

Social Assessment of the Beaverhead-Deerlodge National Forest

Prepared for the

Beaverhead-Deerlodge National Forest

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Prepared by



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Abbreviations

| | |
|-------------|---|
| B-DNF | Beaverhead-Deerlodge National Forest |
| BLM | The Bureau of Land Management |
| Forest Plan | Land and Resource Management Plan |
| I-15 | Interstate 15 |
| I-90 | Interstate 90 |
| MBMG | Montana Bureau of Mines and Geology |
| NVUM | National Visitor Use Monitoring Project |
| ORV | Off-road vehicle |
| USFS | U.S. Forest Service |
| ERS | Economic Research Service |
| TCPU | Transportation, communications, and public utilities |
| FIRE | Finance, insurance, and real estate |
| REIS | Bureau of Economic Analysis Regional Economic Information System |
| CPI-U | Consumer Price Index |
| BEA | United States Bureau of Economic Analysis |
| PILT | Payments in Lieu of Taxes |
| ARCO | Atlantic Richfield Company |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act |
| NPL | National Priorities List |
| SSDAN | Social Science Data Analysis Network |
| RC&D | Headwaters Resource Conservation Development Area, Inc. |
| MWRC | Montana Western Railway Company |
| FAIM | Families Achieving Independence in Montana |
| MOU | <i>memorandum of understanding</i> |
| BWC | Beaverhead Watershed Committee |
| EPA | Environmental Protection Agency |
| SCORE | Service Corps of Retired Executives |
| JLDC | Jefferson County Local Development Corporation () |
| PPF | people from pavement |

Executive Summary

Introduction

The Beaverhead-Deerlodge National Forest (B-DNF) is the largest national forest in Montana containing approximately 3.32 million acres of land in southwest Montana and is one of twelve national forests (and one grassland) located in Region 1. The B-DNF was created in 1996 when the Beaverhead and Deerlodge Forests were merged into one administrative unit.

Forest managed lands are primarily contained in eleven noncontiguous segments in seven southwest Montana counties: Anaconda-Deer Lodge, Butte-Silver Bow, Beaverhead, Granite, Jefferson, Madison, and Powell. These seven counties form the study area. Table ES - 1 provides the county seat and the amount of acreage in the B-DNF for each of the counties. Forest offices of one type or another are located in each of the county seats except for Anaconda.

Table ES - 1. County, County Seat, and Acreage in the Beaverhead-Deerlodge National Forest

| County | County Seat | Acreage ^a |
|------------------|---------------|------------------------|
| Beaverhead | Dillon | 1,370,178 |
| Butte-Silver Bow | Butte | 190,036 |
| Deer Lodge | Anaconda | 185,470 |
| Gallatin | Bozeman | 35 |
| Granite | Philipsburg | 445,863 |
| Jefferson | Boulder | 362,121 |
| Madison | Virginia City | 692,486 |
| Powell | Deer Lodge | 85,231 |
| Total Acreage | | 3,322,911 ^a |

Source: www.fs.fed.us/rl/b-d/county_list.htm. February 27, 2002.

^aTotal acreage as of September 1998.

Table 2-4 shows the percentage of each county occupied by USFS land. USFS ownership in the study area counties ranges from a low of approximately 35 percent of Madison County to a high of 60 percent of Granite County.

Table ES - 2. Percent of USFS Land in the in Study Counties

| County | Percent USFS Land |
|------------------|-------------------|
| Beaverhead | 38 |
| Butte-Silver Bow | 41 |
| Deerlodge | 37 |
| Granite | 60 |
| Jefferson | 43 |
| Madison | 35 |
| Powell | 43 |

Source: Montana State Library, 2001.

Figure ES - 1 shows the amount of the B-DNF in each county. Figure ES - 2 shows the distribution of population across the seven-county study area. While 42 percent of the study area population lives in Butte-Silver Bow, only six percent of the B-DNF is in that county. In contrast, Beaverhead County has 40 percent of the Forest located within its boundaries but only 11 percent of the study area population.

Figure ES - 1. B-DNF Acreage in Forest Counties

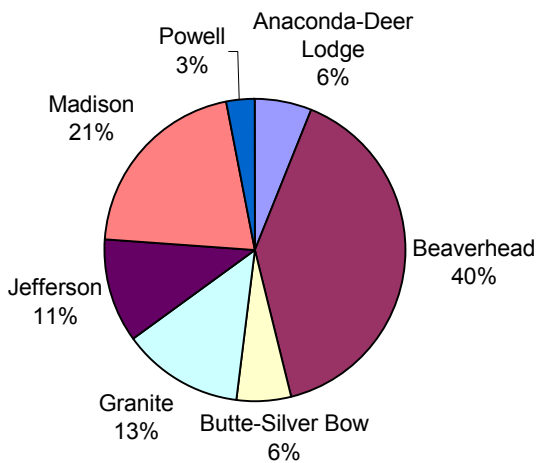
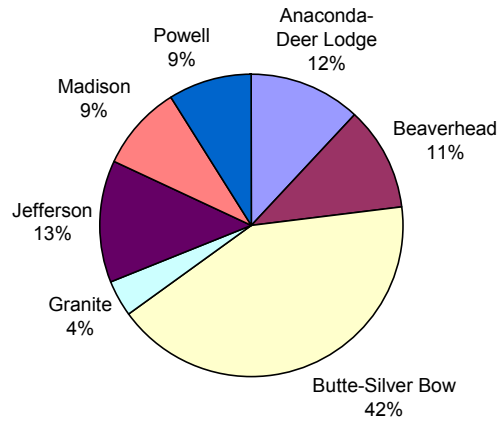


Figure ES - 2. Population Distribution of Forest Counties



Source: U.S. Census Bureau, Census 2000

Source: www.fs.fed.us/rl/b-d/county_list.htm. February 27, 2002.

Socioeconomic Background

Each of the seven project counties has a unique configuration of socioeconomic conditions that influence its social and cultural character and contribute to the definition of and public response to natural resource issues. The differences and similarities among counties are also factors that affect differences in community resiliency among study area counties.

Demography

Population size is a significant issue in southwest Montana at both ends of the growth continuum. Jefferson County has experienced significant population growth, while Anaconda-Deer Lodge County continues to lose population. The amount, rate, and patterns of population growth can significantly affect a community's infrastructure, economy, and social institutions, as well as having impacts on the natural environment.

Population

Table 4-8 presents the population for each of the counties in the study area at 10-year intervals. Six of the seven counties in the study area, Anaconda-Deer Lodge, Beaverhead, Butte-Silver Bow, Granite, Madison, and Powell make up what was called the Butte Region, which historically was the most populous region of Montana because of mining. If the populations for these counties are aggregated,

population in this region peaked in 1920. Population increased in six of the seven project counties during the 1990s. Only Anaconda-Deer Lodge County experienced a loss of population. Jefferson County experienced the fastest growth rate.

Table ES - 3. Seven County Project Area, Population, 1890-2000.

| County | Year | | | | | | | | | | | |
|---------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | 1890 | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | 2000 |
| Beaverhead | 4,655 | 5,615 | 6,446 | 7,369 | 6,654 | 6,943 | 6,671 | 7,194 | 8,187 | 8,186 | 8,424 | 9,202 |
| Butte-Silver Bow | 23,744 | 47,635 | 56,848 | 60,313 | 56,969 | 53,207 | 48,422 | 46,454 | 41,981 | 38,192 | 33,941 | 34,606 |
| Anaconda-Deer Lodge | 15,155 | 17,393 | 12,988 | 15,323 | 16,293 | 13,627 | 16,553 | 18,640 | 15,652 | 12,518 | 10,356 | 9,417 |
| Granite | - | 4,328 | 2,942 | 4,167 | 3,013 | 3,401 | 2,773 | 3,114 | 2,737 | 2,700 | 2,548 | 2,830 |
| Jefferson | 6,026 | 5,330 | 5,601 | 5,203 | 4,133 | 4,664 | 4,014 | 4,297 | 5,238 | 7,029 | 7,939 | 10,049 |
| Madison | 4,692 | 7,695 | 7,229 | 7,495 | 6,323 | 7,294 | 5,998 | 5,211 | 5,014 | 5,448 | 5,989 | 6,851 |
| Powell County | - | - | 5,904 | 6,909 | 6,202 | 6,152 | 6,301 | 7,002 | 6,660 | 6,958 | 6,620 | 7,180 |
| Total | 54,272 | 87,958 | 97,958 | 106,779 | 99,587 | 95,288 | 90,732 | 91,912 | 85,469 | 81,031 | 75,817 | 80,135 |

Source: U.S. Census Bureau Census 2000.

Table 4-10 shows recent data about the components of population change in study area counties. Populations increase or decrease in response to three variables: fertility, mortality, and net migration. Migration is the most unstable of these variables as demonstrated in Table 4-10. Only Beaverhead and Powell Counties experienced a natural increase in population. In- or out-migration accounts for the major sources of change in other counties.

Important factors that influence in- and out-migration include employment opportunities, the physical environment, perception of regional, state, and local government taxing policies, labor markets, cost of living, population composition, and local and state social legislation. The USFS is a major landowner and employers, and USFS policies have impacts on employment opportunities, the physical environment, and the perception of the region.

**Table ES - 4. Components of Population Change for Montana and 7 Study Area Counties
April 1, 2000 to July 1, 2001**

| Place | Births | Deaths | Natural Increase (Births-Deaths) | Net International Migration | Net Internal Migration | Population Change | April 1 2000 Population | July 1, 2001 Population |
|---------------------|--------|--------|-------------------------------------|-----------------------------|------------------------|-------------------|-------------------------|-------------------------|
| Montana | 13,320 | 10,165 | 3,155 | 470 | -1,377 | 2,238 | 902,195 | 904,433 |
| Anaconda-Deer Lodge | 109 | 180 | -71 | 1 | -179 | -246 | 9,417 | 9,171 |
| Beaverhead | 129 | 96 | 33 | 7 | -155 | -113 | 9,202 | 9,089 |
| Butte-Silver Bow | 478 | 560 | -82 | 19 | -951 | -1,002 | 34,606 | 33,604 |
| Granite | 22 | 42 | -20 | 1 | 86 | 69 | 2,830 | 2,899 |
| Jefferson | 106 | 112 | -6 | 2 | 351 | 356 | 10,049 | 10,405 |
| Madison | 75 | 89 | -14 | 14 | 89 | 88 | 6,851 | 6,939 |
| Powell | 85 | 71 | 14 | 5 | -123 | -104 | 7,180 | 7,076 |

Source: Population Division, U.S. Census Bureau Released April 29, 2002.

Note: Net internal migration is the difference between in-migration and out-migration.

The seven counties surrounding the B-DNF are among the least densely populated areas of the United States. Table 4-14 shows population, population density, and land area for project counties.

Table ES - 5. Census 2000 Total Population, Density, and Land Area for Montana and Study Area Counties

| County | Total Population | Land Area in Square Miles | Density (Persons per Square Mile) | Land Area Rank (in State) |
|---------------------|------------------|---------------------------|-----------------------------------|---------------------------|
| Montana | 902,195 | 145,552 | 6.2 | - |
| Anaconda-Deer Lodge | 9,417 | 737 | 12.8 | 55 |
| Beaverhead | 9,202 | 5,542 | 1.7 | 1 |
| Butte-Silver Bow | 34,606 | 718 | 48.2 | 56 |
| Granite | 2,830 | 1,727 | 1.6 | 40 |
| Jefferson | 10,049 | 1,657 | 6.1 | 42 |
| Madison | 6,851 | 3,587 | 1.9 | 13 |
| Powell | 7,180 | 2,326 | 3.1 | 30 |

Source: U.S. Census Bureau, Released March 21, 2001.

Compiled by: Census and Economic Information Center, Montana Dept. of Commerce.

Population Distribution within the Study Area

Population density is dependent in part on the amount of land available for settlement and on transportation systems. The large amount of public lands in study area counties significantly limits the amount of land available for private development, which along with geography concentrates population and development more than indicated when looking at population by total land area. Table 4-15 compares the population of each county with major population centers in the county.

Table ES - 6. Population of Counties Compared to Incorporated Cities, Towns, and Designated Census Places, 2000

| Place | Population | Percent of County Population | Type |
|---|---------------|------------------------------|---------------------------|
| Anaconda-Deer Lodge County^c | 9,417 | | |
| Anaconda-Deer Lodge County | 9,417 | | Consolidated City-County |
| Beaverhead County^a | 9,202 | | |
| Dillon | 3,752 | 40.8 | Incorporated Place (city) |
| Lima | 242 | 2.6 | Incorporated Place (town) |
| Wisdom | 114 | 1.2 | Census Designated Place |
| Butte-Silver Bow^b | 34,606 | | |
| Butte-Silver Bow | 33,892 | 97.9 | Consolidated City-County |
| Walkerville | 714 | 2.1 | Incorporated Place (town) |
| Granite County^d | 2,830 | | |
| Drummond | 318 | 11.2 | Incorporated Place (town) |
| Philipsburg | 914 | 32.3 | Incorporated Place (town) |

| Place | Population | Percent of County Population | Type |
|-------------------------------------|---------------|------------------------------|---------------------------|
| Jefferson County^e | 10,049 | | |
| Basin | 255 | 2.5 | Census Designated Place |
| Boulder | 1,300 | 12.9 | Incorporated Place (town) |
| Cardwell | 40 | <1 | Census Designated Place |
| Clancy | 1,406 | 14.0 | Census Designated Place |
| Jefferson City | 295 | 2.9 | Census Designated Place |
| Montana City | 2,094 | 20.8 | Census Designated Place |
| Whitehall | 1,044 | 10.4 | Incorporated Place (town) |
| Madison County^f | 6,851 | | |
| Alder | 116 | 1.7 | Census Designated Place |
| Big Sky | 188 | 2.7 | Census Designated Place |
| Ennis | 840 | 12.3 | Incorporated Place (town) |
| Harrison | 162 | 2.4 | Census Designated Place |
| Sheridan | 659 | 9.6 | Incorporated Place (town) |
| Twin Bridges | 400 | 5.8 | Incorporated Place (town) |
| Virginia City | 130 | 1.9 | Incorporated Place (town) |
| Powell County^g | 7,180 | | |
| Avon | 124 | 1.7 | Census Designated Place |
| Deer Lodge | 3,421 | 47.6 | Incorporated Place (city) |
| Elliston | 225 | 3.1 | Census Designated Place |
| Garrison | 112 | 1.6 | Census Designated Place |
| Ovando | 71 | 1.0 | Census Designated Place |

Source: U.S. Census Bureau, Census 2000.

^a Other communities include Apex, Bannock, Dell, Dewey, Glen, Grant, Jackson, Lakeview, Monida, Polaris, and Wise River

^b Other communities include Divide, Grigson Hot Springs, Melrose, Nissler, Ramsey, and Rocker.

^c Other communities include Galen, Opportunity, Southern Cross, and Warm Springs.

^d Other communities include Hall, Maxville, Porters Corner, and Quigley.

^e Other communities include Alhambra, Corbin, Elkhorn, Pipestone, Renova, Vendome, and Wickes.

^f Other communities include Mountain Village, Cameron, Jeffers, Jefferson Island, Laurin, McAllister, Nevada City, Norris, Pony, Silver Star, Waterloo.

^g Other communities include Demsey, Gold Creek, Helmville, Racetrack, and Woodworth.

Age

Age distribution gives an indication of whether the population of a community is generally young or old, growing or declining. A notable characteristic of population composition for both the state and project counties is the aging of the population relative to the U.S. The median age for the state is 37.5 compared to a median age of 35.3 for the United States. Median ages in study area counties range from a low of 37.6 in Beaverhead County to a high of 43.4 years of age in Jefferson County.

Table ES - 7. Total Population, Median Age, and Gender, 2000

| Geographic Area | Total Population | Median Age (Years) | Males per 100 Females | |
|---------------------|------------------|--------------------|-----------------------|-------------------|
| | | | All Ages | 18 years and Over |
| State Total | 902,195 | 37.5 | 99.3 | 97.2 |
| Anaconda-Deer Lodge | 9,417 | 42.3 | 99.8 | 97.3 |
| Beaverhead | 9,202 | 37.6 | 105.0 | 102.5 |
| Butte-Silver Bow | 34,606 | 38.9 | 97.8 | 96.3 |
| Granite | 2,830 | 42.8 | 105.1 | 102.6 |
| Jefferson | 10,049 | 40.2 | 100.8 | 100.4 |
| Madison | 6,851 | 43.4 | 102.3 | 103.9 |
| Powell | 7,180 | 39.7 | 143.2 | 151.4 |

Source: U.S. Census Bureau Census 2000, Summary File 1, Matrices PCT12 and P13.

Race

In comparison to other areas of the United States, Montana as a whole and the seven project counties show a relatively homogenous racial composition.

Table ES - 8. Race Distribution for Seven County Study Area and Montana, 2000

| Race | Anaconda-Deer Lodge | Beaverhead | Butte-Silver Bow | Granite | Jefferson | Madison | Powell | Montana |
|--|---------------------|------------|------------------|---------|-----------|---------|--------|---------|
| White, 2000 | 95.9 | 95.9 | 95.4 | 96.3 | 96.1 | 97.0 | 92.5 | 90.6 |
| Black or African American | 0.2 | 0.2 | 0.2 | 0 | 0.1 | Z | 0.5 | 0.3 |
| American Indian | 1.8 | 1.5 | 2.0 | 1.3 | 1.3 | 0.5 | 3.5 | 6.2 |
| Asian | 0.4 | 0.2 | 0.4 | 0.1 | 0.4 | 0.3 | 0.4 | 0.5 |
| Native Hawaiian | Z | Z | 0.4 | Z | 0.1 | 0 | - | 0.1 |
| Persons reporting some other race | 0.2 | 1.1 | 0.6 | 0.1 | 0.4 | 0.8 | 0.7 | 0.6 |
| Persons reporting two or more races | 1.6 | 1.2 | 1.4 | 1.8 | 1.7 | 1.4 | 2.3 | 1.7 |
| Hispanic/Latino | 1.6 | 2.7 | 2.7 | 1.3 | 1.5 | 1.9 | 1.9 | 2.0 |
| White persons, not of Hispanic/Latino origin | 94.7 | 94.4 | 93.7 | 95.3 | 95.2 | 96.0 | 91.5 | 89.5 |

Source: U.S. Census Bureau, Census 2000.

Education

Educational attainment is one indicator of the human resources available in a community and the level of workforce preparation (Table 4-22). All counties have a higher proportion of the population 25 years and older with a high school diploma or equivalency than the United States. However, Anaconda-Deer Lodge and Powell Counties have almost half as many college educated people with bachelor's degrees or higher than the U.S., the state, and three of the other project area counties.

Table ES - 9. Percent of Population 25 Years and Over with High School Diplomas and Bachelor's Degrees and Higher, U.S., Montana, and Project Counties, 2000

| Location | Educational Attainment | |
|---------------------|--|-------------------------------------|
| | Percent High School Graduate or Higher | Percent Bachelor's Degree or Higher |
| U.S. | 80.4 | 24.4 |
| Montana | 87.2 | 24.4 |
| Anaconda-Deer Lodge | 84.5 | 14.7 |
| Beaverhead | 89.3 | 26.4 |
| Butte-Silver Bow | 85.1 | 21.7 |
| Granite | 87.8 | 22.1 |
| Jefferson | 90.2 | 27.7 |
| Madison | 89.8 | 25.5 |
| Powell | 81.9 | 13.1 |

Source: U.S. Census Bureau, 2000 Census, DP-2.

Housing and Households

Table 4-20 compares total population with other household and home ownership variables. It is noteworthy that the home ownership rate is higher in six of the seven project counties than the state average, ranging from a low of 63.4 percent in Beaverhead County to a high of 83.2 percent in Jefferson County.

Table ES - 10. Housing Units and Households for Study Area Counties, 2000

| Characteristic | Anaconda Deer Lodge | Beaverhead | Butte-Silver Bow | Granite | Jefferson | Madison | Powell | Montana |
|---|---------------------|------------|------------------|---------|-----------|---------|--------|---------|
| Population | 9,417 | 9,202 | 34,606 | 2,830 | 10,049 | 6,851 | 7,180 | 902,195 |
| Housing Units | 4,958 | 4,571 | 16,176 | 2,074 | 4,199 | 4,671 | 2,930 | 412,633 |
| Occupied Housing Units | 3,995 | 3,684 | 14,432 | 1,200 | 3,747 | 2,956 | 2,422 | 358,667 |
| Housing Units per Square Mile of Land Area | 6.7 | 0.8 | 22.5 | 1.2 | 2.5 | 1.3 | 1.3 | - |
| Homeownership Rate | 73.6% | 63.4% | 70.4% | 74.4% | 83.2% | 70.4% | 71.3% | 69.1% |
| Households | 3,995 | 3,684 | 14,432 | 1,200 | 3,747 | 2,956 | 2,422 | 358,667 |
| Nonfamily households | 1,469 | 1,329 | 5,501 | 415 | 901 | 1,035 | 788 | 121,260 |
| Households with individuals 65 years and over | 1,296 | 885 | 3,981 | 322 | 735 | 819 | 697 | 83,982 |
| Households with persons under 18 | 1,095 | 1,179 | 4,349 | 351 | 1,402 | 807 | 757 | 119,550 |
| Average Persons per Household | 2.3 | 2.4 | 2.3 | 2.3 | 2.6 | 2.3 | 2.4 | 2.5 |
| Average Family Size | 2.8 | 3.0 | 3.0 | 2.9 | 3.0 | 2.9 | 2.9 | 3.0 |

Source: U.S. Census Bureau, Census 2000.

Economy

The natural resources of the seven project counties are an important economic asset. In the recent past, these resources (e.g., timber, minerals, grazing lands) were a foundation of extractive industries that formed the economic base in each county. Recent changes in national and international economic and sociopolitical conditions have changed the role of extractive industries in the seven project counties. Government and service sector employment along with other non-extractive industry jobs indicate a changing economy.

Economic Diversity

Economic structure and the diversity of this structure are factors used for assessment of community resiliency. Two measures of economic diversity are presented, based on 1999 IMPLAN¹ Model Year Data. One perspective examines the contributions to local economies by natural resource-dependent industry sectors (Table 4-25). According to 1999 IMPLAN data, industry employment in “wildland” related sectors as a percent of total county employment ranged from a low of around 1 percent in Butte-Silver Bow County to a high of almost 17 percent in Granite County. “Wildland” related sectors include timber, grazing, and mineral industries.

¹ IMPLAN Pro™ is Social Accounting and Impact Analysis software; produced by MIG, Incorporated

Table ES - 11. Direct Effects of "Wildland" Related Sectors, 1999

| | Industry Output (Millions of \$) | Industry Output as % of County Total | Employment | Industry Employment as % of County Total | Labor Income (Millions of \$) | Average Laborer Income (\$/Job) |
|----------------------------|-------------------------------------|--|--------------|---|----------------------------------|--|
| Anaconda-Deer Lodge | 5.1 | 2.5 | 41.0 | 1.0 | 1.0 | 25,390 |
| Timber Industries | 0.4 | 0.2 | 5 | 0.1 | 0.1 | 16,200 |
| Grazing Industries | 1.2 | 0.6 | 19 | 0.5 | 0.4 | 18,632 |
| Mineral Industries | 3.5 | 1.7 | 17 | 0.4 | 0.6 | 35,647 |
| Beaverhead | 59.7 | 17.1 | 532.0 | 9.5 | 16.4 | 30,759 |
| Timber Industries | 2.4 | 0.7 | 78 | 1.4 | 0.7 | 9,051 |
| Grazing Industries | 27.4 | 7.8 | 265 | 4.7 | 4.0 | 14,947 |
| Mineral Industries | 30.0 | 8.6 | 189 | 3.4 | 11.7 | 61,889 |
| Butte-Silver Bow | 133.2 | 9.8 | 907.7 | 4.7 | 34.0 | 37,426 |
| Timber Industries | 1.9 | 0.1 | 39 | 0.2 | 0.5 | 12,051 |
| Grazing Industries | 1.6 | 0.1 | 51 | 0.3 | 0.7 | 14,275 |
| Mineral Industries | 129.7 | 9.5 | 817.7 | 4.2 | 32.8 | 40,080 |
| Granite | 33.3 | 33.3 | 258.0 | 16.6 | 5.8 | 22,543 |
| Timber Industries | 26.8 | 26.8 | 187 | 12.0 | 4.2 | 22,342 |
| Grazing Industries | 2.6 | 2.6 | 30 | 1.9 | 0.5 | 15,900 |
| Mineral Industries | 3.9 | 3.9 | 41 | 2.6 | 1.2 | 28,317 |
| Jefferson | 92.1 | 27.7 | 490.0 | 11.9 | 17.2 | 35,180 |
| Timber Industries | 2.2 | 0.7 | 38 | 0.9 | 0.6 | 14,737 |
| Grazing Industries | 3.0 | 0.9 | 69 | 1.7 | 1.1 | 15,855 |
| Mineral Industries | 86.9 | 26.1 | 383 | 9.3 | 15.6 | 40,689 |
| Madison | 18.9 | 8.2 | 191.0 | 4.9 | 3.5 | 18,215 |
| Timber Industries | 1.6 | 0.7 | 31 | 0.8 | 0.4 | 11,710 |
| Grazing Industries | 15.7 | 6.8 | 149 | 3.8 | 2.9 | 19,302 |
| Mineral Industries | 1.6 | 0.7 | 11 | 0.3 | 0.2 | 21,818 |
| Powell | 74.1 | 32.2 | 435.0 | 12.6 | 15.1 | 34,731 |
| Timber Industries | 61.2 | 26.6 | 342 | 9.9 | 12.8 | 37,342 |
| Grazing Industries | 5.7 | 2.5 | 67 | 1.9 | 1.1 | 16,806 |
| Mineral Industries | 7.3 | 3.2 | 26 | 0.8 | 1.2 | 46,577 |

Source: Table based 1999 IMPLAN Model Year Data.

Note: NAIC code categories reporting no output were not included in the table.

The other perspective presents value-added estimates of industry sectors to the local economy (Table ES - 12). While these data suggest modestly diverse economies, in these small economies a sector may be composed of relatively few businesses. For example, adding or subtracting 10 or 15 jobs can have a significant impact in a county like Granite which according to 1999 REIS data had 89 business establishments.

Table ES - 12. Value-Added by Basic Industries as Percentage of Total Value-Added, 1999

| Categories | MT | All Project Counties | Anaconda Deer Lodge | Beaver-head | Butte-Silver Bow | Granite | Jefferson | Madison | Powell |
|-------------------|-----------|-----------------------------|----------------------------|--------------------|-------------------------|----------------|------------------|----------------|---------------|
| Agriculture | 5 | 4 | 3 | 10 | 1 | 12 | 6 | 16 | 9 |
| Mining | 2 | 7 | 1 | 11 | 7 | 4 | 18 | 0 | 3 |
| Manufacturing | 7 | 6 | 4 | 1 | 11 | 16 | 14 | 4 | 17 |
| Government | 17 | 17 | 28 | 19 | 9 | 21 | 18 | 16 | 31 |
| Services | 21 | 18 | 26 | 16 | 22 | 9 | 9 | 15 | 12 |
| FIRE | 14 | 11 | 10 | 16 | 8 | 16 | 16 | 15 | 12 |
| TRADE | 18 | 14 | 16 | 14 | 14 | 9 | 8 | 13 | 8 |
| TCPU | 10 | 18 | 5 | 8 | 22 | 6 | 4 | 8 | 5 |
| Construction | 6 | 5 | 7 | 5 | 6 | 7 | 7 | 13 | 3 |

Source: MIG Group, Inc., IMPLAN Model Output. Based on 1999 IMPLAN Model.

Note: TCPU=transportation, communications, and public utilities

FIRE= Finance, Insurance, and Real Estate

Income

For 2000, Montana's per capita personal income was \$22,518, which places it 46th out of 50 states. Montana's per capita personal income is approximately 23 percent below the national average. Five of the seven project counties are below the overall average for Montana. Table 4-30 provides average per capita personal income along with in-state rankings, and a breakdown of the sources of personal income for the State of Montana compared with the seven counties in the study area.

Personal income has three components: earnings, income from dividends, interest, and rents, and transfer payments. Income from earnings ranges from a low of 51.1 percent in Anaconda-Deer Lodge County to a high of 70 percent in Jefferson County.

Transfer payments are income payments by government and businesses to individuals and nonprofit institutions for which no current services are performed. Transfer payments include retirement and disability insurance benefit payments, medical benefit such as Medicare and Medicaid, income maintenance benefits, unemployment insurance benefit payments, veterans benefit payments, and federal education and training benefits. In the 2000 Census, transfer payments accounted for 20 percent or more of personal income in Anaconda-Deer Lodge County, Butte-Silver Bow, and Granite Counties. Transfer payments ranged from a high of 26.6 percent of total personal income in Anaconda-Deer Lodge County to a low of 12.4 percent in Jefferson County. There is often an inverse relationship between earnings and transfer payments. A high dependency in an economy on transfer payments can reflect few employment opportunities or a popular retirement area.

The proportion of households with a household income of less than \$10,000 a year is greater than the proportion of households with household incomes of \$75,000 or higher in all project counties except for Jefferson County. In 1999, median household incomes in the project area counties, except for Jefferson are lower than the U.S. by at least \$11,000.

Table ES - 13. Per Capita Personal Income, Total Personal Income, and Components for Montana and Seven Counties in Study Area, 1999

| County | Per Capita Personal Income | | Total Personal Income | | Components of Total Personal Income | | |
|---------------------|----------------------------|---------|-----------------------|---------|-------------------------------------|-----------------------------------|-----------------------|
| | (\$) | Rank | (\$1,000s) | Rank | Earnings (%) | Dividends, Interest, and Rent (%) | Transfer Payments (%) |
| Montana | 22,518 | 46 (US) | 20,336,883 | 46 (US) | 61.2 | 22.7 | 16.1 |
| Anaconda-Deer Lodge | 19,406 | 32 | 181,989 | 26 | 51.1 | 22.3 | 26.6 |
| Beaverhead | 21,069 | 22 | 193,729 | 21 | 56.7 | 24.8 | 18.5 |
| Butte-Silver Bow | 22,456 | 12 | 775,306 | 7 | 59.5 | 20.4 | 20.2 |
| Granite | 18,322 | 36 | 52,034 | 43 | 53.8 | 26.0 | 20.1 |
| Jefferson | 25,120 | 4 | 253,314 | 14 | 70.0 | 17.6 | 12.4 |
| Madison | 19,615 | 31 | 134,793 | 28 | 51.3 | 30.6 | 18.1 |
| Powell | 18,159 | 38 | 130,512 | 29 | 58.9 | 22.3 | 18.8 |

Source: Regional Economic Information System, Bureau of Economic Analysis, Bearfacts.
 Note: Montana contains 56 counties.

Table ES - 14. Distribution of Household Income for U.S., Montana, and Project Counties, 1999

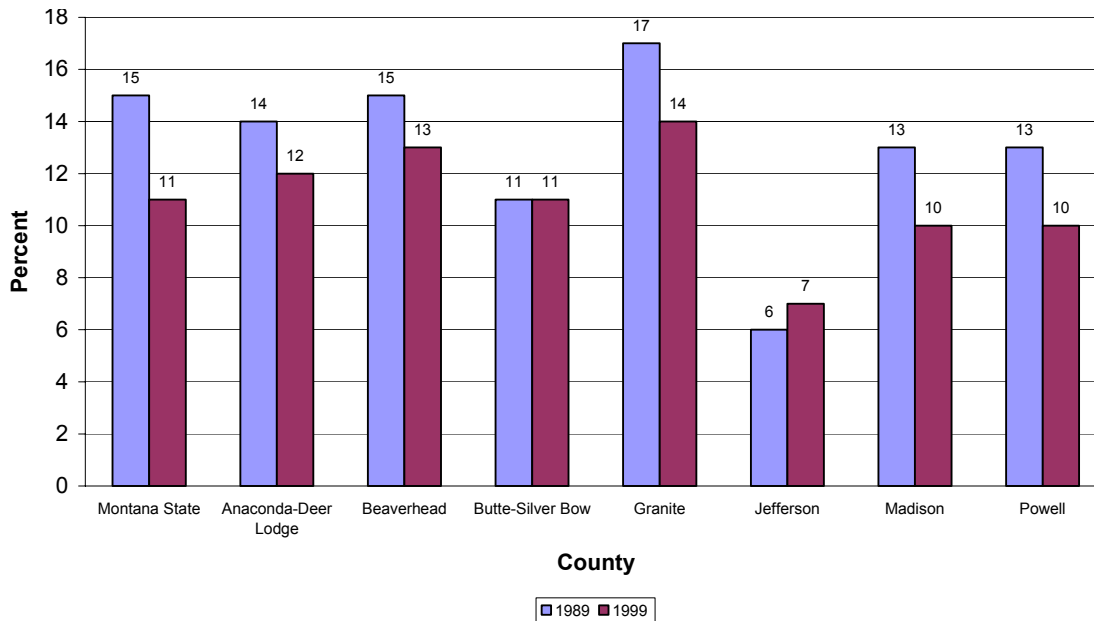
| | U.S. | Montana | Anaconda Deer Lodge | Beaverhead | Butte-Silver Bow | Granite | Jefferson | Madison | Powell |
|------------------------------|--------|---------|---------------------|------------|------------------|---------|-----------|---------|--------|
| Less than \$10,000 | 9.5 | 11.3 | 15.0 | 13.1 | 12.0 | 12.9 | 8.6 | 11.9 | 10.8 |
| \$10,000 to \$14,999 | 6.3 | 8.9 | 9.6 | 11.6 | 11.0 | 10.1 | 6.8 | 10.0 | 11.1 |
| \$15,000 to \$24,999 | 12.8 | 17.1 | 22.8 | 18.7 | 18.2 | 19.4 | 13.7 | 18.0 | 18.7 |
| \$25,000 to \$34,999 | 12.8 | 15.4 | 13.1 | 13.5 | 15.5 | 18.0 | 12.1 | 17.2 | 16.6 |
| \$35,000 to \$49,999 | 16.5 | 18.2 | 18.7 | 16.9 | 15.8 | 16.5 | 18.8 | 18.6 | 22.7 |
| \$50,000 to \$74,999 | 19.5 | 17.1 | 14.4 | 17.2 | 17.1 | 12.6 | 22.6 | 14.7 | 12.2 |
| \$75,000 to \$99,999 | 10.2 | 6.4 | 4.1 | 5.1 | 5.4 | 5.7 | 10.4 | 4.8 | 4.3 |
| \$100,000 to \$149,999 | 7.7 | 3.6 | 1.1 | 3.2 | 3.2 | 2.4 | 5.2 | 3.1 | 1.9 |
| \$150,000 or more | 4.6 | 1.9 | 1.2 | 0.8 | 1.7 | 2.5 | 1.8 | 2.7 | 1.5 |
| Median Household Income (\$) | 41,994 | 33,024 | 26,305 | 28,962 | 30,402 | 27,813 | 41,506 | 30,233 | 30,625 |

Source: U.S. Census Bureau, Census 2000, DP-3.

Poverty Status

The poverty rate is a commonly used indicator of the level of economic need in a community. In 1989, Jefferson County had the lowest rate of poverty for families at almost six percent. The highest level of poverty for families was in Granite County with a rate of approximately 17 percent. By the 2000 Census, the poverty rate for families had decreased for all counties except for Jefferson, which showed a small increase. Jefferson County remained the county with lowest poverty rate and Granite County still had the highest, although its rate had decreased to approximately 14 percent.

Figure ES - 3. Percent Poverty Status of Families, 1989 and 1999



Source: U.S. Census Bureau, Census 2000 and 1990 Census.

Payment in Lieu of Taxes

The Payments in Lieu of Taxes (PILT) program is administered by the BLM. PILT payments are made to local governments that have federal lands within their borders to compensate for loss of property tax revenues.

Table ES - 15. PILT Payments (Payments in Lieu of Taxes) for Selected Montana Counties, 1997-2001

| County | FY 1997 (\$) | FY 1998 (\$) | FY 1999 (\$) | FY 2000 (\$) | FY 2001 (\$) |
|---------------------|--------------|--------------|--------------|--------------|--------------|
| Anaconda-Deer Lodge | 117,918 | 121,081 | 135,477 | 138,183 | 202,745 |
| Beaverhead | 273,102 | 250,159 | 298,936 | 321,656 | 476,624 |
| Butte-Silver Bow | 145,327 | 155,098 | 164,187 | 165,341 | 244,121 |
| Granite | 67,907 | 70,982 | 69,590 | 74,263 | 116,085 |
| Jefferson | 265,797 | 297,461 | 309,928 | 307,704 | 476,105 |
| Madison | 257,595 | 249,996 | 278,323 | 295,573 | 435,001 |
| Powell | 280,495 | 214,835 | 220,215 | 213,927 | 404,755 |

Source: National Association of Counties at www.nacoorg/counties/queries/pilt_res.cfm, February 21, 2002.

Employment

Labor Force and Unemployment

Table 4-26 shows the number and percent of individuals 16 years and older, individuals in this age category in the civilian labor force, and employed and unemployed individuals. Five of the seven counties had unemployment rates lower than the state. Of note is that unemployment rates do not take into

account those individuals who are underemployed or discouraged workers who have given up hope of finding a job and are not actively seeking employment.

Table ES - 16. Population 16 Years and Older in the Labor Force, Employed, and Unemployed, 2000

| Area | Population 16 Years and Older | Population in Labor force | % in Labor Force | Population Not in Labor Force | % Not in Labor Force | No. Employed | % Employed | No. Unemployed | % Unemployed |
|------------------------|-------------------------------------|---------------------------------|------------------------|-------------------------------------|----------------------------|-----------------|---------------|-------------------|-----------------|
| Montana | 701,168 | 458,306 | 65.4 | 242,862 | 34.6 | 425,977 | 60.8 | 28,710 | 4.1 |
| Study Area | 63,566 | 38,516 | 60.6 | 25,050 | 39.4 | 35,974 | 56.6 | 3,238 | 5.1 |
| Anaconda Deer Lodge | 7,627 | 4,237 | 55.6 | 3,390 | 44.4 | 3,790 | 49.7 | 433 | 5.7 |
| Beaverhead | 7,338 | 4,664 | 63.6 | 2,674 | 36.4 | 4,478 | 61.0 | 178 | 2.4 |
| Butte-Silver Bow | 27,369 | 16,959 | 62.0 | 10,410 | 38.0 | 15,768 | 57.6 | 1,159 | 4.2 |
| Granite | 2,219 | 1,344 | 60.6 | 875 | 39.4 | 1,272 | 57.3 | 875 | 3.2 |
| Jefferson | 7,665 | 5,183 | 67.6 | 2,482 | 32.4 | 4,895 | 63.9 | 265 | 3.5 |
| Madison | 5,516 | 3,353 | 60.8 | 2,163 | 39.2 | 3,169 | 57.5 | 175 | 3.2 |
| Powell | 5,832 | 2,776 | 47.2 | 3,056 | 52.4 | 2,602 | 44.6 | 153 | 2.6 |

Source: U.S. Bureau of the Census, Census 2000, DP-3.

Table 4-27 shows the percentage of four different classes of workers: private wage and salary workers, government workers, self-employed workers in their own business who are not incorporated, and unpaid family workers. The government sector is a significant source of employment in all project counties.

Table ES - 17. Percent of Class of Worker, 2000

| Class of Worker | Montana | Anaconda- Deer Lodge | Beaver- head | Butte- Silver Bow | Granite | Jefferson | Madison | Powell |
|---|---------|-------------------------|-----------------|----------------------|---------|-----------|---------|--------|
| Private Wage and Salary Workers | 69.2 | 61.8 | 63.0 | 76.4 | 58.0 | 57.3 | 60.1 | 54.8 |
| Government Workers | 18.3 | 26.4 | 25.4 | 16.4 | 20.9 | 31.2 | 18.1 | 29.7 |
| Self-employed Workers in Own Not Incorporated Business | 11.8 | 10.9 | 10.6 | 6.6 | 18.9 | 11.2 | 20.4 | 14.5 |
| Unpaid Family Workers | 0.7 | 0.9 | 1.1 | 0.6 | 2.1 | 0.3 | 1.3 | 0.9 |

Source: U.S. Census Bureau, Census 2000.

Employment by Occupation and Industry

Table 4-28 compares the percent of employment in Montana and the study area counties by occupation and by industry according to Census 2000.

In terms of employment by industry, employment in agriculture, forestry, fishing, hunting, and mining ranges from a low 4.1 percent in Butte-Silver Bow County to a high of 21.1 percent in Granite County.

Table ES - 18. Percent of Employment by Occupation and Industry, Census 2000

| | Montana | Anaconda Deer Lodge | Beaver head | Butte Silver Bow | Granite | Jefferson | Madison | Powell |
|---|---------|---------------------------|----------------|------------------------|---------|-----------|---------|--------|
| Occupation | | | | | | | | |
| Management, Professional, and Related Occupations | 33.1 | 27.7 | 34.6 | 32.4 | 31.2 | 39.3 | 32.4 | 32.5 |
| Service Occupations | 17.2 | 31.9 | 20.0 | 19.4 | 17.2 | 16.3 | 14.8 | 21.9 |
| Sales and Office Occupations | 25.5 | 19.2 | 17.5 | 27.0 | 17.9 | 23.1 | 19.6 | 18.4 |
| Farming, Fishing, and Forestry Occupations | 2.2 | 1.2 | 6.8 | 0.7 | 9.1 | 1.6 | 6.5 | 5.2 |
| Construction, Extractions, and Maintenance Occupations | 10.7 | 10.5 | 10.1 | 9.4 | 14.0 | 11.9 | 15.1 | 7.6 |
| Production, Transportation, and Material Moving Occupations | 11.2 | 9.5 | 11.0 | 11.1 | 10.5 | 7.8 | 11.6 | 14.3 |
| Industry | | | | | | | | |
| Agriculture, Forestry, Fishing and Hunting, and Mining | 7.9 | 4.5 | 19.3 | 4.1 | 21.1 | 8.4 | 20.7 | 15.8 |
| Construction, Extractions, and Maintenance Occupations | 7.4 | 6.5 | 7.0 | 5.4 | 9.7 | 8.4 | 13.2 | 5.5 |
| Manufacturing | 6.0 | 5.1 | 4.5 | 4.0 | 8.9 | 3.8 | 5.2 | 9.2 |
| Wholesale Trade | 3.0 | 0.6 | 2.1 | 2.4 | 1.7 | 2.5 | 0.9 | 2.0 |
| Retail Trade | 12.8 | 8.9 | 9.2 | 15.4 | 7.9 | 8.7 | 10.2 | 8.6 |
| Transportation and Warehousing, and Utilities | 5.4 | 4.1 | 4.5 | 9.3 | 4.5 | 4.8 | 4.3 | 2.8 |
| Information | 2.2 | 1.9 | 1.9 | 2.9 | 1.0 | 1.9 | 1.4 | 1.0 |
| Finance, Insurance, Real Estate, and Rental and Leasing | 5.5 | 4.3 | 3.9 | 3.9 | 3.5 | 6.5 | 4.0 | 2.6 |
| Professional, Scientific, Management, Administrative, and Waste Management Services | 6.5 | 4.1 | 3.6 | 7.1 | 3.7 | 6.6 | 4.3 | 3.2 |
| Educational, Health and Social Services | 21.7 | 30.9 | 26.0 | 23.8 | 17.5 | 20.7 | 16.3 | 21.2 |
| Arts, Entertainment, Recreation, Accommodation and Food Services | 10.4 | 16.1 | 10.3 | 11.5 | 7.9 | 7.9 | 10.3 | 8.2 |
| Other Services (except Public Administration) | 5.3 | 5.7 | 2.5 | 5.0 | 5.5 | 4.5 | 4.3 | 2.3 |
| Public Administration | 5.9 | 7.3 | 5.1 | 5.1 | 7.0 | 15.4 | 5.0 | 17.6 |

Source: U.S. Census Bureau, Census 2000, Table DP-3.

The Social and Cultural Context

The history of southwest Montana is based on the use of natural resources and lifestyles that are “close to the land.” Native Americans were early residents of the region and relied on bison and other game for subsistence. Most Native Americans no longer resided in the area of the seven project counties by the mid-late 1800’s. Miners drawn by gold and silver were among the earliest settlers in the region, although ranchers were also drawn to the region by the grasslands and meadows that provided feed for livestock.

Boom and bust cycles in mining, grazing, and land development characterized the history of the region from early settlement in the 1860's to the present.

A review of literature and primary data collection indicate several different lifestyle groups that exist in the seven project counties. The lifestyle categories identified are:

- Ranching
- Timber and Logging
- Urban and Suburban
- Rural Town
- Recreationists

Ranching and timber lifestyles are present to some degree in each county, and represent natural resource lifestyles. Urban and suburban lifestyles are not present in all counties, but they contribute to the current cultural mix of area lifestyles. Rural town lifestyles are found in every county, except Butte-Silver Bow. The “townspeople” express a social and lifestyle distinction described in other regional studies. Recreation represents an important component of most southwest Montana lifestyles. Hunting, fishing, horseback riding, ORV riding, bird watching, and other outdoor activities are important to ranchers, miners, bankers, and many other people who are long-term residents as well as newcomers to the region.

Values and beliefs based in these lifestyles affect the identification and response to natural resource management issues.

Community Resiliency Summaries

Resiliency is a concept used to assess the capacity of communities to adapt to changes in the socioeconomic environment. Prior research suggests that resiliency is influenced by variables such as the opportunities and threats associated with: the natural environment, attitudes to change, community cohesiveness, cooperative problem solving, leadership resources, infrastructure, human resources, and economic structure and diversity. The following summaries of variables that may affect community resiliency are drawn from both the quantitative and qualitative information gathered for this report.

Anaconda-Deer Lodge County

Land Use. Approximately 51 percent of county land is in either federal or state ownership, which limits the amount of land available for development. Injuries to the natural environment from previous mining and mineral processing activities limit the amount of land available for development.

Attitude to Change. Local culture reflects Anaconda's history as a one-company smelter town with over a hundred years of boom and bust mineral processing activities. Interview data suggest that some social groups are resistant to change and would like to maintain what is viewed as the previous status quo. Some data indicate residents of Anaconda-Deer Lodge County are trying to direct their own change and transform community reputation and identity.

Community Characteristics. In the past, community unionism functioned as a tie that helped to draw together numerous social groupings. While many of the community residents share similar values based on the importance of family, it remains to be seen whether the diverse groups can unite in forging and attaining a common vision of the future.

Mutual Support Cooperative Problem-Solving. Mutual support and volunteerism are important community values. Activism is part of the county's history as expressed through unionism and the community's continuing efforts to reclaim contaminated land.

Local Services and Infrastructure. Basic services exist in the community, but the county has several basic infrastructure needs. Opportunity and West Valley need sanitary sewer systems and Anaconda needs a new water line. Anaconda has made headway in taking advantage of its historic past by upgrades in the central business district, but revitalization efforts need to continue if the county is going to successfully change and market its "new" self-identity as a tourist destination.

Leadership. Anaconda-Deer Lodge County appears to have a rich source of community leadership available although it may be necessary to develop the leadership potential of younger residents. This availability of leadership resources in the community may be its greatest strength and may help offset shortfalls in other resource areas.

Human Resources. Anaconda Deer Lodge County has a higher level of home ownership than the state as a whole. However, the county has had a higher unemployment rate than the state since the mid 1970s. Over 21 percent of the families with related children under five are living in poverty. The county is dependent on transfer income. While retirement income can provide stability, at the same time, the demands of retirees on a community are often at odds with young families who want good schools and other services

Economic Diversity. According to the most recent IMPAN data (1999), "wildland" related sectors of the economy do not appear to be a significant source of total industry output or employment for Anaconda-Deer Lodge County. Employment data and value-added information from IMPLAN show that Anaconda Deer Lodge County is dependent on employment in the government and services sectors. The importance of these sectors is supported by interview data. Government employment provides some stability for the county.

Beaverhead County

Land Use and Ownership. Thirty-one percent of Beaverhead county lands are privately owned. The remaining 69 percent is in federal and state ownership, with the USFS managing 38 percent of those lands and the BLM 19 percent. The qualities of place in Beaverhead County are important elements of lifestyles and the sense of place in the county. Open space, wildlife, rivers, mountains, and valleys construct what residents describe as the experience of "wild Montana" in Beaverhead County.

Attitude to Change. Local culture values stability and maintenance of the status quo. While progress is desirable, it is progress toward maintaining things as they are or have been in the past.

Community Characteristics. The county has a relatively homogenous population with limited social differentiation. The major county-level social groupings (townspeople and ranchers/farmers) identified by this work are stable and do not appear to have any significant inter-group conflicts. There are ties that integrate social groups, but these tend to be more within sub-groups than across major county-level social groupings. Residents have a strong sense of belonging to their communities. However, there is some divisiveness regarding different perspectives on natural resource issues, and this contributes to community conflicts that weaken social bonds. Such divisiveness is a weakness that undermines cohesiveness.

Local Services and Infrastructure. There are both county services and municipal services in the incorporated communities. The county ranks fifth among the seven project counties in per capita expenditures (\$514.04) for services. The proximity of these regional services combined with the educational, medical, and federal agency services in the county contribute to the quality of life in the community. County residents perceive this combination of local and regional services as a strength.

Mutual Support. Communities have a history of community-based social support through volunteer efforts, fund raising events, and neighboring. Some activities are organized by service clubs and churches and others are organized by groups or individuals. The high value placed on mutual support combined with the expression of this value contributes to the sense of belonging in county communities.

Cooperative Problem Solving. County communities exhibit both strengths and weaknesses in cooperative problem solving. The strengths lie in a history of developing community groups to address identified problems. These groups are sometimes ad hoc and focused around a particular issue. Others are more long standing and provide a forum for raising and resolving issues of concern to community members. The weakness in problem solving is associated with some community divisiveness about natural resource management issues.

Leadership. Recognized leadership resources appear concentrated in institutional positions such as mayors and other municipal and county officials. When community-based resources leadership resources are needed, they emerge. Leadership resources need additional development by county communities.

Human Resources. Within the county, educational attainment is higher than average for Montana, in part because of the university, hospital, and professionals employed in government agencies. Unemployment is among the lowest of all the project area counties, but sources suggest that underemployment is an issue for local workers.

Economic Diversity.

The “wildland dependency” shows that 17.1 percent of the total county output is accounted for by grazing, timber, and mining industries combined. The county ranks fourth among all project counties in “wildland” output. Mining has the largest share, accounting for about 9 percent of the total followed by grazing industries with 7.8 percent. The grazing industries output is the largest among all project counties. The county ranks fourth among all project counties in wildland industries employment with 9.5 percent of the county total.

IMPLAN value-added output show that the county has 6 of 9 sectors that are each more than 10 percent of the total value-added output. This is the same as the averages for all seven project counties and for the state as well. Government is the sector with the highest percentage (19 percent) followed by services (16 percent), FIRE² (16 percent), and wholesale and retail trade (14 percent). Agriculture accounts for 10 percent of the total value-added. The county has more diversification than other rural counties because of its government, hospital, and university assets. The importance of agriculture in the economy is both an asset and a potential source of weakness since it is interconnected with other sectors of the economy.

Butte-Silver Bow County

Land Use. Approximately 57 percent of county land is in federal or state hands. While the landscape of Butte is dominated by the Berkeley Pit, Butte is surrounded by blue-ribbon trout streams and gorgeous mountain scenery with easy access to numerous outdoor recreation opportunities. Clean up efforts in the Superfund sites are expected to continue for years, but at the same time may provide employment opportunities for residents.

Attitude to Change. Local culture reflects Butte’s history as a one-company mining town with over a hundred years of mining. Many of the residents contacted in this study believe the mine will open again soon.

² FIRE=Finance, insurance, and real estate.

Community Characteristics. In the past, community unionism functioned as a tie that helped to draw together the numerous social groupings in the county. While many of the residents of the county share similar values based on the importance of family and other social ties, it remains to be seen whether the diverse groups in the county can unite in forging and attaining a common vision of the future of the county. Independence and maintenance of their hard working and hard playing self-identity appear to be important values in Butte.

Local Services and Infrastructure. Basic services exist in the community. In fact, Butte is a draw for residents from surrounding counties who come to shop, for medical treatment, and to fly in and out of the Butte Airport. Headwaters Resource Conservation and Development Area, Inc.'s *Area Plan/Comprehensive Economic Development Strategy, 2002*, points out that Butte has the potential to become a regional commercial center, but that it lacks industrial infrastructure.

Mutual Support and Community Problem Solving. Volunteerism is exemplified in the numerous service and fraternal organizations in Butte and the frequent fund raising events in support of families and individuals with major health problems, involvement in accidents, or a death in the family.

Leadership. Leadership appears to be one of Butte-Silver Bow County's strengths. Leadership is apparent in both institutional and non-institutional positions. While the county faces many social, economic, and environmental problems, leaders seem to emerge to deal with these problems.

Human Resources. While residents have adequate educational resources to draw on, it would appear that they have limited financial resources to meet basic needs. The higher rates of poverty and especially the number of children in poverty may require the use of social and community resources that might have otherwise been used for community enhancement.

Economic Diversity. In contrast to other project counties, government provides very little value-added to the county. Government value-added can provide a local economy with some stability. Butte is experiencing growth in transportation, communications, and public utilities sectors. Their services sector is growing. According to 1999 IMPLAN data, "wildland" related industry sectors contribute very little to the local economy. Before the most recent closure of a mine, mining contributed approximately 7 percent of total industry output and 3 percent of employment.

