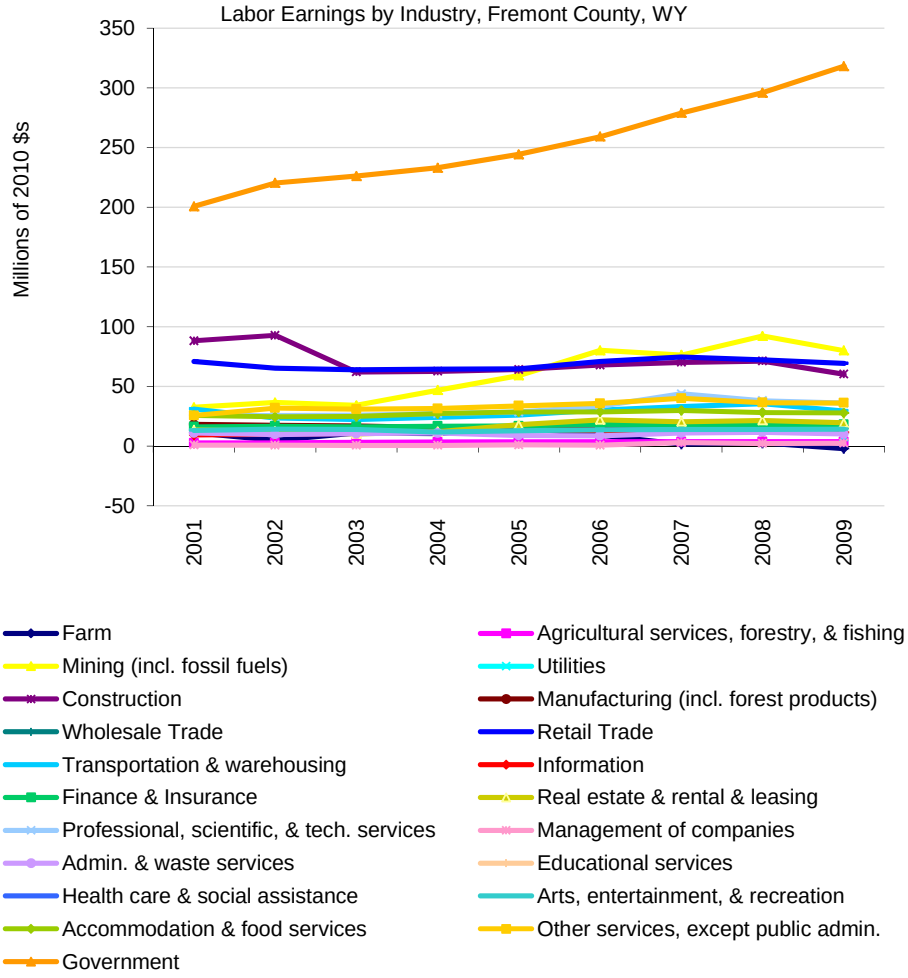
Personal Income by Industry, 2001-2009 (Thousands of 2010 $s)

	2001	2009	Change 2001-2009
Labor Earnings	697,366	891,193	193,827
Non-services related	152,690	157,837	5,147
Farm	11,240	-2,040	-13,280
Forestry, fishing, & related activities	2,653	3,769	1,115
Mining (including fossil fuels)	32,532	80,067	47,535
Construction	88,179	60,284	-27,895
Manufacturing	18,085	15,757	-2,327
Services related	*243,168*	*301,516*	58,348
Utilities	*na*	7,558	na
Wholesale trade	*na*	19,532	na
Retail trade	70,966	69,241	-1,725
Transportation and w arehousing	31,127	29,489	-1,639
Information	9,332	11,258	1,926
Finance and insurance	16,186	18,108	1,922
Real estate and rental and leasing	13,588	19,511	5,923
Professional and technical services	25,812	36,110	10,298
Management of companies and enterprises	*849*	2,472	1,623
Administrative and w aste services	*10,857*	10,164	-693
Educational services	*na*	*na*	na
Health care and social assistance	*na*	*na*	na
Arts, entertainment, and recreation	13,146	14,083	937
Accommodation and food services	25,723	27,776	2,053
Other services, except public administration	25,581	36,214	10,634
Government	200,786	318,112	117,325

Percent of Total			% Change 2001-2009
Labor Earnings			27.8%
Non-services related	21.9%	17.7%	3.4%
Farm	1.6%	-0.2%	-118.1%
Forestry, fishing, & related activities	0.4%	0.4%	42.0%
Mining (including fossil fuels)	4.7%	9.0%	146.1%
Construction	12.6%	6.8%	-31.6%
Manufacturing	2.6%	1.8%	-12.9%
Services related	*34.9%*	*33.8%*	24.0%
Utilities	*na*	0.8%	na
Wholesale trade	*na*	2.2%	na
Retail trade	10.2%	7.8%	-2.4%
Transportation and w arehousing	4.5%	3.3%	-5.3%
Information	1.3%	1.3%	20.6%
Finance and insurance	2.3%	2.0%	11.9%
Real estate and rental and leasing	1.9%	2.2%	43.6%
Professional and technical services	3.7%	4.1%	39.9%
Management of companies and enterprises	*0.1%*	0.3%	191.2%
Administrative and w aste services	*1.6%*	1.1%	-6.4%
Educational services	*na*	*na*	na
Health care and social assistance	*na*	*na*	na
Arts, entertainment, and recreation	1.9%	1.6%	7.1%
Accommodation and food services	3.7%	3.1%	8.0%
Other services, except public administration	3.7%	4.1%	41.6%
Government	28.8%	35.7%	58.4%

All earnings data are reported by place of work.
Estimates for data that were not disclosed are shown in italics. Actual and estimated data do not necessarily add to totals.
Source: EPS-HDT Socioeconomic Measures Report, December 14, 2011, based on 2011 data from the BEA, Regional Economic Information System, Table CA05N.