Granite County

Land Use and Ownership. About 60 percent of the county is USFS lands, the highest percent of all the counties in the study area. Approximately 70 percent of the county is evergreen forest, also the highest percent of the project counties.

Services and Infrastructure. The provision of services and infrastructure are difficult with the very low population and small tax base of Granite County. The very limited availability of retail and medical services is perceived as a county weakness, both in terms of availability to residents and as a source for keeping dollars from leaking out of the county. County residents spend their money in Helena or Missoula.

Attitudes to Change. Community cultures value stability, but it is the remembered stability of yesteryear—residents would like things to be as they were in the past, when timbering, mining, and agriculture were important contributors to the local economy. The positive value of this attitude to change is that it focuses attention on conditions that can reinforce the valued attributes and characteristics of local communities. The weakness of this view is that it may inhibit thinking about adaptation to new circumstances and new solutions to old problems.

Community Characteristics. The Granite County Natural Resource Land Use Plan describes the shared values of the community as independence, self-sufficiency, equality, and devotion to family, work, and the land. Local customs include a history of mining, timbering, and agriculture.

Mutual Support. Mutual support and volunteering appear to be important values for residents of Granite County.

Cooperative Problem Solving. The citizens of the county have apparently identified a problem pertaining to regulation by state and federal activities that have affected local values and customs. In response, the county has adopted the Granite County Natural Resource Land Use Plan to ensure the rights of county in decisions made about federal and state lands within the county.

Leadership. Little information was collected about leadership, but information from secondary sources shows that leadership may be a strength in this county with the smallest population of the project counties.

Human Resources. The indicators of the human resources available to the county show a mixed picture. The census data regarding educational attainment shows that Granite County has excellent educational resources to draw on and an unemployment rate lower than the state. The home ownership in Granite County is around four percent higher than the home ownership in the state. However, the median household income of Granite County is \$5,000 a year less than the median household income in the state. The percent of related children under 18 in poverty is the highest of any of the project counties. Based on these statistics, residents would appear to have limited financial resources to meet basic needs and the higher rates of poverty and especially children in poverty may require the use of social and community recourses that might otherwise be used for community enhancement.

Economic Diversity. According to the most recent IMPLAN data (1999), the county is very dependent on “wildland” related industrial sectors of the economy. “Wildland” related sectors appear to be a significant source of total industry output and employment for Granite County, accounting for approximately 33 percent of total industry output and approximately 16 percent of total employment. Timber industries accounted for about 28 percent of total industry output and 12 percent of employment for the county.

Jefferson County

Land Use and Ownership. Almost 52 percent of county lands are forested and nearly 40 percent are in rangelands. Of the 1,061,000 acres of land in the county, approximately 464,000 acres are privately owned. The USFS manages about 460,000 acres (43 percent) of federally owned land and the BLM about 97,000 acres.

Services and Infrastructure. County residents have access to east-west and north-south interstate highways, and major air carriers are available in Butte, Helena, and Bozeman. The county provides essential services to residents, although it ranks sixth in 2001 per capita expenditures (\$513.89) among all project counties.

Attitudes to Change. Residents are keenly aware of population and lifestyle changes occurring in their county as well as the region. Similarly, the upcoming closure of the Golden Sunlight Mine is also promoting awareness of how to respond to the fiscal demands and changes in community composition that may accompany this closure. County leadership is anticipating these changes and working with residents to develop adaptive strategies.

Community Characteristics. Characteristics of Jefferson County communities that influence resiliency include: a mix of lifestyles, limited interaction among communities in the three major geographic regions

of the county (north, central, and south), localized community networks, and a loose sense of county identity.

Mutual Support. Communities work cooperatively and supportively within localized geographic areas, but countywide cooperation is limited. Localized “micro-networks” are important sources of social support and mutual assistance that contribute to cohesiveness within confined geographic areas or among lifestyle groups. Volunteerism is valued as an important community resource and expressed in participation in volunteer fire departments, service clubs, county fair committees, school athletic support, and other formal and informal venues. Lifestyle groups appear to provide support for one another in localized settings.

Cooperative Problem Solving. The Jefferson County Local Development Corporation (JLDC) represents an example of ongoing cooperative problem solving, especially concerning the county’s economic future. The presence of an economic development specialist in the county extension office facilitates actions of the JLDC and provides access to a wider range of regional resources for cooperative problem solving.

Leadership. Institutional leadership exists within the elected political positions of each community. Leadership resources have multiple demands for their services, constraining their availability for participation in a wide range of activities. The county extension agent is an important supplement to these community-based resources. His activities are dedicated to local economic development and facilitating key organizations that also provide problem solving and community leadership.

Madison County

Land Use and Ownership. Forty seven percent of county lands are in private ownership. Among all project counties, Madison County has the second highest total acreage in agricultural production and the highest percentage of lands in conservation easements and special use designations

Services and Infrastructure. Madison County has services that meet the basic needs of county residents or those services are available nearby in urban centers. Local medical services are available in both Ennis and Sheridan. Residents in the north county must use medical services in Ennis or Sheridan or else travel to Whitehall, Butte, or Bozeman. The county has the second highest per capita expenditures on services (\$819.68) among all project counties.

Attitudes to Change. Madison County’s population growth is an issue of concern to residents. There is a desire to retain the traditions and agricultural lifestyles that are a valued heritage. There is also a reality that newcomers are populating all areas of the county and creating changes in the physical and social landscapes. This recognition of the potential for change and efforts to respond is a positive adaptation.

Community Characteristics. Small and dispersed communities with similar lifestyles promote a localized sense of community identity. Community members highly value neighboring, egalitarianism, independence, and their western heritage. Within localized areas, this strong sense of community identity promotes cohesiveness, which is a basis for collective action when communities experience opportunities or threats. Communities are relatively homogenous in terms of lifestyles. Rural ranching lifestyles are the most prominent, although rural town lifestyles characterize communities such as Ennis, Sheridan, Twin Bridges, and Harrison. Recreation is a significant component of these lifestyles. Additionally, there is commercial recreation for fly fishing, hunting and skiing. Difference in wealth between established residents and newcomers is an expressed concern, especially its implications for the values of egalitarianism residents’ hold. Newcomers are not a homogenous group. Residents evaluate the status of newcomers based on their residence pattern. Those who are seasonal residents are perceived as on the periphery of local communities. Those who are full-time residents and who participate in community events and projects are perceived as more integrated into local lifestyles.

Mutual Support. Within county communities, independence is a valued characteristic of local lifestyles. At the same time, neighbors also value assisting one another when a tractor breaks down or a family member's sickness leaves a hay crew short handed. Independence and mutual assistance are complimentary and embedded in social networks that also function to communicate about needs for mutual support. Residents perceive that participating in mutual support activities is a contribution to community and an indicator of community membership.

Cooperative Problem Solving. The Madison Valley Ranchlands group, the Warm Springs Ranchlands Group, and various task forces to address water and riparian issues indicate cooperative problem-solving efforts. Groups form in response to specific issues, and they have been successful in achieving their missions. Recent efforts such as the Madison Valley Ranchlands group incorporate different social and lifestyle groups that create crosscutting ties that are an important basis for cooperative problem solving. Some of the efforts are reactions to impending crises, suggesting the capacity to anticipate and prevent problems from becoming more complex.

Leadership. There is a combination of traditional community leadership supplemented by leadership from newcomers that strengthens the leadership capacity of the county. Observers of Madison County as well as residents note that community-based leadership may require some facilitation by sources within or external to the community. That is, to engage potential leaders who are busy with other life demands may require external resources to initiate or cooperate in initiating actions that then pull in community-based leaders.

Human Resources. Secondary data do not suggest any obvious human resources deficits for Madison County. The county shows below average unemployment, crime rates, and poverty levels. Educational attainment is above average, although as with most rural Montana Counties, household and per capita income is below the state average.

Economic Diversity.

The IMPLAN data indicate the county has six sectors that are each more than 10 percent of the value-added output in comparison to five sectors for the aggregate of all project counties and six for the state. Mining data are not included in this IMPLAN output, but local sources suggest the Luzenac Mine is a major employer and contributor to the county economy. This information suggests that mining also is an important contributor to economic diversity. The largest sectors indicated by the IMPLAN data are agriculture and government, each with 16 percent of total value-added output. Tourism in the form of sight seeing, fishing, hunting, and skiing is a strength of this economy, and it contributes to overall economic diversity.

The "wildland" dependency data indicate that Madison County ranks fifth among all project counties in "wildland"-related industry output with \$18.9 million in 1999. Grazing accounts for \$15.7 million of the \$18.9 million total. The county ranks fifth among all project counties in the percentage of "wildland" related employment (4.9 percent). Grazing accounts for 3.8 percent of the total 4.9 percent in "wildland" related employment. Although these data indicate the importance of grazing within the county economy, they do not indicate any economic benefits that accrue from tourists and other visitors attracted by the county's substantial natural resources.

Powell County

Land Use and Ownership. About 43 percent of the county is USFS lands. The B-DNF is only one of four Forests located in the county. Almost 60 percent of county lands are forested.

The Upper River of the Clark Fork was designated a Superfund site in 1985. The EPA is currently accepting written comments on its proposed cleanup plan of the Upper River site that runs through

Powell County. The proposed cleanup alternatives are currently a source of division for the county because many private landowners own land along the river. The river has been the economic, cultural, and biological backbone of western Montana. The average size of farms and ranches in the county did not decrease between the 1987 and 1997 Agriculture Censuses, but the number of farms has decreased. There is concern in the county over the sale of long-time family ranches both to corporate buyers and for subdivision.

Services and Infrastructure. The provision of services and infrastructure is difficult with the declining tax base in the county and Deer Lodge. The limited availability of retail and medical services is perceived as a county weakness, both in terms of availability to residents and as a source for keeping dollars from leaking out of the county. County residents spend their money in Helena, Missoula, or Butte. Services are available for the tourists that visit Deer Lodge and tourism is a growing industry in Deer Lodge.

Attitudes to Change. The culture of both the townspeople and the ranchers values stability, but it is the remembered stability of yesteryear—residents would like things to be as they were in the past, when residents could have well paying jobs at Anaconda Mining Company in Anaconda or Butte, or the Milwaukee Railroad operations in Deer Lodge, or at Cominco.

Community Characteristics. One of the characteristics that influences Powell County is the unusual distribution of the population, with almost half of the county population located in the southern portion of the county in Deer Lodge. Deer Lodge is adjacent to I-90 while the northern portions of the county are much more isolated, which results in a mix of lifestyles. There is limited interaction between the southern and northern portions of the county. However, the communities do come together for the fair and such as events as turkey shoots. Government jobs at the prison in Deer Lodge and the State Registrar of Motor Vehicles provide some economic stability to the county

Mutual Support. Mutual support and volunteering are important local values among both townspeople, people in the timber industry, and ranchers. The community works cooperatively within Deer Lodge, but information about countywide cooperation is limited. How residents come together and respond to current issues such as the remediation efforts on the Clark Fork will in a large part demonstrate not only the ability of residents to come together to work to solve a common problem but also demonstrate what leadership is available in the county.

Cooperative Problem Solving. Residents from different social groupings across the county believe that many of their current problems are beyond their control and are the result of outside market forces, changes in federal management practices, or the result of state policies that limit economic development. Additional information about each of these topics may offer more clarity about the strengths and weaknesses associated with how residents work together to identify and resolve potential conflicts.

Leadership. Individuals were identified in the county who are recognized as leaders in terms of always “being willing to help others out.” Other leaders appear to be tied to particular issues or needs of the community or are “institutional” leaders. Several of those identified were members of the business community.

Human Resources. The indicators of the human resources available to the county show a mixed picture. The census data regarding educational attainment shows that Powell County has adequate educational resources with the percent of individuals with a high school diploma or higher close to those of the state as a whole. However, the percent of individuals with a bachelor’s degree or higher is far lower than the state and lower than any of the other counties in the study area. Interview data suggest that this may be due in part to the phenomenon reported to be occurring all over Montana—young adults are moving out of the county/state for better employment opportunities. Powell County has a low unemployment rate, but the largest percent for all the counties in the study area of individuals 16 years and over not in the labor force. However, this high percentage may be accounted for by individuals living in group housing, in

the Montana State Prison. Residents of the county have the lowest per capita personal income of the all the counties in the study area.

Economic Diversity. According to the most recent IMPLAN data (1999), the county is very dependent on “wildland” related industrial sectors of the economy. These sectors account for 32 percent of total output and 13 percent of the employment in the county. The most important industry in the county is “sawmills and planing mills,” which accounts for almost 23 percent of total industry output and 8 percent of employment in the county.

Employment data and value-added information from IMPLAN show that Powell County is dependent on employment in the government and the manufacturing sectors. Government accounts for 31 percent of the value-added in Powell County. The next largest value-added sector is manufacturing which accounts for 17 percent of the value-added in the county. In Powell County, the manufacturing sector consists of one establishment, the Louisiana Pacific Mill. The importance of these sectors is supported by interview data and information from the 2000 Census. In the census, 16 percent of employment by industry is accounted for by employment in agriculture, forestry, fishing and hunting, and mining in the county. Manufacturing accounts for around nine percent of the employment by industry.

Forest Management Concerns

Two approaches were taken to identify public concerns about forest management issues. One approach reviewed existing literature and forest management documents to identify topics and issues. The second used informal interviews with individuals in each county. The interview material revealed a wider range of issues of concern to county publics regarding forest management.

The document review had the following conclusions:

- The process of forest management and the particular issues associated with different management alternatives.
- Noxious weeds are a topic of comment across documents and across interest groups, including issues related to how weeds spread, the most effective methods of weed control, and how noxious weed issues interact with other topics of concern such as grazing, ORV use, and wildlife habitat.
- Collectively, issues related to roads, ORV use, travel management, and roadless areas are frequent topics, with comment contributors expressing opinions for more road access as well as road closures. ORV interests want to promote access, while other user groups are interested in addressing motorized access to different areas of the forest.
- Fisheries issues concern diverse interest groups, especially topics related to the western cutthroat trout. However, other fisheries issues related to water levels and riparian effects on fisheries are also topics of comment in the documents reviewed.

Interview data suggested a wider range of public concerns than expressed in the existing literature and in the public comments received in response to specific forest management initiatives. The major topics identified in the interviews include:

- The process and practices of forest management by the B-DNF staff.
- The threats posed by noxious weeds and the management issues regarding noxious weed control.
- The use of local ecological knowledge to improve forest management.
- Off road vehicle use and the issues in management for the concerns of multiple publics who use B-DNF lands.

- The role of timber management in community socioeconomics.
- Management of grazing lands to sustain environmental conditions as well as ways of life associated with ranching and the use of public lands for grazing.
- The threats and benefits of wolves on National Forest lands.
- The threats posed by fire and the role of B-DNF staff in fire management.

Trends and Issues

National and local socioeconomic trends influence the ability of communities to adapt to changing circumstances. Trends identified in secondary and primary data examined for this work include:

Land Use

- Census of Agriculture data show an overall decline in farm/ranch lands, although a slight increase in the total number of farms. This is a move away from the large style ranch and farming operations that have characterized western and especially southwestern Montana.
- The overall growth of western states and the specific growth in western Montana has increased demand for residential land at a time when ranchers and farmers are either retiring or facing financial difficulties that make the sale of their properties attractive. Some prime agricultural land is taken out of production as it is sold for subdivision into 20-acre “ranchettes” or other types of development.
- USFS lands account for approximately 42 percent of the lands within the study area. BLM lands account for another 11 percent. USFS lands range from a low of 35 percent of Madison County to a high of 60 percent of Granite County.

Demography

- Population growth in the 1990s was uneven across Montana. Western Montana is experiencing a relatively rapid rate of population growth. Twenty-three counties in western Montana account for a significant amount of this growth, with an average growth rate of almost 20 percent. Population growth appears to be a result of in-migration to western counties from eastern counties as well as from out-of-state residents relocating for work, retirement, or seasonal residence.
- Populations of the project counties have always been unstable due in part to their ties to natural resources.
- The project counties are among the least densely populated areas of the United States. Low density and a limited amount of land available for private ownership and taxation make it more difficult for communities to provide their own basic infrastructure, and concentrates population and development.
- Nearby urban growth (e.g., Bozeman and Helena) is affecting the project counties. The increase in nearby urban and suburban populations mean increasing demands on nearby recreation resources as well as increasing demands for land to be subdivided and developed.
- Farm population is decreasing, but paradoxically the number of farms is increasing, a trend that is no doubt accounted for by the subdivision of large agricultural lands noted previously.
- Montana’s population is aging. The median age in the state is now 37.5 years compared to the national average of 35.3 years. In the project counties, median age ranges from a low of 37.6 years in

Beaverhead County to a high of 43.4 years in Madison County. The older age cohorts are increasing, while younger ones are decreasing: the under age ten age cohort decreased some 6.5 percent since the last census.

- All of the project counties have a higher proportion of population 25 years and older with a high school diploma or equivalency than the United States as a whole. However, as a percentage of total population, Anaconda-Deer Lodge and Powell Counties have only about half as many college educated people with bachelor's degrees or higher as the national average, the state average, and several of the project area counties.

Economy

- **Employment in extractive industries such as mining and timber is declining in western Montana as well as throughout the west.**
- Local economies in southwest Montana are small and subject to potentially large impacts from what might be evaluated as relatively small events.
- The government sector is a significant source of employment in all of the project counties accounting for approximately 16 percent of the employment in Butte-Silver Bow County and more than 31 percent of the employment in Jefferson County.
- Relative to the United States, the state's per capita income performance has deteriorated since the mid 1970s. In 1999, median household income for Montana was almost \$9,000 less than the U.S. median income. Median household incomes in the project area counties, except for Jefferson, are lower than the U.S. median household income by at least \$11,000.
- Both wage jobs and self-employment in ranching and agriculture have shown an overall decline since 1986, and projections are for continued declines in employment in these occupations.

Community Lifestyles and Culture

- Lifestyle, sense of place, and community of residence are interconnected and promote a strong sense of attachment to place in project communities.
- Egalitarianism is a value in these rural communities that is coming into conflict with the socioeconomic status of some newer residents.
- Traditional values favor a "utilitarian" view about the use of natural resources. This is coming into conflict with other views that the best use of natural resources is not necessarily for only utilitarian purposes.
- Community culture, lifestyles, local economies, and social structures are changing at different rates. A result is the experience of discontinuity between community culture and social realities. The experience of the discontinuity of lifestyles and social realities can result in social disruptions or tensions about new residents, new economic activities, or changes in forest management policies. This social disruption can also amplify disagreements within communities or groups or it can migrate to conflicts about forest management issues.

Implications

- Develop increased social awareness through attention to social networks and increased interaction with community members in different settings.

- Recognize the informal basis for local problem solving and how that may affect the identification and resolution of forest management issues.
- Reinforce existing trust between the B-DNF and community members by new outreach efforts and continuation of ongoing communication and public information activities.
- Recognize that tenure is an important community value and it affects working relationships between community members and B-DNF staff who rotate in and out of the Forest.
- Address “process despair” among community members who believe the forest management process is compromised. Increased communication about forest management decisions, outreach to develop community-based concerns, and creating a sense of fairness in decision-making can individually and collectively address process despair.
- Work with local development corporations or similar entities to identify opportunities for mutual benefit can make a useful contribution to community sustainability.
- Recognize that the sense of place among residents fosters values about stewardship. Ranchers, recreationists, loggers, farmers, and fishermen have different ideas about what constitutes stewardship. However, the value is present among these groups and this presents an opportunity to work with community members on issues of mutual interest.

1 Introduction

The Beaverhead-Deerlodge National Forest (B-DNF or the Forest) is the largest national forest in Montana, covering 3.32 million acres in southwest Montana. The Forest is in 11 discontinuous pieces spread across mountaintops and ridges. Forest lands are used for multiple purposes including logging, recreation, grazing, and mining. Diverse types of vegetation characterize the forest, including lodgepole pine, Douglas fir, spruce fir, whitebark pine, aspens, junipers, and other woodland species, along with great expanses of sagebrush.

The B-DNF was created in 1996 when the Beaverhead and Deerlodge Forests were merged into one administrative unit. On May 3, 2002, the U.S. Forest Service (USFS) initiated a revision of a Land and Resource Management Plan (Forest Plan) for the B-DNF (Federal Register: May 3, 2002; Vol. 67, No. 86, p. 22,396). Currently, two forest-management plans are in place—the Forest Plan for the former Beaverhead Forest, completed in 1986, and the Forest Plan for the former Deerlodge Forest, completed in 1987.

This report was undertaken to provide an integrated assessment of the socioeconomic and cultural conditions and trends in the neighboring counties and communities as part of the Forest Plan revision efforts. In a social assessment, information is developed that helps forest managers work with their neighbors. Such information is a framework from which to view the interaction of forests and communities when revising forest plans and planning individual projects. Such information can also help land and resource managers be more aware of local conditions and the socioeconomic factors that influence the interactions of community members with the USFS.

The natural resources and watershed ecologies of each of the national forests have unique characteristics and configurations that make them distinct places. Similarly, surrounding forest communities each possess unique configurations of social, economic, and cultural conditions that affect the interaction of each community with the Forest. Within a community, the attitudes, beliefs, worldviews, and values about place, landscape, and natural resources define the perceptions and definitions of problems as well as evaluations of solutions. Community politics affect advocates for conservation and/or use of forest resources.

People form long-term attachment to places through association and interaction with geographic areas. These attachments to place are customarily passed down from one generation to the next and are a part of their heritage in a very personal way (Galliano and Loeffler 1999). However, Western communities are changing. As communities grow, a cow on the lawn of a trophy subdivision home is likely to be perceived differently by the homeowner than by the rancher who owns the cow. Knowing who people are, what they believe, who they associate with, and why some issues are important and others are not can help forest managers identify and solve problems with their neighbors.

National forests have neighbors. Residents fish, gather firewood, hunt, ride the roads, walk the trails, snowmobile winter ridge tops, or simply take pleasure in knowing “their” national forest exists. Ranchers graze cattle and sheep on forest lands, while commercial gatherers collect mushrooms and fishing and hunting guides accompany their clients on these same lands. Nearby communities have economic, social, and cultural ties to forestlands. Sawyers, skidder operators, logging truck drivers, mills, and other large and small-scale industries use forest products. Lands adjacent to national forests used for agriculture, ranching, mining, or conservation easements influence how forestlands are viewed and assessed as local resources.

National forests also have regional and national constituents. Residents of the Bitterroot Valley as well as residents of Missoula, Bozeman, and Idaho Falls use the resources of the B-DNF. These residents and other regional interest groups such as the Alliance for the Wild Rockies, Friends of the Bitterroot, and the Rocky Mountain Elk Foundation express an interest and have a stake in forest management issues.

Similarly, national interest groups such as the National Wildlife Federation also express an interest in forest management as national stakeholders of a public resource. These regional and national stakeholders are important forest constituents. They represent other non-local publics that may have different issues and concerns than nearby forest neighbors. Although it is important to acknowledge the interests and concerns of these wider publics, our focus in this social assessment is on the residents and communities³ in the seven counties that are adjacent to the majority of the B-DNF: Anaconda-Deer Lodge, Beaverhead, Butte-Silver Bow, Granite, Jefferson, Powell, and Madison.⁴

1.1 Phase I

This project was undertaken in two phases. The purpose of Phase I was to review existing information about the socioeconomic conditions of the seven counties and to identify gaps that needed to be filled. Each county has a unique combination of population structures, land use patterns, public attitudes, beliefs, values, lifestyles, social and cultural organization, and economic activities. Phase I focused on collecting and summarizing existing information about demographics, land use patterns, public attitudes and beliefs, lifestyles, social and cultural organization, and community resiliency.

We focused on readily available sources such as Census 2000, county and forest planning documents, contracted reports, and other published literature. Phase I identified gaps in information about social and cultural processes in all the counties as well as inconsistencies in some economic and demographic data about the seven project counties. The Phase II data collection process was designed to address inconsistencies in the socioeconomic data and to develop new information about the social and cultural characteristics of the seven project counties.

1.2 Phase II

Phase II built on the work completed in Phase I. The objectives of Phase II include:

- Synthesize public input for the past five years regarding forest management and validate that information with local publics.
- Collect information about local desires, needs, and expectations regarding management of the B-DNF.
- Collect information about how the B-DNF can work more effectively with local publics.

Phase II involved a review of a sample of prior public comment on B-DNF projects as well as extensive fieldwork in each of the seven counties that border the Forest. The framework for the phase was ethnographic—individuals were interviewed to determine their point of view about their communities and their connections with forest resources. Participants were identified by consultation with District Rangers and other USFS staff, as well as representatives of county governments, and other locally knowledgeable individuals. Lists were compiled for each county and individuals who appeared on lists from different sources were identified as “key persons.” Telephone calls were made to these individuals to arrange face-to-face interviews. If someone was unavailable for an interview, the next person on the list was phoned. No one refused to participate in the interview process, although some individuals were unavailable to meet during the time available for fieldwork. An interview protocol, or topic list guided the

³ The term “community” has many social and/or geographic definitions. Throughout this report, community is used to describe a spatially defined place or town. Community is often used interchangeably with a town, county, or group of counties.

⁴ Gallatin County contains approximately 35 acres of the B-DNF and therefore is not included in this analysis.

interviews, but not all topics were asked of each person. Typically, individuals were more knowledgeable about one topic area than another, and our goal was to develop that knowledge. Community organization, values and beliefs, interactions with forest resources, and forest management concerns were the primary topics developed in fieldwork interviews.

Initially, another element of the Phase II plan was to collect information about various types of groups concerned with forest management issues and to identify the types of issues of concern to those groups, or—in short—to identify who owns what issue. This proved impractical given the time available for fieldwork. We identified a wider range of interest groups in each county than could be contacted and interviewed in the time available, and it was also our assessment that more groups probably existed. Consequently, fieldwork efforts focused on gathering the social and cultural information for each community needed to develop a basic description of the socioeconomic characteristics and conditions in the project counties. Connecting issues to specific groups is a larger task, one that the Forest may wish to consider in future work. However, we did collect a wide range of sentiments about forest management issues from knowledgeable persons in different communities. These concerns represent useful information not only about specific forest resource issues, but also about the process of addressing these issues.

Western Montana mirrors many other parts of the intermountain West where conflicts exist among different stakeholders about the use of natural resources. Some of these conflicts are among residents who hold different views about the extraction, use, or protection of natural resources on public lands. Other conflicts arise from differing views regarding riparian areas, grazing, wilderness, endangered species, noxious weeds, roadless areas and other access issues, and off-road vehicle (ORV) use. National groups often take an interest in these same issues sometimes expressed in land management litigation or in the actions of local representatives of these national organizations. In a region rich with natural resources and public lands, conflict is part of the history of land use and management. Stalemate, litigation, and divisiveness characterize many of these conflicts. However, there are also efforts such as the Montana Consensus Council aimed at resolving or mitigating the effects of such conflicts and building locally-based groups such as the Big Hole Watershed Committee or the Beaverhead County Community Forum.

1.3 Analysis Framework

Community resiliency is sometimes referred to as “community capacity for change” or “community well-being.” The concept has been used in the past to examine forest-community economic interactions, specifically timber harvesting and the direct economic benefit for nearby communities. The concept was broadened to include a wider range of social and economic issues that result from the interactions of communities with nearby forests. Well-being, resiliency, or capacity for change are concepts used to analyze the resources within communities affected by forest management policies and the capacity of those resources to assist communities in adapting to changing circumstances, especially those resulting from changes in forest management policies. In the past, the concept has been applied to local community analysis (Kaufman and Kaufman, 1946) but more recently, it has been applied to large-scale ecosystems analysis using primarily secondary demographic and economic indicators (USFS, 1998).

Prior assessments using these concepts have focused almost exclusively on the economic contributions to communities from timber harvests (Beckley, [JCR1]1995). However, more recent analyses examine a wider range of social, cultural, and economic variables through the development of “social indicators” (Kusel, 1995). These “social indicators” rely heavily on secondary census and socioeconomic data to describe what is termed “community well-being”—the capacity of communities to adapt to change. The advantage of the social indicators approach is their attention to more than just the economics of timber harvest and grazing access on community-forest interactions. However, this approach does not provide

detailed descriptive information about specific community structure and processes that affect community-forest interactions or explain “how things work.”

While our analysis also depends on census and socioeconomic data, we incorporate primary data about community structure and processes to describe how communities function within the project counties. An understanding of how things work offers a practical and usable analysis of community-forest interactions. By combining census and other secondary socioeconomic data with information about community structure and processes, we can address the potential ability of communities to act collectively to identify problems and to mobilize resources to address these problems (Portes, 1998; Christensen and Richardson, 1995).

The question guiding this analysis is:

What county resources exist to allow the county to adapt to changing conditions, including ones that might result from changes in forest management policies?

The criteria for this analysis are drawn from the following variable categories:

- **Biophysical Context.** Physical geography, land use characteristics, and natural resources describe the biophysical context of the project area.
- **Demographic and Economic Characteristics.** These variables address population size, structure, and growth as well as employment, income, poverty status, economic diversity, and economic structure.
- **Community Characteristics.** The term community as we use it refers to individuals who reside in a locally defined geographic space with a self-defined identity. We focus on community at a county level by describing social groupings, cohesiveness, cooperative problem solving, and leadership.
- **Human Resources.** Traditional measures of human resources (sometimes described as human capital) include education, skills, income, knowledge, and leadership.
- **Culture and Lifestyle.** Values, beliefs, attitudes, and worldviews integrate into particular ways of living that are adaptations to specific biophysical and social conditions. Common lifestyles exist across project county boundaries. Consequently, these are described for the project area rather than county-by-county.

It is important to emphasize some constraints on this analysis. Even the smallest community within a county is a complex place with a particular history, demography, economy, social structure, and lifestyle. When we aggregate multiple communities into a county-level discussion of “community,” this simplifies the complexity of how individual communities function and relate to their outside environment. The loss of detail that accompanies this county-level analysis means there are limits on a full understanding of how particular county communities function and adapt to change.

Similarly, there is also a tendency to take any analysis as “the answer” about the resiliency or the nature of how socioeconomic and cultural factors affect community-forest interactions. In fact, any such analysis should be considered a starting point rather than an ending point. That is, this analysis raises as many questions as it answers, but it nonetheless is a starting point for ongoing consideration of how communities and national forests interact.

1.4 Report Organization

A goal of this report is to provide both a useful reference document of socioeconomic information and an analysis of the community resiliency for the study area and each of the project counties. Initially, the level of analysis was going to be the study area as whole unit. However, as we collected and analyzed the primary data and further examined the secondary data from Phase I, it became apparent that the report

could be more useful if it addressed both the similarities and differences between the counties and the socioeconomic and community characteristics of each county. The seven project counties of southwest Montana have specific cultural, social, demographic, economic, and land use conditions that influence both local ways of life and responses by individuals, groups, and communities to forest management issues.

Following this introduction, Chapter 2 provides an overview of the B-DNF. Chapter 3 begins with a brief review of the historical background of southwest Montana followed by a look at the social and cultural characteristics that cross over county lines or are shared by various social groups within the counties. The identified groups include:

- Ranching
- Timber and Logging
- Urban and Suburban
- Rural Town
- Recreationists

Lifestyles, values, and management concerns are identified for each group. Chapter 4 uses secondary demographic, economic, and land use data to characterize similarities and differences among the counties as well as to describe how these characteristics are compared to or influenced by statewide demographic and socioeconomic trends. The demographic and economic data in this chapter present a cross-sectional picture of southwest Montana at one point in time. Chapter 4 and each of the county chapters that follow are meant to be both an integral part of this report and at the same time, stand-alone chapters. Chapters 5 through 11 present detailed demographic and economic information for each county, along with information about land use, community resources, human resources, and community resiliency. Chapter 12 examines forest management issues identified in both primary data collection and in the analysis of secondary materials. The final chapter summarizes some of the trends and major issues along with a discussion of the implications of the social assessment for forest managers.

2 Overview of the B-DNF

The Beaverhead-Deerlodge National Forest (B-DNF) is the largest national forest in Montana containing approximately 3.32 million acres of land in eight southwestern Montana Counties. The Beaverhead National Forest and the Deerlodge National Forest were originally formed by two separate Executive Orders of President Theodore Roosevelt on July 1, 1908. Previous presidents had set aside the Hell Gate, Bitter Root, and Big Hole forest reserves between 1897 and 1905. Rivers were the boundaries of many early forest reserves; however, beginning in 1911, most boundaries were shifted to mountaintops or ridge lines so that an entire river drainage could be managed as a single entity (Williams, 1999). The Madison National Forest became part of the B-DNF in 1931. Then, in 1945, the west slope of the Madison Range was transferred from the Gallatin National Forest to the Beaverhead National Forest. On February 2, 1996, the Beaverhead and Deerlodge Forests were merged into a single administrative unit.

There is a clear sense in neighboring communities of the forest as a local resource. There are families whose history in the region dates from earlier than 1865; they have strong and long-term attachments not only to their ranch lands, but also to the forest-owned lands their families have used for more than a hundred years. Similarly, others believe the forest is a special resource that enhances rural lifestyles because of the open spaces and available forest resources for recreation, firewood, and commercial use.

Other local residents perceive the forest as a commercial resource with renewable and abundant timber and grazing resources that can support local economies and lifestyles. These cultural and economic attachments to forest lands contribute to an assessment that local communities have a “special” stake in forest management: local economies and ways of life are often directly affected by forest management decisions. This acknowledges that local interests necessarily compete with national, if not global, concerns and demands regarding forest management.

There is also recognition of the B-DNF as a national resource. Appeals of timber sales as well as responses to Environmental Impact Statements, Environmental Assessments, and other management activities by out-of-area and out-of-state interests indicate how non-local entities influence B-DNF management issues. Nonetheless, there remains a perception that local interests have a special stake in the B-DNF because of the interconnections of communities and lifestyles with the forest.

This chapter provides an overview of the physical and organizational characteristics of the B-DNF and identifies key forest resources and uses. This chapter begins with some definitions of terms frequently used in discussions about forests and forest uses. In order to place the B-DNF in its national and local context, brief discussions are provided of the organizational structure of the U.S. Forest Service (USFS) and the legal mandates under which the USFS must operate. The organizational structure and the legal mandates provide both opportunities and constraints for management of the B-DNF and the interactions of the Forest and its communities.

2.1 Definitions

The first important term to clarify is “National Forest,” which is defined as an ownership class of Federal lands, designated by Executive Order or statute as a National Forest or Purchase Unit, under the administration of the USFS. Other important definitions used by the USFS are found in Table 2-1.

National forests comprise the second largest area of public lands in the United States: 192 million acres, the equivalent of California, Oregon, and Washington combined. There are 155 national forests in the nation, mostly in the West and in Alaska. The USFS was established in 1905 and, in addition to national forests, administers twenty national grasslands covering four million acres. The Bureau of Land Management (BLM) within the U.S. Department of the Interior administers 264 million acres.

Table 2-1. Important Definitions

| Term | Definition |
|----------------------|---|
| Forest land | Land that is at least 10 percent stocked by forest trees of any size, including land that formerly had tree cover and that will be naturally or artificially regenerated. The minimum area for classification of forest land is 0.5 hectare.(1.23 acres). |
| Reserved forest land | Forest land withdrawn from timber utilization through statute, administrative regulation, or designation. |
| Timber land | Forest land that is capable of producing crops of industrial wood and not withdrawn from timber utilization by statute or administrative regulation. Areas qualifying as timber land are capable of producing in excess of 20 cubic feet per acre per year of industrial wood in natural stands. |
| Other forest land | Forest land other than timber land and productive reserved forest land. It includes available and reserved forest land that is incapable of annually producing 20 cubic feet per acre of industrial wood under natural conditions because of adverse site conditions, such as sterile soils, dry climate, poor drainage, high elevation, steepness, or rockiness. |
| Growing stock volume | Live trees of commercial species meeting specified standards of quality and vigor. Cull trees are excluded. Includes only trees 5 inches in diameter or larger at 4.5 feet above ground. |
| Removals | The net volume of growing stock trees removed from the inventory during a specified year by harvesting; cultural operations, such as timber stand improvement; or land clearing. |
| Other removals | Unutilized wood volume from cut or otherwise killed growing stock, from cultural operations such as precommercial thinnings or from timber land clearing. |

Source: U.S. Forest Facts and Historical Trends. U.S. Department of Agriculture Forest Service <http://fia.fs.fed.us/library/ForestFactsMetric.pdf> accessed September 21, 2002.

2.2 Legislative Mandates

National forest management is guided by numerous legislative mandates and administrative rules. The USFS is vested with the authority and responsibility for managing the multiple natural resources of our national forests. “Multiple use” is defined as “management of the public lands and their various resource values so that they are utilized in the combination that best meet the present and future needs of the American people.” The Multiple Use Sustained Yield Act of 1960 lists these resources as outdoor recreation, range, timber, watershed, wildlife, and fisheries.

The stated mission of the USFS is “Working with people to sustain the health, productivity and diversity of the land for the use and enjoyment of present and future generations.”⁵

Table 2-2 details some of the important laws and statutes that guide USFS activities. Numerous amendments have been made to many of these acts. As this report is completed in October 2002, there are several legislative proposals before Congress that could significantly affect the way the USFS operates and interacts with its various constituents.

⁵ USDA Forest Service Strategic Plan <http://www.fs.fed.us/intro/gpra3.html> accessed September 19, 2002.

Table 2-2. Some of the Resource Laws and Statutes of Interest to the USFS

| Act | Purpose |
|--|---|
| Organic Act of 1897 | Specified the purposes (i.e., timber and water supply) for which forest reserves could be established and provided for their protection and management. |
| Multiple Use Sustained Yield Act of 1940 | Defined “multiple use” as the management of all the various renewable surface resources of the national forests so that they are utilized in the combination that will best meet the needs of the American people. |
| Sustained Yield Forest Management Act of March 29, 1944 | Established a policy to promote the stability of forest communities through continuous supplies of timber, provide a continuous supply of forest products, and “secure the benefits of forests in maintenance of water supply, regulation of stream flow, prevention of soil erosion, amelioration of climate and preservation of wildlife.” |
| Multiple-Use Sustained Yield Act of 1960 | Directed that the National Forests be managed for multiple uses including recreation, range, timber, watershed, wildlife and fish, and a sustained yield of products and services. |
| Wilderness Protection Act of 1964 | Established a National Wilderness Preservation System to be composed of federally owned areas designated by Congress as “wilderness areas,” to be “administered for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness...” |
| National Environmental Policy Act of 1969 | Required all Federal agencies to prepare detailed environmental impact statements for every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment. Required that unquantified environmental values are given appropriate consideration, along with economic and technical considerations. |
| Clean Water Amendments Act of 1972 | Established a policy to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. |
| Endangered Species Act of 1973 | Set the policy for conserving species and the critical habitat of fish, wildlife and plants that are in danger of or threatened with extinction. |
| Forest and Rangelands Renewable Resources Planning Act of 1974 | Required an assessment of the Nation's natural resources every 10 years, with a 5-year update. |
| Federal Noxious Weed Act of 1975 | Established a Federal program to control the spread of noxious weeds. |
| National Forest Management Act of 1976 | Extensively amended Forest and Rangelands Renewable Resources Planning Act of 1974. Provides guidelines for planning and management of National Forests and requires the Secretary of Agriculture to assess forest lands; develop a management program based on multiple-use, sustained-yield principles; and implement a resource management plan for each unit of the National Forest System. It is the primary statute governing the administration of national forests. |
| Clean Air Amendments of 1977 | Established Federal standards for various pollutants from both stationary and mobile sources and provided for the regulation of polluting emissions via state implementation plans. |
| Cooperative Forestry Assistance Act of 1978 | As amended: authorizes cooperation and assistance to non-Federal forest landowners in forest management, timber production, insect and disease control, and fire prevention. |
| Forest and Rangeland Renewable Resources Research Act of 1978 | Authorizes the agency to conduct and cooperate in research to generate knowledge about protecting, managing, and using forested, rangeland renewable resources. |
| International Forestry Cooperation Act of 1990 | Authorizes the agency to work overseas and to provide technical and financial assistance for its international cooperative activities and research. |

In the late 1980s, the USFS, along with other federal agencies, began to propose ecosystem management as a new working paradigm. The current ecosystem approach to management undertaken by the USFS has required that resource decisions be more community based, collaboratively designed, and regional in scope. The USFS tries to look beyond its administrative boundaries to manage forest resources and to integrate an understanding of the human dimensions of ecosystems into their policies, programs, and management. A community's economic viability and integrity are critical components of ecosystem management. From an ecosystem perspective, socioeconomic health and forest health should be viewed as compatible goals.

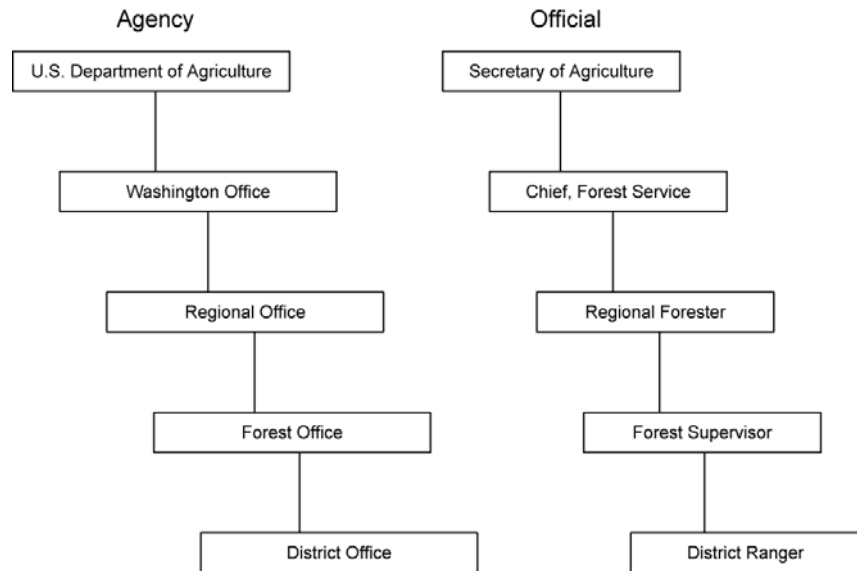
Each national forest has a Land and Resource Management Plan as required by the National Forest Management Act of 1976, which amended the earlier Forest and Rangeland Renewable Resources Planning Act of 1974. This document, usually referred to as the Forest Plan, describes how the forest will be managed including resource goals, objectives, and standards for the next 10 to 15 year period after it is adopted. The forest planning process provides for an integrated land and resource management planning effort for a National Forest. It determines the availability of land for resource management, predicts levels of resource use and outputs, and provides for a variety of resource management practices. The specific rules and procedures that govern the forest planning process are published in the Code of Federal Regulations (36 CFR 219).

The B-DNF was created in 1996 when the Beaverhead and Deerlodge Forests were merged into one administrative unit. On May 3, 2002, the USFS initiated a revision of a Land and Resource Management Plan (Forest Plan) for the Forest (Federal Register: May 3, 2002, Vol. 67, No. 86, p. 22,396). Currently, two forest management plans are in place—the Forest Plan for the Beaverhead Forest, completed in 1986, and the Forest Plan for the Deerlodge Forest, completed in 1987. These earlier plans and information about the Forest Plan Revision can be found on the web page of the B-DNF at <http://www.fs.fed.us/r1/bdnf/index.htm>.

2.3 Organizational Structure of the USFS

The USFS is organized hierarchically with administrative and management levels based in part on geography (Figure 2-1).

Figure 2-1. Organizational Structure of U.S. Forest Service



The Chief of the Forest Service and the staff of the Washington office provide broad policy goals and direction for the Forest Service, work with the Executive Branch to develop a budget to submit to Congress, provide information to Congress on accomplishments and needs, and monitor activities of the agency. The Regional Forester is the official responsible for administering an entire region of the Forest Service. The United States is divided into 9 regions:⁶

- Region 1. Northern
- Region 2. Rocky Mountain
- Region 3. Southwestern
- Region 4. Intermountain
- Region 5. Pacific Southwest
- Region 6. Pacific Northwest
- Region 8. Southern
- Region 9. Eastern
- Region 10. Alaska

⁶ Region 7 was split between Region 8 and Region 9 during a national review of Forest Service management and organization in 1965 and 1966, http://fs.jorge.com/archives/History_National/FS_Reorganization_Attempts.htm#organization.

The B-DNF is one of twelve national forests (and one grassland) located in Region 1. The Regional Forester and staff for Region 1 are located in Missoula, Montana. The Forest Supervisor, who reports to the Regional Forester, is the official responsible for administering National Forest lands on an administrative unit, usually one or more National Forests. The Forest Supervisor and offices for the B-DNF are located in Dillon (Beaverhead County), Montana. District Rangers, who report to the Forest Supervisor, are responsible for on-the-ground management activities. The B-DNF has the following ranger districts:

- Madison Ranger District with headquarters in Ennis (Madison County).
- Wisdom Ranger District with headquarters in Wisdom (Beaverhead County).
- Butte Ranger District with headquarters in Butte, (Butte-Silver Bow County).
- Pintler Ranger District, Philipsburg Office, (Granite County) and Deer Lodge (Powell County).
- Jefferson Ranger District with headquarters in Whitehall (Jefferson County).
- Dillon Ranger District with headquarters in Dillon (Beaverhead County) at the same location as the Forest Supervisor's office.
- Wise River Ranger District with headquarters in Wise River (Beaverhead County).

In addition, the Forest has three work centers: the Boulder Work Center, part of the Jefferson Ranger District located in Boulder; the Sheridan Work Center, part of the Madison Ranger District, located in Sheridan; and the Lima Work Center, part of the Dillon Ranger District located in Lima.

In July 2002, the B-DNF employed 201 permanent employees and 200 temporary employees. In addition to its land management activities, the Forest provides a large number of well-paying jobs in the seven-county area, both permanent and temporary.

2.4 Land Ownership and Management

Forest managed lands are primarily contained in eleven noncontiguous segments in seven southwest Montana counties: Anaconda-Deer Lodge, Butte-Silver Bow, Beaverhead, Granite, Jefferson, Madison, and Powell. These seven counties form the study area. Table 2-3 provides the county seat and the amount of acreage in the B-DNF for each of the counties. Forest offices of one type or another are located in each of the county seats except for Anaconda.

Table 2-3. County, County Seat, and Acreage in the Beaverhead-Deerlodge National Forest

| County | County Seat | Acreage ^a |
|------------------|---------------|------------------------|
| Beaverhead | Dillon | 1,370,178 |
| Butte-Silver Bow | Butte | 190,036 |
| Deer Lodge | Anaconda | 185,470 |
| Gallatin | Bozeman | 35 |
| Granite | Philipsburg | 445,863 |
| Jefferson | Boulder | 362,121 |
| Madison | Virginia City | 692,486 |
| Powell | Deer Lodge | 85,231 |
| Total Acreage | | 3,322,911 ^a |

Source: www.fs.fed.us/rl/b-d/county_list.htm. February 27, 2002.

^aTotal acreage as of September 1998.

Table 2-4 shows the percentage of each county occupied by the B-DNF land. USFS ownership in the study area counties ranges from a low of approximately 35 percent of Madison County to a high of 60 percent of Granite County.

Table 2-4. Percent of USFS Land in the in Study Counties

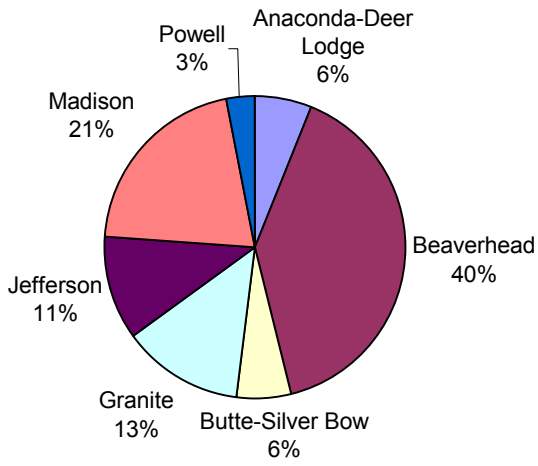
| County | Percent USFS Land |
|------------------|-------------------|
| Beaverhead | 38 |
| Butte-Silver Bow | 41 |
| Deerlodge | 37 |
| Granite | 60 |
| Jefferson | 43 |
| Madison | 35 |
| Powell | 43 |

Source: Montana State Library, 2001.

As indicated in Figure 2-2, the largest portion of national forest lands are located in Beaverhead County (40 percent) followed by Madison County (21 percent), Granite County (13 percent) and Jefferson County (11 percent). Powell County has only three percent of B-DNF lands and Anaconda-Deer Lodge has six percent. Gallatin County is not included in this analysis, because only 35 acres of the Forest are in Gallatin County.

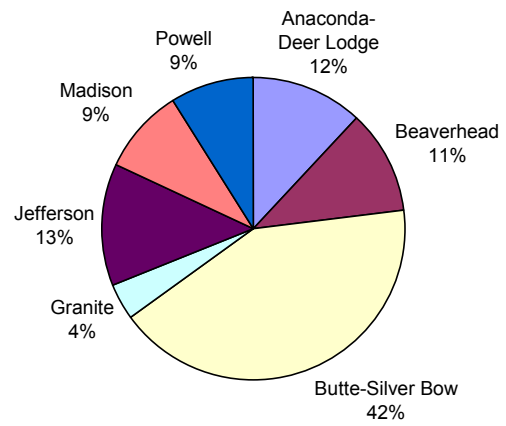
Figure 2-3 shows the distribution of population across the seven-county study area. While 42 percent of the study area population lives in Butte-Silver Bow, only six percent of the B-DNF is in that county. In contrast, Beaverhead County has 40 percent of the Forest located within its boundaries but only 11 percent of the study area population. These relationships have important implications for management of the Forest that are discussed in the final chapter of this report.

Figure 2-2. B-DNF Acreage in Forest Counties



Source: www.fs.fed.us/rl/b-d/county_list.htm.
February 27, 2002.

Figure 2-3. Population Distribution of Forest Counties



Source: U.S. Census Bureau Census 2000

2.5 Physical Characteristics

The name “Beaver’s Head” first appeared in Lewis and Clark’s journals referring to what the Shoshone called a prominent rock shaped like a swimming beaver located about 14 miles northeast of Dillon, Montana. The Beaverhead River was named after the rock. The name Deer Lodge comes from the Deer Lodge Mound—a 40-foot geothermal formation resembling a large medicine lodge near the city of Anaconda. In addition, the mineral water attracted a large number of deer to the area for the high salt content. The Lewis and Clark National Historic Trail traverses the Forest along with the Nez Perce National Historic Trail.

A satellite overview of southwest Montana suggests islands of forested mountain peaks surrounded by broad river valleys such as the Beaverhead, Big Hole, Boulder, and Madison. Many of the rivers flow north into the Missouri or Clark Fork Rivers. The Forest is broken up into 11 noncontiguous pieces and has been described as resembling a large puzzle struggling to put itself together.

The mountain peaks, many of which straddle the Continental Divide, range from 8,000 to just over 11,000 feet in height. The highest point in the seven-county area is Hilgard Peak (11,316 feet) in Madison County. The valley floors are between 4,000 and 6,000 feet in elevation. The lowest elevation (3,590 feet) in the study area is located in Granite County on Rock Creek. Passes range from around 5,000 feet to greater than 7,000 feet.

Most of the human communities are concentrated in the valleys and most of the valley land is farmed or ranched. Only five paved routes cross the B-DNF: Interstates 15 and 90, State Highways 43 and 278, and the Pioneer Mountains Scenic Byway.

Temperatures and precipitation vary with the elevation. Summers typically bring moderate to warm temperatures with highs in the 70s and 80s and relatively cool nights. Winter temperatures can drop below zero. Precipitation can range from 50 inches in the high mountains to less than 10 inches in the some valleys. The snow pack at higher elevations can last into June and July. Although cottonwoods and willows grow along river and stream banks, sagebrush is a common form of vegetation in the valley floors and on the mountain slopes, reflecting the relatively low rainfall—less than 15 inches per year in most mountain valleys. The heaviest precipitation falls between the months of April through September (about 1-2.9 inches per month)⁷.

At the time of this report (2002), Montana is in the midst of a drought that has severely stressed water resources. Without irrigation, growing alfalfa, wheat, and other grains would not be possible because of the relatively low rainfall. However, reservoirs and lakes such as Clark Canyon, Ruby, and Ennis Lake are important water sources to irrigate ranches and farms that dominate valley floors throughout the region.

At the mid to high elevations, vegetation turns to forests. Approximately 80 percent of all B-DNF lands are forest land with the remaining 20 percent in water or non-forested lands. B-DNF lands are dominated by lodgepole pine that accounts for about 47 percent of forest trees, followed by Douglas-fir (22 percent), spruce-fir (12 percent), and whitebark pine (11 percent) (DeBlander 2000).

⁷ Climate summaries for communities in the project area can be found at : <http://www.wrcc.dri.edu/summary/climsmmt.html>.

2.6 Resources and Uses

Native Americans moved through southwest Montana following buffalo and other game that provided subsistence resources for their survival. Among the first long-term settlers to the region were miners brought by gold and silver that provided to be rich resources. The nearby forests were plentiful sources of wood, and the valleys and mountain meadows were ideal grazing grounds for beef cattle and good habitat for game. These important resources allowed these early settlers to develop the infrastructure for emerging communities such as Virginia City.

The resources that attracted Native Americans as well as these early settlers to the region remain important today: timber, minerals, grazing, and game habitat are significant resources of the B-DNF. Yet, as American culture has developed time, financial, and technical resources, National Forests and other public lands have become important recreational, aesthetic, and symbolic resources. In this section we discuss primarily the “utilitarian” resources of timber, minerals, and grazing and recreational resources. Aesthetic and symbolic resources such as “beauty,” “solitude,” and “quiet” are also briefly discussed.

2.6.1 Timber Resources

As a national forest, the B-DNF is inventoried on a periodic basis, generally about every 10 years. The Forest completed an inventory in 1997 and published its results in *Forest Resources of the Beaverhead-Deerlodge National Forest* by Larry T. DeBlander, U.S.D.A. Forest Service, Rocky Mountain Research Station, August 2001.

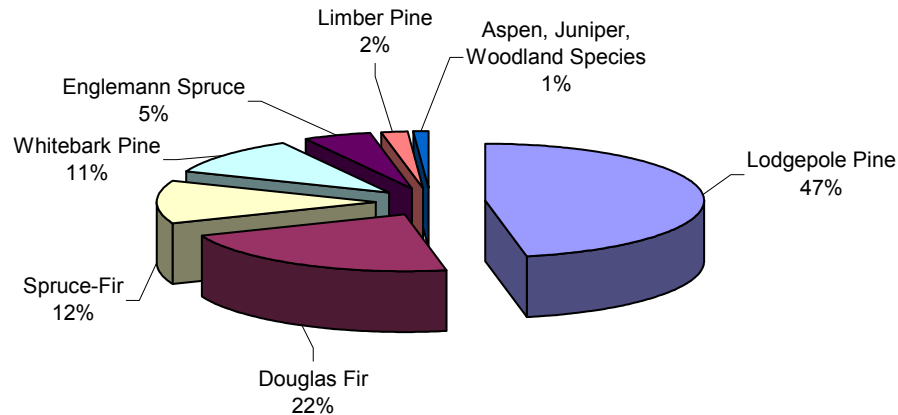
It is important to note an inventory is just that—a collection of information on the Forest, especially its biological data, such as forestlands, habitat classifications, and growth. This data supports management decisions, such as timber management planning, range and grassland plans, and recreational use.

The Forest consists of 3,352,288 acres. Non-reserved forestland makes up 94 percent of total forestland, or 2,511,787 acres. Non-reserved means the land has not been withdrawn from timber utilization for statutory or administrative reasons. About 33 percent of the non-reserved forestland is suited for timber production, a total of 836,425 acres.

Forest timber resources are historically categorized by forest types, with the predominant tree species in a stand suggesting the type. For example, lodgepole pine is the predominant species by total forestland area in the B-DNF forest.⁸ Figure 2-4 presents the percentage of forest types found in the B-DNF.

⁸ This section summarizes key points from DeBlander 's thorough assessment of B-DNF forest resources (2001)

Figure 2-4. Predominant Tree Species in the B-DNF.



Source: *Forest Resources of the Beaverhead-Deerlodge National Forest* by Larry T. DeBlander, U.S.D.A. Forest Service, Rocky Mountain Research Station, August 2001.

Forest communities can also be described by habitat type based on site characteristics such as slope, aspect, elevation, soils, and climate. Forest types classify lands by their current (predominant) species, while habitat types describe lands by their potential to grow similar plant communities at successional climax. There are more than 70 unique forest habitat types on the Forest.

Average volume per acre, net, on lands suitable for timber production is 2,272 cubic feet. Total volume on this same timberland is 1.96 billion cubic feet, with a plus or minus 9.1 percent sampling error. Lodgepole pine, as a forest type, is 70 percent of the timberland suited for harvest. Most of these trees are in the large (9.0 inches diameter at breast height, 4.5 feet above ground level) or medium (5.0 to 8.9 inch diameter) size classes. Overall, in all forest types, there are more small diameter trees than large trees.

Forest growth as measured in 1997 exceeded mortality. Net annual growth (gross annual growth less tree mortality) was 97.4 million cubic feet with lodgepole pine again as the predominant species.

Table 2-5 indicates the net volume of wood in live trees by species for the B-DNF.

Table 2-5. B-DNF Wood Volume by Species

| Species | Million Cubic Feet |
|------------------------|--------------------|
| Lodgepole pine | 3,142.2 |
| Douglas-fir | 1,167.3 |
| Englemann spruce | 992.6 |
| Subalpine fir | 543.9 |
| Whitebark pine | 496.4 |
| Limber pine | 68.5 |
| Aspen | 12.6 |
| Rocky Mountain Juniper | 5.9 |
| Curleaf mahogany | .6 |
| Black cottonwood | .4 |
| Total | 6,431.4 |

Source: *Forest Resources of the Beaverhead-Deerlodge National Forest* by Larry T. DeBlander, U.S.D.A. Forest Service, Rocky Mountain Research Station, August 2001.

2.6.2 Grazing

Grazing lands are an important resource of the B-DNF. Both game and commercial livestock use these resources. Local ranchers and farmers often depend on access to forest-owned lands for grazing their livestock. There are about 350 permittees grazing on 256 allotments, making this the largest range program in Region 1. In the summer, cattle and sheep graze the upper elevations of forest-owned lands. During the fall, the animals are brought down for wintering in the valleys. Then, in late spring, after calving and branding, the livestock are returned to graze on forest-owned lands. The table below indicates the numbers of livestock grazing on Beaverhead land between 1945 and 1997.

Livestock Use on the Beaverhead National Forest, 1945-1997

| Year | Cattle/Horse Numbers | Animal Unit Months | Sheep/Goat Numbers | Animal Unit Months |
|-------------|-----------------------------|---------------------------|---------------------------|---------------------------|
| 1945 | 32,780 | n/a | 126,460 | n/a |
| 1950 | 33,251 | n/a | 108,070 | n/a |
| 1955 | 32,783 | n/a | 90,736 | n/a |
| 1960 | 32,446 | n/a | 78,208 | n/a |
| 1965 | 31,670 | n/a | 69,541 | n/a |
| 1970 | 33,598 | n/a | 55,200 | n/a |
| 1975 | 40,780 | n/a | 41,221 | n/a |
| 1980 | 40,918 | n/a | 23,675 | n/a |
| 1989 | 44,716 | 183,619 | 23,825 | 13,167 |
| 1990 | 43,073 | 176,256 | 21,579 | 13,257 |
| 1991 | 43,760 | 177,760 | 13,875 | 10,334 |
| 1992 | 43,140 | 174,135 | 13,875 | 10,753 |
| 1993 | 41,056 | 169,417 | 13,875 | 10,543 |
| 1994 | 40,528 | 161,873 | 13,250 | 8,601 |
| 1995 | 39,630 | 158,987 | 12,550 | 8,050 |
| 1996 | 37,783 | 133,436 | 9,348 | 6,201 |
| 1997 | 36,702 | 133,193 | 15,407 | 7,550 |

Source: USDA Forest Service Beaverhead-Deerlodge National Forest web site.

Notes:

“Animal Unit Months” is defined as the amount of forage required by one animal unit for one month.

n/a – Figures for “animal-unit months” were not available in reports from 1945-1980. Figures were compiled by Bruce Fox, range program leader, USDA Forest Service, Northern Region. Figures for 1945-1980 were extracted from historical grazing statistical reports. Figures for 1989-95 were extracted from computerized database reports.

2.6.3 Minerals

Gold and silver brought some of the first settlers to southwestern Montana and the history of Butte and Anaconda are testament to the wealth of mineral resources in the region. Although there are nearly 2,000 mineral claims in forest-owned lands, ongoing mining operations are almost non-existent. Minerals are an important forest resource, but currently these resources have limited socioeconomic implications.

In 1992, Region 1 of the USFS Management entered into the first of a series of participating agreements with the Montana Bureau of Mines and Geology (MBMG) to carry out an inventory and preliminary characterization of abandoned and inactive mines in Montana that might have environmental health and/or safety problems either on or affecting USFS lands.

In 1993, the Montana State Office of the BLM entered into a similar agreement with the MBMG. The abandoned-inactive mines database now contains over 8,000 records and includes information on location, ownership, office and field screening results, and water and soil sampling results.

Two of the program goals as they pertain to the B-DNF, were to develop preliminary screening criteria to assess the affects of abandoned and inactive mine sites and to categorize sites based on their individual and cumulative effects on other resources and the human environment. In the northern zone of the B-DNF, 1,057 abandoned or inactive mines were identified. Of these, 99 sites were determined to have sufficient effects on water, soil, and fisheries to be classified as Superfund sites. The inventory also identified a number of hazardous mine openings and buildings. An inventory of the southern zone of the B-DNF begun in 1995 identified 387 abandoned mine sites. Forty-six of these sites were determined to have sufficient effects on the water, soil, and fisheries to be classified as Superfund sites.

The USFS has undertaken numerous mine clean-up and reclamation efforts and this effort continues.

2.6.4 Recreation

Increasing recreational use of National Parks and National Forests is a national trend. National forests in Montana, including the B-DNF, are experiencing increased demand for recreational opportunities. Common recreational resources on national forest lands include campsites; fish and varieties of small and big game; trails for wildlife viewing, hiking, horse back riding, winter skiing and snowmobile riding; and access to remote wild lands, where solitude and quiet are valued resources for some recreational users. The B-DNF has these resources, including two wilderness areas and some of the most dramatic scenery in southwestern Montana. High and often snow-capped peaks that plunge into deep river valleys offer the “big sky” views for which Montana is famous. Wildlife is relatively abundant for both wildlife viewing and hunting. Species include moose, elk, whitetail and mule deer, grizzly and black bear, mountain lions, coyotes, fox, and some wolves.

There are more than 2,700 miles of trail in the Forest. Hikers, horseback riders, skiers, and snowmobilers use these trails, as well as other types of ORVs, including motorbikes and “four wheelers”. Lakes and streams also provide recreation opportunities for fishermen in nearly all segments of forest-owned lands. A recent USDA/USFS National Visitor Use Monitoring Project (NVUM) indicated that for the B-DNF, “the top six recreation activities of the visitors were viewing wildlife/nature, hunting, fishing, general relaxation, and driving for pleasure,” and “The top primary activities were hunting, viewing wildlife/nature, picnicking, general relaxation, and fishing.” Table 2-6 lists the type and frequencies of recreation uses.

Table 2-6. Activity Participation and Primary Activity for the Beaverhead-Deerlodge National Forests

| Activity | Percent Participation | Percent Reporting as Primary Activity |
|--|------------------------------|--|
| **Viewing wildlife, birds, fish, etc on national forest system lands | 59 | 16 |
| Picnicking and family day gatherings in developed sites (family or group) | 27 | 13 |
| **Viewing natural features such as scenery, flowers, etc on national forest system lands | 26 | 3 |
| Hunting- all types | 24 | 24 |
| Fishing- all types | 22 | 7 |
| General/other- relaxing, hanging out, escaping noise and heat, etc, | 21 | 8 |
| Driving for pleasure on roads | 20 | 1 |
| Hiking or walking | 15 | 2 |
| Gathering mushrooms, berries, firewood, or other natural products | 14 | 3 |
| Camping in developed sites (family or group) | 11 | 5 |
| Resorts, cabins and other accommodations on USFS managed lands (private or USFS run) | 9 | 6 |
| Visiting historic and prehistoric sites/area | 7 | 4 |
| Nature Study | 7 | 0 |
| Off-road vehicle travel (4-wheelers, dirt bikes, etc) | 4 | 2 |
| Downhill skiing or snowboarding | 4 | 4 |
| Cross-country skiing, snow shoeing | 4 | 3 |
| Primitive camping | 3 | 1 |
| Backpacking, camping in unroaded areas | 3 | 0 |
| Visiting a nature center, nature trail or visitor information services | 3 | 0 |
| Snowmobile travel | 3 | 3 |
| Motorized water travel (boats, ski sleds, etc) | 2 | 1 |
| Other motorized land/air activities (plane, other) | 1 | 0 |
| Horseback riding | 1 | 0 |
| Bicycling, including mountain bikes | 1 | 0 |
| Non-motorized water travel (canoe, raft, etc.) | 1 | 0 |
| Other non-motorized activities (swimming, games and sports) | 1 | 0 |

* less than 1 percent participation

** first version of survey form, used October through March, had these two viewing categories combined as viewing scenery

Table 2-7, also replicated from the NVUM, indicates estimates of the annual visits for the B-DNF in comparison to three other Region 1 forests that participated in the survey.

Table 2-7. Annual Recreation Use Estimates by Forest for Region 1¹

| Forest | National Forest Visits | | Site Visits | | Wilderness Visits | |
|---|------------------------|------------------|-------------------|------------------|-------------------|------------------|
| | Visits (millions) | Error Rate +/- % | Visits (millions) | Error Rate +/- % | Visits (millions) | Error Rate +/- % |
| Beaverhead-Deerlodge | 1.1 | 18.7 | 1.3 | 17.6 | .016 | 30.0 |
| Flathead | 1.4 | 7.5 | 1.6 | 6.8 | .022 | 22.1 |
| Nez Perce | 0.5 | 18.2 | 0.6 | 19.1 | .039 | 42.6 |
| R1 expanded use estimate for CY 2000 ² | 13.2 | 23.0 | 15.3 | 21.9 | .337 | 25.1 |

¹ Region 1, the “Northern Region” includes national forest system lands in Montana, North Dakota and portions of northern Idaho and northwest South Dakota.

² Calendar year

Although the B-DNF is not the most visited National Forest among Region 1 participants in the NVUM, it shows a high level of visitation that is consistent with past studies that indicate the B-DNF is among the most popular Region 1 forests for recreational visits. While there is a substantial population of out-of-state visitors, and some out-of-country visitors, the majority of visitors are from nearby areas, as indicated by the zip codes in the NVUM (Table 2-8).

Table 2-8. Reported Visitors to the B-DNF by Zip Code

| Zip Code | Frequency | Percent |
|----------------------|-----------|---------|
| 59701 (Butte) | 130 | 25.5 |
| 59711 (Anaconda) | 43 | 8.4 |
| 59725 (Dillon) | 33 | 6.5 |
| 59858 (Phillipsburg) | 23 | 4.5 |
| 59722 (Deerlodge) | 18 | 3.5 |
| 59801 (Missoula) | 17 | 3.3 |
| 59601 (Helena) | 11 | 2.2 |
| 59729 (Ennis) | 9 | 1.8 |
| 59715 (Bozeman) | 7 | 1.4 |

Source: Adapted from B-DNF National Visitor Use Monitoring Project.

Visitors are predominately male (86.5 percent), white (96 percent), and dominated by three age groups: less than 16 years of age (21 percent); 31-40 years of age (31.9 percent); and, 41-50 (19.3 percent) (USFS, 2001:6-7).

3 History and Lifestyles

This chapter begins with a brief overview of the social history of southwest Montana. Next we look at the social and cultural characteristics that cross over county lines or are shared by various social groups within the counties. The groups identified include:

- Ranching
- Timber and Logging
- Urban and Suburban
- Rural Town
- Recreationists

Lifestyles, values, and management concerns are identified for each group.

3.1 An Overview of Social History

The short sketch of southwest Montana social history is one of ongoing interaction between humans and the region's natural resources. For our purposes, this history can be grouped into several major periods that influenced the development of southwest Montana. Historians might argue with this grouping⁹, but it offers an overview that places the present in the context of major historical events. The periods we develop in this overview are as follows:

Pre Contact -Native American. This discussion addresses the time prior to the early 1700s when Native Americans were the inhabitants of the west. They used and influenced the landscape of the region and they are an important part of the history of western Montana.

1700s –1862 Northwest Passage Exploration and Early Development. Europeans first came into contact with Native Americans through French and English exploration for the “Northwest Passage” that was accompanied by developing trade for beaver and other furs with Native Americans. The French were among the earliest of these traders and early explorers, and this period illustrates the initiation of change of settlement and use patterns in the region. The Americans Lewis and Clark traveled through the region in 1804-5 in their search for the Northwest Passage.

1862-1889: Gold Territory to Statehood. The settlement of southwest Montana truly began with the discovery of gold in Grasshopper Creek in 1862. An influx of miners seeking gold and silver brought the first American settlement to the region and ultimately sparked the growth and development that lead to statehood in 1898.

From Statehood to Modern Day Montana. This hundred-year period of history illustrates the development of the timber, mining, and ranching industries as well as the more recent rise of tourism and new economic and social trends.

3.1.1 Pre-Contact Native Americans

Some 10,000 years ago, paleo-Indians mined chert—used for stone tool making—in the Horse Prairie Valley of present-day Beaverhead County. Other paleo-Indians used “jumps” (what the Blackfeet later

⁹ Readers should consult works such as Malone, Roeder, and Lang (1991) or Hamilton (1957) for more detailed historical information.

termed *pishkuns*) to herd mammoth and bison over cliffs to later butcher, skin, and eat. Native American descendants of these paleo-Indians also depended on the region's rich game and other resources. Some authors suggest that Native Americans as they are known today have had a relatively short history in Montana:

The only Indians who lived in Montana before 1600 were the tribes in the western mountains—the Plateau Indians—and perhaps the Crows in the Yellowstone Valley, who may have migrated there as early as the mid-sixteenth century (Malone, Roeder, and Lange 1991: 13)

Plateau tribes such as the Flathead and Kootenai-Salish lived to the north and west of the Continental Divide, the Shoshone to the south, the Blackfeet to the north and west, and the Crow to the south and west. The Tukuariaka, a Shoshone band sometimes referred to as sheepeaters, lived in the areas west of Yellowstone and into the Lemhi Valley. This region of Montana was a crossroads for multiple tribes, including the Nez Perce and the Sioux, who pursued bison and other game in the valleys and nearby mountain meadows. By the early 1700s, the Shoshone acquired horses—or “elk dogs” as they were called—that gave them greater mobility and a military advantage that allowed them to push their Flathead and Salish neighbors north and thereby expand their territory well into what is now central Montana. At about the same time the Blackfeet acquired firearms from the British and French, and this somewhat mitigated the military advantages that accrued to the Shoshone from horse travel. However, it was not long before the Blackfeet also acquired horses and they soon became among the fiercest and most dominant tribes in the region. In fact, horses soon spread among all tribes in the region and led to new methods of horse-back hunting for bison and other game that became an integral part of plains Indian culture.

Historians of the west also argue that these tribes used fire to force game into certain locations, to cultivate fresh grazing grass, and to clear crop lands and travel routes (Lewis 1978)¹⁰. Pyne, a historian of western fires, also suggests Native Americans used fire for multiple purposes and modified the landscape:

...[through] repeated, controlled, surface burns on a cycle of one to three years, broken by occasional holocausts from escape fires and periodic conflagrations during times of drought. ... So extensive were the cumulative effects of these modifications that it may be said that the general consequence of the Indian occupation of the New World was to replace forested land with grassland or savannah, or, where the forest persisted, to open it up and free it from underbrush. Most of the impenetrable woods encountered by explorers were in bogs or swamps from which fire was excluded; naturally drained landscape was nearly everywhere burned. Conversely, almost wherever the European went, forests followed. The Great American Forest may be more a product of settlement than a victim of it (Pyne, 1982: 79-80).

Native Americans were an integral part of the cultural and geographic history of southwestern Montana. Although they may not have been settled residents for extended periods of time, the resources of the region were important to these people who lived—for the most part—a migratory way of life. Native American populations decreased dramatically from diseases spread through contact with non-natives, and as warring among tribes and with those pushing westward increased, tribes further dispersed. Yet, there was a strong Native American presence in southwest Montana at the time of the arrival of Lewis and Clark in 1805, as evidenced by the accounts in their journals. However, as western exploration gave way to gold discovery and settlement, the migratory patterns of Native

¹⁰ A 1998 paper by USFS sociologist J. Williams suggests that Native American use of fire is a controversial topic, but he lists 11 major uses of fire, including those noted in this discussion (http://fs.jorge.com/archives/Heritage_Program/IndianUseOfFire.htm).

Americans that brought them into southwestern Montana were changed by life on reservations. By 1880, most Native Americans in Montana were living on reservations.

3.1.2 1700 – 1862: Northwest Passage Exploration and Early Development

Among the first non-Native Americans in southwest Montana were French and British fur traders. British traders of the Hudson's Bay Company and French of the North West Company were exploring for the Northwest Passage as well as seeking furs. These traders were among the first to encounter the Native Americans of the west and they traded rifles and other goods of interest for beaver, mink and other valued furs. Journals of French fur trader and explorer Verendyres, and the Englishman Henry Kelsey indicate they were exploring and trading in the northern Rockies during the early decades of 1700s. After the French and Indian wars that ended in 1762, France ceded to Spain the Louisiana Territory (including what is most of present-day Montana), but European political events resulted in France reclaiming the territory in 1802. The United States purchased the Louisiana Territory from France in 1803. This laid the foundation for the opening of the west by Americans.

In the early 1800s, the British explorer Alexander MacKenzie wrote about his travels from the St. Lawrence River to the western coast of Canada near Bella Coolla in *Voyages from Montreal, on the River St. Laurence, through the Continent of North America to the Frozen and Pacific Oceans, in the Years, 1789 and 1793 with a Preliminary Account of the Rise, Progress, and Present State of the Fur Trade of that Country*. Thomas Jefferson equipped Meriwether Lewis and William Clark with copies of MacKenzie's book and sent them off in 1804 to find the Northwest Passage and to explore the continent. The Lewis and Clark expedition passed through southwestern Montana, crossing the Continental Divide at Lemhi Pass. Their exploits are part of the region's history, but importantly their exploration marks the opening of a new period of development that began with fur traders who listened to the tales from the Lewis and Clark party about the bountiful beaver and other fur bearers that inhabited the western territories.

Between 1808 and the early 1830s the Missouri Fur Company and other fur trading opportunists established trading posts along the upper Missouri River, often encountering hostile Blackfeet and other tribes. These were also the decades of mountain men such as Tom Fitzpatrick, Jim Bridger, and others of the Rocky Mountain Fur Company and the American Fur Company. Even these hearty souls were ultimately deterred by the ferocity of hostilities with the Blackfeet and other tribes in the region. However, a combination of numbers (more than 1,000 traders were said to be in Montana by the 1840s) and the effects of smallpox and other such diseases began to erode the ability of Indians to resist the onslaught of newcomers to the region.

The middle years of the 1800s saw exploring naturalists, missionaries, and more fur traders who by now were trading for bison skins and other incidental furs, but this was also a period when military expeditions and railroad surveyors came on the scene. The California Gold Rush of 1849 brought some miners through the region, but it was the discovery of gold in Grasshopper Creek in 1862 that began a new period in the region's history. By now, the territory (then known as the Nebraska Territory¹¹) was opening as exploration gave way to settlement.

3.1.3 1862 – 1899: Gold Territory to Statehood

California gold attracted easterners such as James and Granville Stuart who accompanied their father from Iowa to northern California. After exploring for gold with some modest success, they found their

¹¹ In 1863 the territory name changed to Dakota, then Idaho, and finally to the Montana Territory in 1864.

way to Montana where on a small creek in present-day Granite County they, along with Reece Anderson, found gold and recorded one of Montana's first gold claims. However, it was not just California gold that attracted men to the west. There were also substantial strikes in the Salmon River region of Idaho. Miners such as John White from the Colorado region traveled up through the Big Hole valley where he eventually found gold in Grasshopper Creek. His discovery sparked a new western gold rush, one White himself did not live long enough to appreciate, as he died from gunshot wounds in 1864.

Bannack, Nevada City, Virginia City, and Alder Gulch became thriving gold camps that transformed into growing communities. The gold deposits discovered at Alder Gulch in 1864 were among the richest of the time, producing some 40 million dollars (Malone, Roeder, and Lang 1991: 67). These attracted even more prospectors:

Within the next year and a half, at least ten thousand people crowded into the steep, rugged contours of the area. Mining districts named Fairweather, Summit, Highland, Pine Grove, and Junction blanketed the gulch. Several towns appeared, the best known being Virginia City and Nevada City, but population was so scattered that some contemporaries called the area "Fourteen-mile City" (Malone, Roeder, and Lang 1991: 67).

Not only miners, but also merchants, loggers, farmers, and ranchers migrated to this and other regions of southwest Montana. The population is said to have peaked in the late 1860s at about 28,000, although the first census in 1870 showed a population of about 20,600 persons. This was a diverse population including a substantial number of Chinese (estimated at about 2,000) who worked in mining as well as Blacks from the south and diverse European immigrants.

As Bannack, Virginia City, and other communities grew, organized law and order became a necessity. A sheriff was hired, a William Plummer, to keep the peace, but unfortunately Mr. Plummer supplemented his sheriff's pay with robbery. Plummer and others he enlisted operated a gang that committed robberies, burglaries, and other crimes that spread disorder throughout the territory. The criminal's identities were discovered and ultimately a local "vigilante" group was formed to quickly address the road agent and other criminal elements that disrupted community life. The vigilantes were modeled after "Vigilance Committees" that were formed to address law and order in California's mining camps. Members became known as "Vigilantes" and they swore the following oath:

We the undersigned uniting ourselves in a party for the laudable purposes of arresting thieves and murders and recovering stolen property do pledge ourselves and our sacred honor each to all others and solemnly swear that we will reveal no secrets, violate no laws of and never desert each other or our standards of justice so help us God as witness our hand and seal this 23 of December A D 1863 (Hamilton, 1957:252).

By early January 1864 the Vigilantes of Bannack, Alder Gulch, and Virginia City were active in identifying, tracking down, and hanging desperados. Sheriff Plummer and his chief supporters were among those escorted to the gallows by the Vigilante Committee. The list below shows the speed with which the Vigilantes acted once they formed and began to take law and order into their own hands:

George Ives, died December 21, 1863, Nevada City, Madison County.

Erastus (Red) Yager, died January 4, 1864, Stinkingwater Valley, Madison County.

G. W. Brown, died January 4, 1864, Stinkingwater Valley, Madison County.

Henry Plummer, died, January 10, 1864, Bannack, Beaverhead County.

Ned Ray, died January 10, 1864, Bannack, Beaverhead County.

Buck Stinson, died January 10, 1864, Bannack, Beaverhead County.

John Wagner (or Wagoner) (Dutch John), died January 11, 1864, Bannack, Beaverhead County.

Joe Pizanthia, died January 11, 1864, Bannack, Beaverhead County.

Geo. Lane (Club-Foot George), died January 14, 1864, Virginia City, Madison County.

Frank Parish, died January 14, 1864, Virginia City, Madison County.

Haze Lyons, died January 14, 1864, Virginia City, Madison County.

Jack Gallagher, died January 14, 1864, Virginia City, Madison County.

Boone Helm, died January 14, 1864, Virginia City, Madison County.

Steve Marshland, died January 16, 1864, Clarke's Big Hole ranch, Beaverhead County.

William Bunton, died January 19, 1864, Deer Lodge Valley, Powell County.

Cyrus Skinner, died January 25, 1864, Hell Gate, Missoula County.

Alexander Carter, died January 25, 1864, Hell Gate, Missoula County.

John Cooper, died January 25, 1864, Hell Gate, Missoula County.

Robert Zachary, died January 25, 1864, Hell Gate, Missoula County.

George Shears, died January 24, 1864, Frenchtown, Missoula County.

Wm. Graves (Whiskey Bill), died January 26, 1864, Fort Owens, Ravalli County.

William Hunter, died February 8, 1864, Gallatin Valley, Gallatin County.

Source: (<http://www.montana-vigilantes.org/noyeshtml/chapters/chap27.html>)

Harrison's description of William Hunter's demise—the last person identified on the above list—typifies the fate of many of the road agents:

He was disarmed and mounted on a horse, and to all appearances the party started for Virginia City. About two miles from the cabin a halt was made under a tree with a horizontal limb. A vote was taken and it was decided to hang Hunter then and there. His crimes were repeated to him. He shook hands with each Vigilante. His arms were pinioned. A noose was placed about his neck, and the rope thrown over the limb of the tree. All hands at the rope jerked him off his feet, and the last of the road agents was dead (Hamilton 1957:262).

Within a reasonably short period of time the Vigilantes solved the road agent problem. Citizen self-reliance was perhaps taken to its extreme with these circumstances, but the "vigilante" identity remains a symbol of the western heritage of this portion of Montana.

By 1865, mining was underway in the Butte, Silver Bow, and Deer Lodge areas for gold, and subsequently deposits of silver and copper were located. Large-scale development of silver and copper did not occur until railroads were built into the region to allow both for transport of heavy equipment into the area and the shipment of product out. By the late 1880s, the Anaconda Silver Mining Company was operating, and subsequently the copper mining industry at Anaconda also became a major force in the population and development of the Butte-Silver Bow area.

Although mining was an impetus in the region's development, cattle ranching was already established when the first miners found their way into Montana. The Grants and Orrs in the Beaverhead region and the Kohrs in Deer Lodge were grazing cattle and providing beef to local miners as well as to consumers in other parts of the west and east. These early ranchers faced difficult circumstances

fighting with Blackfeet and other tribes over territory and initially competing with bison for range. Yet, through the 1870s the cattle and sheep business as well as farming continued to expand. This expansion was aided by related policies of extensive hunting of bison and the confinement or elimination of Native Americans. Despite the outcomes of battles at the Little Big Horn and the Big Hole, by the early 1880s Indians ceased to be a formidable force slowing the expansion of ranching, homesteading, and travel in Montana. By the end of the 1870s, bison were also on the brink of extinction. Public lands became more accessible facilitated by an “open range” policy that made available public lands for grazing. Cattle ranching in Montana became another means to “strike it rich” and spurred another rush of settlers and speculators motivated by tales and publications such as *Beef Bonanza, or How to Get Rich on the Plains* (Hamilton, 1957: 392). This “boom” of the 1880s was comprised both of family and corporate ranchers:

Before the boom of the 1880s, most Montana cattle operations were partnerships or family affairs, but many of the new outfits were full-fledged corporations with access to plenty of capital and plenty of livestock. Dozens of corporate ranches held Montana charters by 1886; and many others, such as the Texas-based XIT, &&&, and Continental Land and Cattle spreads, were incorporated in other states or territories. By 1886, at the peak of the open-range boom, roughly 664,000 cattle and 986,000 sheep grazed Montana rangelands. A large percentage of the animals belonged to the new corporate ranchers, whose managers packed them onto limited ranges with no provisions of winter hay, in hope of quick profits from minimal investments (Malone, Roeder, and Lang, 1991: 157).

A severe drought and hard winter in 1886-87 combined with overgrazing on public lands resulted in severe impacts to Montana’s cattle business, with some estimates that half or more of the cattle died (Fletcher, 1960:89-94). Small operators who put up hay adapted better than the “get rich quick” operators did, and after 1887, the cattle industry settled into a period of recuperation and ultimately further expansion as the value of hay for winter feed became apparent (Harrison, 1957; Fletcher, 1960).

By the early 1880s, the railroads had track through the Montana Territory bringing more people and a means to haul equipment and supplies needed for ranchers and miners. This provided access for transportation and freight that further facilitated the development of the Montana Territory. Part of this development was the ability to transport the smelting and other heavy equipment necessary for efficient silver and copper mining. Places such as Butte, Deer Lodge, Philipsburg, and Anaconda developed the silver and copper deposits that required this industrial machinery. Moguls such as Sam Hauser and William Clark poured capital into silver mining, as did other outside investors, including foreign investors from Germany and Britain. Although silver went through boom and bust periods, the price dropped precipitously in 1893, and thereafter silver was primarily a by-product of copper mining.

Following rounds of political wrangling in the mid-1880s, Montanans developed a constitution and petitioned for statehood. Montana became the forty-first state in November of 1889.

3.1.4 From Statehood to Modern Day Montana

From statehood to the present, southwest Montana has experienced different periods of boom and bust, most related to the changes in supply and demand for natural resources. Among the first of these booms in the years immediately before and shortly after statehood occurred in the copper industry. After the railroads enabled the shipment of the equipment necessary to develop silver and copper, Butte and Anaconda developed thriving copper industries. By the time of statehood, Marcus Daly and others had developed the copper deposits around Butte by importing laborers from Ireland, Cornwall,

and elsewhere in Europe. This was the era of the “company town” and the initiation of a strong labor movement among mine workers. Copper remained an important industry in the region until 1982 when the Berkeley Pit closed.

During the first 20 years after statehood, thousands of homesteaders also began arriving in Montana. “In the fifteen years between 1909 and 1923, settlers filed 114,620 homestead claims on almost twenty-five million acres of land” (MRL 1990: 232). This “agricultural boom” resulted in an expansion of cattle and wheat production in Montana. Germans, Scandinavians, and other Europeans and American emigrants swelled Montana’s population:

During the first quarter of 1910, the Great Northern Railroad moved over a thousand emigrant cars into northern Montana... The flood tide of immigration leveled off somewhat during 1911-12 and then rose again during 1913-18... Even by 1910 agriculture had surpassed mining to become Montana’s major source of income. The state’s population climbed from 243,329 in 1900 to 376,053 in 1910. During the same period, the aggregate number of farms and ranches increased from 13,370 to 26,214 (MRL 1990:242).

The agricultural boom began to go bust in the post-war depression of the 1920s, and large numbers of Montana farmers moved out of state, leaving a demographic profile that is similar to that of present-day Montana: larger numbers of older persons and younger persons with the middle-age demographic group showing sharp declines. Prior to World War II, ranching and farming continued under pressure, but various New Deal programs supported these industries into World War II, when once again there was a small boom. A combination of weather, world economics, and cultural changes in the United States have continued to influence boom and bust cycles in ranching and farming in southwest Montana. Today these activities remain important to the overall economy and culture of the region, but the face of agriculture and ranching are changing

The timber industry also is one of boom and bust cycles. Timber was cut in the earliest days to supply the wood for mining, ranching, and community building. However, it was not until the early decades of the 20th century that timber assumed a significant place in local economies. After the Second World War, the timber industry continued to grow through the early 1970s, but then began a period of overall decline that has continued to the present day. The reasons for this decline are complex, and include automation, international markets, and other globalization factors, as well as the actions of special interest groups that have affected timber harvesting in National Forests. Although not exhibiting exactly the same boom-bust cycles as other extractive industries, the long rise and slow decline of timber in southwest Montana is consistent with the overall patterns of Montana resource extraction industries since World War II.

Since the 1970s, it is argued that Montana has experienced a shift in its economic structure away from resource extraction and toward more service industries. At the same time, there has also been a shift toward more urbanization and fewer rural residents. These trends and issues are addressed in more detail in Chapter 4.

3.2 Lifestyles and Values

Lifestyles can be described as the activities, values, meanings, preferences, and ways of living in a particular place and time. The project counties have several lifestyle groupings that are a product both of history and of current socioeconomic conditions. These lifestyles are composed of values, beliefs, world-views, and activity patterns that express variations in local culture. This section describes lifestyles within the project counties.

Some lifestyles are present in all counties, while others are not. The five lifestyle groups described are:

- Ranching
- Timber and Logging
- Urban and Suburban
- Rural Town
- Recreationists

Ranching and timber lifestyles are present to some degree in each county, and represent historical natural resource lifestyles. Timber and logging lifestyles were once an important part of culture in most project counties, although contemporary expression is limited. However, this lifestyle expresses values about the relationship of communities to natural resources that is an important part of the cultural history of this region.

Butte is the example of an urban lifestyle within the seven project counties. Suburban lifestyles are more contemporary and express the demographic and socioeconomic changes in western Montana. Urban and suburban lifestyles are not present in all counties, but they contribute to the current cultural mix of area lifestyles.

Rural town lifestyles are found in every county, except Butte-Silver Bow. The “townspeople” express a social and lifestyle distinction described in other regional studies. We use these prior studies as well as project data to characterize this lifestyle.

Recreation represents an important component of most southwest Montana lifestyles. Hunting, fishing, horseback riding, ORV riding, bird watching, and other outdoor activities are important to ranchers, miners, bankers, and many other people who are long-term residents as well as newcomers to the region. We briefly discuss the importance of recreation as a lifestyle value that cuts across the majority of residents within the seven project counties.

3.2.1 Ranching

Ranching Lifestyles

A custom-made felt cowboy hat bought in Sheridan, Jackson, or even Butte easily can cost a couple of hundred dollars or more, but it stays on your head in a stout wind, protects you from a pelting horizontal rain, and it keeps you cool when you are moving cows from one range to another. The cost is a good value, one that even the early ranchers of southwestern Montana would recognize. Those ranching forefathers were among the first American and European residents of Montana. Since the mid 1860s, families such as the Khors, Grants, and Stewarts have settled and raised cattle they sold to nearby mining communities as well as to consumers as far away as Chicago and San Francisco.

Ranching is an important part of the history, culture, and economy of southwest Montana, and it constitutes a lifestyle that is practiced in every project county. Table 2-1, compiled from the Census of Agriculture, compares farm and ranching operations and their size as well as the percentage of total county land and numbers of cattle.

Table 3-1. Comparison of Farm and Ranching Operations for Montana and the Project Area Counties

| | Montana | Anaconda-Deer Lodge | Beaverhead | Butte-Silver Bow | Granite | Jefferson | Madison | Powell |
|----------------------------|------------|---------------------|-------------|------------------|-------------|-------------|------------|-------------|
| Farms | 24,297 | 83 | 360 | 116 | 117 | 266 | 460 | 230 |
| Avg. Size | 2,414 | 1,225 | 3,200 | 864 | 2,294 | 1,369 | 2,347 | 2,824 |
| Principal Operators | 15,703 | 44 | 223 | 51 | 91 | 128 | 316 | 137 |
| Farmland | 58,607,778 | 101,657 | 1,152,008 | 100,181 | 268,413 | 364,153 | 1,079,502 | 649,489 |
| % Total Land | 63.0 | 21.55% | 32.48% | 22% | 2.57% | 34.34% | 47.03% | 43.63% |
| Cattle, Calves and Ranking | 165,4014 | 9,400 (53) | 153,000 (1) | 9,000 (54) | 23,000 (41) | 20,000 (47) | 79,000 (6) | 50,000 (23) |
| USFS Grazing Permits | 1,162 | 13 | 78 | 31 | 32 | 38 | 107 | 41 |

Source: Census of Agriculture. 1997

Beaverhead, Madison, Jefferson, and Powell Counties have a significant ranching and farming presence in terms of size and total land in agricultural production. These same counties are ones in which ranching and farming is a significant component of the overall lifestyle. Major ranching areas include the Beaverhead and Big Hole Valleys in Beaverhead County, the Ruby and Madison Valleys in Madison County, the Boulder Valley in Jefferson County, and the Deer Lodge Valley in Powell County.

Lifestyle Patterns and Values

Summer months are busy for ranchers, whether they run sheep or cattle. Some sheep ranchers grow grain or hay, and in summer they harvest those crops. Lessons of the lean 1886 winter remain valid for today’s cattle ranchers who usually grow and store the feed required to get their cows through winter.

Altitude and weather influence exactly when haying starts, but late July through August are the months when family, friends, and hired hands gather to cut hay. Haying is time and labor intensive, usually requiring more than one tractor or harvester that cuts hay into windrows where it is left to dry before stacking or baling. Beaverslides, a structure for stacking loose hay, were once popular as a method of stacking hay and they can still be found scattered throughout the region, especially in the Big Hole where they are said to have originated. Today, however, hay is either stacked or baled (round or square) for winter feeding. Some would say it is the “old timers” who stack hay, while the more “modern” ranchers bale it. The process of cutting, drying, and stacking plus maintaining the equipment usually means that family members from young to old are involved. Some operations use hired hands, but family ranchers usually call in on the entire family to minimize costs.

During the summer, ranchers and family members also check their summer pasture to make sure cows have not strayed or that predators are not harassing livestock. During the fall, livestock are gathered from summer pasture—usually higher elevation lands—and brought down to the valley ranchlands for the upcoming winter months. The gathering and moving of cattle is also a family operation, although on some corporate ranches hired hands, or cowboys, assist in moving the cattle.

Winter is a quieter season when pregnant cows begin to calve. This can mean long nights if cows have trouble calving or if the calf is abandoned—known as a “bummer.” These calves must then be hand fed. During the winter, one of the first daily tasks is feeding the cattle or sheep, and there may be a

second feeding during the later part of the day. Calves are also closely monitored to make sure they are healthy and surviving their first Montana winter. Winter is also a time for the repair and general upkeep of equipment and property. As spring approaches, new calves are branded and cattle are gathered and examined before they go to the summer range. Winter, early spring, and late fall are “slower” times in the ranching lifestyle, although there is always a hay cutting knife to sharpen, a baler to fix, a fence to mend, or a cow that needs attention.

Ranchers or their family members may also work as fishing guides or outfitters or in town to supplement their income. Fluctuations in cattle prices, other market forces, and increasing equipment and operating costs require some diversification in order to ensure the fiscal viability of present-day ranching operations. Some choose to lease their lands, or access through them for hunting or fishing and supplement ranch income. It is common for wives and children to work for the cash needed to keep family and ranching life viable. Unfortunately, for many ranchers, children are not staying on to ranch, either because the isolation and lifestyle demands are not appealing or because financial realities do not allow it.

Values are part of a lifestyle. They influence how people act, what they believe to be true, and what is most important in daily life. Interviews indicated several categories of values associated with ranching lifestyles. There are certainly more ranching values than those described below, but these are the ones expressed in interviews; they may have implications for how ranchers respond to forest management issues.

***It’s a Tough Way to Make Living.*¹²**

A rancher’s comment, *It’s a tough way to make to make a living*, suggests two values about ranching: one is the importance of hard work, and the other is the toughness associated with this way of life. Hard work is a fundamental value for ranchers. The hours required are long, the labor is demanding, and the monetary rewards are not always perceived to be commensurate with the effort required. For example, a rancher commented:

Cattle prices make it so hard. For four or five years, things are good, then it goes down. It is hard to be in the cattle business...it is not great income.

When ranchers comment that what they do is a “way of life,” the implication is they are not motivated by monetary rewards: the work and the way of life associated with the work is highly valued. There is also a fierce pride in what ranchers believe are the difficult circumstances of ranching life. For example, one rancher commented:

We live in a harsh environment with marginal productivity. The strong survive. It is a tough way to live; with 160-320 acres, you can hardly make a living.

The volatility of cattle prices, changing world markets, changing American dietary habits, competition with recreationists for water, and other external pressures also contribute to the sentiment that toughness of body, mind, and spirit are required to live the ranching lifestyle. There is also sentiment that this lifestyle and its products contribute to the moral and cultural foundation of the American way of life:

¹² Italics indicate a statement from project participants that were recorded on tape or written in field notes. Exact word for word transcription did not occur in all cases. However, these statements indicate the meaning of what was said. The process of writing field notes and making transcriptions from tapes often results in approximations of what was said that remain true to the meaning of the statement. Quotations from published or other sources are indicated by indentations but not italics.

I believe in this way of life. It instills the ideals of hard work, independence, and respect for the land in our local community, but it is more than that. It is a foundation of our nation, our heritage is built on those values and what our forefathers did here in Montana.

This rancher's belief in his lifestyle's value is not consistent with how others may view it:

Sometimes I think the public just wants the aesthetic values of ranching and cowboys, they don't appreciate us and what we do beyond that. We make a contribution to the spirit of America, our values of hard work and taking care of the land. We are not looking for any hand-outs, we want to be responsible, to make this nation work. We want to do well for society and to do well for ourselves at the same time.

The value of hard work and toughness that ranchers attribute to their lifestyle contrasts with what they perceive as American culture's hollow evaluation of their present-day way of life: cowboys, ranches, and cows are artifacts, aesthetic accoutrements of western history that do not resonate with modern-day realities. This is a perception ranchers believe needs to be changed to be more consistent with their contributions to local communities and national values.

Our land is not a place we visit, it is a place we live.

Attachment to the land and belonging to it are also fundamental values of the ranching/agricultural lifestyle of southwest Montana. This is succinctly and eloquently stated:

Our land is not a place we visit, it is a place we live. We belong to it as much as it to us. We don't have a short-term view of our ownership; we can't have a short-term view and survive.

This personalizes the relationship of families to their land. People and land are attached; people "belong to it." It is a value borne in historical experience and everyday connection:

Our ties to the land are...well, there is a familiarity that only comes with time and contact. You touch the soil, you pick up a rock, you build or tear down a fence, it is a connection that happens. You see things—you see animals giving birth, trees growing and falling—it is like your children....

This intimate connection between history, family, and land instills a sense of belonging and connectedness that goes beyond the ownership conferred by a legal deed. The sense of belonging is enhanced by historical connection, and it contributes to the stewardship values ranchers express:

My family has been ranching here since 1865. We know this land, we love it, and we want to be good stewards of the land. I bring that stewardship, my connection to my lands, to the public lands my cattle graze on.

Tenure on the land leads to familiarity, and that familiarity leads to stewardship that in turn reinforces ties between ranchers and their lands. For these ranchers, the land is not a place they visit. The land, their tenure on it, and their caring for it, is a part of how they construct and evaluate their identity and that of their land-owning neighbors, including public agencies. However, there is also a recognition that not everyone always adheres to those stewardship ideals:

There is no doubt there was abuse by greedy self-serving uses of private and public lands. Someone who rapes the land and moves on, that is not the majority. Most ranchers are good stewards of the land, there is a moral and ethical foundation to that and a sincere desire to do the right thing.

You just don't cut a tree down and let it rot.

Utilitarianism and dominion are also expressed values by many ranchers. Utilitarianism is a familiar agriculturalist value. Natural resources are to be used. "Dominion" is the value that man has

precedence in the world, if not the moral responsibility, to establish civilization where there is wilderness. Man's place in the natural world is to control and harness natural resources and subdue nature's chaos and make it orderly and functional. The history of the Khors, Grants, and others is one wherein Montana "wilderness" was converted to productive land that created benefit not only for themselves, but also for their community and the nation. In this sense, stewardship is implied in dominion. These are the values of the frontier west, where wolves, coyotes, mountain lions, and other predators were a threat to the order of making a living and living a meaningful life. As one Ruby Valley rancher observed about his "last best place:" *This valley is beautiful not in spite of human interventions, but because of them.* The beauty of the Ruby Valley is a direct result of man's actions to work the land, to take nature, and to make it produce. This is the view expressed in the following quote:

You just don't cut down a tree and let it rot. You take it to the mill so someone can make lumber of out of it. We have a waste not and want not philosophy. It is a shame to see something go to waste. We want the land at its best. (long pause) But I know there are times and places when land does not have commodity value.

The long pause in the last part of this statement suggests there is heart-felt recognition of the amenity and aesthetic values of natural resources and at the same time consternation that some of those resources should be used and not "locked up" or used for less than their "best value."

Perhaps the value accorded water resources best expresses this consternation. For many ranchers, their deep-seated utilitarian values result in the evaluation of water resources as "best" used for irrigation to produce crops or hay to feed cattle. However, as demands for water from fishermen, developers, and others have resulted in changes in agricultural water allocations, there is at once recognition of that value, but there is also an evaluation that the "best use" is for irrigation and not trout. Present-day realities are resulting in a change in how ranchers balance changing assessments of resources. For example,

We do get our blinders on. A rancher sees a blade of grass and he sees it converted to a pound of beef. But we acknowledge there are legitimate uses, diversified uses, that are not only possible on public lands but necessary.

Nonetheless, historical and present-day realities contribute to an evaluation of natural resources as best used when they have a productive purpose and when nature is controlled to support those productive purposes.

Bull-Headed Self-Reliance...

Independence and self-reliance coexist with values about mutual assistance to neighbors and community.

Bull-headed self-reliance, the attitude of 'I don't need anything or anyone, if I can't do it myself it don't get done' that hurts the industry, it hurts the individuals who think that way. Independence is part of our heritage, but we also have to work in a mutually beneficial way....

Repairing your own tractor, treating a sick horse, and otherwise maintaining a ranch requires diverse skills and self-reliance that historically have been highly valued. At the same time, ranchers also recognize a need for mutual assistance when circumstances require it. Independence is tempered with mutually beneficial assistance. As this value is described, the extreme expression of independence and self-reliance, "If I can't do it myself, it don't get done," is not consistent with the self-reliance that recognizes the inter-dependence of those who live ranching lifestyles.

Resource Management Concerns

Ranchers expressed both issue-specific and “process-related” management concerns. The issue-specific concerns were usually elicited in direct response to questions about forest management concerns and the “process-related” concerns were usually volunteered during other portions of the interviews. These concerns are listed below with a brief elaboration.

Noxious Weeds: Ranchers perceive that noxious weeds are among the most significant items of concern for the management of both public and private lands. Noxious weeds provide essentially no viable feed for cattle, they crowd out native species, and they reduce the diversity of plant material that is necessary for a healthy landscape. Ranchers argue that programs to control noxious weeds on public lands need urgent attention.

Private and Public Land Interface: USFS and BLM lands are often adjacent to ranch lands. Ranchers argue that this interface is a benefit to wildlife and to the overall health of the ecosystem, regardless of land ownership boundaries:

*The **public** benefits from me taking cattle off the river bottoms on my land and grazing them in the uplands (on public lands). This takes the pressure off the river bottoms; it benefits everyone.*

Balancing Competing Uses: There is expressed concern that competing uses need to be identified as well as how those uses will coexist or be managed otherwise. For example:

We want to see competing uses identified, whether or not it is fish and irrigation, pheasant cover and raising alfalfa, or whatever it is, we need to identify it. It is possible to have both and maybe even necessary to have both.... There are people who don't believe we (ranchers) are necessary any longer when we can import all that beef from Mongolia.... It is more than farms are nice to look at, we can sustain the land and have competing uses too.

Grazing: Ranching dependency on access to USFS land is a well-known and often expressed management concern. Sentiment exists that ranchers are perceived as sometimes overgrazing public lands or allowing damage to riparian areas. One rancher noted:

Are there problems with grazing? Yes, there are, but because there are problems everywhere, with all types of uses. The emphasis should be on solving the problems, not eliminating grazing. If you eliminate grazing, then it will have the same effect as what happened with timber: you will have all that forage to burn and then you will have out-of-control fires.

There is also argument that grazing is a “natural and necessary disruption” of lands that evolved under grazing pressure. From this perspective, grazing continues to have an important ecological function, despite some problems that may need ongoing attention.

Land Management Expertise: Ranchers argue that they have valuable land management expertise and knowledge that is under-used and under-valued by public land management agencies as well as the general public. Their knowledge and expertise is based in long-term relationships with particular pieces of land. From these relationships, they have developed a locally based understanding of ecological processes that can be applied to their use of public lands.

Off Road Vehicles (ORVs): There are two types of expressed concerns about ORVs. One concern is that ORVs are a means whereby noxious weeds are spread on public lands. A policy that opens all areas of the Forest to ORV use is likely to result in more widespread distribution of noxious weeds. A second concern is that ORV use should not be restricted, since public lands should be open to public uses, including ORV use. These two concerns contradict each other, but they express different dimensions of this issue.

Loss of Ranchlands: Open space is an aesthetic value of local landscapes that ranchers value, but it is also an indicator of the availability of grazing lands, public or private. As ranches are sold and then developed into ranchettes or other similar properties, pasture once leased for grazing may not be available. Grazing land is perceived to be decreasing in supply and this will put additional pressures on public lands.

Wolves: Wolves have returned as a management concern for ranchers. One rancher commented:

It was a long night. I have not slept well in a few nights; my herd is up on the Gravelly Range, and I know there are wolves in them at night. They shouldn't be there, they shouldn't be there.

They argue that wolves take more cattle than can be proved and consequently the actual threat to livestock and ranching viability is not known. Wolves are also perceived as threatening elk herds that some ranchers depend on for outfitting purposes, but the larger concern appears to be with the threat to cattle. It appears that ranchers perceive wolves as a part of the environment that now needs management.

Management Process: Ranger and Forest Supervisor turnover is an expressed concern about the process of forest management. Ranchers argue that few rangers have sufficient tenure to understand the land and the requirements for effective management. Those rangers who do have tenure were acknowledged as individuals with whom they have established solid working relationships. Tenure is important for both understanding the management situation and for developing working relationships to effectively implement management policies. A consequence of the many appeals of various management policies is a perception that local managers “have their hands tied” and cannot manage lands according to sound science. Indeed, there is also a perception that managers may be reluctant to take actions for fear of legal appeals or other objections to management policy. Ranchers interviewed acknowledge a long-standing adversarial relationship with the USFS, but they also expressed a willingness to trust agency decisions if they are made based on “good science” and the assessments of local land managers.

3.2.2 Timber and Logging

The timber industry in Montana began in response to demands generated by the mining boom. When gold was discovered near Bannack in 1862, lumber was needed to build the sluices, houses, and other buildings, and for supporting mine shafts. Boomtowns sprang up almost over night and wherever there was a gold camp, a sawmill most likely followed. The hills around Butte and Anaconda were stripped of trees to feed the smelters. The Organic Act of 1897 permitted prospecting and mining on national forest lands under the Mining Act of 1872. Prospectors, miners, settlers, and residents of an area were allowed to use national forest timber and stone for building purposes and firewood.

Malone and Roeder (1976) provide an historical overview of the timber industry in Montana. Marcus Daly of the Anaconda Company invested in timberlands in Montana and Idaho to supply wood for the smelters in Anaconda, East Helena, and Great Falls and lumber for mine construction. Construction of the railroads in Montana generated a need for lumber for railroad ties, bridges, tunnels, and stationhouses, and in turn made it possible to ship timber out of Montana.

The Anaconda Copper Mining Company was not just the world’s biggest producer of copper, but also became the largest wood producer in Montana. The company acquired over 1,000,000 acres of timberland by 1910 in order to satisfy its need for construction timber and fuel for smelters.

There were three major timber companies in Montana: the Anaconda Company headquartered in a company town at Bonner, the Great Northern Railroad’s Somers Lumber Company near Kalispell, and

the J. Neils Company located in Libby. However, compared to national standards, Montana timber production was small and irregular, averaging only 250 to 400 million board feet a year until World War II.