Source: EPS-HDT Socioeconomic Measures Report, December 14, 2011, based on 2011 data from the BEA, Regional Economic Information System, Table CA05N.

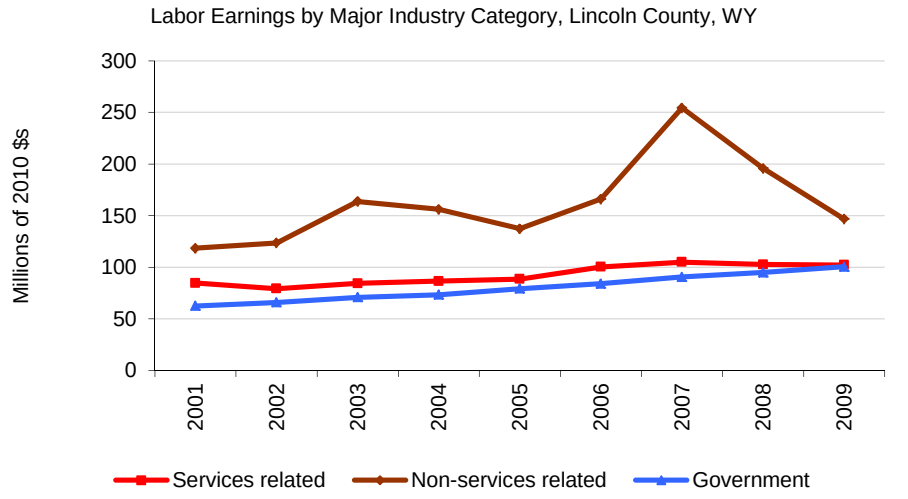
LINCOLN COUNTY

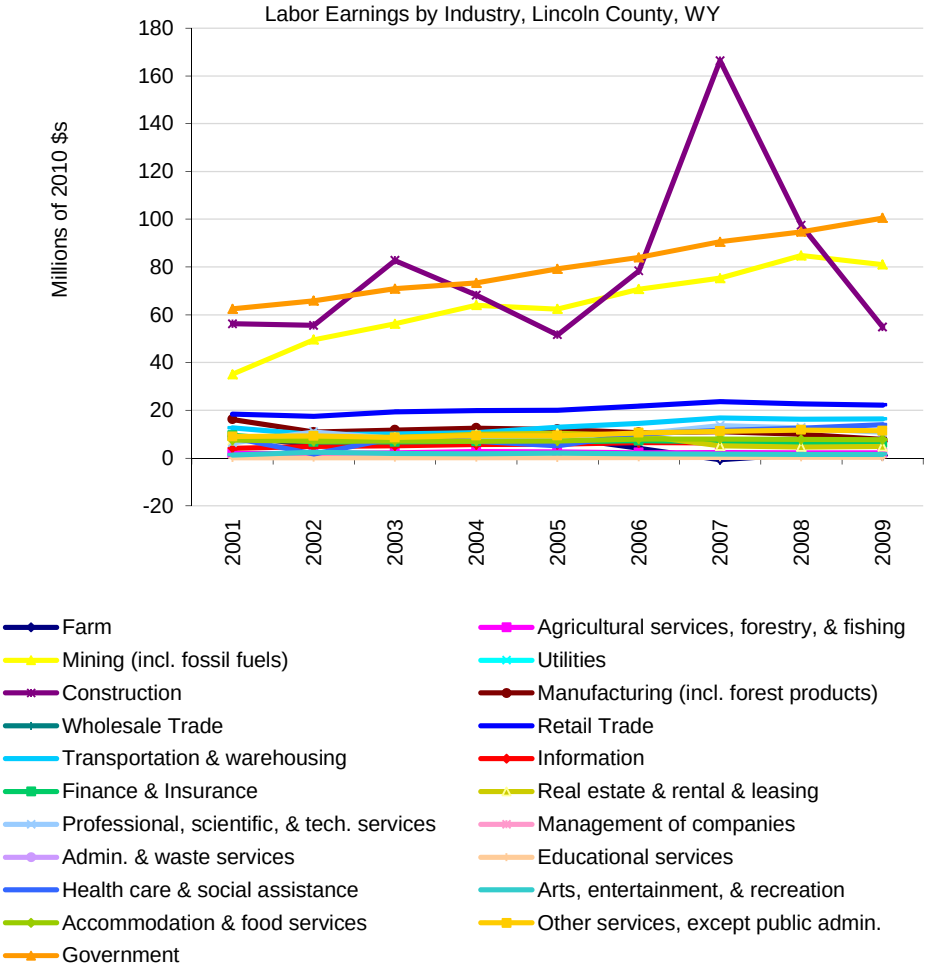
Personal Income by Industry, 2001-2009 (Thousands of 2010 $s)

	2001	2009	Change 2001-2009
Labor Earnings	292,008	388,490	96,482
Non-services related	118,444	146,696	28,252
Farm	9,122	1,037	-8,086
Forestry, fishing, & related activities	1,894	2,152	258
Mining (including fossil fuels)	35,088	80,943	45,855
Construction	56,203	54,794	-1,409
Manufacturing	16,136	7,770	-8,365
Services related	*84,591*	*102,191*	17,600
Utilities	*na*	*na*	na
Wholesale trade	*na*	*na*	na
Retail trade	18,327	22,166	3,838
Transportation and warehousing	12,618	16,362	3,744
Information	4,115	6,906	2,792
Finance and insurance	9,553	6,339	-3,214
Real estate and rental and leasing	7,288	4,842	-2,446
Professional and technical services	6,361	10,720	4,359
Management of companies and enterprises	*na*	*na*	na
Administrative and waste services	*na*	*na*	na
Educational services	*31*	289	258
Health care and social assistance	*8,492*	13,933	5,441
Arts, entertainment, and recreation	1,300	1,566	266
Accommodation and food services	7,513	7,700	187
Other services, except public administration	8,993	11,367	2,374
Government	62,453	100,487	38,034

Percent of Total			% Change 2001-2009
Labor Earnings			33.0%
Non-services related	40.6%	37.8%	23.9%
Farm	3.1%	0.3%	-88.6%
Forestry, fishing, & related activities	0.6%	0.6%	13.6%
Mining (including fossil fuels)	12.0%	20.8%	130.7%
Construction	19.2%	14.1%	-2.5%
Manufacturing	5.5%	2.0%	-51.8%
Services related	*29.0%*	*26.3%*	20.8%
Utilities	*na*	*na*	na
Wholesale trade	*na*	*na*	na
Retail trade	6.3%	5.7%	20.9%
Transportation and warehousing	4.3%	4.2%	29.7%
Information	1.4%	1.8%	67.8%
Finance and insurance	3.3%	1.6%	-33.6%
Real estate and rental and leasing	2.5%	1.2%	-33.6%
Professional and technical services	2.2%	2.8%	68.5%
Management of companies and enterprises	*na*	*na*	na
Administrative and waste services	*na*	*na*	na
Educational services	*0.0%*	0.1%	837.8%
Health care and social assistance	*2.9%*	3.6%	64.1%
Arts, entertainment, and recreation	0.4%	0.4%	20.5%
Accommodation and food services	2.6%	2.0%	2.5%
Other services, except public administration	3.1%	2.9%	26.4%
Government	21.4%	25.9%	60.9%

All earnings data are reported by place of work.
Estimates for data that were not disclosed are shown in italics. Actual and estimated data do not necessarily add to totals.
Source: EPS-HDT Socioeconomic Measures Report, December 28, 2011, based on 2011 data from the BEA, Regional Economic Information System, Table CA05N.





Source: EPS-HDT Socioeconomic Measures Report, December 28, 2011, based on 2011 data from the BEA, Regional Economic Information System, Table CA05N.

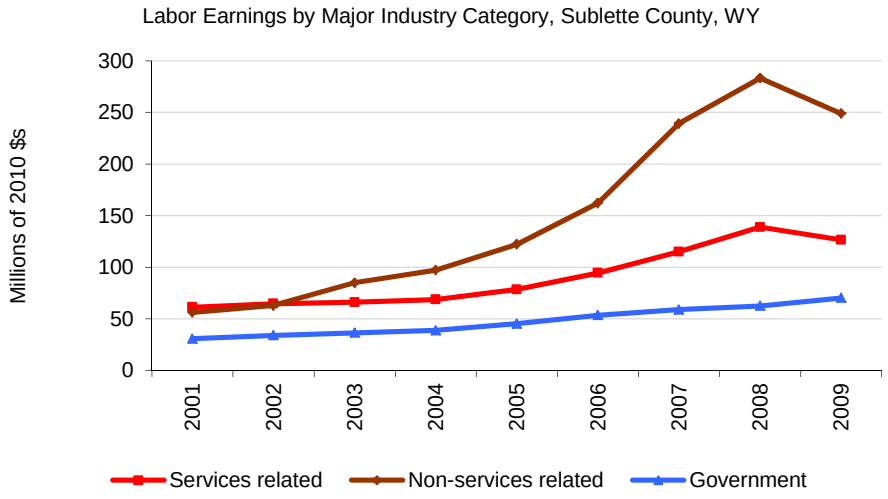
SUBLETTE COUNTY

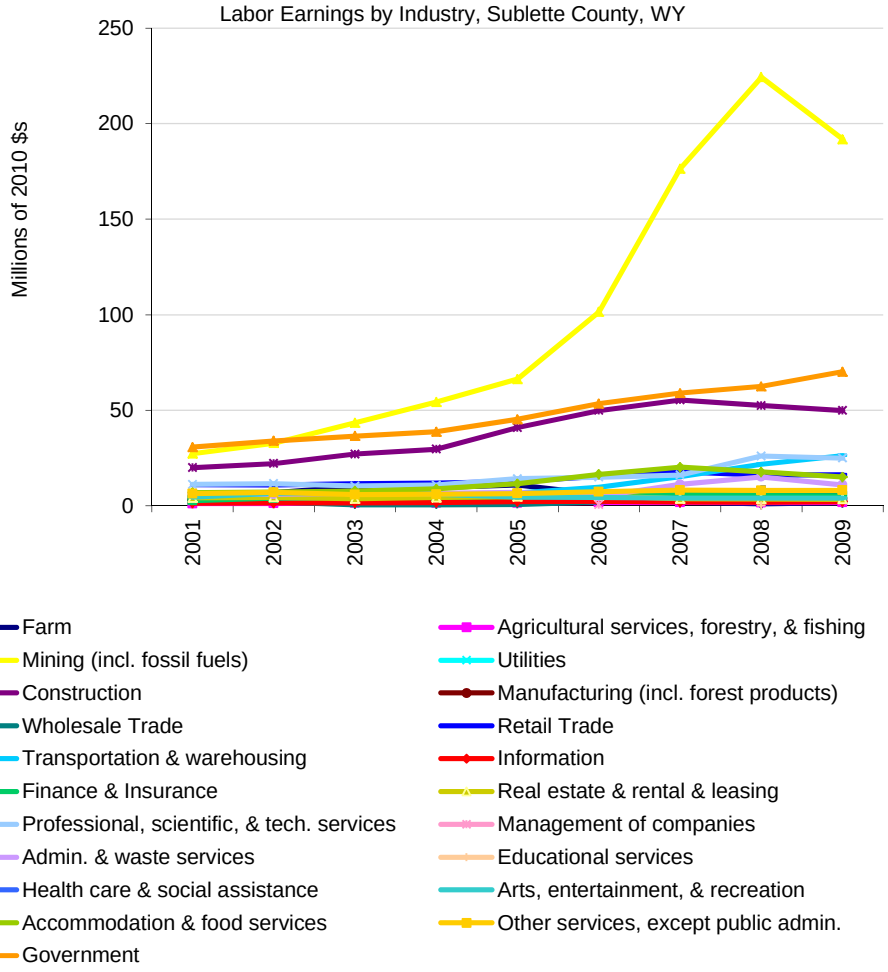
Personal Income by Industry, 2001-2009 (Thousands of 2010 $s)