It was not until a 1910 forest fire when 1,000,000 acres burned on the Idaho-Montana borders and 85 firefighters were killed, that residents of Montana began to understand what a valuable resource the National Forest Reserves were. President Theodore Roosevelt had withdrawn thousands of acres of federal timberlands and placed them into the National Forest Reserves between 1901 and 1909. Until the fire of 1910, most fire fighting had been undertaken by the timber companies who wanted to protect their investments.

The building boom after World War II increased demand for lumber, and Montana’s marginal stands of fir, spruce, lodgepole and ponderosa pine became marketable. Four hundred and thirty-four mills were operating by 1948. The wood products industry employed 7,150 people by 1955. Missoula became the boomtown of the 1960s when Hoerner Boxes and the Waldorf Paper Products Company, who had opened a large pulp mill west of town, merged into the Hoerner-Waldorf Company of Montana. Thousands of jobs were created in Missoula, along with an air pollution problem that brought Missoula national attention. By the late 1970s the wood products industry was Montana’s number one manufacturing industry.

Almost one-fourth of Montana’s land area (22.5 million acres) is covered by forests. Approximately half of the forest lands are on each side of the Continental Divide. More tree species are found on the west side of the Divide than on the east side due to moist air masses that flow in from the Pacific Ocean.¹³ According to Headwaters RC&D/EDD there are approximately 6,551,300 acres of forest land within their eight county southwest Montana area including Broadwater County. Table 3-2 shows the acres of commercial timberland by county for the study area.

Table 3-2. Acres of Commercial Timberland by County

| County | Acres |
|---------------------|------------------|
| Anaconda-Deer Lodge | 93,893 |
| Beaverhead | 130,848 |
| Butte-Silver Bow | 67,880 |
| Granite | 192,021 |
| Jefferson | 135,835 |
| Madison | 199,920 |
| Powell | 365,587 |
| Total | 1,185,984 |

Source: Headwaters RC&D – Forestry Program at <http://hots4.in-tch.com/www.headwatersrc&d.org/forest.htm>.

3.2.2.1 Timber and Logging Lifestyles

In the decades before the 1990s, mill towns were scattered across western Montana. From Libby in the northwest to Dillon and Livingston in the southwest, mills produced lumber, plywood, chips, and other wood products. Sawyers, buckers, choker setters, truck drivers, and other woods workers built the roads, cut the timber, and hauled it to town mills where it was processed and shipped. Some of

¹³Montana Wood Products Association at <http://www.montanaforests.com/forest.htm>.

these timber-cutting crews worked for a particular mill, while others were “gyppo” loggers that traveled around. Gyppo operators—supposedly named after gypsies because they moved so frequently—are usually small, independent companies that cut timber and sometimes own the trucks that haul it. “Gyppo” might also refer to an independent truck driver, but most often the term describes the people who work in the woods cutting trees and hauling them to landings. Gyppo companies are sometimes family owned and operated; other times there is an owner who works with a hired crew. Indeed, gyppo loggers take pride in their hands-on work in the woods beside other members of their crews. Gyppo logging can be hard on family life because of the frequent moves. As one ex-gyppo logger interviewed for this work observed:

We quit logging because we wanted to have a family and settle down in one place. We wanted our kids to go to the same school all year long. We didn't really quit because of the change in the industry, it was that the lifestyle just got to be too hard on how we wanted to raise our kids.

Local independents or company loggers also work alongside the gyppo operators. These workers usually live in or near the town where the mill is located and operate their business from a fixed location. Among local independents, company loggers, and the gyppos, the people cutting trees, called sawyers or fallers, have the most prestige and danger and they are usually the most well paid members of logging crews. Sawyers usually work their way up from other jobs or they learn from their relatives working in the woods. These highly skilled and dangerous jobs earn the respect of other woods workers.

The buckers, riggers, “cat” operators, road builders, and log truck drivers each have their own place in the logging hierarchy. Collectively they have a fierce pride in their work and describe it as a way of life that is, in part, made meaningful because of the opportunity to “work in the woods.” Furthermore, the level of skills required often takes an extended period of time to learn. One of the current concerns in communities such as Clancy, Dillon, and Deer Lodge is the ongoing loss of “infrastructure” and the skill loss that accompanies that loss. As one mill operator noted:

You are not just going to replace those people overnight. We are losing that infrastructure and we will not be able to replace it in a short space of time. We need to do something to keep the skills up or we will not be able to do anything with the timber if it does become available.

These workers often describe themselves as people who care about forests and their health. As one small mill operator observed:

I am not an environmentalist, but I am a conservationist and I care about what happens out there. The health of the forest is important for my business and for my family's future. If we don't take care of it, then it isn't going to be there. I know I want my kids to have the same opportunity I have had to enjoy the woods and to get to know it. You learn from being close to it and it isn't something you get from a book.

This is an important tenet for many in the timber industry who believe that their hands-on knowledge base is an important, but under-valued asset.

Pride in their work and their sense of being practicing conservationists is in contrast to what some loggers perceive as a stigmatization of their occupational identity. “Environmentalists” and their supporters are often credited with blaming sawyers and other woods workers for “destroying the forest.” Some argue that even schools paint a false picture of logging and its ways of life for those who attend these institutions. One timber industry worker described his distress about this type of mischaracterization with the following anecdote:

My daughter came home with some drawings from school. She was telling me what was in the picture and I was telling her how much I liked them. She came to this one picture of a tree. She told me it was a tree and she said to me, "Dad it is not good to cut a tree, bad people cut trees." I asked her who told her that and she told me her teacher.

Right then, I said to her that we had to have a talk. And we talked about cutting trees and what it means to be in the woods. It bothered me. It just really bothered me that she was learning that my way of life is considered a "bad thing." My family is in the business and I wouldn't mind my children being in the business. It just makes me, well, I don't even know the word for how it makes me feel, just confused.

Although some perceive a continuing stigmatization of their profession, others are unbothered by what they assess as an irrational reaction and misinformed evaluation of their work. Loggers have a strong sense of occupational identity that is tied to a lifestyle. They work in a natural environment that they believe they understand well. As the wife of one logger noted:

It is just a pleasure to be in the woods with him, he sees things I would never see. He knows the big picture out there and I trust what he knows.

This connection of lifestyle, occupation, and place constructs a complex identity for loggers. The loss of a job for a logger is thus more than a missing paycheck; it also means changing a valued way of life.

The mills are now much fewer in number in project count communities than fifteen years ago. The Stoltze Mill in Dillon closed in 1990. This was among the first of many mill closures in western Montana during the 1990s. Today, there are only a few mills operating in the seven project counties. There are three general types of mills in the project area:

- The mill at Deer Lodge, typical of medium to large size mills that use spruce, fir, and pine to produce fingerjoint products, dimensional lumber and studs or plywood
- Post and pole mills that use primarily lodge pole pine to make fence posts, garden stakes, and similar products suited to small diameter timber
- Specialty mills that serve niche markets. An example of this type is the mill in Clancy that saws rough-hewn timber from fir and pine often sold to builders making "western style" homes.

Today, most of the timber processed in these mills is bought from private lands. Timber from public lands constitutes a relatively small part of the overall log supply.

Indeed, the limited amount of federal timber and its economic effects is a topic of ongoing controversy between the timber industry and those who argue that the decrease in federal timber has had negligible economic effects for western Montana communities (e.g. Power and Barrett, 2001).

Some timber industry representatives argue that past forest management plans "guaranteed" a supply of timber to support local mills. However, appeals and other management actions reduced log availability and the "guaranteed" timber supply became a thing of the past. The industry has argued that the USFS has an obligation to support local communities with a timber supply, while their opponents argue that forests have other economic value such as recreation and amenity values. Proponents of the latter point of view suggest that reduced timber supply is not the source of mill problems. New technology, global timber supply and demand issues, and other external economic factors account for mill closures.

One effect of mill closures is a feeling within the timber industry they have been "let down" by the USFS because they did not "stand up" to environmentalists and others who want the forests for "preserves." Instead, the USFS is perceived to have yielded to pressure and violated the "guaranteed cut" they believe was specified in past forest plans. The desire is for enough timber to support local

mills and the lifestyles that accompany it. Again, the tie between lifestyle, place, and occupation contributes to the strength of feelings held by timber industry workers who believe that their lifestyle is not a part of Montana's past, but an essential part of its future.

Although timber jobs are concentrated in only a few areas among the project counties, feelings are intense about the role of federal timber in supporting what has traditionally been an important way of life in western Montana. Although the number of persons living this lifestyle has declined, sentiments about its importance remain strong. These sentiments persist for reasons beyond our ability to explain them, but clearly they are rooted in the connection of lifestyle and place; they are connected to a wider set of concerns in western Montana about changing lifestyles resulting from in-migration and other sources of change beyond local influence. These strong feelings often result in a wide range of resource management concerns, some of which are briefly discussed in the next section.

3.2.2.2 Resource Management Issues

Members of the forest products industry like ranchers expressed both "issue-specific" and "process-related" management concerns. The issue-specific concerns were usually elicited in direct response to questions about forest management concerns and the "process-related" concerns were usually volunteered during other portions of the interviews. Their issues were very similar to ones expressed by ranchers including the threat of noxious weeds, the balance of competing land uses, land management expertise, and the need to give authority to the rangers in the districts who are "on the ground."

The USFS has good competent people but they are not able to do what they know needs to be done.

Fuel hazard reduction was viewed as a serious problem for this group. There was agreement that removal of fuel loads would help to reduce the risk of wildfire. Concerns were also expressed about the problems inherent with living at the wildland-urban interface.

We are at a critical juncture in the management of our forests. We are going to have some major fires and loss of life and properties. People want to live near the forest but they should know the hazards. Many communities are not safe from the threat. We need to identify high hazard areas.

There is frustration about not being allowed to salvage dead trees.

If they are not going to let us go in and salvage dead trees they are not going to let us go in and cut green ones.

People see the wasted wood and they are very frustrated.

In terms of process issues, many people, not just the members of the forest products industry, felt that local interests should come before special interests as expressed in the following.

We can go through the local comment period and agree on all these issues and then special interests voice their opinions and everything comes to a screeching halt.

3.2.3 Urban and Suburban Lifestyles

Most project counties are rural with low population density and a few town centers. Butte-Silver Bow County and, to some extent, Anaconda-Deer Lodge County represent a more urban and suburban lifestyle that contrasts with other project counties. The points of contrast are historical, social, and cultural. Although mining is a historical component of most project counties, large-scale industrial

mining is unique to Butte-Silver Bow and Anaconda-Deer Lodge counties. Similarly, the social organization of other project counties is characterized by distinctions between townspeople and agriculturalists, whereas in Butte-Silver Bow and Anaconda-Deer Lodge counties, the important social distinctions have been “labor” and “union” or “Irish” and “Slovak.” Culturally, these counties have a mix of values, beliefs, and worldviews that are unique because of their diversity.

Population density and the economic structure of these counties is also a distinguishing characteristic that further contributes to a categorization of these counties. In particular, Butte-Silver Bow County represents an “urban” lifestyle within the project counties. Since this lifestyle is unique within these project counties, the socioeconomic and community characteristics of this lifestyle are developed in more detail in the specific county chapters.

This section offers background for the discussion in Chapters 5 and 7. As of 1995, when the Butte-Silver Bow Master Plan was completed, Butte was the most densely populated area in Montana. Butte is different from other cities and towns in Montana because it started out and remained an industrial town for over 100 years. In much of the western United States, cities and towns like Deer Lodge in Powell County and Dillon in Beaverhead County grew up to serve the growing rural population. However, the pattern of settlement was different on the mining frontier where towns were born and died overnight.

The mining frontier of the Far West differed sharply from the normal pattern of America’s westward movement. Ordinarily, as in the westward advances of trappers, stockmen, and farmers, towns and cities arose only after the hinterland had been occupied and only in order to serve a rural population. But on the mining frontier, this process reversed itself. Instant “cities” sprang up along forlorn gulches, often in extremely remote locations, and then the surrounding countryside attracted farmers and ranchers to feed the towns. This was indeed, an “urban frontier” (Malone and Roeder, 1976, p. 65).

Butte is one such town and amazingly, it has survived many boom and bust cycles. Butte was a company town, but at the same time became a “Gibraltar of Unionism.” By 1885, there were 1,800 union miners in Butte (Malone and Roeder, 1976, p. 156). Thousands of immigrants came from Ireland, England, Italy, Germany, Finland, China, and Eastern Europe to work in the mines and smelters. Butte had many ethnic neighborhoods with names like Meaderville, Dublin Gulch, and Seldom Seen. These immigrants left a lasting imprint, not only on Butte, but on much of Montana.

Many residents of Butte are third and fourth generation. They have a strong sense of community and extensive family and social networks. Urbanization is often characterized by particular types of social bonds best described as “single interest” non-kinship based patterns of association. These social bonds tend to be associated with social contexts such as work, clubs, or friends. These contrast with “multiplex” relationships of rural communities, in which social bonds are built around kinship, religious affiliation, and neighborhoods. However, while Butte may be an urban area in terms of population density and governmental structure, interviews suggest that many of its residents share the values, interaction patterns, and attachments to place found in rural southwest Montana towns.

In addition to the environmental and social problems Butte faces from its unique mining history, Butte is facing many of the same problems as other cities throughout the country. Historically, the “downtown” of any city was the simple manifestation of a bounded social and commercial structure. Living downtown was efficient, functional, and desirable. People wanted to live downtown to be near their jobs and where the goods and services they needed were available. However, with the rise of suburbanization, many downtowns have evolved into only employment and entertainment centers. In Butte, entire neighborhoods were even forced to relocate to accommodate mining. Butte’s has shifted from the downtown area to the “Flats” on the south.

3.2.4 Rural Town Centers: Boulder Dillon, Deer Lodge, Ennis

Rural towns represent a social grouping as well as a lifestyle category within the project counties. Communities such as Phillipsburg, Deer Lodge, Ennis, Dillon, Twin Bridges, Whitehall, Sheridan, and Boulder represent rural town centers of varying style and social complexity. Although they are each distinct places, they share values, interaction patterns, and a relationship with nearby rural farm and ranchlands.

The quality of life issues in small towns motivate people to live in these communities. These quality of life issues include: low crime rates; high levels of interpersonal trust; a slower pace of life; volunteerism rather than government as a basis for solving community problems; opportunities for community involvement; a sense of belonging, and, a high value placed on the quality of nearby surroundings. Some popular musicians sing about these types of rural Montana communities as “lifestyles of the poor and fiercely independent.” These communities are not poor, but there are economic constraints that are mitigated by the natural surroundings and community values that residents find meaningful.

Canton-Thompson (1990, 1994) describes a perception of “townspeople” who live in communities such as Dillon and work for government agencies, school districts, retail stores, small businesses, or are employed in service occupations such as physicians or accountants. Townspeople usually do not commute to a distant work site; rather, they are employed near their homes. Townspeople are often long-term residents with the same types of attachments to place as that of their ranching and farming neighbors.

Social relationships are complex. This characteristic is primarily related to the nature of social networks in small and urban communities. In rural town centers, social networks and relationships overlap. The mayor may also be the high school football coach and the only accountant in town. Consequently, interactions with others usually involve multiple role relationships. Such multiple overlapping social networks contribute to the complexity of social relationships. This is a contrast with assumptions of some newcomers, who may find more complexity than expected.

Schools and athletic activities are an integrating force in these communities. As noted, schools, and especially school athletics, become arenas where people interact around common interests and concerns—their children. This illustrates a more general point that common arenas or forums for community interaction tend to promote more community cohesiveness and solidarity in rural towns.

Leadership is important but often in short supply. In most rural towns, economic conditions result in limited time and energy for participating in community life in leadership roles. Leadership emerges in response to specific needs. What might be termed “town fathers” exist in some communities, but not in others. Where they are present, they are an important source of leadership and counsel for residents. In other communities, there is ongoing turn over in leadership roles because leaders simply “burn out” from ongoing demands.

Small towns are often service centers for nearby agricultural communities. Independent owners operate local businesses, although chain stores (often grocery stores) exist in some of the larger communities. However, the “town pumps,” small grocery stores, clothing store, restaurants, and bars are operated by independent owners. Local retailers often struggle in these communities because of competing retail services available in nearby communities such as Butte, Helena, and Bozeman. As one Madison Valley resident noted, “There are things here I can’t get, but you know, Bozeman is only an hour away, and if I need something I can usually wait until I make a shopping trip there.”

Interviews suggest several characteristics and values about this lifestyle.

You know everyone and everyone knows your business.

This is one of the valued characteristics of rural town centers. The corollary to this point is that gossip is an important means of information communication and social control. For younger people and adolescents, the perception that “everyone knows your business” is a curse, whereas for parents it is part of the attraction to living in these communities. When others know enough about their neighbors to identify the usual and unusual, this contributes to a sense of security and familiarity. The prevalence of gossip about the activities and characteristics of others is a usual process that both spreads information and acts to constrain individual behavior. The perception of security appears to be based on an assessment of familiarity with others and the belief that few actions can go unnoticed in a small town.

We accept other people.

There is both a reality and a myth to this sentiment. The mayor of one of the larger rural towns in the project area observed: “We are a live-and-let-live kind of place. We don’t have prejudices here; we accept other people for what they are, as long as we know who they are.” These towns are remarkably homogenous in terms of ethnicity and lack social characteristics that add diversity to other populations. The process of acceptance may be more difficult if individuals fall outside of the range of expectations that tend to be narrower than in urban areas. For example, a rural town resident reported open hostility in public encounters because of his views about natural resource management. “My views are just not the views of other people here and they see me as the enemy. That is not what I expected, but that gets broken down some because of school sports and my kids.”

Mutual support and volunteerism are essential values.

Looking out for your neighbor and providing assistance when needed are part of the small town values in rural America. Similarly, volunteerism is perceived as an indicator of community commitment. “Neighboring” or mutual assistance, along with volunteerism, is expressed in a range of social actions in these communities. Food banks, clothing drives, fund raisers, participation in service clubs, and similar activities are examples of these social actions.

Government should not be in your face.

Rural towns appear to have an ambivalent attitude to government and its intrusion into their lives. This may be part of a more generalized cultural value about individualism, but its specific manifestation is a belief that government should be restrained. As one local official observed:

You are from California right? Well, the last time I was there you couldn’t smoke in a restaurant. They want to do that here. Government shouldn’t be in your face. Why should government get involved in personal behavior or what you want to do with your personal property? For God’s sake, it’s your property! Don’t let any one tell you what to do with it. That is the way we feel here: keep government out of your life as much as possible.

I like it here because it is close to unspoiled Montana.

Natural resources and national forests are important assets associated with rural town living. Living close to “unspoiled Montana” is an asset that enhances the quality of life and, in some instances, mitigates the economic disadvantages associated with a rural town. For example, the Tobacco Root Landscape Analysis provides a description that appears to fit the relationship of the forest to rural town lifestyles:

The Tobacco Roots provide an opportunity for local and regional residents to engage in “lifestyle” recreation opportunities ranging from firewood cutting, weekend camping, fishing, hiking to high mountain lakes, motorized touring, hunting, or simply viewing the scenic peaks from Highway 287 on their way to work. (USFS 1997: VIII:IX-20)

Most of “unspoiled Montana” exists on public lands, and there is an important relationship of these lands to rural town quality of life

We like our outdoor recreation here.

In many ways, public lands are perceived as the front or back yards of those who live in rural towns. That is, these public lands are important because they offer the opportunity to enjoy recreational opportunities that enhance the quality of life. As one resident observed, *We like our outdoor recreation here; it is why we live here. Our recreation is snow machines and four wheelers, and to enjoy that you need space and you need lots of it. And we’ve got that space here.* Without public lands, the recreation opportunities available, or at least widespread access to those opportunities, would be more limited.

It’s a hard place to get a job.

Employment opportunities are limited in these rural communities, and often townspeople will work multiple jobs to make ends meet. The employment opportunities for high school and college-age young people are limited or non-existent in most rural towns within the project area. This is contributing to the out-migration and changing demographics of these rural communities.

Town economies are often dependent on natural resource uses. In communities such as Dillon, where the Stoltze Mill operated from the early 1970s until 1990, the mill was a source of well paying jobs that diversified the local economy and provided a source of jobs for young people. The reasons for mill closures are a controversial topic among economists and local residents alike, but small towns perceived these types of mills or mines as resources that gave them a future. Without these resources, there is a sense of economic vulnerability that is unsettling.

3.2.5 Recreation

Recreation is a component of most lifestyles within the project area. The substantial recreational opportunities for fishing, hunting, hiking, horseback riding, ORV use, skiing, and sightseeing are an important element of the overall quality of life for residents. The importance of recreation became evident during interviews in each of the project counties. Again, it is necessary to emphasize that this discussion does not identify recreationists as a lifestyle group in the same way as ranchers or other lifestyles groups. Rather recreation is discussed as a noteworthy component of the values and beliefs that enhance the quality of life for most community residents.

There are several patterns of recreation activity among area residents. One is the weekend recreationist who works full time and has limited opportunity for either before or after work activity. The weekend recreationist is perhaps more common in the urban and suburban areas of the project counties, especially in Butte and Anaconda. For these individuals, the recreation opportunities of nearby streams and forest lands are an important asset of the region. Recreation is integrated into their lifestyles as a “getaway” or “break” from other obligations. These recreational opportunities are a significant contribution to the perceived quality of life in southwest Montana.

A second pattern of recreation activity is the “everyday” recreationist that works or lives in the rural towns, subdivisions, and rural farm areas and has greater opportunity for their chosen activity. For these individuals, recreation is among the most important quality of life attributes. They have either moved to the counties, or stay in the counties, because of recreational opportunities. Other components of life are structured around the opportunity to recreate. They may hunt or fish before or after work and otherwise integrate recreational activity into their daily lives.

A third activity pattern is the commercial recreationist who incorporates outfitting and guiding as part of their work and recreation life. Some are ranchers or farmers who may use recreation as a means to economic diversification. Others operate a full-time or seasonal business as outfitters and employ some local residents as guides for hunting or fishing. There are also independent guides who have their own clients, both local and from outside the region.

A noteworthy feature of recreationists is their propensity for organizing into interest groups. Most recreational activities have at least one group that advocates for their activity. These groups also serve to organize group events centered around particular activity patterns or as a means to provide education about the activity. Some of these groups are national with local chapters. Others are local sportsman’s clubs that are composed of individuals with a variety of interests. These types of organizations and sportsman’s clubs include: Trout Unlimited; Montana Backcountry Horsemen; Blue Ribbon Coalition (ORV); Jackpine Snowmobile Club; Montana Trail Vehicle Riders Association; Public Lands Access Association; Rocky Mountain Elk Foundation; and the Anaconda Sportsmen. These types of organizations are both a means for people with local interests to share their activity as well as a means to connect to more national interests groups that advocate for their issues.

Although individuals may have a favorite recreational past time, recreation activities appear to be practiced year round. For example, a 1999 study by the Montana Tourism Institute identified resource dependent and non-resource dependent recreational activities by season. Table 3-3 lists resource dependent activities.

Table 3-3. Seasonal Recreational Activities: Montana Tourism Institute Study 1999

| Winter | Spring | Summer | Fall |
|-------------------|-------------------|-------------------|-------------------|
| Walking | Walking | Walking | Walking |
| Wildlife Watching | Wildlife Watching | Wildlife Watching | Wildlife watching |
| Day Hiking | Biking | Picnicking | Hunting |
| | Picnicking | Swimming | |

Source: Montana Department of Tourism: 1999.

This study also reported the percentages of households surveyed that participate in various types of “natural resource dependent” activities and their ranking within all recreational activities. Table 3-4 shows these percentages, suggesting that outdoor recreation activities that rely on natural resources rank among the most frequent recreational activities of Montana households.

Table 3-4. Participation in Resource Dependent Recreational Activities of Montana Households

| Resource Dependent Activity | Percent of Households | Rank among all activities |
|-----------------------------|-----------------------|---------------------------|
| Wildlife Watching | 52 | 3 |
| Day Hiking | 37 | 5 |
| Picnicking | 31 | 9 |
| Nature Photography | 29 | 10 |
| Fishing (non flyfishing) | 27 | 15 |
| Hunting | 18 | 20 |
| Tent Camping | 18 | 21 |
| Horseback Riding | 15 | 23 |
| Fly Fishing | 13 | 25 |
| Motor Boating | 13 | 25 |
| Vehicle Camping | 13 | 25 |
| Backpacking | 12 | 28 |
| Non Motor Boating | 11 | 29 |
| Sledding | 11 | 29 |
| ATV/Off Road recreation | 10 | 31 |
| Downhill Skiing | 10 | 31 |
| Snowmobiling | 7 | 31 |
| Water Skiing | 6 | 33 |
| Cross Country Skiing | 5 | 34 |
| Ice Fishing | 5 | 25 |
| Snowboarding | 4 | 35 |
| Snowshoeing | 2 | 37 |

Source: Montana Department of Tourism 1999

For this project, the following recreation activities, opportunities, and concerns were described during interviews with residents of the seven project counties:

- *Fishing.* In almost every county in the project area there are exceptional opportunities for hunting and fishing recreation. The trout streams are described as “blue ribbon” or “world renowned” and they attract residents as well as visitors from Bozeman, Missoula, and all areas of the United States and beyond. The local, regional, and national draw of these resources has resulted in a high demand for fishing opportunities. One response has been to impose restrictions on non-resident fishing access to some rivers, including the Big Hole, and Beaverhead Rivers. This increases opportunities for local recreational fishermen and manages overcrowding on prime fishing resources. Another concern related to recreational fishing is the relative allocation of water for fish habitat and irrigation. These have been concerns along many of the major rivers, including the Big Hole, Beaverhead, and the Ruby.
- *Hunting.* Although a variety of hunting opportunities exist, the essence of the hunting experience in southwest Montana is elk hunting. Southwestern Montana has a strong elk population that summers in the higher elevations and winters in the valleys, often on private ranchlands. Fall hunting for elk is an activity of significant cultural importance for western Montana residents. In fact, for many, fall elk hunting defines the hunting experience. Out of area hunters from Missoula, Bozeman, and other parts of Montana as well as other states crowd area motels and book with local outfitters for elk hunting. Both the cultural and economic significance of elk hunting for local

residents is noteworthy. Two types of concerns associated with hunting emerged in interviews: hunting ethics and wolf predation. The hunting ethics concern relates directly to the use of ORVs (four wheelers and especially snowmobiles) in hunting elk. Some hunters expressed concern that there is too much hunting from vehicles and that the “sporting chase” is being lost as more people hunt from vehicles. Concerns about wolf predation on elk were noted by both hunters and outfitters. Both groups are concerned that elk are being “decimated” by wolves and also that elk herds are being scattered, therefore making them harder to find and hunt. Outfitters are especially concerned that wolf predation threatens their business.

- *Off Road Vehicle Use.* In a recent Montana Department of Tourism study, 10 percent of households reported participation in ATV/ORV recreation and another 7 percent in snowmobile use. Historically, driving in the wilderness has been an activity enjoyed by local residents. For example, a rancher interviewed for this project describes riding on what are described as “old jeep trails” as a common activity among his peers. He contrasts this with current ORV use on public lands, which he perceives as a significantly different type of activity that is focused more on the machine and less on the experience than in his day. ORV recreation includes riding motor bikes, all terrain vehicles (sometimes called 4x4), four wheel drive trucks, and others include snowmobiles or “snow machines.” ORV use appears to be among the most controversial and difficult topics in current dialogues about recreation activity. ORV users argue for access to public lands and the opportunity to ride trails and roads. Critics of ORV activity note their use creates new trails and roads, degrades the experience of users seeking quiet and solitude, conflicts with horseback riders and trail walkers, promotes the spread of noxious weeds, disturbs wildlife, and creates tension. Critics also argue that the technology of ORV and especially snowmobile use has outpaced travel management planning on public lands and that ORV users have used political influence to unfairly affect travel management decisions on public lands.
- *Horseback Riding.* Horseback riding is a popular activity in rural Montana counties. Individuals, clubs, and commercial outfitters use horses to access the wilderness and roadless areas as well as the trails and roads on most public lands. Organized groups such as the Montana Backcountry Horsemen are advocates for these trails riders, although the group also participates in volunteer clean ups and trail improvement projects on public lands. The concerns of horsemen are about conflicts over trail use, especially with ORV users, trail improvement, and access to roadless and wilderness areas.
- *Hiking, camping, exploring, and wildlife watching.* These activities are among those that many Montana residents enjoy on public lands. For example, the previously mentioned tourism study noted that 53 percent of Montana households surveyed reported wildlife watching as a recreational activity, 37 percent mentioned day hiking, and 31 percent reported picnicking. Local residents value day walks and day rides through public lands as a fulfilling and time efficient way to enjoy their surroundings. One resident noted that hiking trails are where they can often find the most solitude:

You just don't find that many people out there on the trails and when you do it tends to be local people and not visitors. The visitors tend to go on horseback or some other way. Most of them have been supersizing at McDonalds and they usually are not in good shape. Seems like the folks who live here like to walk and a couple mile hike in the woods just seems to set the world right again for me.

These types of recreational activities are ones that are part of the seasonal or everyday recreation patterns of users, and they express the values of living within easy reach of an environment rich with opportunities for relatively low cost recreational activity. Access to public lands and conflicts with motorized users were the types of management issues expressed in interviews with those

who participate in these recreational activities. However, there are certainly a wider range of issues that might be expressed in more focused interviews.

Recreation is part of the lifestyle in most of Montana. It is also important for the residents of the seven project counties, and an important value that contributes to sense of place and attachment to community. "Multiple use" of recreation resources is also an expressed value among recreationists, although interpretations of "multiple use" varies among users. For example, one interpretation is that all types of uses should be possible in most areas of the forest. Another interpretation is that all uses are not compatible in all areas. These different interpretations of the notion of multiple use sometimes result in conflicts among different users. This especially appears to be the case among motorized and non-motorized users of public lands.

4 Land, Demographic, and Economic Context of Project Counties

In this chapter, secondary land use, demographic, and economic data are used to characterize similarities and differences among the seven project counties: Anaconda-Deer Lodge, Beaverhead, Butte-Silver Bow, Granite, Jefferson, Madison, and Powell, as well as to describe how these characteristics are compared to or are influenced by statewide demographic and socioeconomic trends. The demographic and economic data in this chapter present a cross-sectional picture of southwest Montana at one point in time. The county descriptions that follow in the next chapters present some of the same information, but on a county-by-county basis, and in some cases show trends over time. This overview chapter on southwest Montana and each of the county chapters that follow are meant to be both an integral part of this report and at the same time, stand-alone chapters. The seven project counties of southwest Montana have specific cultural, social, demographic, economic, and land use conditions that influence both local ways of life and responses by individuals, groups, and communities to forest management issues.

4.1 Land Ownership and Use

County land ownership and land use are context variables that influence the interaction of forests and forest communities. Land use can affect the perceptions of and demands on forestlands and resources. Regional patterns of major land uses vary considerably from county to county, reflecting differences in soil, climate, topography, ownership, settlement patterns, and other cultural, social, and economic forces. Patterns of ownership, types of land uses, and particular land use issues are topics that influence the socioeconomic context of forest management. Each county has a diverse range of land use issues that may include water quality and availability; abandoned mines; residential sprawl; loss of range, agricultural and recreational lands; Superfund sites; access to federal land; and increased pressures on recreational resources such as the Big Hole and Beaverhead Rivers.

4.1.1 Land Ownership

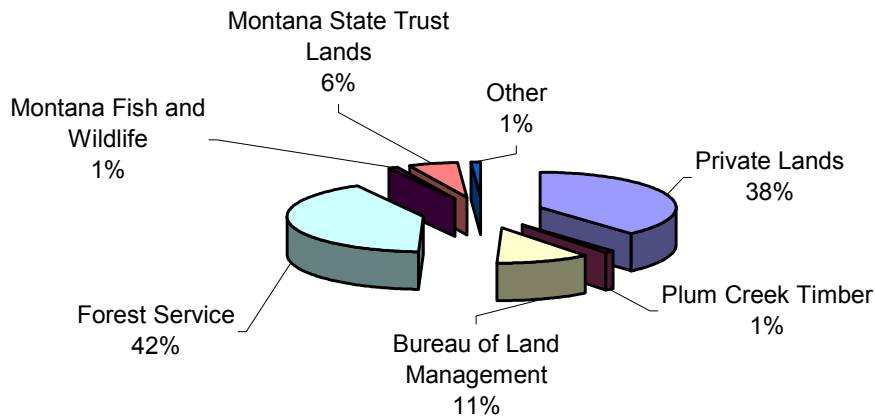
Land ownership is an important issue in southwestern Montana where a majority of the lands are managed by state and federal agencies. The seven counties have a total land base of approximately 10,465,000 acres, and about 42 percent of this land is managed by the USFS. Another 11 percent is managed by the BLM. Only 38 percent of the land in the seven-county study area is under private ownership. Table 4-1 shows land ownership, number of acres, and the percent of the total land base of each owner for the study area as a whole. Figure 4-1 shows land ownership patterns for the study area. Table 4-2 provides a breakdown on the percent of land owned by the USFS in each of the seven counties. USFS ownership ranges from a low of 35 percent of total land area in Madison County to a high of 60 percent in Granite County.

Table 4-1. Land Ownership for Study Area

| Ownership | Number of Acres | Percent of Total |
|--|-------------------|------------------|
| Private Lands | 3,984,000 | 38 |
| Plum Creek Timber Lands | 118,000 | 1 |
| National Park Service | 2,160 | <1 |
| U.S. Bureau of Land Management | 1,190,000 | 11 |
| U.S. Bureau of Reclamation | 4,100 | <1 |
| U.S. Department of Agriculture Research Stations | 16,000 | <1 |
| U.S. Fish and Wildlife Service | 45,170 | <1 |
| U.S. Forest Service | 4,297,000 | 41 |
| Montana Fish, Wildlife, and Parks | 118,200 | 1 |
| Montana Institutions (Prisons, Hospitals) | 36,100 | <1 |
| Montana State Trust Lands - DNRC | 604,600 | 6 |
| Montana University System | 3,400 | <1 |
| Water | 42,800 | <1 |
| Total | 10,461,530 | 1 |

Source: Montana State Library. <http://nris.state.mt.us/mapper/ThemeList>.

Figure 4-1. Percent of Ownership for the Major Land Owners for Study Area Counties



Source: Montana State Library, 2001.

Note: Total area in all seven counties is approximately 10,465,000 acres.

Table 4-2. U.S. Forest Service Land Ownership in Study Area Counties

| County | Percent of Ownership for U.S. Forest Service |
|---------------------|--|
| Beaverhead | 38 |
| Butte-Silver Bow | 41 |
| Anaconda-Deer Lodge | 37 |
| Granite | 60 |
| Jefferson | 43 |
| Madison | 35 |
| Powell | 43 |

Source: Montana State Library (2001).

Table 4-3 compares the land ownership patterns in the study area counties. Data were gathered using Montana Natural Resources Information System's new interactive Internet mapping tools.

Table 4-3. Land Ownership County by County for the Study Area Counties

| Land Owner | Anaconda Deer Lodge | Beaverhead | Butte- Silver Bow | Granite | Jefferson | Madison | Powell | Total |
|--|---------------------------|------------------|-------------------------|------------------|------------------|------------------|---------------------|-------------------|
| Private Lands | 233,000 | 1,090,000 | 196,000 | 348,000 | 464,000 | 1,074,000 | 579,000 | 3,984,000 |
| Plum Creek Timber Lands | 0 | 0 | 0 | 41,000 | 0 | 0 | 77,000 | 118,000 |
| National Park Service | 0 | 660 | 0 | 0 | 0 | 0 | 1,500 | 2,160 |
| U.S. Bureau of Land Management | 5,000 | 670,000 | 46,000 | 38,000 | 97,000 | 252,000 | 82,000 | 1,190,000 |
| U.S. Bureau of Reclamation | 0 | 4,100 | 0 | 0 | 0 | 0 | 0 | 4,100 |
| U.S. Department of Agriculture Research Stations | 0 | 16,000 | 0 | 0 | 0 | 0 | 0 | 16,000 |
| U.S. Fish and Wildlife Service | 0 | 39,000 | 0 | 0 | 1,600 | 170 | 4,400 | 45,170 |
| U.S. Forest Service | 174,000 | 1,373,000 | 189,000 | 657,000 | 460,000 | 805,000 | 639,000 | 4,297,000 |
| Montana Fish, Wildlife, and Parks | 50,000 | 20,000 | 14,000 | 0 | 3,200 | 21,000 | 10,000 | 118,200 |
| Montana Institutions (Prisons, Hospitals) | 1,100 | 0 | 0 | 0 | 0 | 0 | 35,000 ^a | 36,100 |
| Montana State Trust Lands - DNRC | 7,600 | 333,000 | 13,000 | 21,000 | 33,000 | 143,000 | 54,000 | 604,600 |
| Montana University System | 0 | 0 | 0 | 0 | 0 | 0 | 3,400 | 3,400 |
| Water | 2,600 | 19,000 | 400 | 3,600 | 1,900 | 10,000 | 5,300 | 42,800 |
| Total | 474,000 | 3,566,000 | 460,000 | 1,108,000 | 1,061,000 | 2,305,000 | 1,491,000 | 10,465,000 |

Source: Montana Natural Resource Information System On Line Mapping, nris.state.mt.us/mapper/county/html, February 19, 2002.

4.1.2 Major Uses or Land Cover Type

The information in Table 4-4 was assembled from the Montana Natural Resource Information System On-Line Mapping system. Table 4-4 presents the type of land use as a percentage of the total land area for individual counties and for the study area as a whole. For the study group as a whole, the major land use type is evergreen forest, an estimated 43.4 percent of the total land area. Approximately 17 percent of total land area is in brush rangeland, and another 17 percent is grass rangeland. Mixed rangeland accounts for just over 9.2 percent of the total and crop/pasture accounts for another 7 percent.

Table 4-4. Type of Land Use as Percent of Total Area for Selected Counties and Study Area

| Type | County | | | | | | | Study Area |
|---------------------------------|------------|-----------------------|-------------------------|---------|-----------|---------|--------|------------|
| | Beaverhead | Butte - Silver Bow | Anaconda- Deer Lodge | Granite | Jefferson | Madison | Powell | |
| Brush Rangeland | 32.70 | 11.10 | - | 6.53 | 4.69 | 16.54 | 8.20 | 17.55 |
| Evergreen Forest | 31.83 | 47.99 | 59.62 | 69.99 | 51.94 | 26.52 | 60.47 | 43.40 |
| Crop/Pasture | 6.22 | 1.76 | 9.02 | 4.57 | 7.01 | 11.89 | 8.33 | 7.46 |
| Grass Rangeland | 13.38 | 27.47 | 8.09 | 0.97 | 29.32 | 37.73 | 2.16 | 17.32 |
| Mixed Rangeland | 10.51 | 4.87 | 7.99 | 14.64 | 6.28 | 0.85 | 16.88 | 9.21 |
| Exposed Rock | 0.18 | 0.02 | 5.79 | 1.17 | 0.02 | 0.01 | 2.24 | 0.75 |
| Mines/Quarries | 0.02 | 1.28 | 3.33 | 0.08 | 0.06 | 0.11 | 0.02 | 0.23 |
| Wetland | 1.32 | - | 1.80 | 0.48 | - | 0.12 | 0.13 | 0.61 |
| Wetland | 1.21 | - | 1.66 | - | - | 0.10 | 0.12 | 0.51 |
| Residential | 0.03 | 1.00 | 0.59 | 0.07 | 0.07 | 0.03 | 0.05 | 0.11 |
| Reservoir | 0.26 | - | 0.48 | 0.22 | 0.03 | 0.10 | 0.02 | 0.16 |
| Transportation/Utilities | 0.10 | 0.80 | 0.38 | 0.14 | 0.28 | 0.03 | 0.15 | 0.16 |
| Bare Tundra | 0.80 | - | 0.32 | 0.01 | - | 0.45 | 0.17 | 0.40 |
| Mixed Forest | 0.54 | 3.00 | 0.19 | 0.27 | - | 0.77 | 0.55 | 0.60 |
| Mixed Tundra | 0.06 | - | 0.17 | - | - | - | 0.03 | 0.03 |
| Grass Tundra | 0.08 | - | - | - | - | 2.23 | 0.02 | 0.48 |
| Deciduous Forest | 0.26 | 0.04 | 0.15 | 0.77 | - | 0.17 | 0.08 | 0.23 |
| Industrial | - | 0.06 | 0.11 | - | - | - | 0.03 | 0.01 |
| Industrial/Commercial Complexes | - | 0.04 | - | - | - | - | - | 0.00 |
| Commercial /Services | 0.01 | 0.24 | 0.10 | 0.00 | 0.03 | 0.01 | 0.04 | 0.03 |
| Sand | - | 0.03 | - | - | - | - | 0.07 | 0.01 |
| Shrub Tundra | 0.38 | - | 0.07 | - | 0.14 | 2.09 | 0.08 | 0.58 |
| Lake | 0.05 | - | 0.05 | 0.05 | 0.06 | 0.21 | 0.15 | 0.10 |
| Other Urban Built Up | 0.02 | 0.22 | 0.04 | 0.01 | 0.01 | 0.00 | 0.00 | 0.02 |
| Transitional | 0.01 | 0.04 | 0.03 | 0.01 | 0.04 | - | - | 0.01 |
| Other Ag | 0.02 | 0.01 | 0.02 | 0.01 | 0.00 | 0.01 | 0.01 | 0.01 |
| Mixed Urban Built | 0.01 | 0.02 | 0.01 | 0.02 | 0.01 | 0.02 | 0.01 | 0.01 |
| Confined Feeding | 0.00 | - | - | - | - | - | 0.01 | 0.00 |

Source: Montana Natural Resource Information System On-Line Mapping, nris.state.mt.us/mapper/county/html, February 19,2002.

Table 4-5 shows acreage held in private, U.S. Fish and Wildlife Service, and state conservation easements, and acreage for special use in each of the study area counties, including BLM special lands, research natural areas, and wilderness areas. The percent of land in each county in state conservation easements or designated as special use areas, ranges from a low of 1.4 percent of Jefferson County to a high of 22.4 percent of Powell County. Conservation easements and special use designations account for approximately 10 percent of the land area in the study area counties.

Table 4-5. Conservation Easements and Special Use Designation in Study Area Counties

| County | Conservation Easements | | Special Designation Land Use | | Total of Conservation Easements and Special Designation Land Use | |
|----------------------|------------------------|-------------|------------------------------|-------------|--|-------------|
| | Acres | % of Total | Acres | % of Total | Acres | % of Total |
| Anaconda- Deer Lodge | 3,245 | 0.68 | 55,779 | 11.77 | 59,024 | 12.45 |
| Beaverhead | 64,960 | 1.82 | 74,390 | 2.09 | 139,350 | 3.91 |
| Butte-Silver Bow | 2,356 | 0.51 | 7,868 | 1.71 | 10,224 | 2.22 |
| Granite | 16,676 | 1.51 | 73,605 | 6.64 | 90,281 | 8.15 |
| Jefferson | 10,895 | 1.03 | 2,275 | 0.21 | 13,170 | 1.24 |
| Madison | 186,459 | 8.09 | 171,307 | 7.44 | 357,766 | 15.53 |
| Powell | 57,519 | 3.86 | 276,880 | 18.56 | 334,399 | 22.42 |
| Study Area | 342,110 | 3.27 | 662,104 | 6.33 | 1,004,214 | 9.60 |

Source: Montana Natural Resource Information System On-Line Mapping, nris.state.mt.us/mapper/county/html, February 19, 2002.

Table 4-6 compares number of farms, full-time farms, acreage, average size of farms, market value of agricultural crops, and average market value of farms for 1992 and 1997. Table 4-6 also includes the value of crop sales and livestock sales for 1997. The number of farms in Beaverhead, Butte-Silver Bow, Anaconda-Deer Lodge, Jefferson, and Madison increased between 1993 and 1997. However, the number of full-time farms only increased in Butte-Silver Bow, Anaconda-Deer Lodge, Jefferson, and Madison Counties. The number of full-time farms decreased in Beaverhead, Granite, and Powell Counties. The amount of acreage in farm land decreased in all of the counties except Butte-Silver Bow and Jefferson, which experienced only slight changes in total acreage. The average size of farms decreased between 1993 and 1997 in all of the study area counties.

The market value of agricultural products decreased in all of the counties except Butte-Silver Bow. The average market value of agricultural products per farms decreased in Beaverhead, Anaconda-Deer Lodge, Jefferson, and Madison Counties. The average market value in Powell remained almost the same, while Butte-Silver Bow experienced an 18 percent increase. Granite County experienced a 13 percent increase. Livestock sales account for the majority of agricultural products revenue, ranging from 72 percent of the total in Madison County, to 93 percent in Butte-Silver Bow County.

Table 4-6. 1997 Census of Agriculture County Profiles for Study Area Counties

| | Anaconda-Deer Lodge | Beaver-head | Butte-Silver Bow | Granite | Jefferson | Madison | Powell |
|--|---------------------|-------------|------------------|------------|------------|------------|------------|
| Number of Farms in 1992 | 70 | 345 | 105 | 138 | 236 | 418 | 233 |
| Number of Farms in 1997 | 83 | 360 | 116 | 117 | 266 | 460 | 230 |
| Number of Full-Time Farms in 1992 | 37 | 239 | 45 | 107 | 125 | 299 | 142 |
| Number of Full-Time Farms in 1997 | 44 | 223 | 51 | 91 | 128 | 316 | 137 |
| Percent Change | 19% | (7%) | 13% | (15%) | 2% | 6% | (4%) |
| Acreage in Farms in 1992 (Acres) | 135,126 | 1,342,484 | 99,746 | 349,938 | 367,482 | 1,271,160 | 675,569 |
| Acreage in Farms in 1997 (Acres) | 101,657 | 1,152,008 | 100,181 | 268,413 | 364,153 | 1,079,502 | 649,489 |
| Percent Change | (25%) | (14%) | - | (26%) | - | (1%) | (4%) |
| Average Size of Farms 1992 (Acres) | 1,930 | 3,891 | 950 | 2,536 | 1,557 | 3,041 | 2,899 |
| Average Size of Farms 1997 (Acres) | 1,225 | 3,200 | 864 | 2,294 | 1,369 | 2,347 | 2,824 |
| Percent Change | (37%) | (18%) | (9%) | (10%) | (12%) | (23%) | (3%) |
| Market Value of Agricultural Products Sold in 1992 (\$) | 4,682,000 | 65,294,000 | 2,476,000 | 10,085,000 | 10,202,000 | 36,738,000 | 18,154,000 |
| Market Value of Agricultural Products Sold in 1997 (\$) | 4,217,000 | 55,374,000 | 3,238,000 | 9,642,000 | 8,565,000 | 35,456,000 | 17,807,000 |
| Percent Change | (10%) | (15%) | 31% | (4%) | (16%) | (3%) | (2%) |
| Crop Sales as % of Market Value in 1997 | 20% | 18% | 7% | 15% | 23% | 28% | 13% |
| Livestock Sales as % of Market Value in 1997 | 80% | 82% | 93% | 85% | 77% | 72% | 87% |
| Average Market Value of Agricultural Products Sold per Farm in 1992 (\$) | 66,883 | 189,258 | 23,585 | 73,081 | 43,228 | 87,890 | 77,913 |
| Average Market Value of Agricultural Products Sold per Farm in 1997 (\$) | 50,807 | 153,815 | 27,910 | 82,417 | 32,198 | 77,079 | 77,423 |
| Percent Change | (24%) | (19%) | 18% | 13% | (26%) | (12%) | - |

Source: 1997 Census of Agriculture County Profile, United States Department of Agriculture, Montana Agricultural Statistics Service.

4.2 Demographic Characteristics and Trends

Information about population characteristics helps describe the general nature of a community or area. An analysis of population trends can help determine if changes are occurring for specific groups defined by age, gender, education level, or ethnicity, thereby influencing the nature of social and economic relationships in the community. Southwest Montana has some distinct demographic characteristics and trends that influence its social and cultural character.

4.2.1 Population Trends

This section presents information on population trends for Montana and the project area counties.

4.2.1.1 Montana Population Trends

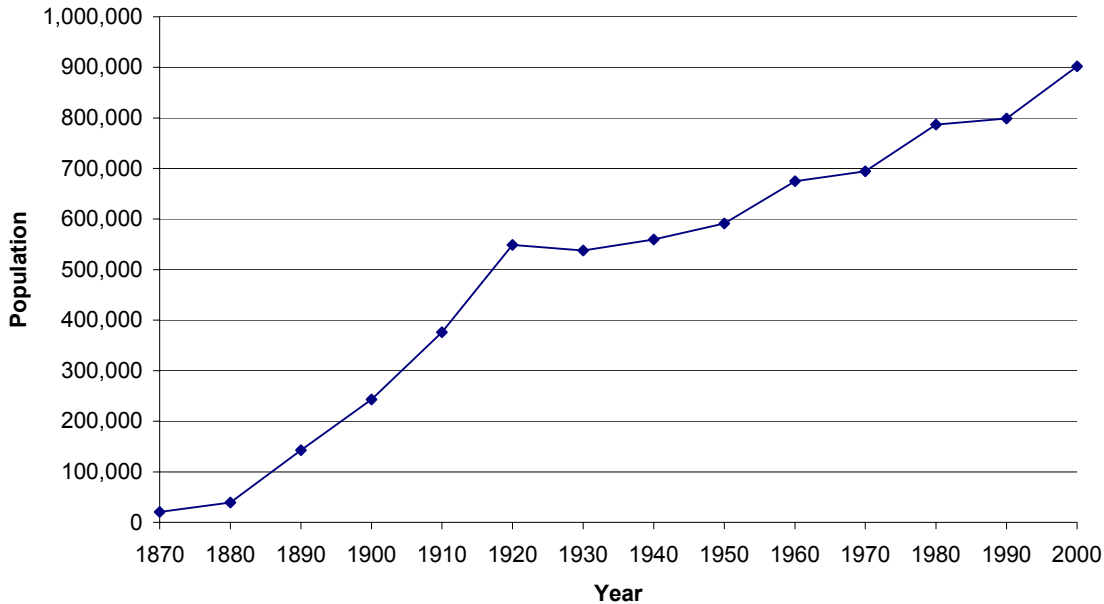
Historical and recent population trends are briefly described in this section. Montana's population increased from 20,595 in the 1870 Census, to 902,195 in the 2000 Census, but the population of Montana and many of the study area counties has always been unstable because of the state's dependence on natural resources. The discovery of new gold fields was followed by the silver boom, then by the discovery and increased demand for copper. These discoveries, along with the opening of transportation routes, and the application of new mining technology, have resulted in a constant shifting of populations in southwest Montana. Figure 4-4 and Table 4-7 show some of these shifts. For example, the population of the state increased 265 percent between 1880 and 1890, when thousands of immigrants from Ireland, England, Canada, Italy, Germany, Finland, Norway, Denmark, Sweden, Austria, Hungary, Croatia, Serbia, and Yugoslavia poured into southwest Montana to work at the mines in Butte or the smelters in Anaconda, East Helena, and Great Falls. Immigration was facilitated by completion of railroad lines to Montana by the fall of 1883.

While the promise of gold and silver brought the first rush of people into the state, expansion of the Enlarged Homestead Act in 1909 drew thousands more. Authorized settlers were allowed to claim 320 acres of non-irrigable, non-mineral lands, having no merchantable timber, on which they had to establish residency for five years and maintain continuous cultivation of crops other than native grasses. Montana's population in 1900 was 243,329, but by 1920, the population had more than doubled to 548,889. Between 1920 and 1930, Montana lost population, dropping from 548,889 in 1920 to 537,606 in 1930. According to Malone and Roeder (1976, p. 241):

Following the collapse of Northern Plains agriculture during the depression of 1918-22, Montana's farmers and ranchers faced a dismal future. Low farm prices and recurring droughts drove many of them from the land and punished those who stayed through the twenties and the "dirty thirties."

Between 1930 and 1940, the population increased slightly (4 percent) and then another 5 percent between 1950 and 1960. Population growth showed a little spurt of growth between 1950 and 1960, increasing around 14 percent. There was another spurt of growth between 1970 and 1980. Between 1980 and 1990, the population increased by only 1.5 percent. However, between 1990 and 2000, the population increased by 12.9 percent, much of this growth in western Montana.

Figure 4-2. Total Population of Montana, 1870-2000



Source: <http://ceic.commerce.state.mt.us/Demog/historic/Censuscty18902000.htm>.

Table 4-7. Population Change for Montana 1870-2000

| Year | Total Population | Population Change | Percent Change |
|------|------------------|-------------------|----------------|
| 1870 | 20,595 | - | - |
| 1880 | 39,159 | 18,564 | 90 |
| 1890 | 142,924 | 103,765 | 265 |
| 1900 | 243,329 | 100,405 | 70 |
| 1910 | 376,053 | 132,765 | 55 |
| 1920 | 548,889 | 172,836 | 46 |
| 1930 | 537,606 | (11,283) | -2 |
| 1940 | 559,456 | 21,850 | 4 |
| 1950 | 591,024 | 31,568 | 5 |
| 1960 | 674,767 | 83,743 | 14 |
| 1970 | 694,409 | 19,642 | 3 |
| 1980 | 786,690 | 92,281 | 13 |
| 1990 | 799,065 | 12,375 | 1.5 |
| 2000 | 902,195 | 103,130 | 12.9 |

Source: <http://ceic.commerce.state.mt.us/Demog/historic/Censuscty18902000.htm>.