	2001	2009	Change 2001-2009
Labor Earnings	148,186	451,122	302,936
Non-services related	*56,285*	248,852	192,567
Farm	4,879	1,772	-3,108
Forestry, fishing, & related activities	1,128	1,702	575
Mining (including fossil fuels)	27,312	191,827	164,515
Construction	19,954	49,819	29,865
Manufacturing	*3,012*	3,732	720
Services related	*61,306*	*126,465*	65,159
Utilities	*na*	3,668	na
Wholesale trade	*2,114*	6,561	4,447
Retail trade	11,014	16,165	5,151
Transportation and w arehousing	4,819	26,276	21,457
Information	1,385	2,201	815
Finance and insurance	2,735	5,178	2,443
Real estate and rental and leasing	4,199	3,442	-757
Professional and technical services	11,190	*24,958*	13,769
Management of companies and enterprises	*na*	*na*	na
Administrative and w aste services	*6,002*	*10,910*	4,908
Educational services	*na*	*na*	na
Health care and social assistance	*na*	*na*	na
Arts, entertainment, and recreation	4,600	4,009	-591
Accommodation and food services	6,946	15,048	8,102
Other services, except public administration	6,303	8,051	1,748
Government	30,701	70,174	39,473

Percent of Total			% Change 2001-2009
Labor Earnings			204.4%
Non-services related	*38.0%*	55.2%	342.1%
Farm	3.3%	0.4%	-63.7%
Forestry, fishing, & related activities	0.8%	0.4%	51.0%
Mining (including fossil fuels)	18.4%	42.5%	602.4%
Construction	13.5%	11.0%	149.7%
Manufacturing	*2.0%*	0.8%	23.9%
Services related	*41.4%*	*28.0%*	106.3%
Utilities	*na*	0.8%	na
Wholesale trade	*1.4%*	1.5%	210.3%
Retail trade	7.4%	3.6%	46.8%
Transportation and w arehousing	3.3%	5.8%	445.2%
Information	0.9%	0.5%	58.9%
Finance and insurance	1.8%	1.1%	89.3%
Real estate and rental and leasing	2.8%	0.8%	-18.0%
Professional and technical services	7.6%	*5.5%*	123.0%
Management of companies and enterprises	*na*	*na*	na
Administrative and w aste services	*4.1%*	*2.4%*	81.8%
Educational services	*na*	*na*	na
Health care and social assistance	*na*	*na*	na
Arts, entertainment, and recreation	3.1%	0.9%	-12.9%
Accommodation and food services	4.7%	3.3%	116.7%
Other services, except public administration	4.3%	1.8%	27.7%
Government	20.7%	15.6%	128.6%

All earnings data are reported by place of work.
Estimates for data that were not disclosed are shown in italics. Actual and estimated data do not necessarily add to totals.
Source: EPS-HDT Socioeconomic Measures Report, December 14, 2011, based on 2011 data from the BEA, Regional Economic Information System, Table CA05N.





Source: EPS-HDT Socioeconomic Measures Report, December 14, 2011, based on 2011 data from the BEA, Regional Economic Information System, Table CA05N.

SWEETWATER COUNTY

Personal Income by Industry, 2001-2009 (Thousands of 2010 $s)

	2001	2009	Change 2001-2009
Labor Earnings	1,259,643	1,755,345	495,702
Non-services related	*726,238*	*875,773*	149,535
Farm	1,447	-294	-1,740
Forestry, fishing, & related activities	*220*	*884*	664
Mining (including fossil fuels)	*485,840*	603,272	117,432
Construction	98,379	136,350	37,971
Manufacturing	140,351	135,560	-4,791
Services related	*393,702*	*510,605*	116,903
Utilities	*na*	*na*	na
Wholesale trade	*na*	*na*	na
Retail trade	71,877	85,040	13,163
Transportation and warehousing	75,051	125,102	50,050
Information	7,676	8,480	804
Finance and insurance	21,993	29,484	7,491
Real estate and rental and leasing	42,459	31,356	-11,103
Professional and technical services	30,358	51,293	20,935
Management of companies and enterprises	6,142	4,418	-1,723
Administrative and waste services	21,514	20,299	-1,215
Educational services	1,018	2,549	1,531
Health care and social assistance	39,803	56,381	16,578
Arts, entertainment, and recreation	5,658	4,984	-673
Accommodation and food services	37,742	50,428	12,686
Other services, except public administration	32,412	40,792	8,381
Government	184,391	262,939	78,548

Percent of Total

			% Change 2001-2009
Labor Earnings			39.4%
Non-services related	*57.7%*	*49.9%*	20.6%
Farm	0.1%	0.0%	-120.3%
Forestry, fishing, & related activities	*0.0%*	*0.1%*	301.1%
Mining (including fossil fuels)	*38.6%*	34.4%	24.2%
Construction	7.8%	7.8%	38.6%
Manufacturing	11.1%	7.7%	-3.4%
Services related	*31.3%*	*29.1%*	29.7%
Utilities	*na*	*na*	na
Wholesale trade	*na*	*na*	na
Retail trade	5.7%	4.8%	18.3%
Transportation and warehousing	6.0%	7.1%	66.7%
Information	0.6%	0.5%	10.5%
Finance and insurance	1.7%	1.7%	34.1%
Real estate and rental and leasing	3.4%	1.8%	-26.1%
Professional and technical services	2.4%	2.9%	69.0%
Management of companies and enterprises	0.5%	0.3%	-28.1%
Administrative and waste services	1.7%	1.2%	-5.6%
Educational services	0.1%	0.1%	150.3%
Health care and social assistance	3.2%	3.2%	41.6%
Arts, entertainment, and recreation	0.4%	0.3%	-11.9%
Accommodation and food services	3.0%	2.9%	33.6%
Other services, except public administration	2.6%	2.3%	25.9%
Government	14.6%	15.0%	42.6%