4.2.1.2 Population Trends for the Seven Project Area Counties

Table 4-8 presents the population for each of the counties in the study area at 10-year intervals beginning in 1890. Six of the seven counties in the study area, Anaconda-Deer Lodge, Beaverhead, Butte-Silver Bow, Granite, Madison, and Powell make up what was called the Butte Region, which

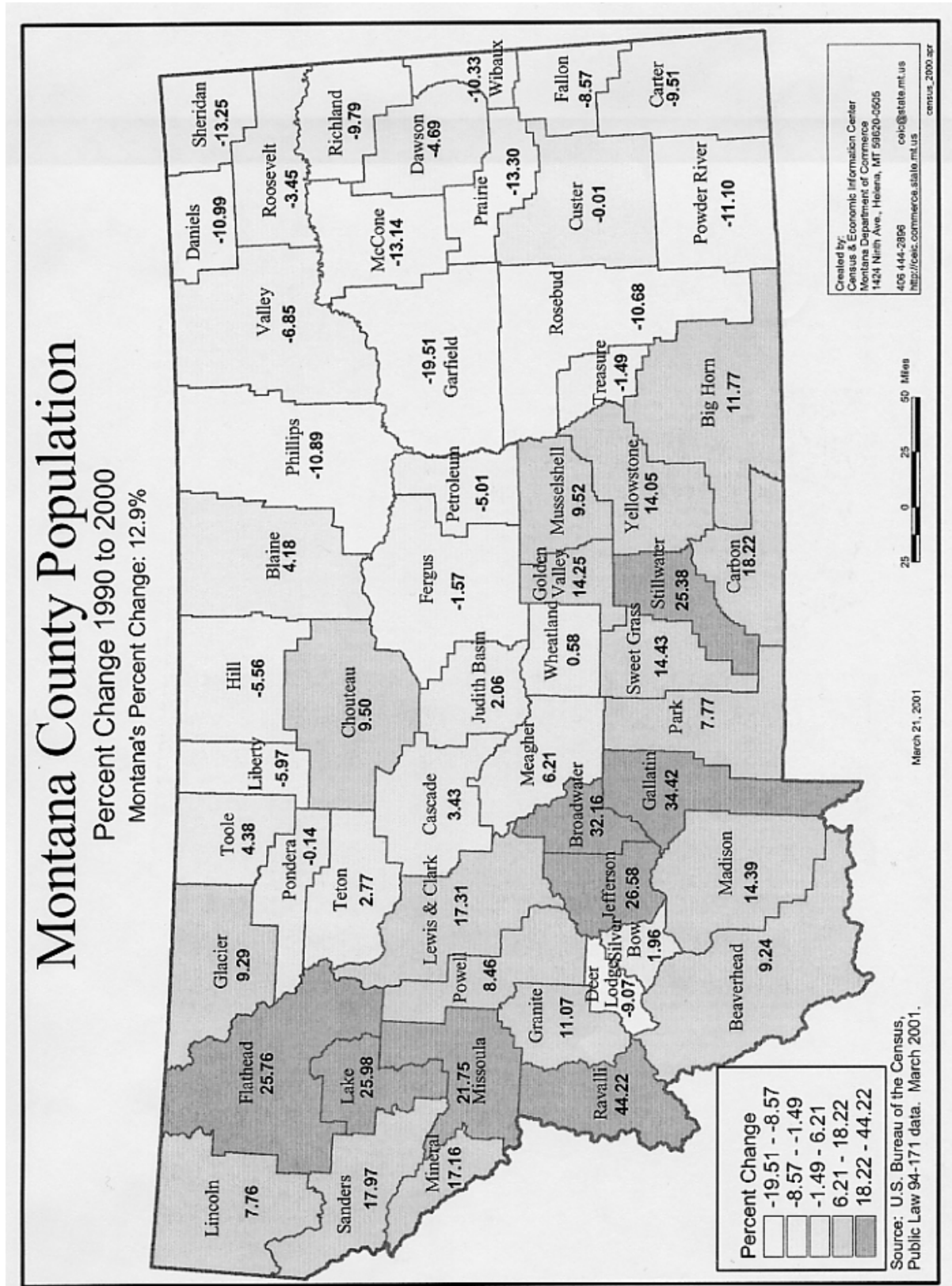
historically has been the most populous region of Montana because of mining. Anaconda had 12,494 residents in 1930 and 12,518 residents as late as 1980. Butte had 41,611 residents in 1920 and Walkerville had 2,391 in 1920. If the populations for these counties are aggregated, population in this region peaked in 1920. Figure 4-3 shows the percent of population change for Montana counties between 1990 and 2000.

Table 4-8. Seven County Project Area, Population, 1890-2000.

| County | Year | | | | | | | | | | | |
|---------------------|--------|--------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|
| | 1890 | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | 2000 |
| Beaverhead | 4,655 | 5,615 | 6,446 | 7,369 | 6,654 | 6,943 | 6,671 | 7,194 | 8,187 | 8,186 | 8,424 | 9,202 |
| Butte-Silver Bow | 23,744 | 47,635 | 56,848 | 60,313 | 56,969 | 53,207 | 48,422 | 46,454 | 41,981 | 38,192 | 33,941 | 34,606 |
| Anaconda-Deer Lodge | 15,155 | 17,393 | 12,988 | 15,323 | 16,293 | 13,627 | 16,553 | 18,640 | 15,652 | 12,518 | 10,356 | 9,417 |
| Granite | - | 4,328 | 2,942 | 4,167 | 3,013 | 3,401 | 2,773 | 3,114 | 2,737 | 2,700 | 2,548 | 2,830 |
| Jefferson | 6,026 | 5,330 | 5,601 | 5,203 | 4,133 | 4,664 | 4,014 | 4,297 | 5,238 | 7,029 | 7,939 | 10,049 |
| Madison | 4,692 | 7,695 | 7,229 | 7,495 | 6,323 | 7,294 | 5,998 | 5,211 | 5,014 | 5,448 | 5,989 | 6,851 |
| Powell County | | | 5,904 | 6,909 | 6,202 | 6,152 | 6,301 | 7,002 | 6,660 | 6,958 | 6,620 | 7,180 |
| Total | 54,272 | 87,958 | 97,958 | 106,779 | 99,587 | 95,288 | 90,732 | 91,912 | 85,469 | 81,031 | 75,817 | 80,135 |

Source: U.S. Census Bureau Census 2000.

Figure 4-3. Population Change of Montana Counties, 1990-2000



4.2.1.3 Most Recent Population Changes

Table 4-9 presents the most recent information available on population changes for the counties in the study area. The population decline in Anaconda-Deer Lodge has continued with a 2.6 percent decrease between April 1, 2000 and July 1, 2001. However, the populations in Beaverhead, Powell, and Silver Bow also declined at rates of 1.2, 1.4, and 2.9 percent, respectively. Jefferson County continued to show a growing population with an increase of 3.5 percent. Interview data suggest that this growth is occurring in the communities that are within commuting distance of Helena and in the south county near Whitehall. The growth or decline of population has a greater relative impact in smaller, rural areas. The smaller and less dense population base found in rural areas makes delivery of basic services more difficult. In urban areas, the logistics and mechanisms for providing public services produce economies of scale impossible for rural areas to duplicate.

Table 4-9. Change in County Populations from April 1, 2000 to July 1, 2001

| County | April 1 2000 | July 2001 | Change | Percent Change |
|---------------------|--------------|-----------|--------|----------------|
| Anaconda-Deer Lodge | 9,417 | 9,171 | -246 | -2.6 |
| Butte-Silver Bow | 34,606 | 33,604 | -1,002 | -2.9 |
| Beaverhead | 9,202 | 9,089 | -113 | -1.2 |
| Granite | 2,830 | 2,899 | 69 | 2.4 |
| Jefferson | 10,049 | 10,405 | 356 | 3.5 |
| Madison | 6,851 | 6,939 | 88 | 1.3 |
| Powell | 7,180 | 7,076 | -104 | -1.4 |

Source: U.S. Census Bureau

4.2.1.4 Components of Population Growth for Montana and Seven Study Area Counties

Populations increase or decrease in response to three variables that can change over time: fertility, mortality, and net migration. A variable such as mortality rate is stable and changes slowly. Fertility, while moderately stable, is more variable than mortality and has been known to change substantially over a 5 to 10 year period. Fertility rates are affected by economic and social trends and public policy.

Migration is the most unstable of the variables that affect population growth. This instability is demonstrated in Table 4-10. While the population in Montana is estimated to have grown from 902,195 on April 1, 2000 to 904,433 on July 1, 2001, according to the Census Bureau, the state experienced a net out-migration of 1,377. Growth in the state population appears to be the result of a natural increase in the population during this period, which offset the population out-migration.

In contrast to the state as a whole, four of the study area counties lost population during this period. In the case of Beaverhead County, the loss appears for the most part to be the result of out-migration. In Deer Lodge County, fertility and mortality rates along with out-migration appear to be contributing factors to the decline in population. Jefferson and Butte-Silver Bow Counties also lost population because of out-migration. Granite and Madison Counties' small increase in population appear to be the result of in-migration. Jefferson County's population increase also appears to be due to in-migration.

Important factors that influence in- and out-migration include employment opportunities, the physical environment, perception of regional, state, and local government taxing policies, labor markets, cost of living, population composition, and local and state social legislation. The USFS is a major landowner and employer in these counties, and USFS policies have impacts on employment

opportunities, the physical environment, and the perception of the region. In July 2002, the Forest employed 201 full-time employees and 200 temporary employees.¹⁴

**Table 4-10. Components of Population Change for Montana and 7 Study Area Counties
April 1, 2000 to July 1, 2001**

| Place | Births | Deaths | Natural Increase (Births-Deaths) | Net International Migration | Net Internal Migration | Population Change | April 1 2000 Population | July 1, 2001 Population |
|---------------------|--------|--------|-------------------------------------|-----------------------------|------------------------|-------------------|-------------------------|-------------------------|
| Montana | 13,320 | 10,165 | 3,155 | 470 | -1,377 | 2,238 | 902,195 | 904,433 |
| Anaconda-Deer Lodge | 109 | 180 | -71 | 1 | -179 | -246 | 9,417 | 9,171 |
| Beaverhead | 129 | 96 | 33 | 7 | -155 | -113 | 9,202 | 9,089 |
| Butte-Silver Bow | 478 | 560 | -82 | 19 | -951 | -1,002 | 34,606 | 33,604 |
| Granite | 22 | 42 | -20 | 1 | 86 | 69 | 2,830 | 2,899 |
| Jefferson | 106 | 112 | -6 | 2 | 351 | 356 | 10,049 | 10,405 |
| Madison | 75 | 89 | -14 | 14 | 89 | 88 | 6,851 | 6,939 |
| Powell | 85 | 71 | 14 | 5 | -123 | -104 | 7,180 | 7,076 |

Source: Population Division, U.S. Census Bureau Released April 29, 2002.

Note: Net internal migration is the difference between in-migration and out-migration.

For an area to increase in population the birth rate must exceed the death rate and this natural rate of increase must exceed any out-migration that occurs. Alternatively, population may increase if in-migration adds enough people to an area to offset losses from a natural decrease. Between 1990 and 1999, the birth rate in Montana has decreased while the death rate has increased slightly (Table 4-11). The birth rate in the counties for which data is available declined during that period. The death rate has declined in Madison and Beaverhead Counties and has increased in Butte-Silver Bow and Jefferson Counties over the same period.

Table 4-11. Birth and Death Rates for Study Area Counties and State, 1990, 1995, and 1999

| County | Birth Rate | | | Death Rate | | |
|---------------------|------------|------|------|------------|------|------|
| | 1999 | 1995 | 1990 | 1999 | 1995 | 1990 |
| Anaconda-Deer Lodge | n/a | n/a | n/a | n/a | n/a | n/a |
| Beaverhead | 10.8 | 16.5 | 15.6 | 7.7 | 7.4 | 8.8 |
| Butte-Silver Bow | 11.3 | 11.8 | 13.6 | 12.6 | 13.5 | 11.5 |
| Granite | n/a | n/a | n/a | n/a | n/a | n/a |
| Jefferson | 8.5 | 10 | 13.2 | 9.1 | 6.8 | 8.1 |
| Madison | 8.1 | 11.3 | 12.7 | 10.9 | 9.9 | 12.4 |
| Powell | n/a | n/a | n/a | n/a | n/a | n/a |
| State of Montana | 12.2 | 12.8 | 14.5 | 9.2 | 8.7 | 8.6 |

n/a = not available.

Montana Department of Commerce, Census and Economic Information Center. Available at <http://ceic.commerce.state.mt.us/>. Available at <http://ceic.commerce.state.mt.us/>.

¹⁴ Personal communication Janet Bean-Dochnah/R1/USDAFS [jbeandochnah@fs.fed.us], September 29, 2002.

One of the population categories in the decennial census is a count of individuals living in group housing. This category is divided between:

- “Institutionalized persons” which includes individuals who are under formally authorized supervised care or custody in the institution at the time of the census enumeration. Institutions include correctional facilities, nursing homes, and psychiatric hospitals.
- “Non-institutionalized group quarters” which include all persons living in group quarters that are not institutions, such as rooming houses, group homes, college dormitories, and bunkhouses for ranch hands.

Table 4-12 shows the number of individuals in group quarters and the percentage of the total population of each county that reside in group quarters. While Census 2000 gives the population of Powell County as 7,180, almost 20 percent of the total population of Powell County lives in institutionalized group quarters, most likely as residents of the Montana State Prison at Deer Lodge, which is designated to maintain a population of 1,300 adult males. The prison employs approximately 600 people.¹⁵ The 218 individuals in institutional housing in Anaconda-Deer Lodge County are probably patients at Montana State Hospital in Warm Springs.

The higher numbers of the population in non-institutionalized group quarters in Beaverhead County (416) and Butte-Silver Bow County (377) probably reflect in part the student populations at University of Montana Western in Dillon and Montana Tech in Butte.

Table 4-12. Population in Group Quarters in the Seven County Study Area

| | Anaconda- Deer Lodge | Beaverhead | Butte-Silver Bow | Granite | Jefferson | Madison | Powell |
|-----------------------|-------------------------|------------|------------------|---------|-----------|---------|--------|
| Institutionalized | 218 | 78 | 715 | 21 | 204 | 65 | 1,403 |
| % of Total Population | 2.3 | 0.8 | 2.1 | 0.7 | 2.0 | 0.9 | 19.5 |
| Non-institutionalized | 153 | 416 | 377 | 11 | 17 | 9 | - |
| % of Total Population | 1.6 | 4.5 | 1.1 | 0.4 | 0.2 | 0.1 | - |

Source: U.S. Census Bureau, Census 2000.

4.2.2 Population Density

Despite recent growth in population, Montana is still classified as a “frontier” state by the criteria established by the Frontier Education Center.¹⁶ This status is based in part on population size and in part on the amount of land owned by the federal government. Small populations and a limited amount of land available for private ownership and taxation make it more difficult for communities to provide their own basic infrastructure. The aggregated population density is about 80 persons per square mile in the United States in contrast to Montana, which has a population density of just over 6 persons per square mile. Table 4-13 shows the population, land area, and population density for the United States and the western states.

The seven counties surrounding the B-DNF are among the least densely populated areas of the United States. Table 4-14 shows the population, population density, and land area for each of the counties in the study area. Beaverhead County is the largest county in Montana, larger than the states

¹⁵ Montana State Prison at <http://www.cor.state.mt.us/css/divisions/MontanaStatePrison.asp>.

¹⁶ *The Geography of Frontier America: The View at the Turn of the Century*, January 2000, Frontier Education Center www.nal.usda.gov/ric/richs/frontierinventory.htm.

of Rhode Island and Connecticut combined. While it is the largest county in the study area, it has the third lowest population and close to the lowest population density. In contrast, Butte-Silver Bow has the highest population and density, but the least land area of the counties in the study area. It is one-eighth the size of Beaverhead County. Not surprisingly, among the study area counties, Butte-Silver Bow County shows the highest population density and Beaverhead County the next to the lowest density as indicated in Table 4-14.

Table 4-13. Population, Land Area, and Density for Western States and U.S.

| | Population | Land Area | Density (Persons per Square Mile) |
|----------------------|-------------------|------------------|--|
| United States | 281,421,906 | 3,536,278 | 80 |
| Alaska | 626,932 | 570,374 | 1 |
| Arizona | 5,130,632 | 113,642 | 45 |
| California | 33,871,648 | 155,973 | 217 |
| Colorado | 4,301,261 | 103,729 | 41 |
| Hawaii | 1,211,537 | 6,423 | 189 |
| Idaho | 1,293,953 | 82,751 | 16 |
| Kansas | 2,688,418 | 81,823 | 33 |
| Missouri | 5,595,211 | 68,898 | 81 |
| Montana | 902,195 | 145,556 | 6 |
| Nebraska | 1,711,263 | 76,878 | 22 |
| Nevada | 1,998,257 | 109,806 | 18 |
| New Mexico | 1,819,046 | 121,364 | 15 |
| North Dakota | 642,200 | 68,994 | 9 |
| Oregon | 3,421,399 | 96,002 | 36 |
| South Dakota | 754,844 | 75,896 | 10 |
| Utah | 2,233,169 | 82,168 | 27 |
| Washington | 5,894,121 | 66,581 | 89 |
| Wyoming | 493,782 | 97,105 | 5 |
| Total | 74,589,868 | 2,123,963 | 35 |

Source: Source: U.S. Census Bureau, Population Division.

Table 4-14. Census 2000 Total Population, Density, and Land Area for Study Area Counties

| County | Total Population | Land Area in Square Miles | Density (Persons per Square Mile) | Land Area Rank (in State) |
|---------------------|-------------------------|----------------------------------|--|----------------------------------|
| Montana | 902,195 | 145,552 | 6.2 | - |
| Anaconda-Deer Lodge | 9,417 | 737 | 12.8 | 55 |
| Beaverhead | 9,202 | 5,542 | 1.7 | 1 |
| Butte-Silver Bow | 34,606 | 718 | 48.2 | 56 |
| Granite | 2,830 | 1,727 | 1.6 | 40 |
| Jefferson | 10,049 | 1,657 | 6.1 | 42 |
| Madison | 6,851 | 3,587 | 1.9 | 13 |
| Powell | 7,180 | 2,326 | 3.1 | 30 |

Source: U.S. Census Bureau, Released March 21, 2001.

Compiled by: Census and Economic Information Center, Montana Dept. of Commerce.

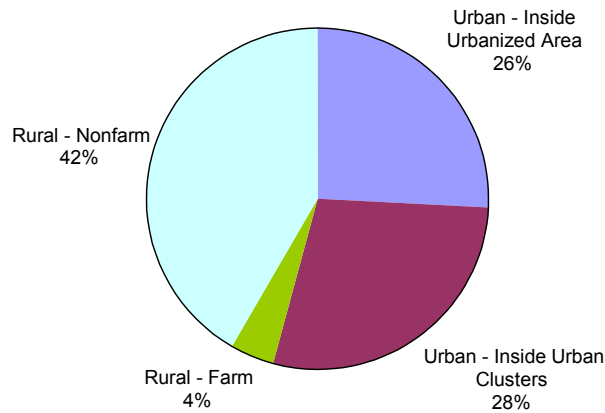
4.2.3 Population in Urban and Rural Areas

The Census Bureau uses an urban-rural typology to classify land as rural-nonfarm, rural farm, urban or urban-cluster. Using this typology, approximately 4 percent of the state’s population lives in an area classified as rural-farm, 42 percent in areas classified as rural-nonfarm, 26 percent in urban-inside urbanized areas, and another 28 percent in areas classified as urban-inside urban clusters (Figure 4-4). For Census 2000, the Census Bureau classifies as “urban” all territory, population, and housing units located within an urbanized area or an urban cluster. They delineate urban area and urban cluster boundaries to encompass densely settled territory, which consists of core census block groups or blocks that have a population density of at least 1,000 people per square mile and surrounding census blocks that have an overall density of at least 500 people per square mile. However, under certain conditions, a part of less densely settled territory might be added to an urban area or urban cluster.

The Census Bureau’s classifies as “rural” all territory, population, and housing units located outside of urban areas and urban clusters. The rural component contains both place and nonplace territory in Census terms. Geographic entities, such as census tracts, counties, metropolitan areas, and the territory outside metropolitan areas, are often “split” between urban and rural territory, and the population and housing units they contain often are partly classified as urban and partly classified as rural.

The growth or decline of population has a greater relative impact in smaller, rural areas. The smaller and less dense population base found in rural areas makes delivery of basic services more difficult. In urban areas, the logistics and mechanisms for providing public services produce economies of scale impossible for rural areas to duplicate.

Figure 4-4. Population in Urban and Rural Areas for Montana



U.S. Census Bureau, Census 2000.

4.2.4 Population Distribution within the Study Area

Population density is dependent in part on the amount of land available for settlement. The large amount of public lands in the study area counties significantly limits the amount of available land for private development, which concentrates population and development more than is indicated when looking at population by total land area. Yet, even in the population centers, overall population numbers are usually less than 2,000 persons.¹⁷ There are notable exceptions such as Butte in Butte-Silver Bow County with a population of just over 34,000 persons, Anaconda with a population of 9,417 in Anaconda-Deer Lodge County, Deer Lodge in Powell County with a population of 3,421, and Dillon with a population of 3,752 in Beaverhead County (Table 4-15).

Most of the larger population centers in the study area are located along major interstate highway routes. Two interstate highways are in the project area. Interstate 90 (I-90) connects the major cities of eastern and western Montana, passing through Billings, Bozeman, Butte, and Missoula. Interstate 15 (I-15) connects the northern and southern parts of Montana, passing through Great Falls, Helena, Deer Lodge and Dillon passing close to Butte and Anaconda.

Table 4-15 shows the population of each of the counties compared with the major population centers of the counties. The largest community in the study area is Butte with a population of 33,892 in 2000. Butte-Silver Bow and Anaconda-Deer Lodge counties are both consolidated city-county governments so that county-city populations are similar. Approximately 41 percent of the population of Beaverhead County, the largest county in terms of land area, is concentrated in Dillon, the county seat. According to the Anaconda-Deer Lodge County Comprehensive Plan (2000), approximately 62 percent of the population of the county lives in the community of Anaconda. In Powell County, almost half of the population is concentrated in the county seat, Deer Lodge. Approximately 30 percent of the residents of Granite County live in the county seat, Philipsburg. The population of Jefferson County is spread between several population areas. Almost 13 percent of the population resides in the county seat, Boulder. Another 21 percent are found in Montana City, with approximately 14 percent in Clancy, and another 10 percent in Whitehall. Approximately two percent of the population of Madison County is located in the county seat, Virginia City. Another 12 percent reside in Ennis.

¹⁷ Detailed population density by 2000 census tracks can be examined using the internet based Montana Natural Resources Information Interactive Mapping service: <http://nris.state.mt.us/mapper/>

Table 4-15. Population of Counties Compared to Incorporated Cities, Towns, and Designated Census Places, 2000

| Place | Population | Percent of County Population | Type |
|---|---------------|------------------------------|---------------------------|
| Anaconda-Deer Lodge County^c | 9,417 | | |
| Anaconda-Deer Lodge County | 9,417 | | Consolidated City-County |
| Beaverhead County^a | 9,202 | | |
| Dillon | 3,752 | 40.8 | Incorporated Place (city) |
| Lima | 242 | 2.6 | Incorporated Place (town) |
| Wisdom | 114 | 1.2 | Census Designated Place |
| Butte-Silver Bow^b | 34,606 | | |
| Butte-Silver Bow | 33,892 | 97.9 | Consolidated City-County |
| Walkerville | 714 | 2.1 | Incorporated Place (town) |
| Granite County^d | 2,830 | | |
| Drummond | 318 | 11.2 | Incorporated Place (town) |
| Philipsburg | 914 | 32.3 | Incorporated Place (town) |
| Jefferson County^e | 10,049 | | |
| Basin | 255 | 2.5 | Census Designated Place |
| Boulder | 1,300 | 12.9 | Incorporated Place (town) |
| Cardwell | 40 | <1 | Census Designated Place |
| Clancy | 1,406 | 14.0 | Census Designated Place |
| Jefferson City | 295 | 2.9 | Census Designated Place |
| Montana City | 2,094 | 20.8 | Census Designated Place |
| Whitehall | 1,044 | 10.4 | Incorporated Place (town) |
| Madison County^f | 6,851 | | |
| Alder | 116 | 1.7 | Census Designated Place |
| Big Sky | 188 | 2.7 | Census Designated Place |
| Ennis | 840 | 12.3 | Incorporated Place (town) |
| Harrison | 162 | 2.4 | Census Designated Place |
| Sheridan | 659 | 9.6 | Incorporated Place (town) |
| Twin Bridges | 400 | 5.8 | Incorporated Place (town) |
| Virginia City | 130 | 1.9 | Incorporated Place (town) |
| Powell County^g | 7,180 | | |
| Avon | 124 | 1.7 | Census Designated Place |
| Deer Lodge | 3,421 | 47.6 | Incorporated Place (city) |
| Elliston | 225 | 3.1 | Census Designated Place |
| Garrison | 112 | 1.6 | Census Designated Place |
| Ovando | 71 | 1.0 | Census Designated Place |

Source: U.S. Census Bureau, Census 2000.

^a Other communities include Apex, Bannock, Dell, Dewey, Glen, Grant, Jackson, Lakeview, Monida, Polaris, and Wise River

^b Other communities include Divide, Grigson Hot Springs, Melrose, Nissler, Ramsey, and Rocker.

^c Other communities include Galen, Opportunity, Southern Cross, and Warm Springs.

^d Other communities include Hall, Maxville, Porters Corner, and Quigley.

^e Other communities include Alhambra, Corbin, Elkhorn, Pipestone, Renova, Vendome, and Wickes.

^f Other communities include Mountain Village, Cameron, Jeffers, Jefferson Island, Laurin, McAllister, Nevada City, Norris, Pony, Silver Star, Waterloo.

^g Other communities include Demsey, Gold Creek, Helmville, Racetrack, and Woodworth.

In terms of regional neighbors to the B-DNF, there are several major population concentrations within a two to three hour drive of the B-DNF including Missoula, Helena, Bozeman, Livingston, and to the south, Idaho Falls, Idaho. The growing density in Gallatin Valley to the east of the study area, the Bitterroot Valley to the west, and the northern areas around Helena suggest that population density may increase if the trend in nearby regions extends to the study area counties. This will have implications for land use and regulation.

4.2.5 Age and Gender Characteristics

Table 4-16 presents total population, age characteristics, and gender for each of the seven counties in the study area and for the state of Montana from Census 2000. Total population of each of the counties ranges from a low of 2,830 individuals in Granite County to a high of 34,606 in Butte-Silver Bow County.

One of the most notable population characteristics of both the state and counties in the study area is the aging of the population. For example, the median age for the state is 37.5 compared to a median age of 35.3 for the United States. The median age in the study area counties ranges from a low of 37.6 in Beaverhead County to a high of 43.4 years of age in Jefferson County. The median age in four of the seven counties, Anaconda-Deer Lodge, Granite, Jefferson, and Madison, is over 40 years (Table 4-16). The gender ratio in Powell County can be attributed the number of individuals counted in Census 2000 as living in institutionalized group quarters—in this case the Montana State Prison, which is designated to maintain a population of 1,300 adult males. The Census Bureau classifies all persons not living in households as living in group quarters (see Table 4-12). Other counties have a gender ratio closer to 100/100.

Table 4-16. Total Population, Median Age, and Gender, 2000

| Geographic Area | Total Population | Median Age (Years) | Males per 100 Females | |
|---------------------|------------------|--------------------|-----------------------|-------------------|
| | | | All Ages | 18 years and Over |
| State Total | 902,195 | 37.5 | 99.3 | 97.2 |
| Anaconda-Deer Lodge | 9,417 | 42.3 | 99.8 | 97.3 |
| Beaverhead | 9,202 | 37.6 | 105.0 | 102.5 |
| Butte-Silver Bow | 34,606 | 38.9 | 97.8 | 96.3 |
| Granite | 2,830 | 42.8 | 105.1 | 102.6 |
| Jefferson | 10,049 | 40.2 | 100.8 | 100.4 |
| Madison | 6,851 | 43.4 | 102.3 | 103.9 |
| Powell | 7,180 | 39.7 | 143.2 | 151.4 |

Source: U.S. Census Bureau Census 2000, Summary File 1, Matrices PCT12 and P13.

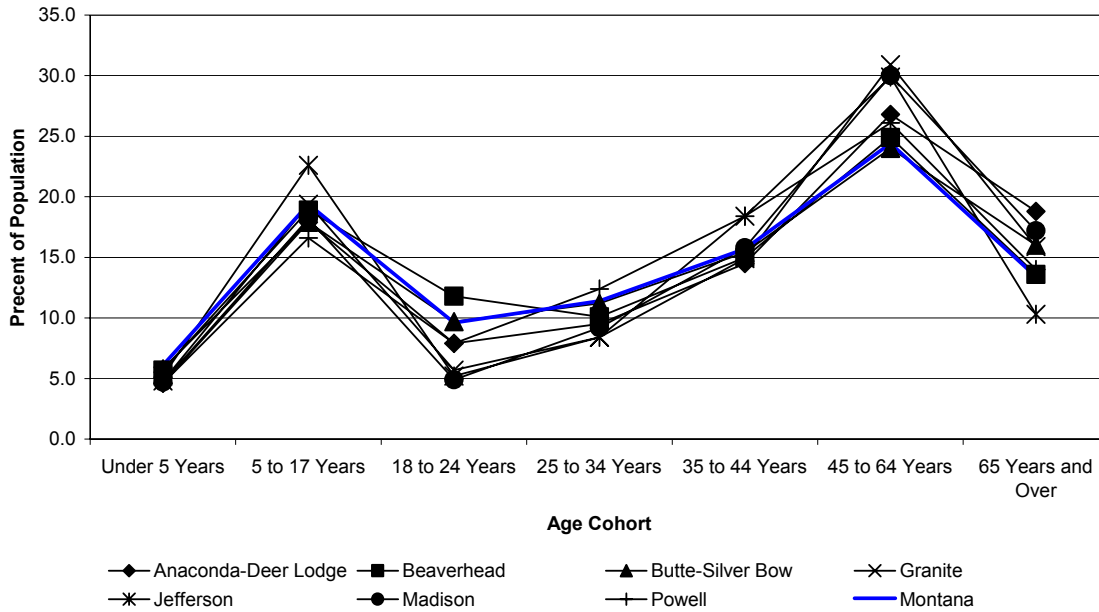
Table 4-17 and Figure 4-5 compare seven cohort groups across time from 1990 to 2000. Figure 4-5 shows the peaks in population for the Baby Boomer Generation and their children. In terms of changes over time from 1990 to 2000, all of the counties and the state have a lower percentage of children under five in 2000 than in 1990. In addition, all of the counties and the state have a lower percent of individuals 25 to 34 years of age, but an increase of 4 percent (Butte-Silver Bow County) to 9.2 percent (Jefferson County) in the age group 45 to 64 years.

Table 4-17. Changes in Age Structure of Seven Cohort Groups, 1990-2000

| | Under 5 Years | 5 to 17 Years | 18 to 24 Years | 25 to 34 Years | 35 to 44 Years | 45 to 64 Years | 65 Years and Over |
|---------------------------|---------------|---------------|----------------|----------------|----------------|----------------|-------------------|
| Montana | | | | | | | |
| 1990 | 7.4 | 20.4 | 8.8 | 15.4 | 15.9 | 18.9 | 13.3 |
| 2000 | 6.1 | 19.4 | 9.6 | 11.4 | 15.7 | 24.4 | 13.4 |
| Anconda-Deer Lodge | | | | | | | |
| 1990 | 5.6 | 17.7 | 8.8 | 12.6 | 14.6 | 20.9 | 19.8 |
| 2000 | 4.6 | 17.9 | 7.9 | 9.5 | 14.5 | 26.8 | 18.8 |
| Beaverhead | | | | | | | |
| 1990 | 7.3 | 20.5 | 11.3 | 14.9 | 14.6 | 18.5 | 12.9 |
| 2000 | 5.7 | 18.9 | 11.8 | 10.1 | 15.0 | 24.9 | 13.6 |
| Butte-Silver Bow | | | | | | | |
| 1990 | 6.8 | 18.1 | 9.1 | 14.6 | 14.4 | 20.0 | 17.1 |
| 2000 | 5.8 | 17.9 | 9.7 | 11.2 | 15.4 | 24.0 | 16.0 |
| Granite | | | | | | | |
| 1990 | 6.6 | 20.0 | 5.6 | 12.7 | 15.0 | 21.7 | 18.4 |
| 2000 | 4.8 | 19.4 | 5.7 | 8.4 | 14.9 | 30.9 | 15.9 |
| Jefferson | | | | | | | |
| 1990 | 7.1 | 22.3 | 5.7 | 14.6 | 19.5 | 20.2 | 10.5 |
| 2000 | 5.2 | 22.6 | 5.2 | 8.4 | 18.4 | 29.9 | 10.3 |
| Madison | | | | | | | |
| 1990 | 6.0 | 19.5 | 6.2 | 13.6 | 16.0 | 21.8 | 16.8 |
| 2000 | 4.7 | 18.2 | 4.9 | 9.2 | 15.8 | 30.0 | 17.2 |
| Powell | | | | | | | |
| 1990 | 6.0 | 16.4 | 7.4 | 18.5 | 17.3 | 20.3 | 14.1 |
| 2000 | 4.6 | 16.6 | 7.9 | 12.4 | 18.4 | 26.1 | 14.0 |

Source: U.S. Census Bureau 1990 and 2000.

Figure 4-5. Age Cohort Distribution for Project Counties, 2000



4.2.6 Race

In 1910, one-fourth of the population of Montana was foreign born, with most immigrants coming from Ireland, Scotland, Canada, and Germany. While the promise of gold and silver brought the first rush of people into the state, the Enlarged Homestead Act in 1909 brought thousands more, many from the Scandinavian countries. Anaconda, Butte, East Helena, and Great Falls been described as “fascinating melting pots where diverse nationality groups mingled, played, and fought with one another” (Malone and Roeder, 1976, p. 155). These immigrants left a lasting imprint on southwest Montana particularly in the Butte and Anaconda area. Most of these immigrants are part of the “white” racial category.

Table 4-18 shows the population of Montana by race in 1980, 1990, and 2000. Montana has a relatively homogenous racial composition. In 1980, approximately 93 percent of the population was white. In the 2000 Census, approximately 90 percent of Montana’s population was white. Table 4-19 shows the distribution by race for the project counties and Montana in 2000.

In six of the seven counties in the study area, over 95 percent of the population is white as compared to the State as whole which is 90.6 percent white. The counties show a relatively homogenous racial composition when compared to the United States. In the United States, 75.1 percent of the population is white. While 6.2 percent of the Montana population is American Indian, the percentages of American Indian for the study area counties range from one-half percent in Madison County to two percent in Butte-Silver Bow County. Hispanic/Latinos make up almost three percent of the population of Beaverhead and Butte-Silver Bow Counties and approximately two percent of Madison and Powell Counties and the state.

Table 4-18. Montana Population by Race, 1980, 1990, 2000

| Race | 1980 | | 1990 | | 2000 | |
|--------------------------------|---------|---------|---------|---------|---------|---------|
| | Number | Percent | Number | Percent | Number | Percent |
| Total Population | 786,690 | 100.00 | 799,065 | 100.00 | 902,195 | 100.00 |
| Total Hispanics | 9,974 | 1.27 | 12,174 | 1.52 | 18,081 | 2.00 |
| White* | 734,389 | 93.35 | 733,878 | 91.84 | 807,823 | 89.54 |
| Black* | 1,715 | 0.22 | 2,242 | 0.28 | 2,534 | 0.28 |
| American Indian and AK Native* | 37,066 | 4.71 | 46,475 | 5.82 | 54,426 | 6.03 |
| Asian* | 2,447 | 0.31 | 4,123 | 0.52 | 4,569 | 0.51 |
| Hawaiian and Pacific Islander* | - | - | - | - | 425 | 0.05 |
| Other* | 1,099 | 0.14 | 173 | 0.02 | 569 | 0.06 |
| Two or More Races* | - | - | - | - | 13,768 | |

Source: Census 2000 analyzed by the Social Science Data Analysis Network (SSDAN).

* Non-Hispanic only; in 1980 and 1990 "Asians" includes Hawaiians and Pacific Islanders.

Table 4-19. Race Distribution for Seven County Study Area and Montana, 2000

| Race | Beaverhead | Butte-Silver Bow | Anaconda-Deer Lodge | Granite | Jefferson | Madison | Powell | Montana |
|--|------------|------------------|---------------------|---------|-----------|---------|--------|---------|
| White, 2000 | 95.9 | 95.4 | 95.9 | 96.3 | 96.1 | 97.0 | 92.5 | 90.6 |
| Black or African American | 0.2 | 0.2 | 0.2 | 0 | 0.1 | Z | 0.5 | 0.3 |
| American Indian | 1.5 | 2.0 | 1.8 | 1.3 | 1.3 | 0.5 | 3.5 | 6.2 |
| Asian | 0.2 | 0.4 | 0.4 | 0.1 | 0.4 | 0.3 | 0.4 | 0.5 |
| Native Hawaiian | Z | 0.4 | Z | Z | 0.1 | 0 | - | 0.1 |
| Persons reporting some other race | 1.1 | 0.6 | 0.2 | 0.1 | 0.4 | 0.8 | 0.7 | 0.6 |
| Persons reporting two or more races | 1.2 | 1.4 | 1.6 | 1.8 | 1.7 | 1.4 | 2.3 | 1.7 |
| Female | 48.8 | 50.6 | 50.1 | 48.8 | 49.8 | 49.4 | 41.1 | 50.2 |
| Hispanic/Latino | 2.7 | 2.7 | 1.6 | 1.3 | 1.5 | 1.9 | 1.9 | 2.0 |
| White persons, not of Hispanic/Latino origin | 94.4 | 93.7 | 94.7 | 95.3 | 95.2 | 96.0 | 91.5 | 89.5 |

Source: U.S. Census Bureau, Census 2000.

4.2.7 Housing and Households

Table 4-20 compares total population, number of housing units, percentage of housing units per square mile of land area, home ownership rates, number of households, average number of people per household, and number of households with persons over 65 and under 18 years of age. Not surprisingly, considering population size and land area, Butte-Silver Bow County has the most housing units per square mile of land area (22.5) and Beaverhead County has the lowest (0.8 percent). The home ownership rate is higher in six of the seven study counties than the state average ranging from a

low of 63.4 percent in Beaverhead County to a high of 83.2 percent in Jefferson County. Of note is that Anaconda-Deer Lodge County and Madison County have more households with persons 65 years and older than households with persons under 18. The average household size ranges from 2.3 to 2.6 and average family size ranges from 2.8 to 3.0.

Table 4-20. Housing Units and Households for Study Area Counties, 2000

| Characteristic | Anaconda Deer Lodge | Beaver- head | Butte- Silver Bow | Granite | Jefferson | Madison | Powell | Montana |
|---|------------------------------------|-------------------------|----------------------------------|----------------|------------------|----------------|---------------|----------------|
| Population | 9,417 | 9,202 | 34,606 | 2,830 | 10,049 | 6,851 | 7,180 | 902,195 |
| Housing Units | 4,958 | 4,571 | 16,176 | 2,074 | 4,199 | 4,671 | 2,930 | 412,633 |
| Occupied Housing Units | 3,995 | 3,684 | 14,432 | 1,200 | 3,747 | 2,956 | 2,422 | 358,667 |
| Housing Units per Square Mile of Land Area | 6.7 | 0.8 | 22.5 | 1.2 | 2.5 | 1.3 | 1.3 | - |
| Homeownership Rate | 73.6% | 63.4% | 70.4% | 74.4% | 83.2% | 70.4% | 71.3% | 69.1% |
| Households | 3,995 | 3,684 | 14,432 | 1,200 | 3,747 | 2,956 | 2,422 | 358,667 |
| Nonfamily households | 1,469 | 1,329 | 5,501 | 415 | 901 | 1,035 | 788 | 121,260 |
| Households with individuals 65 years and over | 1,296 | 885 | 3,981 | 322 | 735 | 819 | 697 | 83,982 |
| Households with persons under 18 | 1,095 | 1,179 | 4,349 | 351 | 1,402 | 807 | 757 | 119,550 |
| Average Persons per Household | 2.3 | 2.4 | 2.3 | 2.3 | 2.6 | 2.3 | 2.4 | 2.5 |
| Average Family Size | 2.8 | 3.0 | 3.0 | 2.9 | 3.0 | 2.9 | 2.9 | 3.0 |

Source: U.S. Census Bureau, Census 2000.

4.2.8 Education

Table 4-21 compares the educational attainment of individuals 25 years and over for Montana with each of the seven counties in the study area. Approximately 13 percent of the individuals in Montana 25 years and over do not have a high school diploma or equivalency. Of the seven counties, Powell County has the largest percent (18.1) of individuals 25 years without a high school diploma or equivalency while Jefferson County has the lowest percent (9.9).

Table 4-21. Educational Attainment of Persons 25 Years of Age and Over, 2000

| | Anaconda Deer Lodge | Beaver- head | Butte- Silver Bow | Granite | Jefferson | Madison | Powell | MT |
|-----------------------------------|---------------------------|-----------------|-------------------------|---------|-----------|---------|--------|---------|
| Total Persons 25 Years and Over | 6,584 | 5,825 | 23,097 | 1,988 | 6,717 | 4,945 | 5,098 | 586,621 |
| Educational Attainment (%) | | | | | | | | |
| Less than Ninth Grade | 6.0 | 3.8 | 4.6 | 4.2 | 3.5 | 3.0 | 5.6 | 4.3 |
| Some High School, No Diploma | 9.5 | 7.0 | 10.3 | 8.0 | 6.3 | 7.3 | 12.5 | 8.6 |
| High School Diploma | 43.0 | 29.1 | 34.3 | 34.9 | 31.2 | 32.6 | 38.9 | 31.3 |
| Some College, No Degree | 22.1 | 28.3 | 24.6 | 26.5 | 25.1 | 25.8 | 25.3 | 25.6 |
| College, Associate Degree | 4.8 | 5.5 | 4.5 | 4.4 | 6.2 | 5.8 | 4.7 | 5.9 |
| College, Bachelor's Degree | 10.6 | 18.7 | 14.8 | 18.3 | 18.7 | 19.7 | 8.5 | 17.2 |
| College, Graduate Degree | 4.1 | 7.7 | 6.9 | 3.8 | 8.9 | 5.9 | 4.6 | 7.2 |

Source: U.S. Census Bureau Census 2000.

Table 4-22 shows the percent of residents 25 years and over who have high school diplomas and bachelor's degrees and higher. All of the project counties have a higher proportion of the population 25 years and older with a high school diploma or equivalency than the United States. As a percentage of total population Anaconda-Deer Lodge and Powell Counties have almost half as many college educated people with bachelor's degrees or higher than the national average, the state average, and several of the project area counties.

Table 4-22. Percent of Population 25 Years and Over with High School Diplomas and Bachelor's Degrees and Higher U.S., Montana, and Project Counties, 2000

| Location | Educational Attainment | |
|---------------------|--|-------------------------------------|
| | Percent High School Graduate or Higher | Percent Bachelor's Degree or Higher |
| U.S. | 80.4 | 24.4 |
| Montana | 87.2 | 24.4 |
| Anaconda-Deer Lodge | 84.5 | 14.7 |
| Beaverhead | 89.3 | 26.4 |
| Butte-Silver Bow | 85.1 | 21.7 |
| Granite | 87.8 | 22.1 |
| Jefferson | 90.2 | 27.7 |
| Madison | 89.8 | 25.5 |
| Powell | 81.9 | 13.1 |

Source: U.S. Census Bureau, 2000 Census, DP-2.

4.3 Economic Conditions and Trends

The contemporary community context of southwest Montana is structured in part by demography, and economy. In an economic assessment, indicators such as unemployment rates, employment by market sector, per capita income, education opportunities, and capital investments are used to measure economic progress.

4.3.1 Typology of Economic and Policy Characteristics for Rural Areas

The Economic Research Service (ERS), part of the United States Department of Agriculture, has developed a typology to identify economic and policy characteristics for rural areas. ERS evaluated the counties in Montana in 1993, using economic data for 1987 to 1989 and Census data for 1990 and earlier. Northern Economics has repeated the evaluation done by ERS using updated information from the 2000 Census and 1997-1999 economic data.

In the earlier study of Montana, economic data were used to categorize each county into one of six types of economies:

- Farming
- Mining
- Manufacturing
- Government
- Service
- Nonspecialized

The first five types indicate a dependence on one industry. The sixth category, nonspecialized, indicates that no single industry is dominant. For a county to be dependent on a specific industry, a certain percentage of labor and proprietor income must have come from that industry, over the course of three years. For more information on the requirements for each economic category, see the ERS website.

In the ERS study with 1987 to 1989 data, each of the counties was dependent on a single industry. The counties of Beaverhead, Jefferson, and Madison were dependent on mining, and received 15 percent or more of their labor and proprietor income from that industry. Anaconda-Deer Lodge and Powell were government-dependent, with the government sector providing 25 percent of labor and proprietor income. Granite was farming-dependent (20 percent of income), and Butte-Silver Bow was service dependent (50 percent of income from all categories of services).

Using 1997 through 1999 data shows a very different picture of the counties (Table 4-23). Of the seven counties, all of them but Powell were nonspecialized. Powell continues to be government-dependent. There may be several explanations for this shift, and each county has its own circumstances. One way in which a county may drop its dependence is through diversification. As new industries grow in importance, the dominance of other industries will decrease. Another way in which dependence can change is through the closure of a major industry and significant loss of jobs. The latter example may be the case for many of the counties in the study area.

Table 4-23. Economic Category of Study Area Counties, Based on 1987-1989 and 1997-1999

| County | Economic Category | |
|---------------------|----------------------|----------------------|
| | 1987-1989 | 1997-1999 |
| Beaverhead | Mining-dependent | Nonspecialized |
| Anaconda-Deer Lodge | Government-dependent | Nonspecialized |
| Granite | Farming-dependent | Nonspecialized |
| Jefferson | Mining-dependent | Nonspecialized |
| Madison | Mining-dependent | Nonspecialized |
| Powell | Government-dependent | Government-dependent |
| Butte-Silver Bow | Service-dependent | Nonspecialized |

Sources: Economic Research Service's 1989 Revised County Typology for Montana, Regional Economic Information System (United States Bureau of Economic Analysis); 1997-1999 categorization prepared by Northern Economics

ERS developed another set of characteristics to describe the policy types for each county including:

- Retirement Destination
- Federal Lands
- Commuting
- Persistent Poverty
- Transfer Dependent

Retirement destination is based on the percent growth of the 60 and over age group due to migration. None of the counties had this designation in the ERS study, and Northern Economics has insufficient information to update this criterion.¹⁸

All seven counties have the federal lands designation, meaning that more than 30 percent of land in a county is owned by federal agencies, including the USDA Forest Service.

The commuting characteristic applies to those counties that have 40 percent or more of their labor force commuting to another county for employment. The latest information available to evaluate this criterion is from the 1990 Census, which shows that Jefferson is a commuting county.

None of the counties has had problems with persistent poverty, a status that requires a county to have experienced an individual poverty rate in excess of 20 percent for several Census years. Based on the 1990 and 2000 Censuses, the persistent poverty characteristic does not apply to any of the counties in the study area.

The final policy type is transfer-dependent, a characteristic that applies to counties in which income from transfer payments has contributed 25 percent or more of the county's personal income. This was the case for Anaconda-Deer Lodge and Butte-Silver Bow for 1987 through 1989. For 1997 through 1999, only Anaconda-Deer Lodge was transfer-dependent.

¹⁸ The retirement destination characteristic requires detailed information on in-migration by age group. Since this data is not yet available from the 2000 Census, Northern Economics indicated those counties that experienced 15 percent or higher growth from 1990 to 2000 in the age group of 60 and over. This is a necessary but insufficient condition for this criterion.

Table 4-24. Policy Types of Study Area Counties

| County | Policy Types | |
|---------------------|-----------------------|--|
| | 1989 ERS ^a | 2002 Northern Economics, Inc. ^b |
| Beaverhead | Federal lands | Retirement destination (potential) |
| | | Federal lands |
| Anaconda-Deer Lodge | Federal lands | Federal lands |
| | Transfer-dependent | Transfer-dependent |
| Granite | Federal lands | Federal lands |
| Jefferson | Federal lands | Retirement destination (potential) |
| | Commuting | Federal lands |
| | | Commuting |
| Madison | Federal lands | Retirement destination (potential) |
| | | Federal lands |
| Powell | Federal lands | Federal lands |
| Butte-Silver Bow | Federal lands | Federal lands |
| | Transfer-dependent | |

Sources: Economic Research Service's 1989 Revised County Typology for Montana, 1990 and 2000 Censuses by U.S. Census Bureau, Montana State Library (2002), Regional Economic Information System (U.S. Bureau of Economic Analysis).

Notes: For 2002 Northern Economic, Inc. work, "Retirement Destination (potential)" indicates that the county experienced a growth in persons age 60 and over in excess of 15 percent from 1990 to 2000. Migration information by age category is not yet available, which prevents the type from being assigned according to USDA guidelines.

^a From Economic Research Service's 1989 Revised County Typology for Montana.

^b Based on work done by Northern Economics in 2002.

4.3.2 Economic Sectors and Diversity

4.3.2.1 Value-Added Estimates from IMPLAN¹⁹

Input-output models are accounting frameworks for analyzing the flow of goods and services among businesses and between businesses and final consumers. These models are useful for defining the relationships and the degree of interdependency between various industries or sectors of an economy. IMPLAN is such a regional input-output model originally developed by the USDA Forest Service in cooperation with the Federal Emergency Management Agency, USDI Bureau of Land Management, and the University of Minnesota. IMPLAN is a computerized database and modeling system that generates reports on total output, value-added, and employee compensation. IMPLAN can be used to look at regional differences in the economic contribution by various sectors to the economy and to determine the relative importance of an industry to a regional economy.

Value-added is one of the best measures available for determining relative industrial economic importance among geographic regions because it avoids double counting. Value-added refers to the total value of payments to the different factors of production and is equivalent to the gross regional

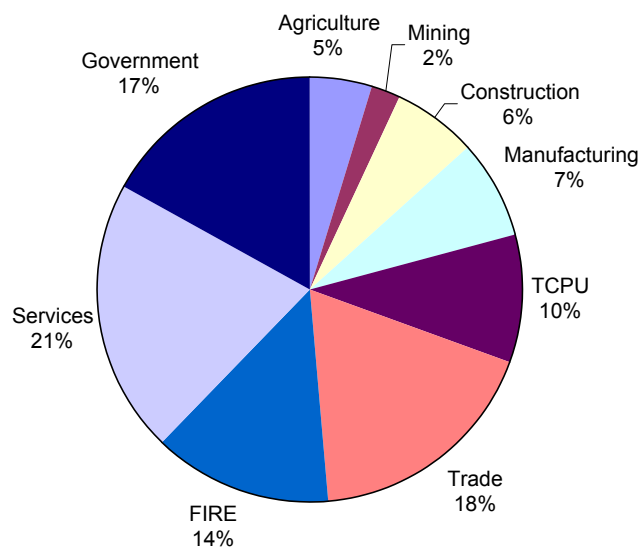
¹⁹ IMPLAN Pro™ is Social Accounting and Impact Analysis software; produced by MIG, Incorporated

product.²⁰ Value-added can be an important indicator of industry health and success because it is a measure of industry activity derived by subtracting the costs of materials, supplies, containers, fuel, purchased electricity, and contract work from the value of shipments for the products manufactured. Value-added is equal to value of shipments minus intermediate production inputs, and thus represents the amount available for wages, salaries, and profits in an industry.

Total value-added estimates for the different sectors of a regional economy (aggregated at the 1-digit SIC level) were derived from the IMPLAN descriptive models for Montana (Figure 4-6) and the study area counties aggregated as a single unit (Figure 4-7), and for each of the counties.

In this section, we discuss the value-added estimates for Montana and for the study area. Value-added estimates are made for each of the counties and are found in the county chapters. In Montana the services sector accounts for the largest single portion of the total estimated value-added (21 percent). In the study area, services accounts for 18 percent of the total. The government sector accounts for 17 percent of the total estimated value-added in both Montana and the aggregated study area counties. In the study area, transportation, communications, and public utilities (TCPU) also accounts for 18 percent of the value-added total, but accounts for only 10 percent of TCPU of the state total value-added. In Montana the trade sector accounts for 18 percent of the estimated value-added while it accounts for 14 percent in the study area. Manufacturing (seven percent and six percent) and construction are both small sectors in Montana and the study area counties, respectively six percent and five percent. Mining accounts for seven percent of the total value-added in the study area counties, but only two percent of total value-added in the state. In terms of value-added, agriculture is a small sector in both the state (five percent) and the study area (four percent). Finance, insurance, and real estate (FIRE) accounts for 14 percent in Montana and 11 percent in the study area.

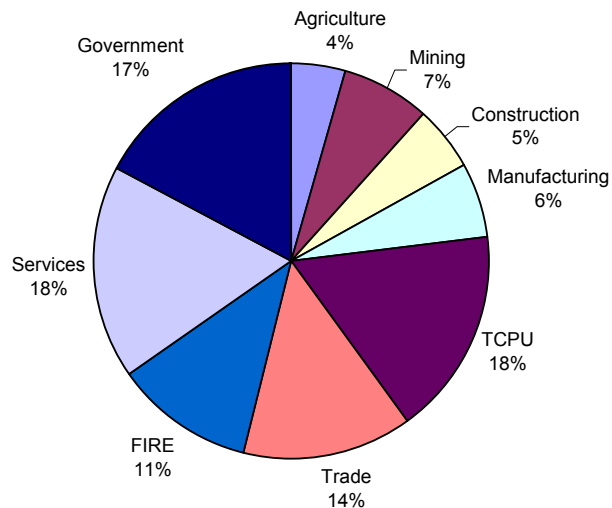
Figure 4-6. Value-Added by Major Industry Sector in Montana as Percent of Total Value-Added, 1999



Source: Economic Diversity—MIG Group, Inc., IMPLAN Model Output, based on 1999 IMPLAN Model.

²⁰ Value-added consists of employee compensation, proprietor income, other property income, and indirect business tax.

Figure 4-7. Value-Added by Major Industry Sector in Study Area as Percent of Total Value-Added, 1999



Source: Economic Diversity—MIG Group, Inc., IMPLAN Model Output, based on 1999 IMPLAN Model.

Table 4-25 is based on the 1999 IMPLAN Model Year Data for the seven counties in the study area. This table is an updated version of a table, which appears in the USFS Region 1 Economic Library²¹. The same industry sectors were used in the update that are found in the 1996 model. “Wildland” related sectors appear to be a significant source of total industry output for Granite County (33.3 percent), Powell County (32.2 percent), and Jefferson County (27.7 percent). In Beaverhead County, the “Wildland” related sectors account for 17.1 percent of total industry output, followed by 9.8 percent for Butte-Silver Bow County, 8.2 percent for Madison, and only 2.5 percent for Anaconda-Deer Lodge County. In terms of the “Wildland” related sectors’ industry employment, these sectors account for 16.6 percent of the employment in Granite County, 12.6 percent of industry employment in Powell County, and 11.9 percent for Jefferson County, followed by 4.9 percent for Madison, 4.7 percent for Butte-Silver Bow, and only 1 percent for Anaconda-Deer Lodge County.

²¹ <http://www.fs.fed.us/r1/planning/econ/easy/library/library.html>.

Table 4-25. Direct Effects of "Wildland" Related Sectors, 1999

| | Industry Output (Millions of \$) | Industry Output as % of County Total | Employment | Industry Employment as % of County Total | Labor Income (Millions of \$) | Average Laborer Income (\$/Job) |
|----------------------------|-------------------------------------|--|--------------|---|----------------------------------|--|
| Anaconda-Deer Lodge | 5.1 | 2.5 | 41.0 | 1.0 | 1.0 | 25,390 |
| Timber Industries | 0.4 | 0.2 | 5 | 0.1 | 0.1 | 16,200 |
| Grazing Industries | 1.2 | 0.6 | 19 | 0.5 | 0.4 | 18,632 |
| Mineral Industries | 3.5 | 1.7 | 17 | 0.4 | 0.6 | 35,647 |
| Beaverhead | 59.7 | 17.1 | 532.0 | 9.5 | 16.4 | 30,759 |
| Timber Industries | 2.4 | 0.7 | 78 | 1.4 | 0.7 | 9,051 |
| Grazing Industries | 27.4 | 7.8 | 265 | 4.7 | 4.0 | 14,947 |
| Mineral Industries | 30.0 | 8.6 | 189 | 3.4 | 11.7 | 61,889 |
| Butte-Silver Bow | 133.2 | 9.8 | 907.7 | 4.7 | 34.0 | 37,426 |
| Timber Industries | 1.9 | 0.1 | 39 | 0.2 | 0.5 | 12,051 |
| Grazing Industries | 1.6 | 0.1 | 51 | 0.3 | 0.7 | 14,275 |
| Mineral Industries | 129.7 | 9.5 | 817.7 | 4.2 | 32.8 | 40,080 |
| Granite | 33.3 | 33.3 | 258.0 | 16.6 | 5.8 | 22,543 |
| Timber Industries | 26.8 | 26.8 | 187 | 12.0 | 4.2 | 22,342 |
| Grazing Industries | 2.6 | 2.6 | 30 | 1.9 | 0.5 | 15,900 |
| Mineral Industries | 3.9 | 3.9 | 41 | 2.6 | 1.2 | 28,317 |
| Jefferson | 92.1 | 27.7 | 490.0 | 11.9 | 17.2 | 35,180 |
| Timber Industries | 2.2 | 0.7 | 38 | 0.9 | 0.6 | 14,737 |
| Grazing Industries | 3.0 | 0.9 | 69 | 1.7 | 1.1 | 15,855 |
| Mineral Industries | 86.9 | 26.1 | 383 | 9.3 | 15.6 | 40,689 |
| Madison | 18.9 | 8.2 | 191.0 | 4.9 | 3.5 | 18,215 |
| Timber Industries | 1.6 | 0.7 | 31 | 0.8 | 0.4 | 11,710 |
| Grazing Industries | 15.7 | 6.8 | 149 | 3.8 | 2.9 | 19,302 |
| Mineral Industries | 1.6 | 0.7 | 11 | 0.3 | 0.2 | 21,818 |
| Powell | 74.1 | 32.2 | 435.0 | 12.6 | 15.1 | 34,731 |
| Timber Industries | 61.2 | 26.6 | 342 | 9.9 | 12.8 | 37,342 |
| Grazing Industries | 5.7 | 2.5 | 67 | 1.9 | 1.1 | 16,806 |
| Mineral Industries | 7.3 | 3.2 | 26 | 0.8 | 1.2 | 46,577 |

Source: Table based 1999 IMPLAN Model Year Data.

Note: NAIC code categories reporting no output were not included in the table.

4.3.3 Employment

Employment data are collected in many different ways and can be presented in many different forms. Information in this section focuses on the number and percent of individuals in the labor force, unemployment rates, employment by occupation and industry, the number of businesses, employees, and payroll by industry sector, and information on self-employed individuals. The information in this section has been gathered from the U.S. Census Bureau, the U.S. Bureau of Economic Analysis, the Montana Department of Labor and Industry, and the Bureau of Economic Analysis Regional Economic Information System (REIS).

4.3.3.1 The Average Montana Worker²²

The following profile of the “the average Montana worker” is from the Montana Department of Labor and Industry, Research and Analysis and is provided as background information or context for the discussion that follows about employment and income. The average Montana worker:

- Has a high school diploma or equivalent or some college, no degree
- Is a full time employee of a private for profit company
- Works in the service sector (for example as a teacher, child care worker, or nurse), the wholesale retail trade sector, or the public administration sector.
- Earns about \$25,000 per year
- Is married with a working spouse and sometimes with one child residing at home
- Lives within 18 minutes of the workplace and does not carpool or take public transportation

4.3.3.2 Labor Force and Unemployment

Table 4-26 shows the number of individuals 16 years and older and the number of individuals in this age category that participated in the civilian labor force, and the number of employed and unemployed individuals. “Civilian labor force” is defined as the number of person 16 years and older, employed or unemployed, excluding members of the armed forces. “Employed” includes those persons who work for pay or profit during a week or, as unpaid family workers, work 15 hours or more during a week. “Unemployed” are persons who, for an entire week, did not work at all but were able and available to work.

In Montana, 34.6 of persons 16 and over were not in the labor force as compared to 39.4 percent in the study area counties. Individual counties range from a low of 32.4 percent in Jefferson County to a high of 52.4 percent in Powell County. Five of the seven counties have unemployment rates that are lower than the state. However, employment rates can be deceptive because the normal measures of unemployment do not take into account discouraged workers—those individuals who not employed, but are not actively seeking employment. In addition, this census data just portrays the employment picture for one point time, April 2000.

²² Profile of the Montana Worker, Montana Department of Labor and Industry accessed at <http://rad.dli.state.mt.us/pubs/profile.asp>.

Table 4-26. Population 16 Years and Older in the Labor Force, Employed, and Unemployed, 2000

| Area | Population 16 Years and Older | Population in Labor force | % in Labor Force | Population Not in Labor Force | % Not in Labor Force | No. Employed | % Employed | No. Unemployed | % Unemployed |
|------------------------|-------------------------------------|---------------------------------|------------------------|-------------------------------------|----------------------------|-----------------|---------------|-------------------|-----------------|
| Montana | 701,168 | 458,306 | 65.4 | 242,862 | 34.6 | 425,977 | 60.8 | 28,710 | 4.1 |
| Study Area | 63,566 | 38,516 | 60.6 | 25,050 | 39.4 | 35,974 | 56.6 | 3,238 | 5.1 |
| Anaconda Deer Lodge | 7,627 | 4,237 | 55.6 | 3,390 | 44.4 | 3,790 | 49.7 | 433 | 5.7 |
| Beaverhead | 7,338 | 4,664 | 63.6 | 2,674 | 36.4 | 4,478 | 61.0 | 178 | 2.4 |
| Butte-Silver Bow | 27,369 | 16,959 | 62.0 | 10,410 | 38.0 | 15,768 | 57.6 | 1,159 | 4.2 |
| Granite | 2,219 | 1,344 | 60.6 | 875 | 39.4 | 1,272 | 57.3 | 875 | 3.2 |
| Jefferson | 7,665 | 5,183 | 67.6 | 2,482 | 32.4 | 4,895 | 63.9 | 265 | 3.5 |
| Madison | 5,516 | 3,353 | 60.8 | 2,163 | 39.2 | 3,169 | 57.5 | 175 | 3.2 |
| Powell | 5,832 | 2,776 | 47.2 | 3,056 | 52.4 | 2,602 | 44.6 | 153 | 2.6 |

Source: U.S. Bureau of the Census, Census 2000, DP-3.

4.3.3.3 Unemployment

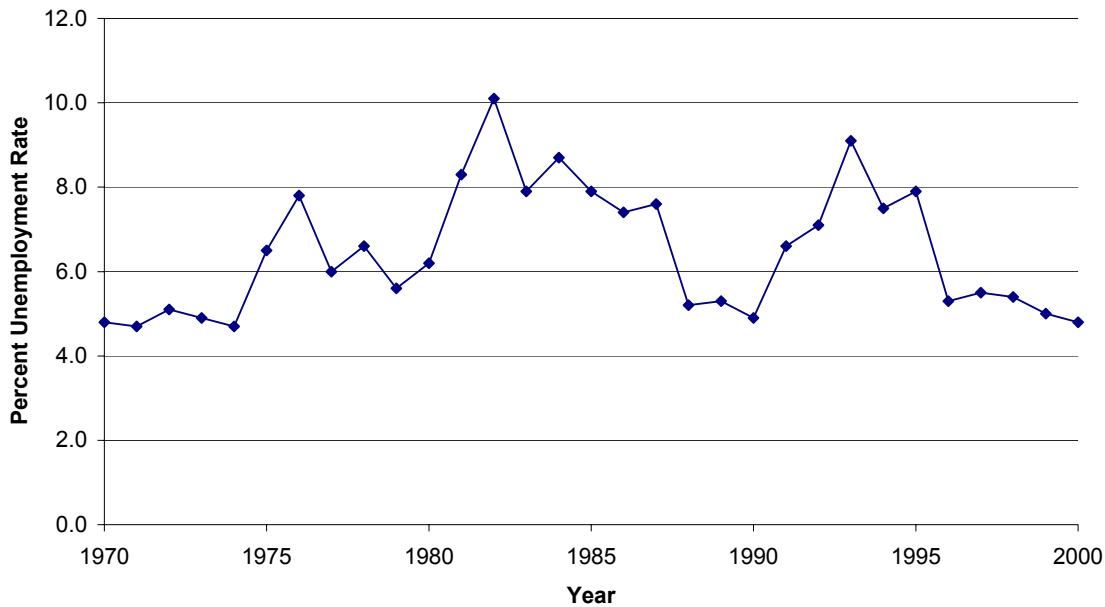
In simple terms, unemployment rates are calculated by dividing the number of people looking for work by the total number of available workers in the labor force. Unemployment rates in the double digits usually indicate a depressed or stagnant economy while a rate under 4 percent is considered full employment.²³ However, there are limitations in interpreting this information, because no differentiation can be made between full-time and part-time jobs. In addition, it does not account for the individuals who are underemployed or the discouraged worker who has given up hope of finding a job.

As an update, the seasonally adjusted unemployment rate for Montana for August 2002 is 4.0 percent and the U.S. unemployment rate was 5.7 percent.²⁴

²³ 4th Quarter 2001 - *Montana Employment and Labor Force Trends*.

²⁴ <http://rad.dli.state.mt.us/press/ptab0802.asp>.

Figure 4-8. Unemployment Rate for Montana, 1970-2000



Source: Montana Department of Labor and Industry, Research and Analysis Bureau, Local Area Unemployment Statistics.

4.3.3.4 Class of Worker

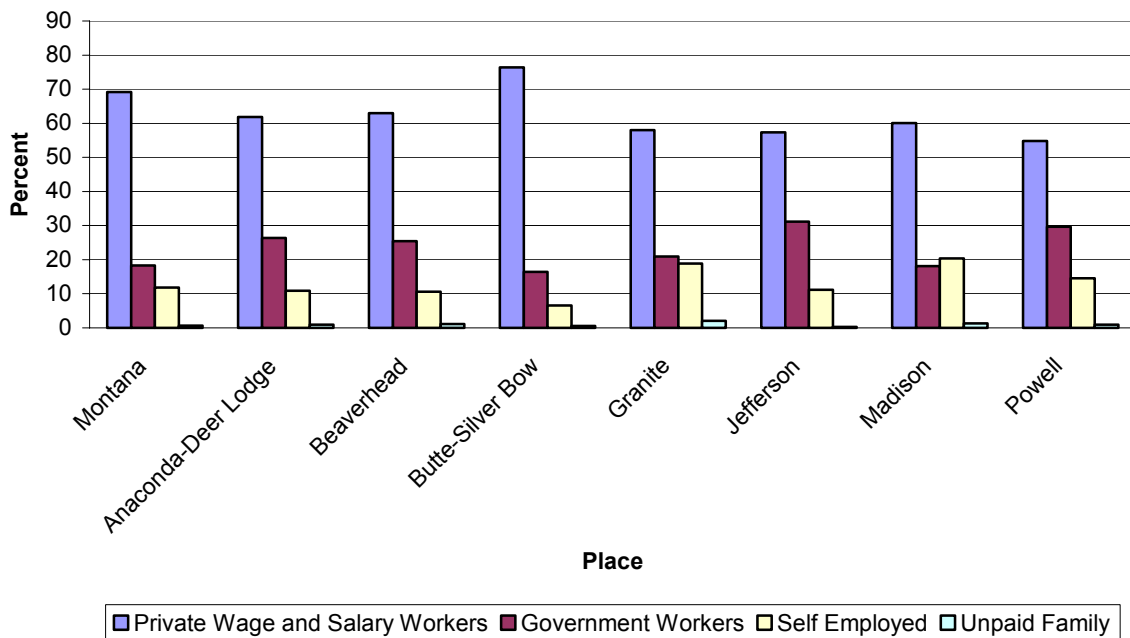
Table 4-27 shows the percentage of four different classes of workers: private wage and salary workers, government workers, self-employed workers in their own business who are not incorporated, and unpaid family workers. According to Census 2000, approximately 69 percent of Montana workers are private wage and salary workers, 18 percent are government workers, 12 are self employed, and less than 1 percent are unpaid family workers. In the study area, government employment ranges from a low of 16.4 percent of workers in Butte-Silver Bow County to a high of 31.2 percent of workers in Jefferson County. Helena is the state capital, and interview data suggest that many of the residents of the Jefferson County commute to Helena to work. Butte-Silver Bow County has the lowest percentage of self-employed workers (not incorporated business) of all the study area counties. Madison County has the highest (20.4), followed by Granite County (18.9), Powell County (14.5), Anaconda-Deer Lodge (10.9 percent), and Beaverhead (10.6 percent).

Table 4-27. Percent of Class of Worker, 2000

| Class of Worker | Montana | Anaconda-Deer Lodge | Beaver-head | Butte-Silver Bow | Granite | Jefferson | Madison | Powell |
|--|---------|---------------------|-------------|------------------|---------|-----------|---------|--------|
| Private Wage and Salary Workers | 69.2 | 61.8 | 63.0 | 76.4 | 58.0 | 57.3 | 60.1 | 54.8 |
| Government Workers | 18.3 | 26.4 | 25.4 | 16.4 | 20.9 | 31.2 | 18.1 | 29.7 |
| Self-employed Workers in Own Not Incorporated Business | 11.8 | 10.9 | 10.6 | 6.6 | 18.9 | 11.2 | 20.4 | 14.5 |
| Unpaid Family Workers | 0.7 | 0.9 | 1.1 | 0.6 | 2.1 | 0.3 | 1.3 | 0.9 |

Source: U.S. Census Bureau, Census 2000.

Figure 4-9. Percent of Class of Worker, Census 2000



Source: U.S. Census Bureau, Census 2000.

4.3.3.5 Employment by Occupation and Industry

Table 4-28 compares the percent of employment in Montana and the study area counties by occupation and by industry according to Census 2000.

In terms of employment by industry, what stands out is the that 30.9 percent of Anaconda-Deer Lodge workers reported working in educational, health and social services industries compared to 21.7 percent of Montana workers as whole. Only 4.5 percent of Anaconda-Deer Lodge workers reported working in agriculture, forestry, fishing and hunting, and mining industries as compared to 7.9 percent of Montana workers. In the study area, the percent of management, professional, and related occupations ranges from a low of 27.7 percent in Anaconda-Deer Lodge County to a high of 39.3 percent in Jefferson County. The percent of service occupations ranges from a low of 17.5

percent in Beaverhead County to a high of 27 percent in Butte-Silver Bow County. The percent of workers who reported farming, fishing, and forestry occupations ranges from a low of 1.2 in Anaconda-Deer Lodge County to a high of 9.1 in Granite County.

In terms of employment by industry, employment in agriculture, forestry, fishing, hunting, and mining ranges from a low 4.1 percent in Butte-Silver Bow County to a high of 21.1 percent in Granite County.

Table 4-28. Percent of Employment by Occupation and Industry, Census 2000

| | Montana | Anaconda-Deer Lodge | Beaverhead | Butte Silver Bow | Granite | Jefferson | Madison | Powell |
|---|---------|---------------------|------------|------------------|---------|-----------|---------|--------|
| Occupation | | | | | | | | |
| Management, Professional, and Related Occupations | 33.1 | 27.7 | 34.6 | 32.4 | 31.2 | 39.3 | 32.4 | 32.5 |
| Service Occupations | 17.2 | 31.9 | 20.0 | 19.4 | 17.2 | 16.3 | 14.8 | 21.9 |
| Sales and Office Occupations | 25.5 | 19.2 | 17.5 | 27.0 | 17.9 | 23.1 | 19.6 | 18.4 |
| Farming, Fishing, and Forestry Occupations | 2.2 | 1.2 | 6.8 | 0.7 | 9.1 | 1.6 | 6.5 | 5.2 |
| Construction, Extractions, and Maintenance Occupations | 10.7 | 10.5 | 10.1 | 9.4 | 14.0 | 11.9 | 15.1 | 7.6 |
| Production, Transportation, and Material Moving Occupations | 11.2 | 9.5 | 11.0 | 11.1 | 10.5 | 7.8 | 11.6 | 14.3 |
| Industry | | | | | | | | |
| Agriculture, Forestry, Fishing and Hunting, and Mining | 7.9 | 4.5 | 19.3 | 4.1 | 21.1 | 8.4 | 20.7 | 15.8 |
| Construction, Extractions, and Maintenance Occupations | 7.4 | 6.5 | 7.0 | 5.4 | 9.7 | 8.4 | 13.2 | 5.5 |
| Manufacturing | 6.0 | 5.1 | 4.5 | 4.0 | 8.9 | 3.8 | 5.2 | 9.2 |
| Wholesale Trade | 3.0 | 0.6 | 2.1 | 2.4 | 1.7 | 2.5 | 0.9 | 2.0 |
| Retail Trade | 12.8 | 8.9 | 9.2 | 15.4 | 7.9 | 8.7 | 10.2 | 8.6 |
| Transportation and Warehousing, and Utilities | 5.4 | 4.1 | 4.5 | 9.3 | 4.5 | 4.8 | 4.3 | 2.8 |
| Information | 2.2 | 1.9 | 1.9 | 2.9 | 1.0 | 1.9 | 1.4 | 1.0 |
| Finance, Insurance, Real Estate, and Rental and Leasing | 5.5 | 4.3 | 3.9 | 3.9 | 3.5 | 6.5 | 4.0 | 2.6 |
| Professional, Scientific, Management, Administrative, and Waste Management Services | 6.5 | 4.1 | 3.6 | 7.1 | 3.7 | 6.6 | 4.3 | 3.2 |
| Educational, Health and Social Services | 21.7 | 30.9 | 26.0 | 23.8 | 17.5 | 20.7 | 16.3 | 21.2 |
| Arts, Entertainment, Recreation, Accommodation and Food Services | 10.4 | 16.1 | 10.3 | 11.5 | 7.9 | 7.9 | 10.3 | 8.2 |
| Other Services (except Public Administration) | 5.3 | 5.7 | 2.5 | 5.0 | 5.5 | 4.5 | 4.3 | 2.3 |
| Public Administration | 5.9 | 7.3 | 5.1 | 5.1 | 7.0 | 15.4 | 5.0 | 17.6 |

Source: U.S. Census Bureau, Census 2000, Tables DP3.

4.3.3.6 Commuting

In Montana, approximately 74 percent of all workers drive alone in a truck, car, or van to work (Table 4-29). In the study area, this percentage ranges from a low of 62.7 percent in Madison County to a high of 81.2 percent in both Anaconda-Deer Lodge and Butte-Silver Bow Counties. The mean travel time to work ranges from a low of 14.3 minutes for workers in Butte-Silver Bow County to a high of 26.4 minutes for workers in the Granite County. Butte-Silver Bow County is the only county where an appreciable number of individuals use public transportation to travel to and from work. Of interest is that over 11 percent of workers in Beaverhead walk to work. In Granite County, approximately 10 percent walk to work, followed by Powell with 9 percent, and Madison with 9 percent. In Anaconda-Deer Lodge and Butte-Silver Bow counties only 4.2 percent walk to work. In Jefferson only 3.7 percent of the labor force walk to work. The higher percentages of walkers for Beaverhead, Granite, Powell, and Madison Counties may be attributable to farming and ranching activities. Interview data suggest the lower percent of walkers in Jefferson County may be attributed to the number of individuals who commute to Helena for work.

Table 4-29. Commuting to Work, 2000 Census

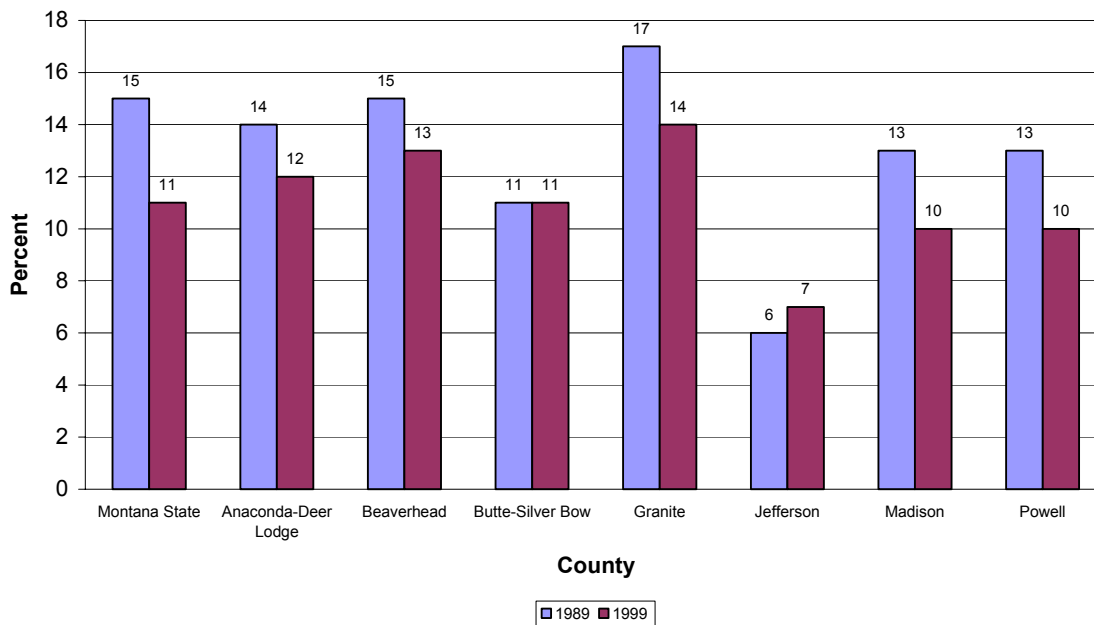
| Characteristic | | | | | | | | |
|---|---------|----------------------------|-----------------|-------------------------|---------|-----------|---------|--------|
| | Montana | Anaconda- Deer Lodge | Beaver- head | Butte- Silver Bow | Granite | Jefferson | Madison | Powell |
| Workers 16 year and over (No.) | 422,159 | 3,744 | 4,403 | 15,601 | 1,261 | 4,842 | 3,109 | 2,553 |
| Car, truck, or van-drove alone (%) | 73.9 | 81.2 | 69.5 | 81.2 | 65 | 75.2 | 62.7 | 66.9 |
| Car, truck, or Van – carpooled (%) | 11.1 | 10.5 | 10 | 10.5 | 11.4 | 14 | 15.1 | 13.1 |
| Public transportation (including taxicab) (%) | 0.7 | 0.6 | 0.5 | 36.0 | 0.4 | 0.2 | 0.1 | 0.1 |
| Walked (%) | 5.5 | 4.2 | 11.4 | 4.2 | 10.4 | 3.7 | 9 | 9.3 |
| Other means (%) | 1.7 | 0.8 | 1.3 | 0.8 | 2 | 0.9 | 1.1 | 0.6 |
| Worked at home (%) | 6.4 | 2.7 | 7.2 | 2.7 | 10.5 | 6.1 | 11.9 | 9.9 |
| Mean travel time to work (minutes) | 17.7 | 21.1 | 14.4 | 14.3 | 26.4 | 22.4 | 22.4 | 22.3 |

Source: U.S. Bureau of the Census, Census 2000, Table DP-3.

4.3.4 Poverty Status

The Census Bureau uses a set of money income thresholds that vary by family size and composition to determine who is poor. If a family's total income is less than that family's threshold, then that family, and every individual in it, is considered poor. The poverty thresholds do not vary geographically, but they are updated annually for inflation using the Consumer Price Index (CPI-U). In 1989, 14.6 percent of Montana's families were considered below the poverty level. By the 2000 Census, this percentage had dropped to 10.5. In 1989, Jefferson County had the lowest rate of poverty for families at 5.6 percent. The highest level of poverty for families was in Granite County with a rate of 17.2 percent. By the 2000 Census, the poverty rate for families had decreased for all counties except for Jefferson, which showed a small increase to 6.7 percent. Jefferson remained the county with lowest poverty rate and Granite County still had the highest, although its rate had decreased from 17.2 percent to 13.9 percent.

Figure 4-10. Percent Poverty Status of Families, 1989 and 1999



Source: U.S. Census Bureau, Census 2000 and 1990 Census.

4.3.5 Income

Personal per capita and household income are shown in the following tables and charts for Montana and the study area counties.

4.3.5.1 Personal Income

As defined by the Bureau of Business and Economic Research, School of Business Administration, University of Montana:²⁵

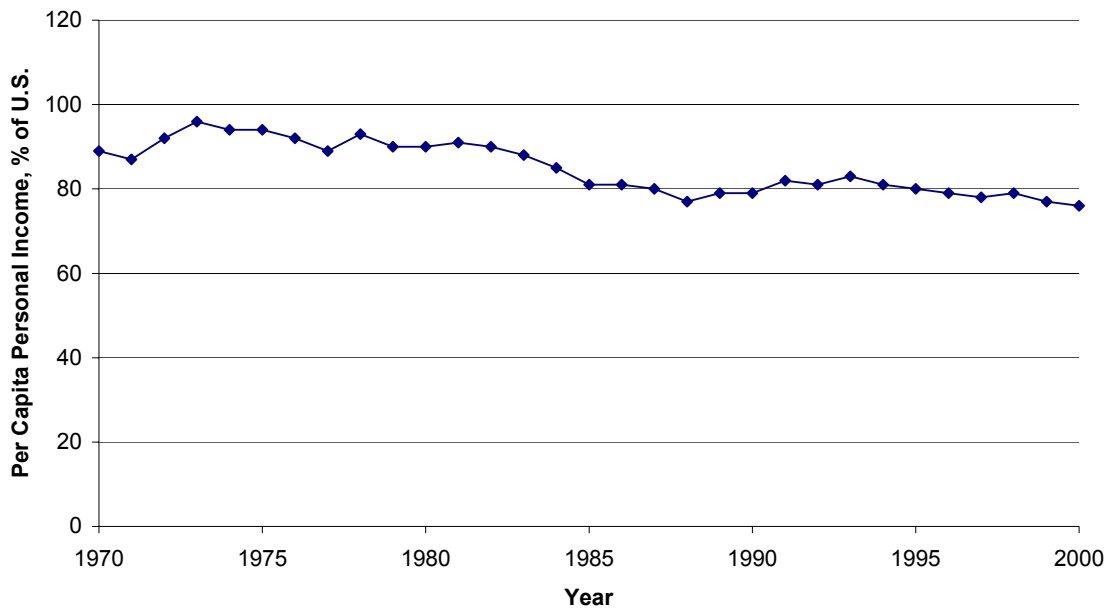
Personal income is the income received by people from all sources—private sector and government wages, and salary disbursements, other labor income, farm and nonfarm self employment income, rental income of people, personal dividend income, personal interest income, and transfer payments. Personal income does not have taxes subtracted from it.

Per capita personal income is the annual total personal income of residents divided by their resident population. Per capita personal income is a measure of economic well-being. The amount of goods and services that people can afford is directly related to their personal income.

Figure 4-11 shows Montana’s per capita personal income as a percent of the per capita personal income for the United States. Montana’s per capita income growth has not kept pace with the U.S. economy, and shows a steady downward trend.

²⁵ <http://www.bber.mt.edu/economicanalysis/personalincome.htm> accessed April 22, 2002.

Figure 4-11. Per Capita Total Personal Income as Percent of U.S. for Montana, 1970-2000



Source: Bureau of Economic Analysis Regional Accounts at <http://www.bea.doc.gov/bea/regional/reis/>.

Table 4-30 provides average per capita personal income along with in-state rankings, and a breakdown of the sources of personal income for the State of Montana compared with the seven counties in the study area. Montana has 56 counties. For 2000, Montana’s per capita personal income was \$22,518, which places it 47th out of 50 states. Montana’s per capita personal income is approximately 23 percent below the national average. In 2000, earnings, as a portion of total income, range from a low of 51.1 percent in Anaconda-Deer Lodge County to a high of 70 percent in Jefferson County. Earnings as a component of total personal income for the State of Montana accounted for 61.2 percent.

Transfer payments are income payments by government and businesses to individuals and nonprofit institutions for which no current services are performed. Transfer payments include retirement and disability insurance benefit payments, medical benefit such as Medicare and Medicaid, income maintenance benefits, unemployment insurance benefit payments, veterans benefit payments, and federal education and training benefits. In 2000 transfer payments accounted for 20 percent or more of personal income in Anaconda-Deer Lodge County, Butte-Silver Bow, and Granite Counties. Transfer payments in 2000 range from a high of 26.6 percent of total personal income in Anaconda-Deer Lodge County to a low of 12.4 percent in Jefferson County. Transfer payments for the State account for 16.1 percent of total personal income (Figure 4-12). There is often an inverse relationship between earnings and transfer payments. A high dependency in an economy on transfer payments can reflect few employment opportunities.

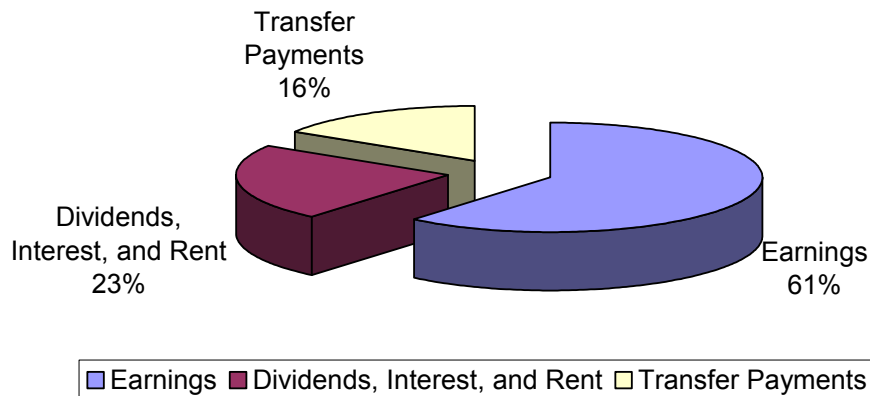
Table 4-30. Per Capita Personal Income, Total Personal Income, and Components for Montana and Seven Counties in Study Area, 1999 and 2000

| County | Per Capita Personal Income | | Total Personal Income | | Components of Total Personal Income | | |
|----------------------------|----------------------------|---------|-----------------------|---------|-------------------------------------|-----------------------------------|-----------------------|
| | (\$) | Rank | (\$1,000s) | Rank | Earnings (%) | Dividends, Interest, and Rent (%) | Transfer Payments (%) |
| Montana | | | | | | | |
| 2000 | 22,518 | 47 (US) | 20,336,883 | 46 (US) | 61.2 | 22.7 | 16.1 |
| Anaconda-Deer Lodge | | | | | | | |
| 1999 | 17,968 | 40 | 174,667 | 25 | 51.0 | 22.6 | 26.4 |
| 2000 | 19,406 | 32 | 181,989 | 26 | 51.1 | 22.3 | 26.6 |
| Beaverhead | | | | | | | |
| 1999 | 20,943 | 20 | 184,086 | 21 | 56.5 | 26.0 | 17.5 |
| 2000 | 21,069 | 22 | 193,729 | 21 | 56.7 | 24.8 | 18.5 |
| Butte-Silver Bow | | | | | | | |
| 1999 | 22,474 | 11 | 763,086 | 7 | 59.5 | 21.0 | 19.5 |
| 2000 | 22,456 | 12 | 775,306 | 7 | 59.5 | 20.4 | 20.2 |
| Granite | | | | | | | |
| 1999 | 19,127 | 31 | 50,915 | 43 | 52.5 | 27.8 | 19.8 |
| 2000 | 18,322 | 36 | 52,034 | 43 | 53.8 | 26.0 | 20.1 |
| Jefferson | | | | | | | |
| 1999 | 23,111 | 9 | 239,596 | 15 | 70.2 | 17.9 | 11.9 |
| 2000 | 25,120 | 4 | 253,314 | 14 | 70.0 | 17.6 | 12.4 |
| Madison | | | | | | | |
| 1999 | 18,399 | 37 | 127,450 | 28 | 50.1 | 31.8 | 18.1 |
| 2000 | 19,615 | 31 | 134,793 | 28 | 51.3 | 30.6 | 18.1 |
| Powell | | | | | | | |
| 1999 | 18,213 | 38 | 126,491 | 29 | 57.9 | 23.8 | 18.3 |
| 2000 | 18,159 | 38 | 130,512 | 29 | 58.9 | 22.3 | 18.8 |

Source: Regional Economic Information System, Bureau of Economic Analysis, Bearfacts.

Note: Montana contains 56 counties.

Figure 4-12. Components of Total Personal Income for Montana, 2000



Source: Regional Economic Information System, Bureau of Economic Analysis, Bearfacts.

4.3.5.2 Household Income

Table 4-31 shows household income for Montana in 1989 and 1999, based on the U.S. Census for 1990 and 2000. Figure 4-13 and Figure 4-14 show household income for the study area counties in 1989 and 1999, also based on the Census for 1990 and 2000. It is important to take into account inflation and increase in the cost of living. Some of the shift from lower to higher income categories is due to a change in inflation, and adjustments to pay rates for the increased cost of living. Inflation also has an effect on household income. Income in 1999 is valued less than income in 1989 due to inflation. In making comparisons, it is important to note that the 1989 figures have not been adjusted by the consumer price index so we are comparing 1989 dollars to 1999 dollars. Even so in 1999, over eleven percent of the population of Montana had a household income less than \$10,000 a year. Annual median household income for Montana in 1999 was \$33,024 contrasted to the median household income for the United States of \$41,994.

Figure 4-13 shows the household income for the counties in the study area for 1989. The income category of less than \$10,000 represented a major portion of residents. Jefferson County had the smallest share in the category, whereas most of the other categories ranged from 20 to 25 percent. However, the \$10,000 to \$14,999 represented a smaller portion of residents, ranging from 11 to 17 percent. Most households earned \$15,000 to \$24,999 annually in 1989, although Jefferson County residents were more likely to have earned between \$35,000 and \$74,999. Fewer than 3 percent of households in any county earned more than \$75,000.

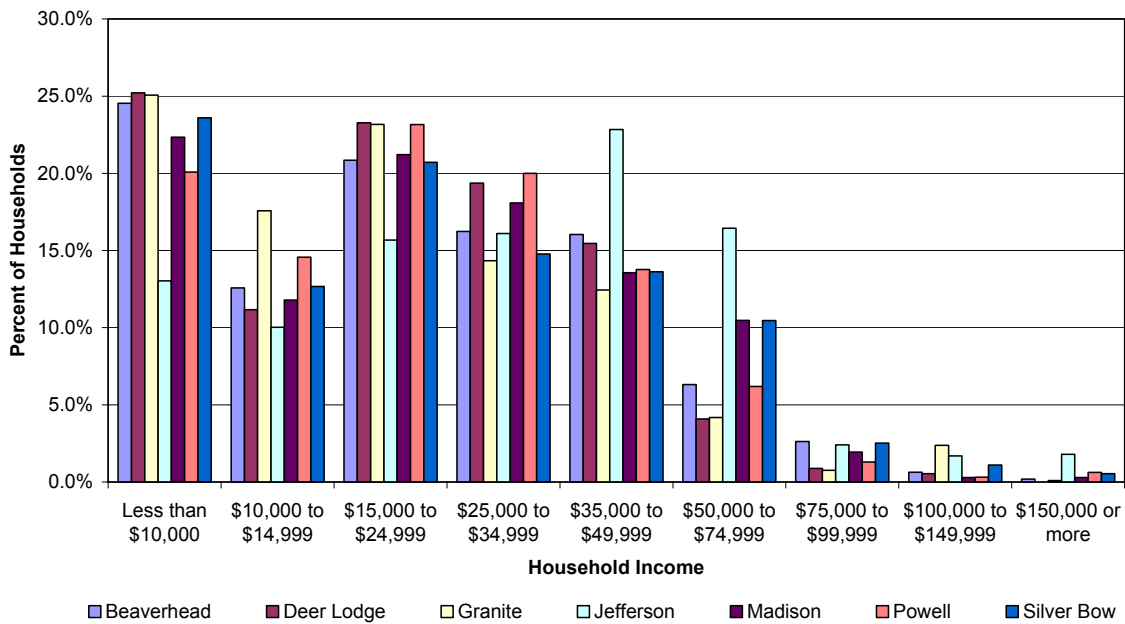
In 1999, the number of households earning less than \$10,000 had dropped to less than 15 percent. Otherwise, earning characteristics did not change significantly from 1989. Households in Anaconda-Deer Lodge County were mostly concentrated in the \$15,000 to \$24,999 range. Powell County households mostly fell in the \$35,000 to \$49,999 range, while Jefferson County households fell predominantly in the \$50,000 to \$74,999 range. More than 15 percent of Jefferson County households earned more than \$75,000 in 1999. A chart of the household income for 1999 is shown in Figure 4-14.

Table 4-31. Household Income for Montana, 1989 and 1999

| Income Level | Percent of Households | |
|------------------------------|-----------------------|--------|
| | 1989 | 1999 |
| Less than \$10,000 | 24.5 | 11.3 |
| \$10,000 to \$14,999 | 12.6 | 8.9 |
| \$15,000 to \$24,999 | 20.8 | 17.1 |
| \$25,000 to \$34,999 | 16.2 | 15.4 |
| \$35,000 to \$49,999 | 16.0 | 18.2 |
| \$50,000 to \$74,999 | 6.3 | 17.1 |
| \$75,000 to \$99,999 | 2.6 | 6.4 |
| \$100,000 to \$149,999 | 0.6 | 3.6 |
| \$150,000 or more | 0.2 | 1.9 |
| Median Household Income (\$) | 20,925 | 33,024 |

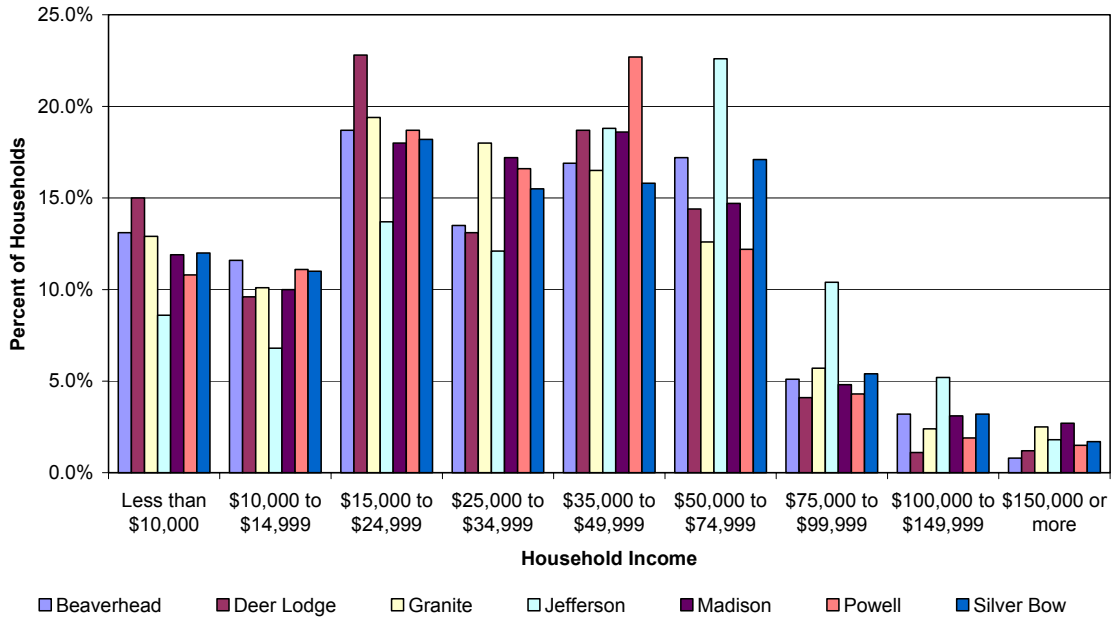
Source: U.S. Census Bureau, 1990 Census and Census 2000.

Figure 4-13. Household Income for Study Area Counties, 1989



Source: U.S. Census Bureau, 1990 Census and Census 2000.

Figure 4-14. Household Income for Study Area Counties, 1999



Source: U.S. Census Bureau, 1990 Census and Census 2000.

4.3.6 Business Characteristics of Study Area Counties and the State of Montana and Federal Spending

REIS is a database of income, employment, and other socioeconomic data produced by the United States Bureau of Economic Analysis (BEA). The most recent release of the database (2000) includes data for 1969 to 1999, and covers the United States down to the county level. Data included in REIS are based on economic projections from the BEA, which derives its information from state and other federal agencies. As new census data are released every 10 years, estimates are updated and revised in the REIS database.

Table 4-32. Business Characteristics of Study Area Counties and State of Montana

| | Beaver head | Butte- Silver Bow | Deer Lodge | Granite | Jefferson | Madison | Powell | Montana |
|---|----------------|----------------------|---------------|----------|-----------|----------|----------|-------------|
| Private nonfarm establishments, 1999 | 367 | 1,151 | 250 | 89 | 194 | 255 | 142 | 31,365 |
| Private nonfarm employment, 1999 | 2,180 | 12,470 | 2,431 | 489 | 1,453 | 1,091 | 1,160 | 288,358 |
| Private nonfarm employment, Percent change, 1990-1999 | 37.5% | 22.3% | 12.6% | 18.4% | 83.5% | 7.2% | 16.6% | 30.0% |
| Nonemployer establishments, 1997 (\$1,000) | \$724 | \$1,893 | \$471 | \$282 | \$767 | \$758 | \$489 | \$68,038 |
| Manufacturers shipments, 1997 (\$1,000) | NA | NA | NA | NA | NA | NA | NA | \$4,866,279 |
| Retail sales, 1997 (\$1,000) | \$69,534 | \$333,086 | \$49,535 | \$13,209 | \$17,846 | \$24,616 | \$15,763 | \$7,779,112 |
| Retail sales per capita, 1997 | \$7,765 | \$9,691 | \$4,952 | \$4,985 | \$1,815 | \$3,571 | \$2,247 | \$8,853 |
| Minority-owned firms, Percent of total, 1997 | F | F | F | F | F | F | F | 4% |
| Women-owned firms, percent of total, 1997 | 13.9% | 27.3% | 58.1% | 28.2% | 22.8% | 28.3% | 31.3% | 24.0% |
| Housing units authorized by building permits, 2000 | 9 | 31 | 11 | 0 | 3 | 2 | 0 | 2,572 |
| Federal funds and grants, 2000 (\$1,000) | \$56,285 | \$224,950 | \$57,310 | \$11,881 | \$62,883 | \$29,259 | \$31,236 | \$5,916,966 |
| Local government employment, full-time equivalent, 1997 | 494 | 793 | 297 | 169 | 332 | 360 | 269 | 32,676 |
| Land area, 2000, (square miles) | 5,542 | 718 | 737 | 1,727 | 1,657 | 3,587 | 2,326 | 145,552 |
| Persons per square mile, 2000 | 1.7 | 48.2 | 12.8 | 1.6 | 6.1 | 1.9 | 3.1 | 6.2 |

Source: QuickFacts, U.S. Census Bureau.

Note: NA denotes not available and F denotes fewer than 100 firms.

Table 4-33. Consolidated Federal Funds Report for Study Area Counties, 2000

| | Anaconda Deer Lodge | Beaverhead | Granite | Jefferson | Madison | Powell | Butte- Silver Bow |
|---|---------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|----------------------|
| Direct Expenditures or Obligations - Total | 57,309,884 | 56,284,619 | 11,880,538 | 62,882,721 | 29,259,230 | 31,235,729 | 224,949,742 |
| Defense | 927,000 | 1,917,571 | 255,000 | 8,505,000 | 1,124,000 | 612,000 | 5,959,006 |
| Non-defense | 56,382,884 | 54,367,048 | 11,625,538 | 54,377,721 | 28,135,230 | 30,623,729 | 218,990,736 |
| Retirement and Disability Payments - Total | 28,835,685 | 19,341,474 | 6,117,313 | 20,836,873 | 15,454,469 | 15,283,637 | 89,727,907 |
| Social Security | 23,648,854 | 14,025,041 | 4,629,981 | 14,690,054 | 11,488,066 | 11,143,760 | 75,070,779 |
| Federal retirement and disability payments | 1,928,181 | 3,274,516 | 785,748 | 3,408,093 | 2,819,235 | 1,640,869 | 8,162,926 |
| Veterans benefit payments | 1,518,551 | 1,137,430 | 516,680 | 1,375,090 | 774,727 | 836,963 | 4,014,622 |
| All other | 1,740,099 | 904,487 | 184,904 | 1,363,636 | 372,441 | 1,662,045 | 2,479,580 |
| Other Direct Payments - Total | 11,546,465 | 12,007,883 | 2,039,403 | 5,913,022 | 6,205,118 | 5,493,115 | 41,353,798 |
| Other direct payments for individuals | 10,993,630 | 10,485,732 | 1,963,164 | 5,263,252 | 4,683,784 | 5,030,984 | 40,319,571 |
| Food Stamps | 744,461 | 374,455 | 119,449 | 270,318 | 28,891 | 281,896 | 2,426,116 |
| Medicare | 9,731,695 | 7,371,348 | 1,773,663 | 4,206,368 | 4,393,528 | 4,168,059 | 32,271,467 |
| Section 8 Moderate Rehabilitation | 401,312 | 1,684,440 | - | 722,551 | - | 190,600 | 3,913,425 |
| All Other | 116,162 | 1,055,489 | 70,052 | 64,015 | 261,365 | 390,429 | 1,708,563 |
| Direct Payments Other Than for Individuals | 552,835 | 1,522,151 | 76,239 | 649,770 | 1,521,334 | 462,131 | 1,034,227 |
| Grant Awards - Total | 12,909,842 | 8,897,178 | 2,005,630 | 26,375,308 | 4,274,438 | 6,350,833 | 52,165,916 |
| Highway Planning and Construction | 1,800,187 | 2,266,810 | 310,140 | 20,349,894 | 1,817,655 | 1,792,651 | 10,983,457 |
| Family Support Payments to States (AFDC+TANF) | 1,334,448 | 552,527 | 266,800 | 335,753 | 15,773 | 508,812 | 3,981,262 |
| Medical Assistance Program (Medicaid) | 7,042,526 | 4,359,651 | 1,006,057 | 4,024,313 | 1,676,776 | 2,347,495 | 25,151,890 |
| Other | 2,732,681 | 1,718,190 | 422,633 | 1,665,348 | 764,234 | 1,701,875 | 12,049,307 |
| Procurement Contract Awards - Total | 389,733 | 7,682,920 | 458,187 | 586,072 | 515,902 | 734,411 | 26,941,623 |
| Defense | - | - | - | - | 115,000 | - | 1,910,000 |
| Non-Defense | 389,733 | 7,682,920 | 458,187 | 586,072 | 400,902 | 734,411 | 25,031,623 |
| Salaries and Wages - Total | 3,628,159 | 8,355,164 | 1,260,005 | 9,171,446 | 2,809,303 | 3,373,733 | 14,760,498 |
| Defense | 153,000 | 565,000 | - | 6,929,000 | - | - | 1,506,000 |
| Non-Defense | 3,475,159 | 7,790,164 | 1,260,005 | 2,242,446 | 2,809,303 | 3,373,733 | 13,254,498 |
| U.S. Postal Service | 1,147,159 | 1,512,164 | 365,005 | 1,251,446 | 1,199,303 | 1,355,733 | 7,873,685 |
| Other | 2,328,000 | 6,278,000 | 895,000 | 991,000 | 1,610,000 | 2,018,000 | 5,380,813 |
| Other Federal Assistance - Total | 3,269,613 | 9,099,884 | 3,327,171 | 5,296,130 | 7,268,945 | 4,395,324 | 9,445,815 |
| Direct Loans | 69,951 | 490,206 | 98,512 | 198,311 | 117,979 | 245,045 | 546,000 |
| Guaranteed Loans | 1,842,120 | 2,007,671 | 1,361,932 | 3,448,132 | 2,910,461 | 1,115,967 | 6,690,414 |
| Insurance | 1,357,542 | 6,602,007 | 1,866,727 | 1,649,687 | - | - | 2,209,401 |

 Source: U.S. Census Bureau, Government Division. www.census.gov/govs/cffr/00cffmt.htm.

Table 4-34. Employment Data from REIS, 1990 and 1999

| Employment | County | | | | | | | Study Area | State of Montana |
|--|-------------|------------------|------------|---------|-----------|---------|--------|------------|------------------|
| | Beaver-head | Butte-Silver Bow | Deer Lodge | Granite | Jefferson | Madison | Powell | | |
| Total Full-Time and Part-Time | | | | | | | | | |
| 1990 | 4,380 | 16,280 | 3,503 | 1,348 | 3,540 | 2,927 | 3,144 | 35,122 | 436,574 |
| 1999 | 5,545 | 19,204 | 4,213 | 1,597 | 4,355 | 3,795 | 3,532 | 42,241 | 552,276 |
| % Change | 27% | 18% | 20% | 18% | 23% | 30% | 12% | 20% | 27% |
| Farm | | | | | | | | | |
| 1990 | 665 | 137 | 85 | 205 | 320 | 657 | 388 | 2,457 | 30,576 |
| 1999 | 731 | 159 | 127 | 210 | 349 | 662 | 386 | 2,624 | 32,122 |
| % Change | 10% | 16% | 49% | 2% | 9% | 1% | -1% | 7% | 5% |
| Private Non-Farm | | | | | | | | | |
| 1990 | 3,715 | 16,143 | 3,418 | 1,143 | 3,220 | 2,270 | 2,756 | 32,665 | 405,998 |
| 1999 | 4,814 | 19,045 | 4,086 | 1,387 | 4,006 | 3,133 | 3,146 | 36,617 | 520,154 |
| % Change | 30% | 18% | 20% | 21% | 24% | 38% | 14% | 21% | 28% |
| Government and Government Enterprise | | | | | | | | | |
| 1990 | 1,034 | 2,638 | 1,228 | 261 | 931 | 493 | 1,033 | 7,618 | 80,270 |
| 1999 | 1,011 | 2,680 | 1,007 | 284 | 921 | 535 | 1,090 | 7,528 | 83,431 |
| % Change | -2% | 2% | -18% | 9% | -1% | 9% | 6% | -1% | 4% |
| Agricultural Services, Forest, Fishing, and Other | | | | | | | | | |
| 1990 | 139 | 68 | 26 | 39 | 59 | a | 41 | N/A | 6,154 |
| 1999 | 132 | 132 | a | a | 59 | a | 87 | N/A | 8,554 |
| % Change | -5% | 94% | N/A | N/A | 0% | N/A | 112% | N/A | 39% |

Regional Economic Information System 1969-99, U.S Department of Commerce, Economics and Statistics Administration, Bureau of Economic Analysis, Regional Economic Measurement Division, CD-ROM RCN-0279, May 2001.