All earnings data are reported by place of work.
Estimates for data that were not disclosed are shown in italics. Actual and estimated data do not necessarily add to totals.
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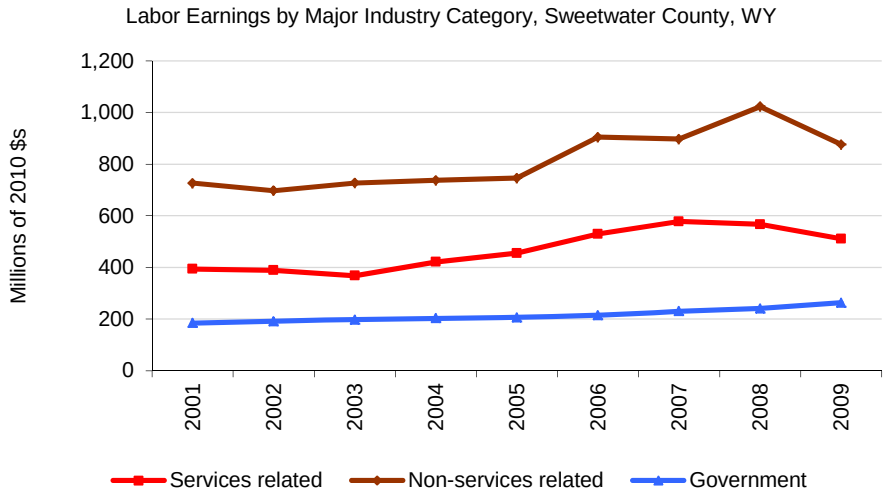
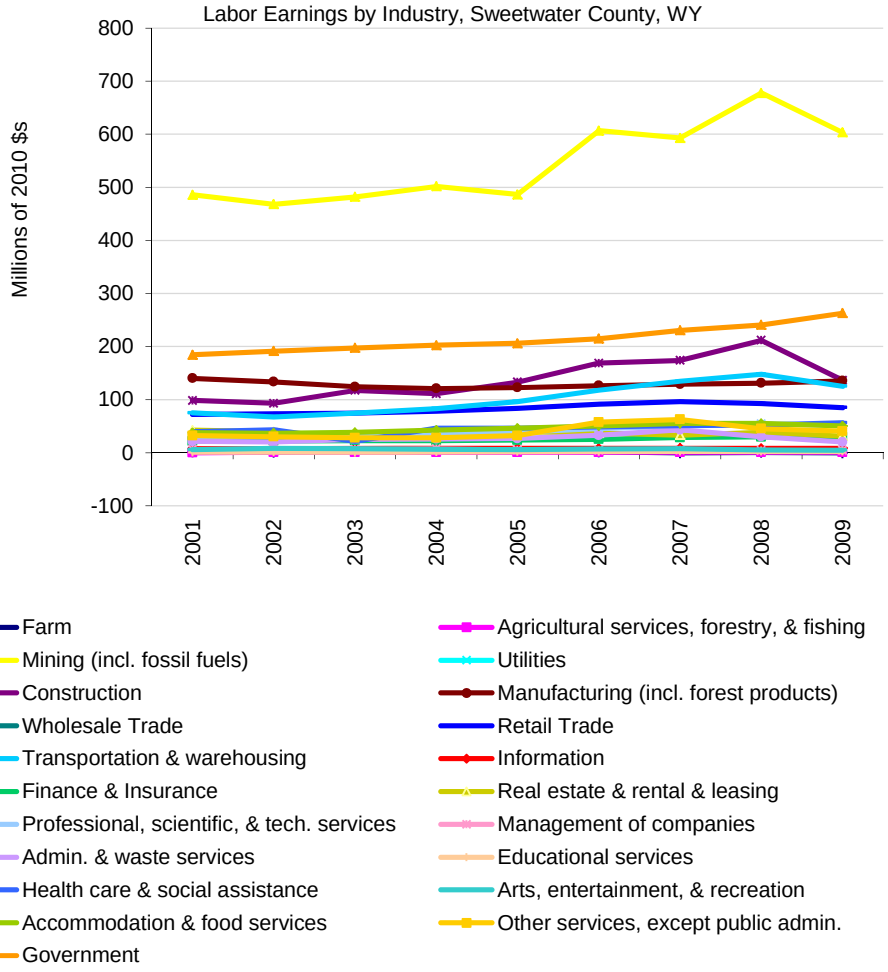




Source: EPS-HDT Socioeconomic Measures Report, December 29, 2011, based on 2011 data from the BEA, Regional Economic Information System, Table CA05N.