Note: a = undisclosed, N/A = not applicable.

4.4 Payments of Lieu of Taxes

Most local governments fund their operations through the collection of property taxes and/or sales taxes. However, federal lands cannot be taxed, which has major implications for counties containing large areas of federal lands. The U.S. Congress has created various payment programs to make up for the lost revenue. The most wide-ranging program is Payments in Lieu of Taxes (PILT). The program is administered by the BLM. PILT are made to local governments that have federal lands within their borders to compensate for loss of property tax revenues. These payments help local governments fund infrastructure projects that they could not pay for otherwise. Payments can also be used for a variety of needs ranging from public school funding to road maintenance.

Table 4-35. PILT Payments (Payments in Lieu of Taxes) for Selected Montana Counties, 1997-2001

| County | FY 1997 (\$) | FY 1998 (\$) | FY 1999 (\$) | FY 2000 (\$) | FY 2001 (\$) |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Anaconda-Deer Lodge | 117,918 | 121,081 | 135,477 | 138,183 | 202,745 |
| Beaverhead | 273,102 | 250,159 | 298,936 | 321,656 | 476,624 |
| Butte-Silver Bow | 145,327 | 155,098 | 164,187 | 165,341 | 244,121 |
| Granite | 67,907 | 70,982 | 69,590 | 74,263 | 116,085 |
| Jefferson | 265,797 | 297,461 | 309,928 | 307,704 | 476,105 |
| Madison | 257,595 | 249,996 | 278,323 | 295,573 | 435,001 |
| Powell | 280,495 | 214,835 | 220,215 | 213,927 | 404,755 |

Source: National Association of Counties; www.naco.org/counties/queries/pilt_res.cfm, February 21, 2002.

5 Anaconda-Deer Lodge County

We are a destination for other parts of Montana. Recreation is becoming a big business here and the hunting and fishing is why people are moving here.²⁶

Anaconda is a small town, very recreation oriented. People work hard and play hard. They demand a lot from our park system and they recreate on the Big Hole River and Georgetown Lake.

Southwest Montana is ideally situated for people interested in outdoor recreation.

Anaconda-Deer Lodge County is a consolidated city-county that had a population of 9,171 in July 2001. Anaconda-Deer Lodge is the second smallest county in Montana, with a land area of 741 square miles. The county has common borders with Beaverhead, Butte-Silver Bow, Granite, Jefferson, and Powell Counties. A profile web page sponsored by the Anaconda Local Development Corporation and the Anaconda Chamber of Commerce, describes the town of Anaconda as:

...a recreation center community in mountainous southwestern Montana. The Continental Divide passes within 5 miles of town, and local Rocky Mountain peaks reach to 10,379 feet. An extraordinary summer or winter vacation opportunity.²⁷

The community of Anaconda is located in the mountainous area of southwestern Montana at the southern end of the Deer Lodge Valley. However, what stands out on the approach to Anaconda along Montana Highway 1 is not just the mountains, but the 585-foot high brick smelter smokestack—a vivid reminder of Anaconda’s copper-dominated past and the only remains of the Washoe Reduction Works.

The county has a wide range of topographic features from rugged mountains to narrow river valleys. It is bordered by several mountain ranges including the Anaconda Range to the west, the Pioneer Mountains to the south, and the Flint Creek Range to the north. Part of the western boundary of the county is formed by the Continental Divide, which passes close to the City of Anaconda.

The Big Hole River forms the southern boundary of the county and is known for its excellent fishing. The Deer Lodge River, which is a tributary of the Clark Fork River, runs through the eastern portion of the county. However, it is degraded from past mining practices. The Deer Lodge River, Silver Bow Creek, and the Clark Fork River are all part of the Clark Fork River Superfund Complex. Combined, the four locations make up the largest Superfund site in the United States, extending from Silver Bow Creek near the Continental Divide for 120 miles to the Milltown Dam near Missoula, Montana.

Most of the county’s population is spread along a relatively narrow corridor along Highway 1 from Opportunity through the West Valley. Anaconda is the county seat and the largest community, with approximately 62 percent of the population. The Georgetown Lake area and Lost Creek are the county’s other population centers. Georgetown Lake is located on the border of Anaconda-Deer Lodge County and Granite County. It is also a popular recreational area that provides irrigation. The lake is owned in part by the USFS and Granite County. The Mount Haggin Wildlife Area, the state’s largest wildlife management area is located in the southeastern portion of the county.

²⁶ Italics indicate a statement from project participants that were recorded on tape or written in field notes. Exact word for word transcription did not occur in all cases. However, these statements indicate the meaning of what was said. The process of writing field notes and making transcriptions from tapes often results in approximations of what was said that remain true to the meaning of the statement. Quotations from published or other sources are indicated by indentations but not italics.

²⁷ <http://www.anacondamt.org/>

The county lies in the Pacific flyway with migratory waterfowl including trumpeter and whistling swans, Canada and snow geese, common loon, surface and diving ducks, and pelicans. The county is home to numerous shore birds such as grouse, Hungarian partridge, and ring neck pheasant. Beaver, muskrat, mink, river otter, badger, red fox, marten and coyotes are also found. Lands in the county provide critical habitat for big game animals and wintering grounds for big horn sheep, elk, mule deer, and moose.²⁸

Almost every aspect of life in Anaconda-Deer Lodge County, along with its natural resources, have been shaped by Anaconda's history as a one-company mineral town. Anaconda is located only 26 miles west of the rich copper mines in Butte. Marcus Daly, of the Anaconda Copper Mining Company, selected the site for the smelter and built the town in 1883. He picked the location because of the ready availability of water for ore processing and abundant timber to provide lumber for the mines and fuel for the smelters

Gold and silver are what first brought prospectors to southwest Montana. But it was the rich copper deposits that gave Anaconda's neighbor, Butte, the name "the richest hill on earth." The first smelter and a massive copper reduction works were built in Anaconda on the banks of Warm Springs Creek, 26 miles west of Butte. This area is known as the "Old Works Smelter Upper Works." The Upper Works began operation in 1884. A second smelter was built in 1887, a mile east of Upper Works. The enormous Washoe Smelter and Copper Reduction Works were constructed across the valley south of Warm Springs Creek. The Washoe Reduction Works opened in 1902 and by 1908 was producing 12,000 tons daily. This state of the art smelter was the largest reduction operation in the world until it closed in 1981 (Mercier 2001). Smelter operations covered over 5,000 acres in Anaconda.

Daly built a water and sewer system, paved streets, provided street lighting and streetcars, and donated land for churches. Several of Daly's numerous undertakings still stand today including the Montana Hotel (which opened in July of 1889) and the elaborate and ornate Court House built at the foot of Main Street in 1900. Daly built mansions for his management staff and boarding houses for the thousands of immigrants he recruited to work in the smelter:

Four generations of Anaconda men, women, and children labored, loved, and lived in the shadow of the giant stack, in a company town that they shaped but whose destiny was ultimately determined by multinational corporate decisions and global metal prices.

Since 1883, Irish, Italian, Scandinavian, and Slav immigrants and their children had shaped the working-class community while accommodating the vagaries of the metals industry. Townspeople championed unions, though the power of the company and the community's dependence on its jobs forged a cautious unionism among the thousands of workers (Mercier, 2001)

Daly had high hopes that Anaconda would become the state capital but his attempts failed in 1894, when his efforts were blocked by his major mining rival, W. A. Clark. The campaign between Anaconda and Helena was expensive and bitter. According to Mercier (2001, p. 11) this battle established a pattern of corruption in state politics that lasted well into the twentieth century.

5.1 Land Ownership and Use

What is holding Anaconda-Deer Lodge County back is the reality of the Superfund sites. This will be a huge stumbling block in future growth. It took a lot of persuading and information before I decided to move my family here.

²⁸ Anaconda-Deer Lodge County Comprehensive Plan, Final Draft, November 2000.

This section describes the ownership patterns of the county and the types of land use. The subsection on land use includes a brief discussion of the impacts of copper mining and processing on land use, the amount of land in conservation easements and special use designations, and a summary of agricultural land use.

At one time Anaconda-Deer Lodge (formerly Deer Lodge County) included a large portion of what is now Glacier National Park. Deer Lodge County was one of the first counties in the Montana Territory, dating back to 1864. Parts of Deer Lodge County were taken to form other counties including Granite County, Silver Bow County, Lewis and Clark County, Flathead County, and Powell Counties.²⁹ Anaconda-Deer Lodge County was separated from the agricultural northern half of the Deer Lodge valley in 1901, becoming the second smallest county in terms of land area in Montana—471,240 acres. The southern portion of the valley was split from the north as a result of the political pressure brought to bear on the state legislature by the Anaconda Copper Mining Company.³⁰ The Anaconda Copper Mining Company was afraid of the protests from rural agricultural interests in the northern portion of the valley who were vigorously protesting smelter pollution and the decline in the quality of life and potential impacts on their livelihood (Mercier, 2001).

5.1.1 Land Ownership

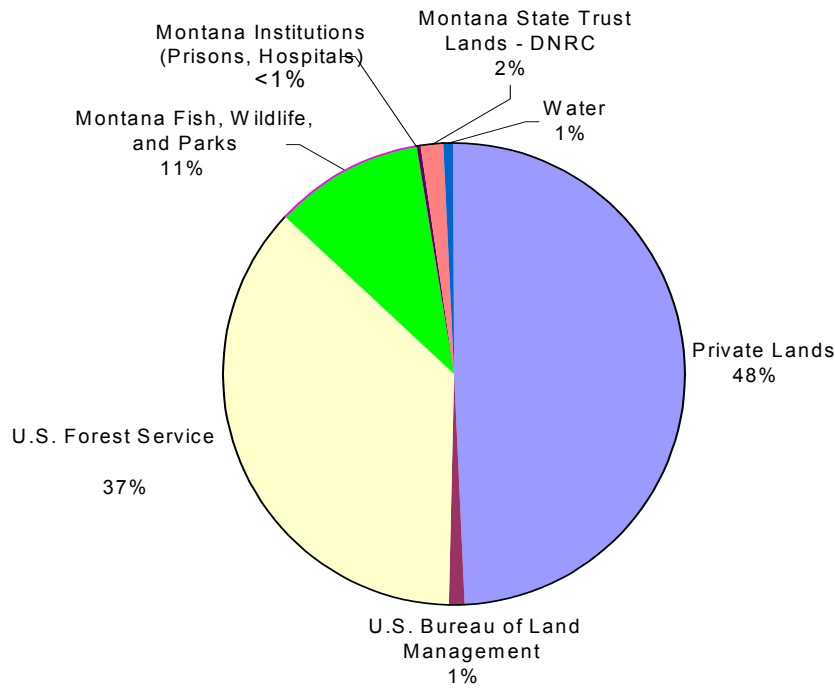
As shown in Figure 5-1, approximately 51 percent of the county is in federal or state ownership. Anaconda-Deer Lodge County contains 6 percent of the B-DNF, about 185,470 acres. The Forest Service is the single largest land owner controlling approximately 37 percent of the land. State-owned lands consist mainly of the Mt. Haggin Wildlife Management Area in the southeast corner of the county and Lost Creek State Park. State lands also include Montana State Hospital (formerly the Warm Springs Mental Hospital), which has long been important to the residents of the county, particularly in terms of jobs (Mercier, 2001, p. 91). The county owns approximately 4,932 acres. BP-ARCO owns approximately 17,000 acres of land.³¹

²⁹ <http://www.geobop.com/World/NA/US/MT/Counties/>

³⁰ Renamed the Anaconda Company in 1955 and purchased by ARCO in 1977.

³¹ [The Montana Standard](#) , 05/08/2001: [Vera Haffey](#)

Figure 5-1. Percent of Land Ownership of Major Land Owners in Anaconda-Deer Lodge County



Note: Total land area in Anaconda-Deer Lodge County is 474,000 acres
 Source: Montana State Library (2001).

5.1.2 Types of Land Use

Land use in Anaconda-Deer Lodge County is constrained by both geography and the impacts of over nine decades of copper smelting operations. The community of Anaconda is wedged between the scenic Pintler Mountains and the vast Anaconda Company smelter complex.

According to the *Anaconda-Deer Lodge Comprehensive Plan* (November 2000), all of the county is considered rural, and most of the publicly owned rural land is largely forest reserved for recreation and conservation purposes, while most of the privately owned rural land is used for agricultural purposes. Anaconda is the gateway to the Anaconda-Pintler Wilderness, 159,000 acres that extends 30 miles along the Continental Divide. The Pintler Scenic Route follows Montana Highway 1 from Anaconda up by Georgetown Lake. Mt. Haggin Wildlife Management Area in the southern portion of the state has 56,151 acres available for hiking, Nordic, skiing, and mountain biking. The management goal of the wildlife area is to provide year-round habitat for wildlife, emphasizing moose and mule deer, and to provide public outdoor recreational opportunities.

5.1.2.1 Superfund Site

A potential constraint on development of Anaconda-Deer Lodge County is the largest superfund site in the United States. Decades of mining and mineral processing in and around the cities of Butte and Anaconda have severely affected the area's natural resources through the release of hazardous substances such as arsenic into the Upper Clark Fork River Basin between Butte and Milltown. While

the specific reasons for designation vary site by site, all are related to historic mining and processing activities. The State of Montana filed a Natural Resource Damage action against the Atlantic Richfield Company (ARCO), now BP-ARCO, in 1983 seeking damages for injury to natural resources in the Clark Fork River Basin. The trial process that began in 1997 is ongoing.

The Clark Fork River Superfund Site is actually a group of several sites within the river basin including the Smelter Site in Anaconda, the Montana Pole Site in Butte, the Silver Bow Creek/Butte Addition Site, and the area along the river and flood plain from Warm Springs near Anaconda upstream north to the Milltown Reservoir near Missoula. In response to issues related to the size and complexity of these sites, they have been divided into several operable units.

An in-depth discussion of the sites and the actions taken as they affect Anaconda-Deer Lodge County can be found in the *Anaconda-Deer Lodge County Comprehensive Plan*, Appendix A: Superfund History and Actions. A brief review of some of the actions and issues follows.

In 1980, the U.S. Congress enacted into law the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as the Superfund law. A tax on the chemical and petroleum industries was created. The act provides broad Federal authority to respond directly to releases or threatened release of hazardous substance that may endanger public health or the environment. Approximately \$1.6 billion was collected in taxes over a five-year period to create a trust fund for cleaning abandoned or uncontrolled hazardous waste sites.

The National Priorities List (NPL) is a published list of hazardous waste sites in the United States that are being cleaned up under the CERCLA. There are approximately 1,235 sites on the NPL located across the country and in several U.S. territories. Once a hazard has been identified, cleanup options are studied for effectiveness and feasibility. Then the EPA determines what it believes to be the appropriate cleanup process. In most cases, the party responsible for the contaminants at the site is responsible for paying cleanup costs. If a site is large and complex the EPA divides the site into operable units.

Since most of the contamination in the area was caused by historic mining operations, ARCO was named as the potentially responsible party. According to U.S. law, the liability associated with hazardous waste travels with ownership of the holdings/facilities connected to the waste. ARCO bought the Anaconda Mining Company and its holdings in 1977 and although ARCO is not directly responsible for the contamination, ARCO's purchase of Anaconda Mining Company includes any pollution created by Anaconda Mining Company. EPA's costs and ARCO's liability is the subject of ongoing litigation in *U.S. v. ARCO*. However, the State of Montana and ARCO have settled some of the continuing natural resource damage lawsuit issues. The smelter site was put on the EPA's National Priority list in 1983. Cleanup efforts up in Anaconda-Deer Lodge County include demolition of the smelter, stabilization actions, permanent relocation of all Mill Creek residents (eight homes), cleanup of arsenic-contaminated soils in three Anaconda neighborhoods, disposal of stored wastes and contaminated materials from the former beryllium flake metal plant and a beryllium oxide pilot plant, and stabilization of the Old Works Operable Unit.

A portion of the Old Works Operable Unit has been reclaimed and turned into a Jack Nicklaus Signature golf course owned by the county. Smelting wastes were capped with limestone and topsoil and a system of underground piping was installed to collect excess water and prevent it from leaching. The excess water collected is then stored in ponds and used for irrigation of the course. In August 2002, construction began on an adjoining \$6 million luxury resort lodge. Expansion of the golf course clubhouse begins in Fall 2002.

Anaconda-Deer Lodge County also contains a portion of the Silver Bow Creek/Butte Area Site. This site includes about 40 miles of stream and streamside habitat above Butte near the Continental

Divide, westward along Silver Bow Creek to the Warm Springs Ponds, which are in Anaconda-Deer Lodge County. Silver Bow Creek was used as a conduit for mining, smelting, industrial, and municipal wastes for over 100 years. In addition there are vast mine tailings deposits along the creek which contain elevated levels of heavy metals. The Warm Springs Ponds were constructed by the Anaconda Company as treatment ponds in 1911, 1916, and between 1954 and 1959. The ponds covering about 2,400 acres were built to settle out mining wastes from Silver Bow Creek and improve the quality of water released into the river. The Clark Fork River begins just below the ponds. Numerous cleanup activities have taken place in the Silver Bow Creek/Butte area site including excavating tailings and contaminated soils and consolidating them in Pond 3.

5.1.2.2 Major Uses or Land Cover Type

Table 5-1 presents major land uses or land cover type in Anaconda-Deer Lodge County. Of the 474,000 acres, approximately 60 percent of the county is covered in evergreen forest. Approximately nine percent is in crop or pasture land. Just over three percent is mines/quarries and around six percent is exposed rock. All other land uses are either zero percent or account for less than two percent of land area and are not included in the Table 5-1.

Table 5-1. Type of Land Use as Percent of Total Area for Anaconda-Deer Lodge County and Study Area

| Type | Percent | Study Area |
|------------------|----------------|-------------------|
| Brush Rangeland | - | 17.55 |
| Evergreen Forest | 59.62 | 43.40 |
| Crop/Pasture | 9.02 | 7.46 |
| Grass Rangeland | 8.09 | 17.32 |
| Mixed Rangeland | 7.99 | 9.21 |
| Exposed Rock | 5.79 | 0.75 |
| Mines/Quarries | 3.33 | 0.23 |

Source: Montana Natural Resource Information System On-Line Mapping, nris.state.mt.us/mapper/county/html, February 19,2002.

Note: Columns may not add up to 100 percent due to exclusion of land use categories accounting for less than one percent of total land area.

5.1.2.3 Conservation Easements and Special Use Designations

Table 5-2 lists the amount of land within the county under conservation easements or designated for special use. Less than one percent are in conservation easements. Special use designated land accounts for just over 12 percent of total county land—the largest portion designated as wilderness area.

Table 5-2. Conservation Easements and Special Use Designations in Anaconda-Deer Lodge County and Project Area

| Land Type | Acres | Percent of Total County Lands | Project Area Total | Percent of Total Project Area |
|--|---------------|-------------------------------|--------------------|-------------------------------|
| Conservation Easements | | | | |
| Private Conservation Easement | 1,576 | 0.33 | 2,600,338 | 2.49 |
| USFWS | 0 | 0 | 27,173 | 0.26 |
| State Lands | 1,669 | 0.35 | 54,899 | 0.52 |
| Total | 3,245 | 0.68 | 2,682,410 | 3.27 |
| Special Use Designation | | | | |
| BLM Special | 0 | 0 | 30,953 | 0.30 |
| Research Natural Areas | 858 | 0.18 | 19,226 | 0.18 |
| Wilderness Area | 54,921 | 11.59 | 611,925 | 5.85 |
| Total | 55,779 | 11.77 | 662,104 | 6.33 |
| Total of Conservation Easements and Special Use | 59,024 | 12.45 | 3,344,514 | 9.60 |

Source: Montana Natural Resource Information System On-Line Mapping, nris.state.mt.us/mapper/county/html, February 19, 2002.

5.1.2.4 Agriculture Profile

Table 5-3 lists farm attributes for the years 1987, 1992, and 1997. The number of farms in Anaconda-Deer Lodge County has increased, along with the number of full-time farms, but total acreage in farmland has decreased. The average size of a farm decreased over 40 percent; from 2,113 acres in 1987 to 1,225 acres in 1997. The average market value of agricultural products per farm averaged \$50,807, down approximately 24 percent from \$66,883 in 1992. The market value of agricultural products sold in 1997 was just over \$4.2 million. The 2002 Census of Agriculture will begin in December 2002.

Table 5-3. Census of Agriculture for Anaconda-Deer Lodge County, 1987, 1992, and 1997

| | 1987 | 1992 | 1997 |
|--|---------|---------|---------|
| Number of Farms | 72 | 70 | 83 |
| Full-Time Agriculture | 35 | 37 | 44 |
| Acreage in Farms | 152,109 | 135,126 | 101,657 |
| Average Size of Farms (acres) | 2,113 | 1,930 | 1,225 |
| Market Value of Agricultural Products Sold (\$1,000) | 3,889 | 4,682 | 4,217 |
| Average Market Value of Agricultural Products per Farm Sold (\$) | 54,021 | 66,883 | 50,807 |

Source: 1997 Census of Agriculture County Profile, United States Department of Agriculture, Montana Agricultural Statistics Service.

5.2 Demographic Characteristics and Trends

People are trying to make things happen and to stabilize the population base.

Information about population helps describe the general nature of a community. An analysis of population trends can help determine if changes are occurring for specific groups defined by age, gender, education level, or ethnicity, thereby influencing the nature of social and economic relationships in the community. Population characteristics may influence resources available to respond to changing socioeconomic conditions. Population growth or decline has a greater relative impact in smaller, rural areas. For example, the smaller and less dense population base found in rural areas makes delivery of basic services more difficult. In urban areas, the logistics and mechanisms for providing public services produce economies of scale impossible for rural areas to duplicate. In addition, in single-sector resource-dependent communities, the variables of population and employment tend to be highly related.

5.2.1 Rural-Urban Classification

Approximately 62 percent of the residents of the consolidated city-county of Anaconda-Deer Lodge live in the city of Anaconda. Another 12 percent live in West Valley, 7 percent in Opportunity, approximately 2 percent in Georgetown Lake with the additional 17 percent spread across the remainder of the county (Table 5-4).

Table 5-4. Anaconda-Deer Lodge County Population Distribution

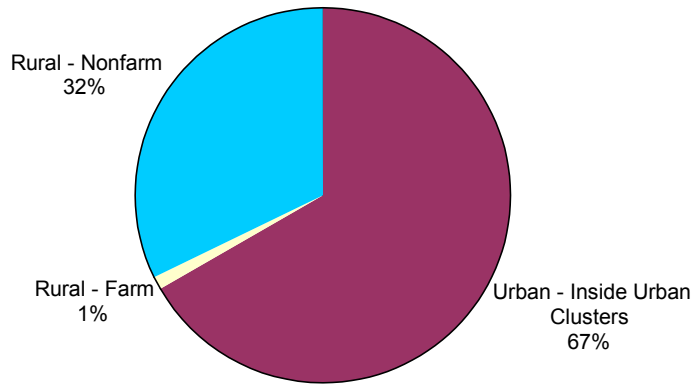
| Area | Estimated Percent of Population |
|---------------------|--|
| Anaconda | 62 |
| Georgetown Lake | (permanent residents) 2 |
| Opportunity | 7 |
| Big Hole Valley | 1 |
| Warm Springs/Galen | (average daily patients and residents) 6 |
| West Valley | 12 |
| Remainder of County | 10 |
| TOTAL | 100 |

Source: Anaconda-Deer Lodge County Comprehensive Plan, Final Draft, November 2000.

Note: Total may not add up to 100 due to rounding.

The Census Bureau uses an urban-rural typology to classify land as rural-nonfarm, rural farm, urban, or urban-cluster as shown in Figure 5-2. Using this typology, only one percent of the county's population lives in an area classified as rural-farm, 32 percent in areas classified as rural-nonfarm, and 67 percent in areas classified as urban-inside urban clusters which reflects the fact that 62 percent of the population of the county live in Anaconda. Anaconda-Deer Lodge County has the second-highest density in the project area with 12.8 people per square mile. Butte-Silver Bow County has the highest density with 48.2 people per square mile.

Figure 5-2. Population in Urban and Rural Areas for Anaconda-Deer Lodge County

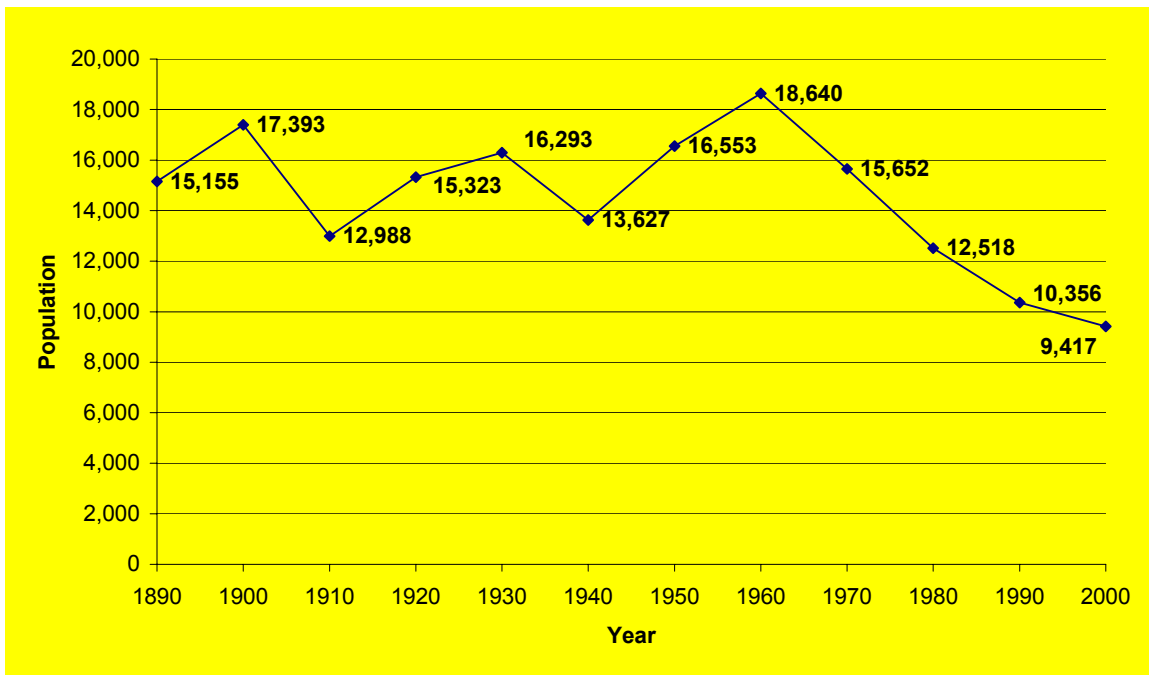


Source: U.S. Census Bureau, Census 2000.

5.2.2 Population Trends

Figure 5-3 shows the population of Anaconda-Deer Lodge County for 1890-2000. Population growth has historically undergone dramatic fluctuations due for the most part to the county’s ties to the mining industry and changing economic conditions of the region.

Figure 5-3. Anaconda-Deer Lodge Population, 1890-2000



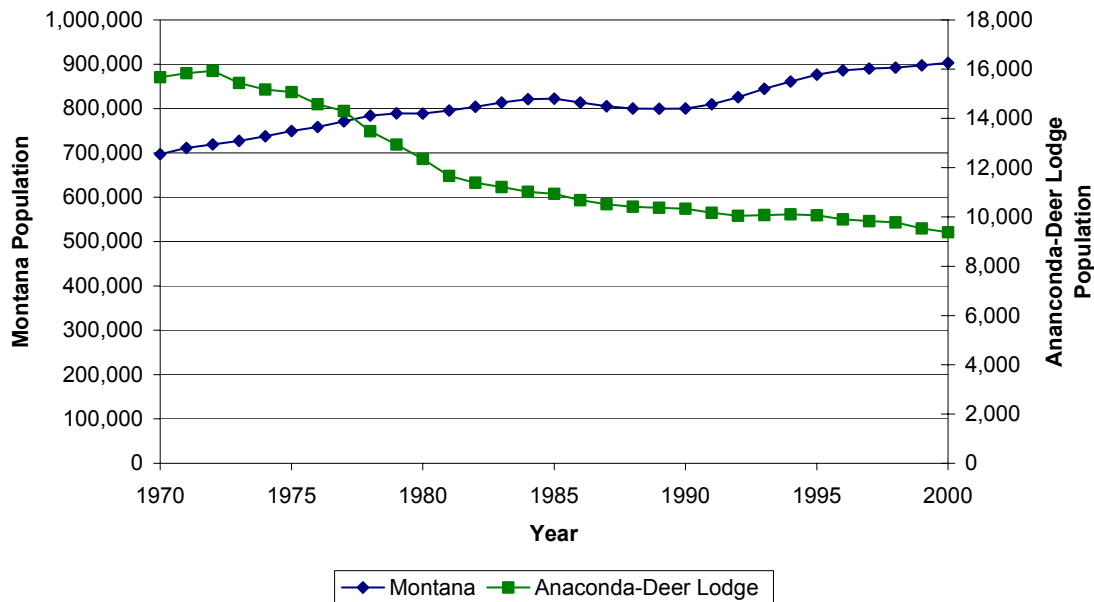
Source: <http://ceic.commerce.state.mt.us/Demog/historic/Censuscty18902000.htm>.

Figure 5-4 compares the population of Montana with the county for a 30-year period. Between 1970 and 2000, the population of Montana increased approximately 30 percent while the population of Anaconda-Deer Lodge County decreased approximately 40 percent. According to Jim Sylvester, economist for the University of Montana, Bureau of Business and Economic Research:

The only people left in Anaconda are the old people and they're dying off.

There's no place to work...there's no jobs, there's no real economic growth in Anaconda, so the young people who are still there are leaving.

Figure 5-4. Total Population of Montana and Anaconda-Deer Lodge County, 1970-2000



Source: Bureau of Economic Analysis, Regional Accounts Data, <http://www.bea.doc.gov/bea/regional/reis/> accessed on September 19, 2002.

Anaconda-Deer Lodge County began to lose population long before the final smelter closed. Population peaked at 17,393 individuals in 1900 and then again in 1960 with 18,640 individuals. However, between 1960 and 1970, the population dropped 16 percent. The following quote from a statement issued on January 13, 1964 by President Lyndon B. Johnson about the unemployment in Anaconda explains, in part, the drop in population:

THE CITY of Anaconda, Mont., has been suffering from severe unemployment for some time, chiefly due to the erection of automated smelting facilities in Butte, Mont. This new plant has drastically affected employment in the city of Anaconda. Senator Mansfield informs that the situation in Anaconda is apt to get worse as the new plant gradually increases its production to full capacity.³²

Population has continued to decrease, but the rate of decrease did slow a little in the 1990s. According to the latest census data, population of the county decreased again between April 1, 2000 and July 1, 2001. Table 5-5 shows components of the most recent population change. Fertility and

³² 99 Statement by the President on Unemployment in Anaconda, Montana. January 13, 1964. American Reference Library, <http://web15.3pnet.com/citation.asp>. Accessed on October 3, 2002.

mortality rates along with out-migration appear to be contributing components to the decline in population. The county experienced 71 more deaths than births during the period and a net out-migration of 179 individuals.

**Table 5-5. Components of Population Change for Montana and Anaconda-Deer Lodge County
April 1, 2000 to July 1, 2001**

| Place | Births | Deaths | Natural Increase (Births-Deaths) | Net International Migration | Net Internal Migration | Numeric Population Change | April 1 2000 Population | July 1, 2001 Population |
|---------------------|--------|--------|----------------------------------|-----------------------------|------------------------|---------------------------|-------------------------|-------------------------|
| Montana | 13,320 | 10,165 | 3,155 | 470 | -1,377 | 2,238 | 902,195 | 904,433 |
| Anaconda-Deer Lodge | 109 | 180 | -71 | 1 | -179 | -246 | 9,417 | 9,171 |

Source: Population Division, U.S. Census Bureau Released April 29, 2002.

Note: Net internal migration is the difference between in-migration and out-migration.

5.2.3 Age and Gender

Senior citizens are a major force here.

Table 5-6 shows the age distribution for Anaconda-Deer Lodge County in 1990 and 2000. In 2000, approximately 23 percent of the county's residents were under 18 years old. Another 19 percent were age 65 years and older.

Table 5-6. Age Distribution for Anaconda Deer-Lodge County, 2000

| | Under 5 Years | 5 to 17 Years | 18 to 24 Years | 25 to 34 Years | 35 to 44 Years | 45 to 64 Years | 65 Years and Over |
|----------------------------|---------------|---------------|----------------|----------------|----------------|----------------|-------------------|
| Montana | | | | | | | |
| 1990 | 7.4 | 20.4 | 8.8 | 15.4 | 15.9 | 18.9 | 13.3 |
| 2000 | 6.1 | 19.4 | 9.6 | 11.4 | 15.7 | 24.4 | 13.4 |
| Anaconda-Deer Lodge | | | | | | | |
| 1990 | 5.6 | 17.7 | 8.8 | 12.6 | 14.6 | 20.9 | 19.8 |
| 2000 | 4.6 | 17.9 | 7.9 | 9.5 | 14.5 | 26.8 | 18.8 |

Source: U.S. Census Bureau Census 2000, Summary File 1, Matrices PCT12 and P13.

A notable population characteristic of Anaconda-Deer Lodge County is the high median age. Table 5-7 gives the median age for the county and the state for 1970, 1980, 1990, and 2000. As pointed out in the county's comprehensive plan, the county has historically had an older population relative to the state and this trend is continuing. By 2000, the median age was more than five years older than the median age in the state. The median age of a community can have implications for income. For example, areas with a higher median age may have more representation in jobs with long years of experience, contributing to higher income levels. However, with the increase of lower paying retail trade and service sector jobs in the county, this may not be the case for Anaconda-Deer Lodge County.

Table 5-7. Median Age for Anaconda Deer Lodge County and Montana 1970, 1980, 1990, and 2000

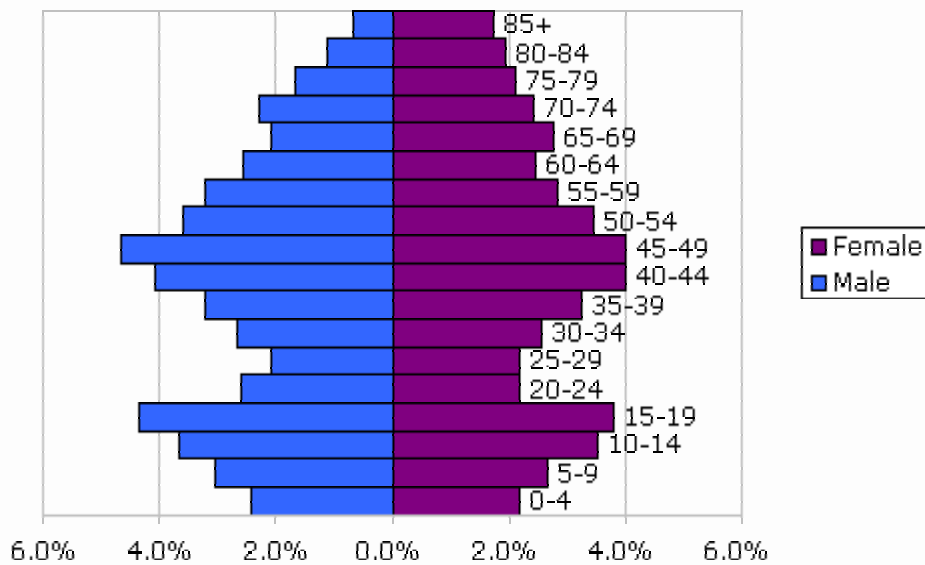
| Place | 1970 | 1980 | 1990 | 2000 |
|---------------------|------|------|------|------|
| Montana | 27.0 | 32.0 | 32.5 | 37.5 |
| Anaconda-Deer Lodge | 33.0 | 32.0 | 38.0 | 42.3 |

Source: Missouri State Census Data Center: Basic Demographic Trend Report at <http://www.oseda.missouri.edu/mscdc/census/us/trend/places/S30MT/P300010>. and Anaconda-Deer Lodge County Comprehensive Plan Final Draft, November 2000.

Drawn as a “population pyramid,” an area’s age-sex structure hints at its patterns of growth. A top-heavy pyramid suggests negative population growth that might be due to any number of factors, including high death rates, low birth rates, and increased emigration from the area. A bottom-heavy pyramid suggests high birth rates, falling or stable death rates, and the potential for rapid population growth. Most areas, however, fall somewhere between these two extremes, and have a population pyramid that resembles a square, indicating slow and sustained growth with the birth rate exceeding the death rate, though not by a great margin. According to information from the Vital Statistics Section of the Montana Department of Health and Human Services, the death rate in Anaconda-Deer Lodge County has exceeded the birth rate in all but three years since 1980. As the population pyramid in Figure 5-5 indicates, one of the most notable population characteristics is that the largest age group is the 45 to 49 age group followed by the 40 to 44 age group.

In terms of gender, there are 99.8 males for every 100 females in the county.

Figure 5-5. Age Structure by Gender for Anaconda-Deer Lodge County, 2000



Source: [Census 2000](#) analyzed by the [Social Science Data Analysis Network \(SSDAN\)](#).

5.2.4 Race

Almost 95 percent of county residents were white compared with 91 percent in the state (Table 5-8). American Indians accounted for 1.8 percent of the population and Hispanic/Latinos for 1.6 percent. One of the unique attributes of Anaconda and Butte is the variety of immigrants attracted to these areas. In 1900, Anaconda and Butte had the largest foreign-born population in the state of Montana. Table 5-9 shows the population and country of origin for Anaconda's population from 1900 to 1940 at 10-year intervals. In 1900, 37 percent of the white population was foreign born.

**Table 5-8. Population Distribution by Race for Anaconda-Deer Lodge County
1980, 1990, and 2000**

| | 1980 | | 1990 | | 2000 | |
|--------------------------------|--------|---------|--------|---------|--------|---------|
| | Number | Percent | Number | Percent | Number | Percent |
| Total Population | 12,518 | 100 | 10,278 | 100 | 9,417 | 100 |
| Total Hispanics | 136 | 1.09 | 157 | 1.53 | 155 | 1.65 |
| White* | 12,078 | 96.49 | 9,816 | 95.50 | 8,914 | 94.66 |
| Black* | 36 | 0.29 | 29 | 0.28 | 16 | 0.17 |
| American Indian and AK Native* | 247 | 1.97 | 250 | 2.43 | 155 | 1.65 |
| Asian* | 21 | 0.17 | 21 | 0.20 | 32 | 0.34 |
| Hawaiian and Pacific Islander* | - | - | - | - | 1 | 0.01 |
| Other* | 0 | 0.00 | 5 | 0.05 | 1 | 0.01 |
| Two or More Races* | - | - | - | - | 143 | 1.52 |

Source: Census 2000 analyzed by the Social Science Data Analysis Network (SSDAN).

Note: * Non-Hispanic only; in 1980 and 1990 "Asians" includes Hawaiians and Pacific Islanders.

Table 5-9. Population of Anaconda, 1900-1940

| | 1900 | 1910 | 1920 | 1930 | 1940 |
|---|-------|-------|-------|-------|-------|
| Female | 3,920 | 4,399 | 5,380 | 5,728 | 5,294 |
| Male` | 5,514 | 5,735 | 6,288 | 6,766 | 5,710 |
| Children ages 6-14 | | 1,776 | 2,069 | 2,069 | 1,612 |
| Number of Families | 2,270 | 2,299 | 2,826 | | |
| Race | | | | | |
| Black | 135 | 124 | 92 | 101 | 76 |
| Indian | | 4 | 1 | | 1 |
| Chinese | 15 | 8 | 6 | | 3 |
| Japanese | | 2 | 1 | | |
| Native Born White | 5,845 | 6,417 | 8,365 | 9,605 | 9,021 |
| Foreign-Born White | 3,458 | 3,579 | 3,196 | 2,774 | 1,903 |
| Native Born with Foreign Parentage | 3,488 | 4,075 | 5,021 | 5,004 | |
| Country of Birth | | | | | |
| Canada- including French Canada | | 472 | 387 | 276 | |
| England | | 195 | 203 | 219 | |
| Germany | | 153 | 133 | 108 | |
| Ireland | | 1072 | 832 | 629 | |
| Italy | | 85 | 1636 | 177 | |
| Denmark, Norway, Sweden | | 525 | 498 | 528 | |
| Austria, Hungary, Croatia, Serbia, Yugoslavia | | 752 | 714 | 543 | |
| Other | | 325 | 304 | 265 | |

Sources: In Laurie Mercier Anaconda Labor, Community, and Culture in Montana's Smelter City, University of Illinois Press, p, 21, 2001.

5.2.5 Housing and Households

Another important descriptive characteristic of Anaconda-Deer Lodge's demography is household composition. Table 5-10 summarizes information on housing units, home ownership, households, and family size. Anaconda-Deer Lodge County has 6.7 housing units per square mile of land area. The county's home ownership rate is about 74 percent compared to approximately 70 percent for Montana as a whole. There are 3,995 households with an average household size of 2.3. The average family size is 2.8. Anaconda-Deer Lodge County has a higher percent of households with individuals 65 years and over than the state, at 32.4 percent and 23.4 percent respectively. The county (27.4 percent) has a lower percent of households with children under 18 than the state (33.3 percent).

Table 5-10. Housing Units and Households for Study Area Counties, 2000

| Characteristic | Anaconda-Deer Lodge | Montana |
|--|---------------------|---------|
| Population | 9,417 | 902,195 |
| Housing Units | 4,958 | 412,633 |
| Occupied Housing Units | 3,995 | 358,667 |
| Housing Units per Square Mile of Land Area | 6.7 | - |
| Homeownership Rate | 73.6% | 69.1% |
| Households | 3,995 | 358,667 |
| Nonfamily Households | 1,469 | 121,260 |
| Number of Households with Individuals 65 years and Over | 1,296 | 83,982 |
| Percent of Households with Individuals 65 years and Over | 32.4 | 23.4 |
| Number of Households with Individuals Under 18 | 1,095 | 119,550 |
| Percent of Households with Individuals Under 18 | 27.4 | 33.3 |
| Average Persons per Household | 2.3 | 2.5 |
| Average Family Size | 2.8 | 3.0 |

Source: U.S. Census Bureau, Census 2000.

Table 5-11 shows changes in household composition for the last decade. There is a slight decrease in the percentage of married couples and almost a five percent decrease in the percent of married couples with children. The percent of married children without children has increased slightly. The number of households headed by females has remained about the same. The percentage of male-headed households has increased slightly as has the percent of non-family households.

Table 5-11. Household Types for Anaconda-Deer Lodge County, 1990-2000

| Household Type | 1990 | | 2000 | |
|--------------------------|--------------|------------|--------------|------------|
| | Number | Percent | Number | Percent |
| Total Households | 4,060 | 100 | 3,995 | 100 |
| Married Couple | 2,175 | 53.6 | 1,999 | 50.0 |
| With Children* | 923 | 22.7 | 713 | 17.8 |
| Without Children* | 1,252 | 30.8 | 1,286 | 32.2 |
| Female-Headed | 377 | 9.3 | 375 | 9.4 |
| With Children* | 220 | 5.4 | 225 | 5.6 |
| Without Children* | 157 | 3.9 | 150 | 3.8 |
| Male-Headed | 102 | 2.5 | 152 | 3.8 |
| With Children* | 49 | 1.2 | 93 | 2.3 |
| Without Children* | 53 | 1.3 | 59 | 1.5 |
| Non-Family | 1,406 | 34.6 | 1,469 | 36.8 |
| Householder Living Alone | 1,318 | 32.5 | 1,336 | 33.4 |
| Two or More Persons | 88 | 2.2 | 133 | 3.3 |

Source: [Census 2000](#) analyzed by the [Social Science Data Analysis Network \(SSDAN\)](#).

* For the purposes of this table, "children" are people under age 18.

5.2.6 Education

Table 5-12 shows the education attainment in Anaconda-Deer Lodge County for the population 25 years of age and older. Approximately 85 percent of the population 25 years and older have high school diplomas or equivalency and around 15 percent have bachelor’s degrees or higher. The percent of individuals with a bachelor’s degree or higher is about of the percent of the state’s population with similar degrees.

Table 5-12. m of Population 25 Years and Older for Anaconda-Deer Lodge County, 2000.

| Education Level | Number | Percent |
|---------------------------------|--------|---------|
| Less than 9th grade | 395 | 6.0 |
| Some high school, no diploma | 623 | 9.5 |
| High school graduate | 2,830 | 43.0 |
| Some college, no degree | 1,452 | 22.1 |
| Associate degree | 313 | 4.8 |
| Bachelor’s degree | 700 | 10.6 |
| Graduate or professional degree | 271 | 4.1 |
| Total Population Age 25+ | 6,584 | 100 |

Source: U.S. Bureau of the Census, Census 2000, DP-2.

5.3 Economic Conditions and Trends

We are hurting real bad—there are no real jobs.

Anaconda is in a state of economic decline and has had to redefine itself as a community.

Anaconda is adverse to change and we are in a little bit of denial.

For us to remain complacent and wait for a large employer or savior, I don’t think it is a healthy perspective. If we just stay stagnant and believe things will get better because “they owe it to you,” they won’t.”³³

The community still has a company mentality. They are waiting for one big company to come and take care of them. There is not a great deal of acceptance of change.

Until 1980, when the Anaconda Smelter closed, the county had been a long-standing smelter-based, one-company town. With the closure, the county lost 66 percent of its tax base and 25 percent of the workforce lost their jobs.³⁴ Today, knowledgeable informants describe their economy as being focused on Superfund sites and clean-up endeavors. These activities are helping to bring some economic stabilization. Anaconda-Deer Lodge County and Butte have had to reinvent themselves. The economy has slowly shifted away from a manufacturing base to an economy supported by government and service-oriented employment. However, from interviews in the county, there still appears to be some expectation on the part of residents, that “some company or industry” will locate in Anaconda and drive the economy once again. Interview data also suggest that many county residents commute to Butte or Deer Lodge.

³³ Mike King in “Anaconda, Mont., Insurance Agent Works to Redevelopment City” by Vera Haffey, *The Montana Standard* August 8, 2002.

³⁴ *Anaconda-Deer Lodge County Comprehensive Plan, Final Draft*, November, 2000.

5.3.1 Economic Sectors and Diversity

I'd hate to see one company dominate the town again.

This section provides information on the diversity of the economy of Anaconda-Deer Lodge County from two perspectives, both based on 1999 IMPLAN³⁵ Model Year Data for the county. A more detailed description of input-output models and IMPLAN is located in Chapter 4 of this report. One perspective looks at the contributions of natural resources-based sectors to the total output and employment of all sectors of the county. The other perspective compares value-added estimates of the different sectors in the county.

Table 5-13 is an updated version of the model that appears in the USFS Region 1 Economic Library. "Wildland" related sectors do not appear to be a significant source of total industry output or employment for Anaconda-Deer Lodge County.

Table 5-13. Direct Effects of "Wildland" Related Sectors in Anaconda Deer Lodge County, 1999

| | Industry Description | Industry Output (Millions of \$) | Industry Output as % of County Total | Employment | Industry Employment as % of County Total | Labor Income (Millions of \$) | Average Laborer Income (\$/Job) |
|---------------------------|--|----------------------------------|--------------------------------------|------------|--|-------------------------------|---------------------------------|
| Timber Industries | | | | | | | |
| 24 | Forestry Products | 0.1 | 0.0 | 2 | 0.0 | 0.0 | 7,746 |
| 26 | Agricultural, Forestry, Fishery Services | 0.0 | 0.0 | 1 | 0.0 | 0.0 | 6,093 |
| 133 | Logging Camps and Logging Contractors | 0.3 | 0.2 | 2 | 0.0 | 0.1 | 29,328 |
| | Total | 0.4 | 0.2 | 5 | 0.1 | 0.1 | 16,200 |
| Grazing Industries | | | | | | | |
| 4 | Range Fed Cattle | 1.1 | 0.5 | 16 | 0.4 | 0.3 | 21,183 |
| 6 | Sheep, Lambs and Goats | 0.0 | 0.0 | 2 | 0.0 | 0.0 | 5,749 |
| 26 | Agricultural, Forestry, Fishery Services | 0.0 | 0.0 | 1 | 0.0 | 0.0 | 6,093 |
| | Total | 1.2 | 0.6 | 19 | 0.5 | 0.4 | 18,632 |
| Mineral Industries | | | | | | | |
| 31 | Gold Ores | 3.3 | 1.6 | 15 | 0.4 | 0.5 | 35,345 |
| 41 | Sand and Gravel | 0.2 | 0.1 | 2 | 0.0 | 0.1 | 38,376 |
| | Total | 3.5 | 1.7 | 17 | 0.4 | 0.6 | 35,647 |

Table based on Anaconda-Deer Lodge County 1999 IMPLAN Model Year Data.

Note: NAIC code categories reporting no output were not included in the table.

Table 5-14 shows the value-added by basic industries as a percent of total value-added for Anaconda-Deer Lodge County, all the project counties as a group, and Montana. Figure 5-6 shows a pie chart of

³⁵ IMPLAN Pro™ is Social Accounting and Impact Analysis software; produced by MIG, Incorporated

value-added for Anaconda-Deer Lodge County. Value-added refers to the total value of payments by the different factors of production and is equivalent to the gross regional product. Value-added can be an important indicator of industry economic activity. It is derived by subtracting the costs of materials, supplies, containers, fuel, purchased electricity, and contract work from the value of shipments for the product manufactured. Value-added represents the amount available in the county for wages, salaries, and profits in an industry.

In Anaconda-Deer Lodge County the largest value-added sector is government, accounting for 28 percent of the total value-added compared to 17 percent for both the state and the project area counties as a group. The services sector is larger in the county than in the state or the project counties. Mining accounts for only one percent of value-added in Anaconda-Deer Lodge. Trade industries account for 16 percent of value-added in the county. Agriculture accounts for five percent of value-added for the state but only three percent for the county.

Table 5-14. Value-Added by Basic Industries as Percent of Total Value-Added for Anaconda Deer Lodge County, All Project Counties, and Montana, 1999

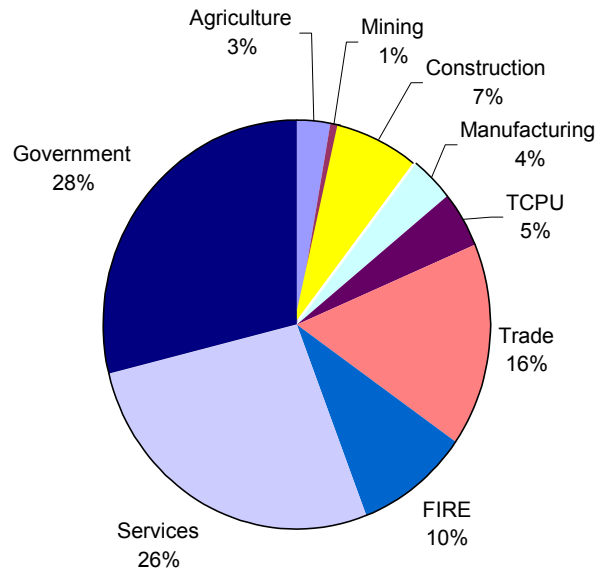
| Categories | Anaconda-Deer Lodge | All Project Counties | Montana |
|-------------------|----------------------------|-----------------------------|----------------|
| Agriculture | 3 | 4 | 5 |
| Mining | 1 | 7 | 2 |
| Manufacturing | 4 | 6 | 7 |
| Government | 28 | 17 | 17 |
| Services | 26 | 18 | 21 |
| FIRE | 10 | 11 | 14 |
| TRADE | 16 | 14 | 18 |
| TCPU | 5 | 18 | 10 |
| Construction | 7 | 5 | 6 |

Source: MIG Group, Inc., IMPLAN Model Output, Based on Anaconda-Deer Lodge County 1999 IMPLAN Model.

Note: TCPU=transportation, communications, and public utilities

FIRE= Finance, Insurance, and Real Estate

Figure 5-6. Value-Added by Basic Industries in Anaconda-Deer Lodge County as Percent of Total Value-Added, 1999



Source: MIG Group, Inc., IMPLAN Model Output, Based on Anaconda-Deer Lodge County 1999 IMPLAN Model.
 Note: TCPU=transportation, communications, and public utilities
 FIRE= Finance, Insurance, and Real Estate

5.3.2 Employment

Information in this section focuses on the number and percent of individuals in the labor force, unemployment rates, employment by occupation and industry, the number of businesses, employees, and payroll by industry sector, and information on self-employed individuals and receipts. This information has been gathered from the U.S. Census Bureau, the U.S. Bureau of Economic Analysis, the Montana Department of Labor and Industry, and the Bureau of Economic Analysis Regional Economic Information System.

5.3.2.1 Labor Force

Table 5-15 shows the number of individuals 16 years and older and the number of individuals in this age category that participated in the civilian labor force. “Civilian labor force” is defined as the number of persons 16 years and older, employed or unemployed, excluding members of the armed forces. “Employed” includes those persons who work for pay or profit during a week or, as unpaid family workers, work 15 hours or more during a week. “Unemployed” are persons who, for an entire week, did not work at all but were able and available to work.

At the time of Census 2000, approximately 35 percent of individuals 16 and over in Montana were not in the labor force, as compared to 39 percent in the study area counties as a whole and 44 percent in Anaconda-Deer Lodge County.