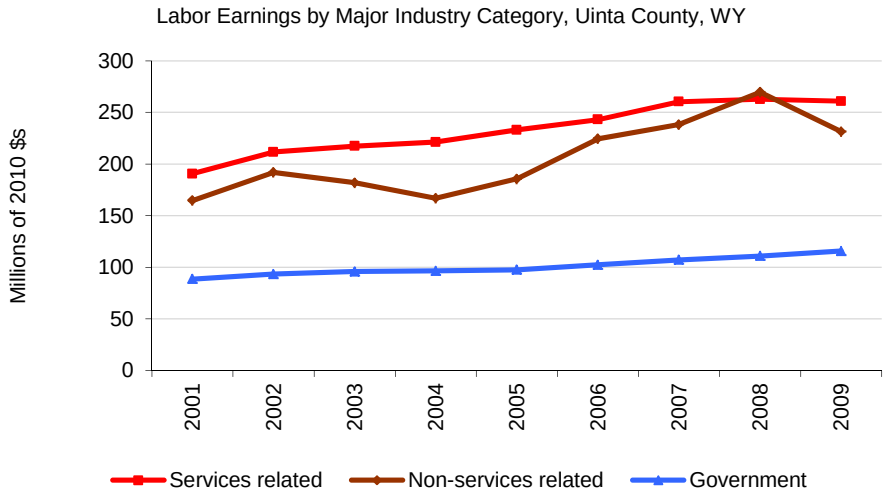
UINTA COUNTY

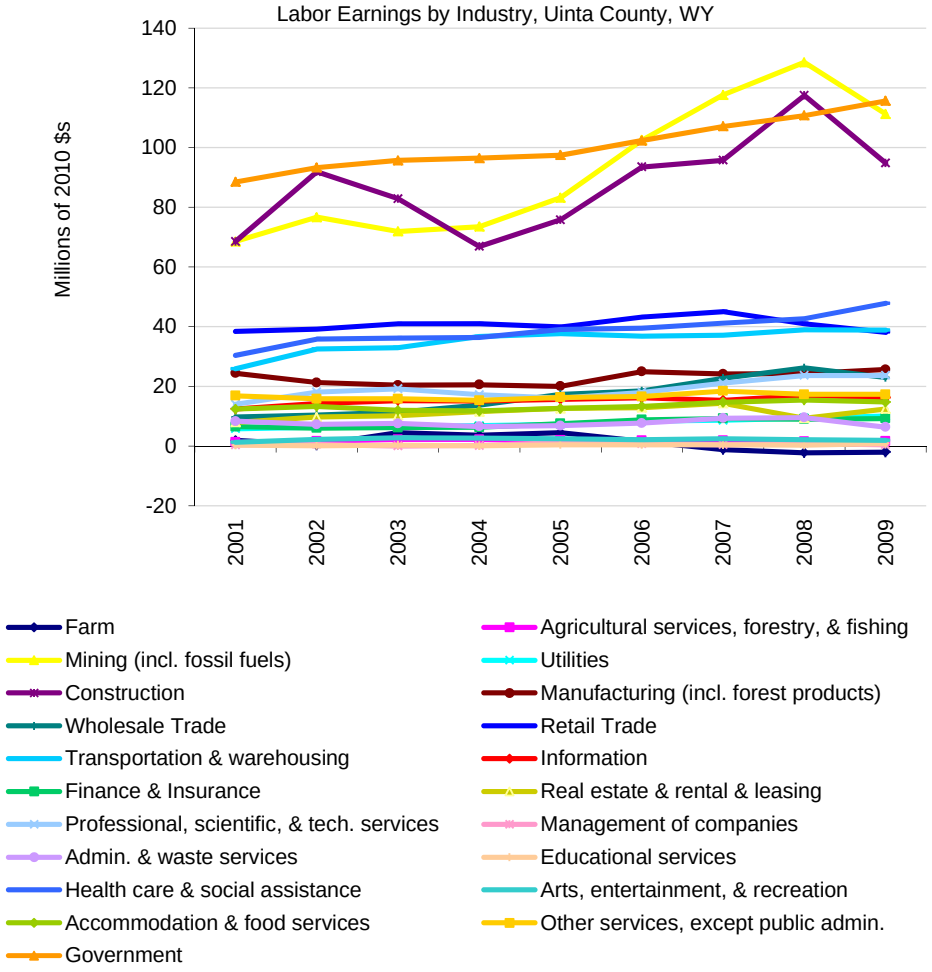
Personal Income by Industry, 2001-2009 (Thousands of 2010 $s)

	2001	2009	Change 2001-2009
Labor Earnings	457,568	604,115	146,546
Non-services related	164,647	*231,344*	66,698
Farm	1,896	-1,989	-3,885
Forestry, fishing, & related activities	1,346	*1,720*	374
Mining (including fossil fuels)	68,502	111,218	42,715
Construction	68,507	94,760	26,253
Manufacturing	24,395	25,636	1,241
Services related	*190,594*	*260,885*	70,291
Utilities	5,791	10,041	4,250
Wholesale trade	9,700	22,986	13,286
Retail trade	38,447	38,126	-321
Transportation and warehousing	25,868	38,779	12,911
Information	12,422	16,218	3,795
Finance and insurance	6,522	9,235	2,713
Real estate and rental and leasing	7,949	12,449	4,500
Professional and technical services	*14,017*	23,662	9,645
Management of companies and enterprises	*403*	449	46
Administrative and waste services	8,337	6,361	-1,976
Educational services	*296*	*839*	543
Health care and social assistance	*30,377*	*47,757*	17,380
Arts, entertainment, and recreation	1,294	1,925	631
Accommodation and food services	12,372	14,752	2,380
Other services, except public administration	16,801	17,307	507
Government	88,497	115,640	27,143

Percent of Total			% Change 2001-2009
Labor Earnings			32.0%
Non-services related	36.0%	*38.3%*	40.5%
Farm	0.4%	-0.3%	-204.9%
Forestry, fishing, & related activities	0.3%	*0.3%*	27.8%
Mining (including fossil fuels)	15.0%	18.4%	62.4%
Construction	15.0%	15.7%	38.3%
Manufacturing	5.3%	4.2%	5.1%
Services related	*41.7%*	*43.2%*	36.9%
Utilities	1.3%	1.7%	73.4%
Wholesale trade	2.1%	3.8%	137.0%
Retail trade	8.4%	6.3%	-0.8%
Transportation and warehousing	5.7%	6.4%	49.9%
Information	2.7%	2.7%	30.6%
Finance and insurance	1.4%	1.5%	41.6%
Real estate and rental and leasing	1.7%	2.1%	56.6%
Professional and technical services	*3.1%*	3.9%	68.8%
Management of companies and enterprises	*0.1%*	0.1%	11.5%
Administrative and waste services	1.8%	1.1%	-23.7%
Educational services	*0.1%*	*0.1%*	183.5%
Health care and social assistance	*6.6%*	*7.9%*	57.2%
Arts, entertainment, and recreation	0.3%	0.3%	48.8%
Accommodation and food services	2.7%	2.4%	19.2%
Other services, except public administration	3.7%	2.9%	3.0%
Government	19.3%	19.1%	30.7%

All earnings data are reported by place of work.
Estimates for data that were not disclosed are shown in italics. Actual and estimated data do not necessarily add to totals.
Source: EPS-HDT Socioeconomic Measures Report, December 29, 2011, based on 2011 data from the BEA, Regional Economic Information System, Table CA05N.





Source: EPS-HDT Socioeconomic Measures Report, December 29, 2011, based on 2011 data from the BEA, Regional Economic Information System, Table CA05N.

APPENDIX D—DEFINITIONS OF LABOR AND NON-LABOR INCOME

Personal Income—Income received from all sources, including income received from participation in production as well as from government and business transfer payments. It is the sum of compensation of employees (received), supplements to wages and salaries, proprietors' income with inventory valuation adjustment and capital consumption adjustment (CCAdj), rental income of persons with CCAdj, personal income receipts on assets, and personal current transfer receipts, less contributions for government social insurance.

Labor Income

Labor Earnings/Net Earnings—Earnings by place of work is the sum of wage and salary disbursements, supplements to wages and salaries, and proprietors' income. Net earnings by place of residence is earnings by place of work less contributions for government social insurance, plus an adjustment to convert earnings by place of work to a place of residence basis.

Non-Labor Income

Dividends, Interest, and Rent—Personal dividend income, personal interest income, and rental income of persons with capital consumption adjustment, sometimes referred to as "investment income" or "property income."

Dividends: This component of personal income consists of the payments in cash or other assets, excluding the corporation's own stock, made by corporations located in the United States or abroad to persons who are U.S. residents. It excludes that portion of dividends paid by regulated investment companies (mutual funds) related to capital gains distributions.

Interest: This component of personal income is the interest income (monetary and imputed) of persons from all sources.

Rent: Rental income is the net income of persons from the rental of real property except for the income of persons primarily engaged in the real estate business; the imputed net rental income of the owner-occupants of nonfarm dwellings; and the royalties received from patents, copyrights, and the right to natural resources.

Transfer Payments (Personal Current Transfer Receipts)—This component of personal income is payments to persons for which no current services are performed. It consists of payments to individuals and to nonprofit institutions by federal, state, and local governments and by businesses. Government payments to individuals includes retirement and disability insurance benefits, medical benefits (mainly Medicare and Medicaid), income maintenance benefits, unemployment insurance compensation, veterans' benefits, and federal education and training assistance. Government payments to nonprofit institutions excludes payments by the federal government for work under research and development contracts. Business payments to persons consists primarily of liability payments for personal injury and of corporate gifts to nonprofit institutions.

Income Maintenance—Income Maintenance Payments consists largely of supplemental security income payments, family assistance, food stamp payments, and other assistance payments, including general assistance.

Unemployment Insurance Compensation—Unemployment insurance compensation includes state unemployment compensation, unemployment compensation of federal civilian employees, unemployment compensation of railroad employees, unemployment compensation of veterans, and trade adjustment allowances to workers who are unemployed because of adverse economic effects of international trade arrangements.

Retirement and Other—Retirement and other consists of retirement and disability insurance benefit payments, medical benefits, veterans benefit payments, federal education and training benefits, other government payments to individuals, government payments to nonprofit institutions, and business payments. However, disbursements received from private retirement programs (e.g., from 401k accounts) are not included. The BEA REIS data does not currently capture this source of income, which is an important source of income in counties with substantial populations of retired persons.

Source: BEA 2010.

APPENDIX E—PARAMETERS FOR ECONOMIC MODELING

Parameters for Oil & Gas Economic Impact Modeling for the Rock Springs RMP/EIS

Production Parameters	Oil (Barrels)	Gas (MCF)	Total	Source
Average Production: 2007-2011	381,586	38,711,598		Office of Natural Resource Revenue
Average Value of Production Per Unit	$71.00	$4.72		Office of Natural Resource Revenue
Average Value of Production: 2007-2011	$27,091,950	$182,716,752	$209,808,702	
Average Production: 2007-2011	381,586	38,711,598		Office of Natural Resource Revenue
Average FMR: 2007-2011 Per Unit	$8.82	$0.56		Office of Natural Resource Revenue
Average FMR: 2007-2011	$3,365,328	$21,530,206	$24,895,534	
Effective FMR Rate	12.4%	11.8%	11.9%	
Average Production: 2007-2011			$209,808,702	Office of Natural Resource Revenue
Output Per Employee			$5,152,804	Wyoming Oil & Gas Conservation Commission (Output) & Bureau of Labor Statistics (Employment)
Direct Employment			40.7	
Direct Employment			40.7	
Employee Compensation Per Job			$123,317	Bureau of Labor Statistics - Average Earnings Per Job (Adjusted for Benefits)
Direct Employee Conpensation			$5,021,165	
Average Production: 2007-2011	381,586	38,711,598		Office of Natural Resource Revenue
Non-Labor Costs Per Unit	$6.35	$1.48		Energy Information Administration Operating Costs - Rocky Mountain Region
Non-Labor Production Costs	$2,423,720	$57,104,604	$59,528,323	
Average Taxable Valuation: 2007-2011	$24,548,016	$139,522,512		Office of Natural Resource Revenue (Price) & Wyoming Department of Revenue (Assessed to Gross Ratio)
Tax Levy (Mills)	68.081	68.081		
Ad Valorem Tax Revenue	$1,671,253	$9,498,832	$11,170,086	
Average Taxable Valuation: 2007-2011	$24,548,016	$139,522,512		Office of Natural Resource Revenue (Price) & Wyoming Department of Revenue (Assessed to Gross Ratio)
Effective Severance Tax Rate	6.0%	6.0%		Wyoming Department of Revenue Annual Report
Severance Tax Revenue	$1,472,881	$8,371,351	$9,844,232	

Drilling and Completion Parameters	Total Cost	Percent Local	Local Spending	
Drilling - Conventional Well	$1,016,000	84.3%	$856,488	Industry (data acquired for the RSFO for the BLM WY Sage Grouse RMP Amendments / EIS)
Completion - Conventional Well	$1,357,000	58.9%	$799,273	Industry (data acquired for the RSFO for the BLM WY Sage Grouse RMP Amendments / EIS)
Total Cost - Conventional Well	$2,373,000		$1,655,761	
Completion Rate	93.0%			BLM - Rock Springs Field Office

IMPLAN Sectors - Production	Sector
Oil and Gas Extraction	20

IMPLAN Sectors - Drilling & Completion	Sector
Drilling Oil & Gas Wells	28
Support Activities for Oil & Gas Operations	29
Construction of New Noresidential Structures	36
Wholesale Trade Business	319
Transportation by Truck	335
Telecommunications	351
Commerical & Industrial Machinery & Euipment Rental	365
Architectual, Engineering, and Related Services	369

Parameters for Coal Production Economic Impact Modeling for the Rock Springs RMP/EIS (1)		
Production Parameters		Source
Average Production: 2007-2011 (Tons)	Withheld*	Office of Natural Resource Revenue
Average Value of Production: 2007-2011 (Per Ton)	Withheld*	Office of Natural Resource Revenue
Average Value of Production: 2007-2011	Withheld*	
Average Production: 2007-2011 (Tons)	Withheld*	Office of Natural Resource Revenue
Average FMR: 2007-2011 (Per Ton)	Withheld*	Office of Natural Resource Revenue
Average FMR: 2007-2011	Withheld*	
Effective FMR Rate	11.9%	
Average Production: 2007-2011 (Tons)	Withheld*	Office of Natural Resource Revenue
Tons Per Employee	17,846	State Inspector of Mines for Wyoming
Direct Employment	Withheld*	
Direct Employment	Withheld*	
Employee Compensation Per Job	$98,413	Bureau of Labor Statistics - Average Earnings Per Job (Adjusted for Benefits)
Direct Employee Compensation	Withheld*	
Average Production: 2007-2011 (Tons)	Withheld*	Office of Natural Resource Revenue
Non-Labor Production Costs (Per Ton)	$8.08	IMPLAN
Non-Labor Production Costs	Withheld*	
Average Taxable Valuation: 2007-2011	Withheld*	Office of Natural Resource Revenue (Price) & Wyoming Department of Revenue (Assessed to Gross Ratio)
Tax Levy (Mills)	69.714	Wyoming Department of Revenue Annual Report
Ad Valorem Tax Revenue	Withheld*	
Average Taxable Valuation: 2007-2011	Withheld*	Office of Natural Resource Revenue (Price) & Wyoming Department of Revenue (Assessed to Gross Ratio)
Effective Severance Tax Rate	3.75%	Wyoming Department of Revenue Annual Report
Serverance Tax Revenue	Withheld*	
IMPLAN Sector - Productions	Sector	
Coal Mining	21	
(1) Based primarily on data available for underground coal mining		
*Data withheld to protect operator confidentiality		

Parameters for Trona Production Economic Impact Modeling for the Rock Springs RMP/EIS			
Production Parameters			Source
Average Production: 2007-2011 (Tons)	Withheld*		Office of Natural Resource Revenue
Average Value of Production: 2007-2011 (Per Ton)	Withheld*		Office of Natural Resource Revenue
Average Value of Production: 2007-2011	Withheld*		
Average Production: 2007-2011 (Tons)	Withheld*		Office of Natural Resource Revenue
Average FMR: 2007-2011 (Per Ton)	Withheld*		Office of Natural Resource Revenue
Average FMR: 2007-2011	Withheld*		
Effective FMR Rate	1.7%		
Average Production: 2007-2011 (Tons)	Withheld*		Office of Natural Resource Revenue
Tons Per Employee	8,896		State Inspector of Mines for Wyoming
Direct Employment	Withheld*		
Direct Employment	Withheld*		
Employee Compensation Per Job	$105,315		Bureau of Labor Statistics - Average Earnings Per Job (Adjusted for Benefits)
Direct Employee Compensation	Withheld*		
Average Production: 2007-2011 (Tons)	Withheld*		Office of Natural Resource Revenue
Non-Labor Production Costs (Per Ton)	$91.71		IMPLAN
Non-Labor Production Costs (Per Ton)	Withheld*		
Average Taxable Valuation: 2007-2011	Withheld*		Office of Natural Resource Revenue (Price) & Wyoming Department of Revenue (Assessed to Gross Ratio)
Tax Levy (Mills)	67.173		Wyoming Department of Revenue Annual Report
Ad Valorem Tax Revenue	Withheld*		
Average Taxable Valuation: 2007-2011	Withheld*		Office of Natural Resource Revenue (Price) & Wyoming Department of Revenue (Assessed to Gross Ratio)
Effective Severance Tax Rate	4.00%		Wyoming Department of Revenue Annual Report
Serverance Tax Revenue	Withheld*		
Soda Ash Sales Value	Withheld*		WY Dept of Revenue
Trona Taxable Value	Withheld*		WY Dept of Revenue
Taxable to Sales Value Ratio	Withheld*		
IMPLAN Sectors - Productions	Sector		
Mining and Quarrying Other NonMetallic Minerals	27		
Alkalies and Chlorine Manufacturing	123		
*Data withheld to protect operator confidentiality			