Table 5-15. Population 16 Years and Older in the Labor Force, Census 2000

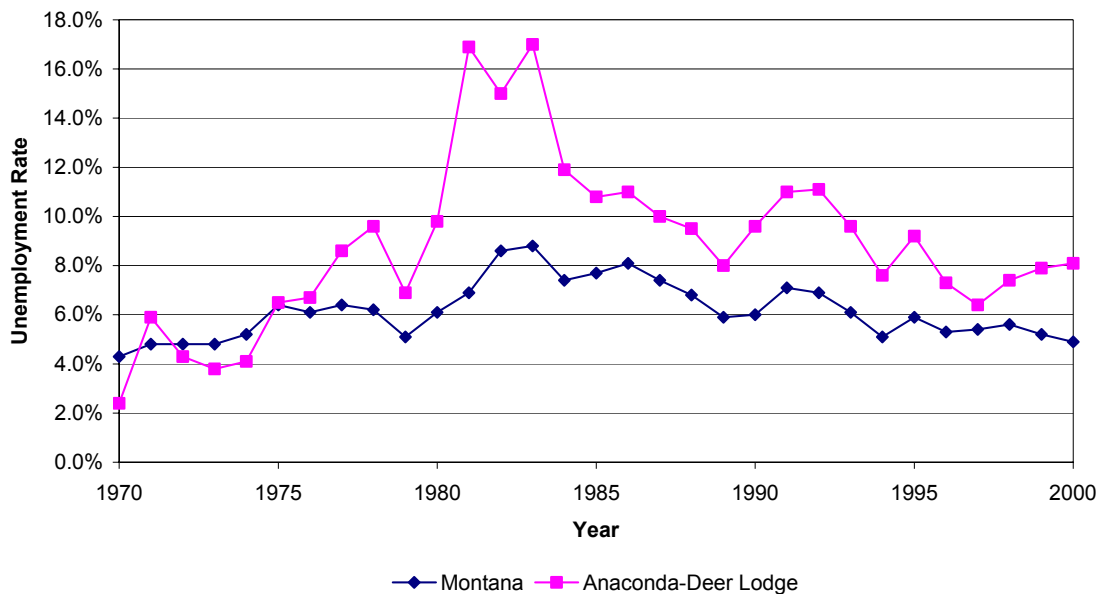
| Area | Population 16 Years and Older | Population in Labor force | Percent in Labor Force | Population Not in Labor Force | Percent Not in Labor Force |
|---------------------|-------------------------------|---------------------------|------------------------|-------------------------------|----------------------------|
| Montana | 701,168 | 458,306 | 65.4 | 242,862 | 34.6 |
| Study Area | 63,566 | 38,516 | 60.6 | 25,050 | 39.4 |
| Anaconda Deer Lodge | 7,627 | 4,237 | 55.6 | 3,390 | 44.4 |

Source: Montana Department of Labor and Industry, Research and Analysis Bureau, Local Area.

5.3.2.2 Unemployment

In 2000, according to the Montana Department of Labor and Industry, Anaconda-Deer Lodge County had the highest unemployment rate (8.1 percent) of any study area counties (Figure 5-7). Unemployment rates are calculated by dividing the number of people looking for work by the total number of available workers in the labor force. Unemployment rates in the double digits usually indicate a depressed or stagnant economy while rates under 4 percent are considered full employment.³⁶ However, there are limitations to unemployment figures and rates, because no differentiation is made between full-time and part-time jobs. In addition, the unemployment rate does not account for individuals who are underemployed or for the discouraged worker who has given up hope of finding a job. Figure 5-7 shows the unemployment rate for Montana and Anaconda-Deer Lodge County from 1970 to 2000. The effects of the closure of the Anaconda Smelter in 1980, when the unemployment rate was over 16 percent, are readily apparent in this figure. As an update, the preliminary unemployment rate for Anaconda-Deer Lodge County for August 2002 was 4.6 percent.³⁷

Figure 5-7. Unemployment Rate for Montana and Anaconda-Deer Lodge County, 1970-2000



Source: Montana Department of Labor and Industry, Research and Analysis Bureau, Local Area Unemployment Statistics.

³⁶ 4th Quarter 2001 - *Montana Employment and Labor Force Trends*.

³⁷ <http://rad.dli.state.mt.us/press/ptab0802.asp>

5.3.2.3 Class of Workers

Table 5-16 shows the percentage of four different classes of workers: private wage and salary workers, government workers, self-employed workers in their own business who are not incorporated, and unpaid family workers. According to Census 2000 approximately 62 percent of Anaconda-Deer Lodge workers are private wage and salary workers, 26 percent are government workers, 11 percent are self employed, and less than one percent are unpaid family workers.

Table 5-16. Percent of Class of Worker for Montana and Anaconda-Deer Lodge County, 2000

| Class of Worker | Montana | Anaconda-Deer Lodge |
|--|---------|---------------------|
| Private Wage and Salary Workers | 69.2 | 61.8 |
| Government Workers | 18.3 | 26.4 |
| Self-employed Workers in Own Not Incorporated Business | 11.8 | 10.9 |
| Unpaid Family Workers | 0.7 | 0.9 |

Source: U.S. Census Bureau, Census 2000.

5.3.2.4 Employment by Occupation and Industry

Table 5-17 shows the percent of employment in Montana and Anaconda-Deer Lodge by occupation and by industry according to Census 2000. Approximately 33 percent of Montana workers are in management, professional, and related occupations compared to 27.7 percent of workers in Anaconda-Deer Lodge. In contrast, 31.9 percent of Anaconda-Deer Lodge Residents are in service occupations while 17.2 percent of all Montana workers are in service occupations. Only 2.2 percent of Montana workers and 1.2 percent of county workers gave their occupations as farming, fishing, or forestry related. Approximately 11 percent of both groups reported their occupations as construction, extractions, or maintenance.

When looking at employment by industry, what stands out is the that 30.9 percent of Anaconda-Deer Lodge workers reported working in educational, health and social services industries compared to 21.7 percent of Montana workers as whole. Only 4.5 percent of Anaconda-Deer Lodge workers reported working in agriculture, forestry, fishing and hunting, and mining industries as compared to 7.9 percent of Montana workers. There is overlap between employment by occupation and employment by industry. For example, workers may report their occupation as management but their employment industry as forestry, fishing and hunting, and mining. Other workers may report their occupation as farming, fishing, or forestry related while reporting their employment industry as forest, fishing and hunting, and mining.

**Table 5-17. Percent of Employment by Occupation and Industry
Anaconda-Deer Lodge County, Census 2000**

| | Montana | Anaconda-Deer Lodge |
|---|---------|---------------------|
| Occupation | | |
| Management, Professional, and Related Occupations | 33.1 | 27.7 |
| Service Occupations | 17.2 | 31.9 |
| Sales and Office Occupations | 25.5 | 19.2 |
| Farming, Fishing, and Forestry Occupations | 2.2 | 1.2 |
| Construction, Extractions, and Maintenance Occupations | 10.7 | 10.5 |
| Production, Transportation, and Material Moving Occupations | 11.2 | 9.5 |
| Industry | | |
| Agriculture, Forestry, Fishing and Hunting, and Mining | 7.9 | 4.5 |
| Construction, Extractions, and Maintenance Occupations | 7.4 | 6.5 |
| Manufacturing | 6.0 | 5.1 |
| Wholesale Trade | 3.0 | 0.6 |
| Retail Trade | 12.8 | 8.9 |
| Transportation and Warehousing, and Utilities | 5.4 | 4.1 |
| Information | 2.2 | 1.9 |
| Finance, Insurance, Real Estate, and Rental and Leasing | 5.5 | 4.3 |
| Professional, Scientific, Management, Administrative, and Waste Management Services | 6.5 | 4.1 |
| Educational, Health and Social Services | 21.7 | 30.9 |
| Arts, Entertainment, Recreation, Accommodation and Food Services | 10.4 | 16.1 |
| Other Services (except Public Administration) | 5.3 | 5.7 |
| Public Administration | 5.9 | 7.3 |

Source: U.S. Census Bureau, Census 2000, DP-3.

Table 5-18 shows employment and payroll data for Anaconda-Deer Lodge County in 1999 by industry sector. Through the week including March 12, 2,431 people were employed by a total of 250 establishments. An establishment is a single physical location at which business is conducted or services or industrial operations are performed. Almost \$47.8 million was paid out during 1999, and the health care and social assistance industry had the largest annual payroll of \$23.9 for 900 employees.

Table 5-18. Anaconda-Deer Lodge County, Number of Employees, Payroll, and Total Number of Establishments by Industry Sector, 1999

| NAICS Code | Description | Number of Employees for week including March 12 | Payroll (\$1,000) | | Total Establishments |
|------------|---|---|-------------------|--------|----------------------|
| | | | 1st Quarter | Annual | |
| | Total | 2,431 | 11,427 | 47,757 | 250 |
| 21 | Mining | 17 | 85 | 378 | 4 |
| 22 | Utilities | 0-19 | 0 | 0 | 1 |
| 23 | Construction | 124 | 660 | 3,953 | 20 |
| 31 | Manufacturing | 107 | 684 | 2,839 | 6 |
| 42 | Wholesale trade | 19 | 102 | 380 | 3 |
| 44 | Retail trade | 268 | 1,117 | 4,754 | 46 |
| 48 | Transportation and warehousing | 31 | 132 | 608 | 4 |
| 51 | Information | 20-99 | 0 | 0 | 6 |
| 52 | Finance and insurance | 67 | 327 | 1,357 | 14 |
| 53 | Real estate rental leasing | 22 | 65 | 280 | 7 |
| 54 | Professional, scientific technical services | 32 | 137 | 488 | 10 |
| 55 | Management of companies enterprises | 0-19 | 0 | 0 | 2 |
| 56 | Admin, support, waste mgt, remediation services | 17 | 98 | 391 | 6 |
| 61 | Educational services | 0-19 | 0 | 0 | 2 |
| 62 | Health care and social assistance | 900 | 5,448 | 23,913 | 40 |
| 71 | Arts, entertainment recreation | 100-249 | 0 | 0 | 12 |
| 72 | Accommodation food services | 424 | 885 | 3,815 | 44 |
| 81 | Other services (except public administration) | 82 | 234 | 949 | 21 |
| 99 | Unclassified establishments | 0-19 | 0 | 0 | 2 |

Source: U.S. Census Bureau, County Business Patterns, 1999 County Business Patterns, CenStats, Major Industry Group.

Table 5-19 shows the number of establishments by employee size class. The largest business was in the health care and social assistance sector with 500 to 999 employees. Over half (152) of the establishments in the county had one to four employees.

Table 5-19. Anaconda-Deer Lodge County, Number of Establishments by Employee Size Class for Selected Industry Sectors, 1999

| NAICS Code | Description | Total Establishments | Number of Establishments by Employment-size class | | | | | | | | |
|------------|---|----------------------|---|-----|-------|-------|-------|---------|---------|---------|--------------|
| | | | 1-4 | 5-9 | 10-19 | 20-49 | 50-99 | 100-249 | 250-499 | 500-999 | 1000 or more |
| | Total | 250 | 152 | 46 | 36 | 8 | 4 | 3 | 0 | 1 | 0 |
| 21 | Mining | 4 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | Utilities | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23 | Construction | 20 | 15 | 2 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 31 | Manufacturing | 6 | 3 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| 42 | Wholesale trade | 3 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 44 | Retail trade | 46 | 31 | 8 | 4 | 3 | 0 | 0 | 0 | 0 | 0 |
| 48 | Transportation warehousing | 4 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 51 | Information | 6 | 3 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 52 | Finance insurance | 14 | 9 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 53 | Real estate rental leasing | 7 | 6 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 54 | Professional, scientific technical services | 10 | 8 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 55 | Management of companies enterprises | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 56 | Admin, support, waste mgt, remediation services | 6 | 5 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 61 | Educational services | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 62 | Health care and social assistance | 40 | 22 | 9 | 5 | 1 | 1 | 1 | 0 | 1 | 0 |
| 71 | Arts, entertainment recreation | 12 | 6 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 72 | Accommodation food services | 44 | 22 | 10 | 9 | 2 | 0 | 1 | 0 | 0 | 0 |
| 81 | Other services (except public administration) | 21 | 13 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 99 | Unclassified establishments | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Source: U.S. Census Bureau, County Business Patterns, 1999 County Business Patterns, CenStats, Major Industry Group

Table 5-20 shows nonemployment statistics for Anaconda Deer-Lodge County. Nonemployer statistics summarize the number of establishments and sales or receipts of companies with no paid employees. These nonemployers are typically self-employed individuals or partnerships operating businesses that have not chosen to incorporate. (Self-employed owners of incorporated businesses typically pay themselves wages or salary, so the business is an employer.) In 1997, there were 486 such establishments in Anaconda-Deer Lodge County, with total receipts in excess of \$12.4 million. The number of establishments decreased slightly between 1997 and 1999 from 486 to 470. Receipts have also decreased, from \$13.3 million in 1997 to \$12.4 million in 1999. In terms of sales or receipts, nonemployers usually account for roughly three percent of business activity. At the same time,

nonemployers account for nearly three-fourths of all businesses. Most nonemployer businesses are very small, and many are not the primary source of income for their owners.

**Table 5-20. Nonemployment Statistics
for Anaconda-Deer Lodge County, 1999 and 1997.**

| NAICS Code | Description | No. of Establishments | | Receipts (\$1,000) | |
|---------------|--|-----------------------|------|--------------------|--------|
| | | 1999 | 1997 | 1999 | 1997 |
| 0 | All Industries | 470 | 486 | 12,422 | 13,291 |
| 11 | Forestry, fishing hunting, ag support services | 17 | 14 | 988 | 997 |
| 21 | Mining | D | D | D | D |
| 22 | Utilities | | | | |
| 23 | Construction | 63 | 49 | 2,081 | 1,993 |
| 31-33 | Manufacturing | D | D | D | D |
| 42 | Wholesale trade | 10 | D | 353 | D |
| 44-45 | Retail trade | 60 | 82 | 1,562 | 2,965 |
| 48-49 | Transportation warehousing | 13 | 18 | 935 | 1,304 |
| 51 | Information | D | D | D | D |
| 52 | Finance and insurance | 18 | D | 425 | D |
| 53 | Real estate, rental, and leasing | 37 | 27 | 859 | 365 |
| 54 | Professional, scientific, and technical services | 48 | 52 | 1,196 | 1,318 |
| 56 | Administrative and support and waste management and remediation services | 16 | 18 | 315 | 343 |
| 61 | Educational services | D | D | D | D |
| 62 | Health care and social assistance | 35 | 36 | 1,036 | 569 |
| 71 | Arts, entertainment, and recreation | D | 19 | D | 438 |
| 72 | Accommodation and food services | D | 13 | D | 343 |
| 81 | Other services (except public administration) | 124 | 121 | 1,617 | 1,939 |

Source: Nonemployer Statistics, available at www.census.gov/epdc/nonemployer/1999/mt/MT001.HTM
D = Withheld to avoid disclosure.

5.3.2.5 Top Employers

We would like to see some low polluting high tech industry come to Anaconda, but would hate to see just one dominant company again.

Table 5-21 presents the top ten **private** employers in Anaconda-Deer Lodge County as given by Montana Department of Labor and Industry, Research and Analysis Bureau. The list does not include city, county, and federal government agencies; public school districts and universities are also excluded. However, according to the *Area Plan/Comprehensive Economic Development Strategy 2002* by Headwaters Resource Conservation and Development Area, Inc. (RC&D), the major employer in the county is the Montana State Hospital with approximately 430 employees. The second largest employer is in the private sector, Community Hospital Nursing Home with 200 jobs, followed by Anaconda Public Schools with 175 jobs (RC&D 2002). The county has 153 employees. The Discovery Basin Ski Corporation accounts for 150 seasonal jobs (RC&D 2002). In addition, from the anecdotal information collected, people in Anaconda-Deer Lodge County commute to Butte or the prison in

Deer Lodge, Powell County, to work. Anaconda is approximately 30 miles from Butte or Deer Lodge. The Montana State Prison in Deer Lodge has 500 employees, many of whom may live in Anaconda-Deer Lodge County (RC&D, 2002).

Table 5-21. Top Ten Private Employers in Anaconda Deer Lodge County (in alphabetical order)

| Business | Type of Business |
|--|------------------|
| AFFCO | Foundry |
| Albertson's | Retail |
| AWARE Inc. | Human Services |
| Community Hospital Nursing Home | Health |
| Dee Motor Company | Retail |
| Fairmont Estates Condominium Association | Recreation |
| Fairmont Hot Springs | |
| Granny's Kitchen | Services |
| Jordan Contracting | Construction |
| Safeway | Retail |

Source: Montana Department of Labor Industry, Research Analysis Bureau, Second Quarter 2001 Unemployment Insurance Information.

5.3.2.6 Commuting

Information from Census 2000 has not yet been released on the number of workers who commute to a county other than their county of residence to work. However, some census information is available. In Montana, approximately 74 percent of all workers drive alone in a truck, car, or van to work (Table 5-22) compared to about 81 percent of workers in Anaconda-Deer Lodge County. Anaconda-Deer Lodge County commuters have a mean travel time of 21.1 minutes.

Table 5-22. Commuting in Anaconda-Deer Lodge County, 2000

| | Montana | Anaconda-Deer Lodge |
|---|---------|---------------------|
| Workers 16 year and over (No.) | 422,159 | 3,744 |
| Car, truck, or van-drove alone (%) | 73.9 | 81.2 |
| Car, truck, or Van – carpooled (%) | 11.1 | 10.5 |
| Public transportation (including taxicab) (%) | 0.7 | 0.6 |
| Walked (%) | 5.5 | 4.2 |
| Other means (%) | 1.7 | 0.8 |
| Worked at home (%) | 6.4 | 2.7 |
| Mean travel time to work (minutes) | 17.7 | 21.1 |

Sources U.S. Bureau of the Census, Census 2000, Table DP-3.

5.3.3 Income

Per capita personal income and household income are discussed in the following sections.

5.3.3.1 Personal Income

As defined by the Bureau of Business Economic Research, School of Business Administration, University of Montana:³⁸

Personal income is the income received by people from all sources—private sector and government wages, and salary disbursements, other labor income, farm and nonfarm self employment income, rental income of people, personal dividend income, personal interest income, and transfer payments. Personal income does not have taxes subtracted from it.

Per capita personal income is the annual total personal income of residents divided by their resident population. Per capita personal income is a measure of economic well-being. The amount of goods and services that people can afford is directly related to their personal income.

Table 5-23 show per capita personal income, total personal income along with in-state rankings, and a breakdown of the sources of personal income for the Montana and the county. Montana has not been able to keep pace with the nation, and the county has not been able to keep pace with Montana. Montana’s per capita personal income was \$22,518, placing it 47th out of the 50 states.

Personal income has three components: earnings; dividends, interest and rent; and transfer payments. Earnings as a component of total personal income for the State of Montana accounted for 61.2 percent of total personal income. In 2000 in Anaconda-Deer Lodge, earnings accounted for 51.1 percent of total income. The county ranks 35th among the 56 Montana counties.

The county’s economy appears to depend heavily on transfer payments for a significant portion of personal income. Transfer payments are income payments by government and businesses to individuals and nonprofit institutions for which no current services are performed. Transfer payments include retirement and disability insurance benefit payments, medical benefit such as Medicare and Medicaid, income maintenance benefits, unemployment insurance benefit payments, veterans benefit payments, and federal education and training benefits. Transfer payments in 2000 account for approximately 16 percent of total personal income for the State of Montana. In contrast to the state, transfer payments account for almost 27 percent of total personal income for Anaconda-Deer Lodge County. Part of this difference is likely due to the higher proportion of older individuals in Anaconda-Deer Lodge (Table 5-23 and Figure 5-8).

Table 5-23. Per Capita Personal Income, Total Personal Income, and Components for Montana and Anaconda-Deer Lodge County, 2000

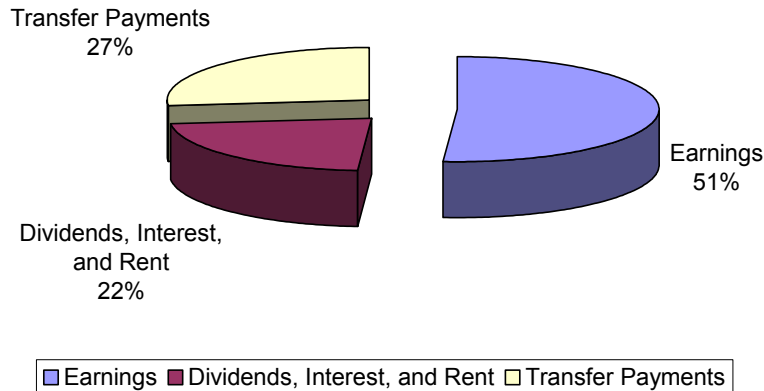
| Place | Per Capita Personal Income | | Total Personal Income | | Components of Total Personal Income | | |
|----------------------------|----------------------------|-----------------|-----------------------|---------|-------------------------------------|-----------------------------------|-----------------------|
| | (\$) | Rank | (\$1,000s) | Rank | Earnings (%) | Dividends, Interest, and Rent (%) | Transfer Payments (%) |
| Montana | | | | | | | |
| 2000 | 22,518 | 47 (US) | 20,336,883 | 46 (US) | 61.2 | 22.7 | 16.1 |
| Anaconda-Deer Lodge | | | | | | | |
| 2000 | 19,406 | 32 ^a | 181,989 | 26 | 51.1 | 22.3 | 26.6 |

Source: Regional Economic Information System, Bureau of Economic Analysis, Bearfacts.

Note: Montana contains 56 counties.

³⁸ [Http://www.bber.mt.edu/economicanalysis/personalincome.htm](http://www.bber.mt.edu/economicanalysis/personalincome.htm) accessed April 22, 2002.

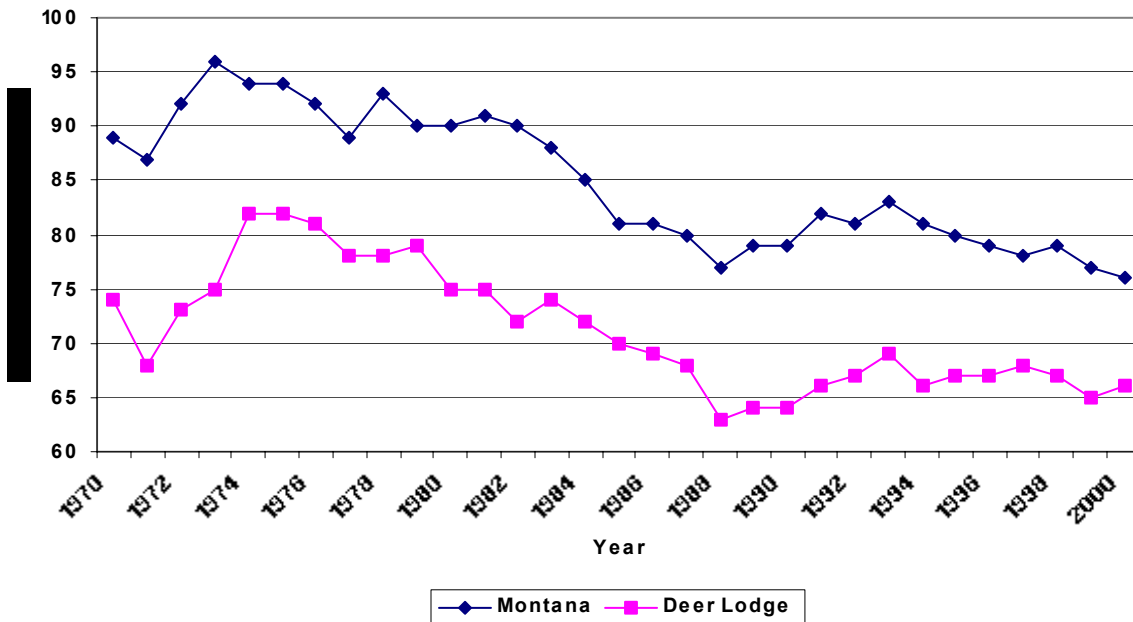
Figure 5-8. Components of Total Personal Income for Anaconda-Deer Lodge County, 2000



Source: Regional Economic Information System, Bureau of Economic Analysis, Bearfacts.

Montana’s per capita income and total personal income are well below the national average (Figure 5-9). The average per capita income for the United States was \$29,469 in 2000 while the per capita income for Montana was \$22,518. The per capita income for Anaconda-Deer Lodge County for 2000 was approximately 14 percent lower at \$19,406. Per capita incomes of all project counties were below the Montana average.

Figure 5-9. Per Capita Personal Income as Percent of U.S. Total for Montana and Anaconda-Deer Lodge County, 1970-2000

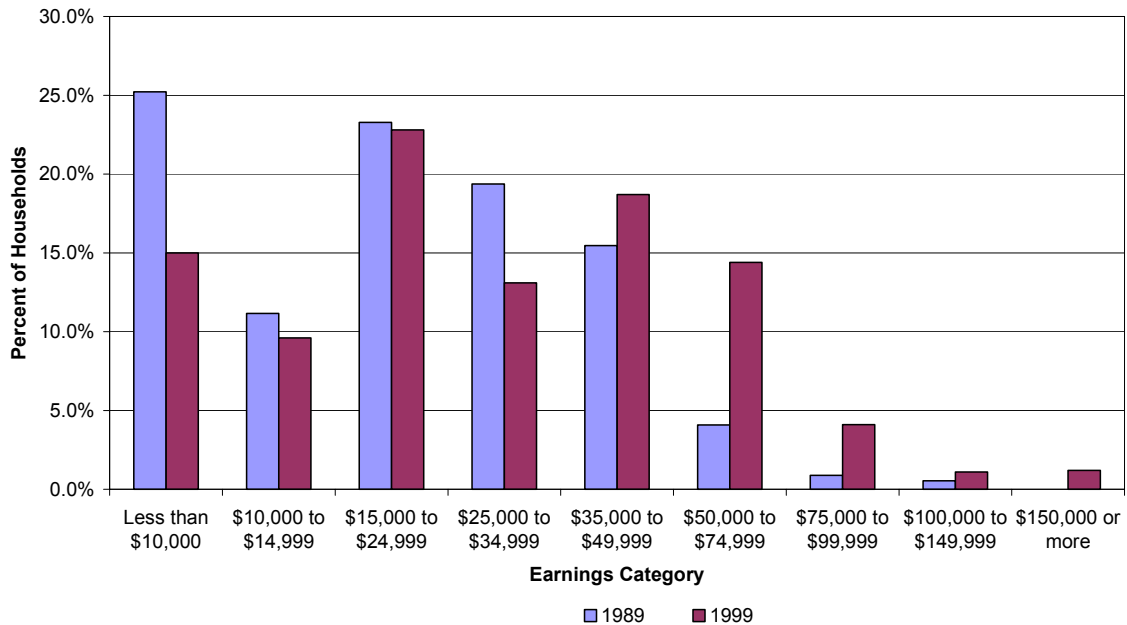


Source: Bureau of Economic Analysis Regional Accounts at <http://www.bea.doc.gov/bea/regional/reis/>.

5.3.3.2 Household Income

Figure 5-10 shows household income for Anaconda-Deer Lodge County for 1989 and 1999. It is important to take into account inflation and growth in the cost of living. Some of the shift from lower to higher income categories is due to a change in the cost of living, and adjustments to pay rates for the cost of living. Inflation also has an effect on household income. Income in 1999 is valued less than income in 1989, due to inflation. As seen in the figure, the largest income category was less than \$10,000 in 1989. By 1999, the largest income group had shifted to the \$15,000 to \$24,999 category.

Figure 5-10. Household Income for Anaconda-Deer Lodge County, 1989 and 1999

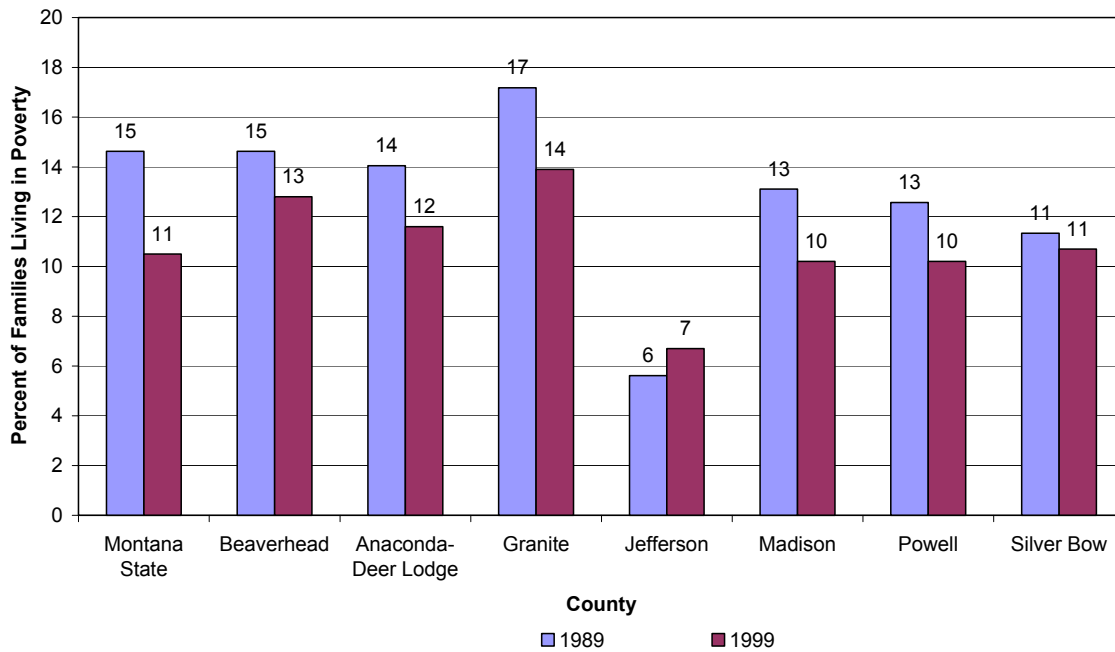


Source: U.S. Census Bureau, Census 1990 and Census 2000.

5.3.3.3 Poverty

The Census Bureau uses a set of money income thresholds that vary by family size and composition to determine who is poor. If a family's total income is less than that threshold, then that family, and every individual in it, is considered poor. The poverty thresholds do not vary geographically, but they are updated annually for inflation for the Consumer Price Index (CPI-U). Figure 5-11 shows the poverty status of county families for 1989 and 1999. In 1989, approximately 17 percent of Montana's families were considered below the poverty level. By the 2000 Census, this percentage had dropped to about 11 percent. The poverty rate for families in Anaconda-Deer Lodge County was approximately 14 percent in 1989 and 12 percent in 1999.

Figure 5-11. Poverty Status of Families in Anaconda-Deer Lodge County, 1989 and 1999



Source: U.S. Bureau of the Census, Census 2000 and 1990 Census, DP-3.

5.4 Community Resources

5.4.1 Infrastructure and Services

Community infrastructure and services are summarized in this section. County infrastructure influences economic development as well as social well-being and community quality of life. Community services indicate the type of resources residents have available to meet basic and other human needs that contribute to personal well-being and community quality of life.

Anaconda is located on Montana Highway 1, which runs from the northwest corner of the county and traverses east until it intersects with I-90 just west of the county line between Anaconda-Deer Lodge and Butte-Silver Bow Counties. The community of Anaconda is located six miles from Interstate 90 and 15 miles from the junction of Interstate 15 (north-south) and Interstate 90 (east-west). According to Jim Sylvester, an economist for the Bureau of Business and Economic Research at the University of Montana, the growth of Anaconda is hindered in part because Interstate 90 bypasses the town.³⁹ Anaconda is around 27 miles from Butte and approximately 25 miles from Deer Lodge. This proximity to Butte provides the county with an important transportation resource and access to the Bert Mooney Airport and the Port of Montana. The Bert Mooney Airport has commercial air service through Horizon and Skywest.

The most popular historic site in Anaconda is the Washoe Theater. Built in 1931, the Washoe is on the National Register of historic places. The county owns the Old Works Golf Course, designed by Jack Nicklaus and paid for by ARCO and the federal government. Instead of hauling away the mine

³⁹ "Deer Lodge County: Census Shows Flight from Mining Areas," www.missoulian.com/archives May 29, 2001.

tailings, slag, and rubble piles at an enormous expense, the Superfund site was capped and special irrigation system installed. Old smelter debris such as flues, smelting ovens and brick walls were incorporated into the design. The inert black slag was made into bunkers. It was expected that the golf course would transform not only the site, but also the city. Building a golf course was one of the least expensive methods of reusing the Superfund site. A hotel is also currently under construction.

County residents value their many recreational opportunities in and around Anaconda-Deer Lodge County including Discovery Ski Area, Georgetown Lake, and the Big Hole River. The former City Hall has been preserved and houses an art gallery, a historical museum and archives, and shops.

The Montana State Hospital is located at Warm Springs in Anaconda-Deer Lodge County. A health resort was built near the springs in the 1870s. The resort was purchased by the state and it became the state's only psychiatric hospital. It has 174 hospital beds. The hospital provides inpatient psychiatric services to adults who have serious mental illness and provides employment to residents of the county and surrounding counties.

The county is served by two freight-only railroad companies: Rarus Railroad and Montana Western Railway Company (MWRC). Rarus is a short line that runs between Butte and Anaconda. MWRC has 52 miles of track between Butte and Garrison. The city-county government owns and operates a basic utility airport, Bowman Field. The north-south runway is 6,000 feet and the southwest-northeast runway is 4,520 feet long. Both runways are paved and lighted. The closest commercial airfreight and passenger airlines are located at the Bert Mooney Airport in Butte approximately 27 miles from Anaconda.

Electricity is supplied by Montana Power Company and the Vigilante Electric Co-op. Natural gas is available from Montana Power Company, which covers a 70,500 square-mile service area. Both Anaconda and Warm Springs are served by a public sewer system. Anaconda has a tertiary treatment public wastewater system.

Wastewater is treated in two aerated lagoons, then piped to holding ponds in the Lost Creek Area. The water is stored and used for ranch irrigation. The sewer system in Warm Springs is maintained by the State of Montana. Wastewater outside of these two cities is treated by on-site disposal such as septic tank systems and drainfields. The city-county government provides a water system for 2,843 hook-ups from six 12-inch wells, a chlorination building, telemetry and control system, and a four million gallon storage tank. Otherwise, domestic water is provided through individual wells. The county needs to replace its water line; and Opportunity and West Valley need sanitary sewer systems.

The Anaconda-Deer Lodge Solid Waste District contracts with Butte-Silver Bow County for Class II solid waste disposal. Garbage collection is provided by Anaconda Disposal. A Class III landfill is located in Anaconda-Deer Lodge east of Arbiter.

U.S. West Communications provides telephone services. There are several dial-up Internet providers. The county is served by *The Montana Standard* and a bi-weekly newspaper, *The Anaconda Leader*.

A survey was mailed to 500 households in Anaconda Deer Lodge County in 2000 asking residents where they shop for various items, what capital improvements are most needed, and how much additional tax they would be willing to pay for various services.⁴⁰ The survey had a response rate of 49 percent. According to the summary report, almost 94 percent of residents normally purchase their groceries in Anaconda, around 88 percent get their hair cut locally, 63 percent buy their appliances locally, and almost 91 percent reported they normally get their cars repaired and maintained locally. It appears that residents will drive to Butte to shop for jewelry, furniture, Christmas shopping, bedding

⁴⁰ Anaconda-Deer Lodge county, Decision 2000, Summary Report, January 2001, prepared by the Deer Lodge County Extension Office.

and linens, and clothing and shoes. Seventy percent reported that they normally get hospital care in Anaconda. About 48 percent of respondents received health insurance from their employment or as part of their retirement package.

The top ranking, most needed, capital improvements are an adult detention center, street repair and reconstruction, additional city water sources, a juvenile detention, repair of the city lighting system, repair of the existing water mains.

A local couple recently opened a full-line sporting goods store in Anaconda. The store was built on a downtown lot that had been vacant since the F.W. Woolworth store burned to the ground over 30 years ago.

Anaconda-Deer Lodge County has a consolidated Commission-Chief Executive type of government that is responsible for all city and county services. Anaconda and Warm Springs are the only two incorporated communities in Anaconda-Deer Lodge County. Anaconda-Deer Lodge County has a comprehensive plan that was revised in November 2000. The city-county government is a commissioner-chief executive form of government with four elected commissioners. The Chief Executive is also elected. Other elected officials include the county attorney, the justice of the peace, county coroner, county treasurer, and the clerk of district court. In addition, the county provides the following services:

- **Public Safety.** The Anaconda Police Department has a Chief of Law Enforcement, an Assistant Chief, 19 patrol officers, 2 detectives, and 1 part-time community service officer.
The Anaconda Fire Department consists of four fire engines with paid firefighters and six volunteers. Some residences are outside of any of the fire service districts in the county.
- **Public Transit.** There is no public transit system.
- **Schools.** Four elementary, one middle school, and one senior high school serve approximately 1,700 students.

Data from the Montana Department of Public Health and Human Services summarize the status of all health services in Montana by county as indicated in Table 5-24.

Table 5-24. Health Resource Assessment for Anaconda-Deer Lodge County

| | | | | |
|---|--|----------------------------------|-----------|---------------|
| Local Hospitals or Medical Assistance Facilities (MAF) (Type of facility and number of beds) | 1 local, 1 adult psych. hospital(s), 0 MAF(s); 228 beds | | | |
| Rural Health Clinics (RHC), Federally Qualified Health Centers (FQHC), IHS and Tribal Health Facilities (Number and type) | 0 RHCs, 0 FQHCs, 0 IHS/Tribal Health Facilities | | | |
| Availability of 911 and Advanced Life Support Services | 911 Yes | Adv. Life Support 0 Services: | | |
| Nursing Homes (Number of facilities and beds) | 2 / 127 beds | | | |
| Aging Services Licensed (Number of Personal Care [PC], Adult Foster Care [AFC], and Retirement Home [RH] Licenses) | PC 1 | AFC 1 | RH 0 | |
| Home Care Services Licensed (Number of Home Health Agency [HHA] and Hospice Licenses) | HHA 2 | Hospice 1 | | |
| Public Health Resources (Number of Full-time Equivalent Public Health Nurses, Public Health Sanitarians [PHS], Registered Dietitians [RD], and Health Educators [HlthEd]) | Nurse 1.2 | PHS 1.0 | RD 0.0 | HlthEd 0.0 |
| Primary Care Provider Resources (Number of doctors [MDs and DOs ⁷], Nurse Midwives [NMW], Nurse Practitioners [NP], and Physician's Assistants [PA]) | MD/DO 7 | NMW 0 | NP 2 | PA 1 |
| Health Care Provider Shortage Status (Federal Health Professional Shortage Area [Fed. HPSA], State HPSA, Medically Underserved Area [MUA], or Medically Underserved Population [MUP]) | Federal HPSA - None; State HPSA - No; MUAs - None; MUPs - None | | | |

Source: Montana State Department of Public Health and Human Services.

The Anaconda Deer Lodge County Ambulance Service is 911-dispatched 24 hours a day. The service has a crew of 20.

- The Community Hospital of Anaconda is a 40-bed facility with 24-hour emergency care and obstetrics, orthopedics, outpatient care, respiratory therapy, and radiology. There is a Veterans Administration Clinic in Anaconda.
- Metcalf Senior Citizens Center provides meals in-house five days a week and delivers meals to shut-ins seven days a week.
- AWARE runs adult and adolescent group homes, foster care, structured living conditions, group therapy, and family style transitions.
- Anaconda Job Corps has a capacity for 240 students. The program includes training as a welder, business clerical, painter, carpenter, operating engineer, construction equipment mechanic, bricklayer, or in the culinary arts.
- Anaconda Local Development Corporation was set up to improve and enhance the economic and business climate in the county.

The Anaconda Chamber of Commerce has over 185 members.

5.4.2 Community Characteristics

The community characteristics addressed in this discussion are collective values, self-images, and selected components of county-level social organization. Values and self-image are aspects of a community that influence residents to reside there and to participate in local activities. Some of the different images or aspects of community identity are expressed in the following statements:

People are taking more pride in the aesthetics of the community and are getting involved to make things happen.

Anaconda has a lot going for it: Discovery Basin Ski Area, Georgetown Lake, some of the best elk hunting in the country, and good hiking.

Anaconda is a wonderful little community with values people like to see. This is very much a community where people help each other out.

Anaconda-Deer Lodge County is a consolidated city-county. Over 60 percent of county residents live in the community of Anaconda and in many ways Anaconda defines the county. Self-image and self-identity are important aspects of the Anaconda-Deer Lodge County social organization. Anaconda is in transition from a one-company, working class, smelter town to a bedroom community and travel destination. It is not an easy transition for some residents. Anaconda has never experienced the long-term stability exhibited by some of the other counties in the study area.

Previous sections of this chapter have described some of the demographic and economic upheavals in Anaconda-Deer Lodge County. Historically the county has had to reinvent itself several times in terms of its economy. But now Anaconda-Deer Lodge County has to reinvent itself in terms of its self-identity.

At one time class, occupation, and ethnicity characterized Anaconda (Mercier 2001), but this does not appear to be as true today. No one interviewed in Anaconda brought up Anaconda's union history. At the same time, almost everyone mentioned the diverse ethnic groups that make up Anaconda and the lasting imprint these groups have on the community. For example, Anaconda Division #1 of the Ancient Order of Hybernian's, a Catholic-Irish fraternal organization dedicated to "promoting the interests and welfare of those with Irish heritage," was formed in September 1885 and is still active in Anaconda today.⁴¹ The group sponsors an annual St. Patrick's Day run.

Other locally defined subgroups include former smelter employees, central district business owners, and residents of smaller communities such as Georgetown Lake and Opportunity.

Many families have lived in the county for three or four generations. Tenure is very much a value still shared by many in Anaconda. But tenure is expressed in a slightly different way than in other parts of the county or in other rural counties within the study area. In Anaconda, tenure is related to a history of extended family, social networks, and self-identity—not as much to land and to a sense of place. People in Anaconda want to know how long you have been there, who is related to who, and who you know that they know.

However, interview data suggest that newcomers who participate in the activities of the community and who express shared values about local lifestyles have an easier time integrating into the community. One newcomer interviewed said "people know who I am and why I am here."

People who are not born in Anaconda are called Boomers. It doesn't matter how long you live here; you are a Boomer if you were not born here. The people here are nice folk and pretty decent, but the smaller a community is the harder it is to walk in and be treated like you belong. People here are somewhat cliquish—it is important to be "from Anaconda."

It is understandable that previous generations might not have had quite the same attachment or ties to the land as experienced in other southwest counties. In Anaconda-Deer Lodge, people lived in a landscape drastically altered by mining and mineral processing.

⁴¹ <http://www.anaconda-aoh.com/>.

Residents of Anaconda value family life and especially children. Participation in sports and other recreational activities is an important aspect of the community. Informed observers reported that one way for newcomers to become accepted in Anaconda is to participate in some type of sport or in their children's school and sporting activities. However, the small-town, family-oriented identity of Anaconda is not the only community self-identity. For example, two residents reported that the major sporting activity in Anaconda was "bar hopping," which would reflect another social grouping.

Easy access to outdoor recreational opportunities was mentioned again and again in interviews. Many economically and environmentally beleaguered communities have turned to tourism in the attempt to remake their identity and economy (Mercier 2001). That appears to be what Anaconda-Deer Lodge County is trying to do. Anaconda-Deer Lodge County is trying to create a new self-identity for itself and in the eyes of others--to overcome the stigma attached with being part of the largest Superfund site in the United States But at the same time:

If folks could choose, they would choose to have the smelter back.

5.4.3 Mutual Support and Cooperative Problem Solving

The adaptive capacity of communities is influenced by the ability of its residents to work together to solve common problems. Communities that can organize and apply their social resources to respond to problems appear to have a higher likelihood of making adaptations to enhance their future instead of constraining it. Limited social conflict and disruption, effective identification of problems, and working together with limited resources in difficult times help communities adapt to change. It is important for communities to respond to events on a local basis instead of always depending on assistance from outside the community.

Anaconda-Deer Lodge County has a long history of social conflict and social and economic disruption and yet it has survived and demonstrated time and again its resiliency. This survival is due in part to mutual support and volunteerism, important community values. Activism is part of the county's history as expressed through community unionism and the community's continuing efforts to reclaim contaminated land. Volunteerism is exemplified in the numerous service and fraternal organizations in Anaconda including but not limited to the Elks Lodge, Order of Eastern Star, Friends of the Hearst Free Library, the Garden Club, Old Timers Club (former employees of the smelter), the Chamber of Commerce, Veterans of Foreign Wars, and Kiwanis. Recent examples of mutual support and volunteer efforts and leadership in Anaconda-Deer Lodge County include:

- Members of the community were charter members of the Old Works Golf Course authority board. It took seven years of negotiation to ensure completion of the course.⁴²
- Formation of a community group called Anaconda Project Facilitators, a grass roots non-profit development group that helped to secure construction of a luxury resort at the Old Works Golf Course. Construction began in August 2002.
- Residents of Anaconda-Deer Lodge County participated in a large scale, county-wide Visioning Program to develop vision statements about various aspects of the county and to synthesize six community goals for Anaconda. These goals serve as a basis for projects in the community, and help transform vision into reality.

⁴² Vera Haffey, "Anaconda Mont. Insurance Agent Works to Redevelop City, The Montana Standard, August 2, 2002.

- Local businesses in Anaconda and Butte are participating in a “weed-free” carwash for big game hunters to help prevent the spread of noxious weeds. It is sponsored by Skyline Sportsmen, Rocky Mountain Elk Foundation, and Headwaters RC&D Range, Weed, and Big Game Committees.
- The Anaconda’s Sportsmen’s Club and the Georgetown Lake Steering Committee are trying to rally support for the acquisition of 328 acres at Georgetown Lake’s Stuart Mill Bay to ensure continued public access and to keep some lands around the lake undeveloped. The acquisition may be funded by the Natural Resource Damage Program.

A final example of mutual support comes from a story told by a newcomer. He and his family moved into a rental house last winter in Anaconda. Before he even met his next-door neighbor, the neighbor started plowing his walkway out. In the summer, when his family moved into a house they had purchased, the next door neighbor at the new house came out and helped them unload their moving truck.

5.4.4 Leadership

Leadership is an important community resource. Leadership is straightforward: it addresses the range and diversity of persons in formal and informal leadership positions in local government, community, special interest, or volunteer organizations. If communities have a diversity of leaders who can both lead and manage, then they have substantial resources to adapt to changing conditions. Leaders contribute to identifying, organizing, and responding to problems or potential opportunities. Communities with strong leadership resources have an advantage in responding to change.

One theme that emerged from interviews in Anaconda-Deer Lodge County is that the county appears to have a significant pool of leadership talent available in many different arenas inside and outside of institutional positions. Individuals were identified who are recognized as leaders. Many of them were members of the business community.

One such member of the local business community was identified as “Mr. Community.” Evidently he is *“involved in many of the civic groups in town and contributes a lot of his own time and money”* to the community. Interestingly enough, another one of the leaders identified by more than one respondent is a “Boomer.” This person was able to obtain a job in the community by starting out as a volunteer. Several other individuals and organizations were identified by more than one respondent as providing leadership to the community. Another theme that emerged was the need to draw in and develop the leadership potential of younger community members.

In summary, it appears that Anaconda may have the necessary leadership resources in their community to handle both everyday needs of the county and to provide leadership to take advantage of any future opportunities.

5.5 Human Resources

If a community has limited education, employment, or financial resources, these characteristics may adversely affect the ability of the community to adapt to changing social or economic conditions. These types of resources are sometimes referred to as “human capital” or for our purposes “human resources.” These characteristics assist in identifying the capacity of a population to develop the full potential of their environment and adapt to changing conditions. This section presents a summary of information on educational attainment, income, employment, and poverty status from 2000 census data as indicators of Anaconda Deer Lodge County human resources.

Table 5-25 presents comparative numbers for the Anaconda-Deer Lodge County, the United States, and the State of Montana. Unemployment was higher in Anaconda-Deer Lodge County than in the rest of Montana and the United States. The county appears to have adequate educational resources because 85 percent of the residents 25 years and over had at least a high school degree or equivalent. However, the percent of individuals 25 years and over with a college degree is lower than both the state and the U.S. per capita income in the county is also lower than both the state and the United States. The poverty rate of families with related children under 18 is higher relative to the state and the nation.

Based on these numbers, overall, it appears that residents of Anaconda-Deer Lodge County may not have the same level of human resources available to them as other project counties. Residents appear to have limited financial resources to meet basic needs that may require the use of social and community resources that might otherwise be used for community enhancement and development. However, these numbers do not represent a complete assessment of available human resources.

Table 5-25. Quantitative Measures of Human Resources, 2000 Census

| | Percent of Unemploy- ment | Percent of High School Graduates >25 | Percent of College Graduates (BA+) >25 | Median Household Income (\$) | Per Capita Income (\$) | Percent of Individuals in Poverty | Percent Related Children Under 18 in Poverty |
|-------------------------|---------------------------------|--|---|------------------------------------|---------------------------|---|--|
| United States | 3.7 | 80.4 | 24.4 | 41,994 | 21,587 | 12.4 | 16.1 |
| State of Montana | 4.1 | 87.2 | 24.4 | 33,024 | 17,151 | 14.6 | 18.4 |
| Anaconda- Deer Lodge | 5.7 | 84.5 | 14.7 | 26,305 | 15,580 | 15.8 | 21.4 |

Source: U.S. Census Bureau, Census 2000.

5.6 Community Resiliency

Resiliency is a concept that addresses the resources that exist for communities to adapt to changing conditions. This assessment of resiliency is presented in a “situational analysis’ framework briefly discussed in Chapters 1 and 12. The community indicators are: land use; attitudes to change; services and infrastructure; community characteristics; mutual support; cooperative problem solving; leadership; human resources; and economics/economic diversity. The strengths or weaknesses of each of these indicators are discussed.

The following summaries of variables that may affect community resiliency are drawn from both the quantitative and qualitative information gathered for this report.

Land Use. The county has a variety of natural resources and is a gateway to wilderness areas, blue-ribbon trout streams, and Discovery Ski Basin. However, future growth and development in Anaconda-Deer Lodge County are constrained by both physical geography and former land use. Approximately 51 percent of county land is in either federal or state ownership which limits the amount of land available for development. The community of Anaconda is located in a narrow valley and is situated between mountains and the former Anaconda Company smelter complex. There is a shortage of land for residential lots. Injuries to the natural environment from previous mining and mineral processing activities limit the amount of land available for development. Federal and state regulations constrain development of land in Superfund sites. Although clean up efforts are expected to continue for years, land may become available as remediation efforts are completed. The Old

Works Golf Course is an example of a successful development project growing from remediation efforts.

Attitude to Change. Local culture reflects Anaconda's history as a one-company smelter town with over a hundred years of mineral processing activities. Interview data suggest that some social groups are resistant to change and would like to maintain what is viewed as the previous status quo. However, Anaconda has never experienced long-term stability in its population size or economy. Anaconda has been forced to change many times by outside events. Now many of the residents of Anaconda-Deer Lodge County are trying to direct their own change and transform the self-identity and reputation of the community.

Community Characteristics. In the past, community unionism functioned as a tie that helped to draw together numerous social groupings. While many of the community residents share similar values based on the importance of family, it remains to be seen whether the diverse groups can unite in forging and attaining a common vision of the future. The county may remain a bedroom community for other areas of southwest Montana.

Local Services and Infrastructure. Basic services exist in the community, but the county has several basic infrastructure needs. Opportunity and West Valley need sanitary sewer systems and Anaconda needs a new water line. Anaconda has made headway in taking advantage of its historic past by upgrades in the central business district, but revitalization efforts need to continue if the county is going to successfully change and market its "new" self-identity as a tourist destination.

Leadership. Anaconda-Deer Lodge County appears to have a rich source of community leadership available although it may be necessary to develop the leadership potential of younger residents. This availability of leadership resources in the community may be its greatest strength and may help offset shortfalls in other resource areas.

Human Resources. In terms of socioeconomic factors, it is often assumed that higher levels of home ownership, education, and employment indicate higher levels of socioeconomic well-being. Higher levels of poverty and lower levels of per capita are assumed to indicate lower levels of socioeconomic well-being. Anaconda Deer Lodge County has a higher level of home ownership than the state as a whole. However, the county has had a higher unemployment rate than the state since the mid 1970s. Over 21 percent of the families with related children under five are living in poverty. The county is dependent on transfer income. While retirement income can provide stability, at the same time, the demands of retirees on a community are often at odds with young families who want good schools and other services. Recent budget cuts to the state Department of Health and Human Services will have negative effects on impoverished families in the county.

Economic Diversity. According to the most recent IMPAN data (1999) "Wildland" related sectors of the economy do not appear to be a significant source of total industry output or employment for Anaconda-Deer Lodge County. Employment data and value-added information from IMPLAN show that Anaconda Deer Lodge County is dependent on employment in the government and services sectors. The importance of these sectors is supported by interview data. Government employment provides some stability for the county.

6 Beaverhead County

Beaverhead is one of the original counties of the Montana Territory with the county seat in the town of Dillon. The county occupies 3.5 million acres of land that is a combination of river valleys and mountain peaks, including those of the Continental Divide that essentially form the western and southern county boundaries. The Big Hole Valley in the westernmost part of the county is one of the most spectacular and isolated of these valleys. It is 59 miles long, 39 miles wide and has an elevation of about 6,200 feet. The valley gets its name from the steep drop from nearby passes that take one into the “big hole” or valley floor. Other major valleys include the Beaverhead, Centennial, Lima, Prairie, and Sweetwater. These valleys, most of which are above 5,000 feet in elevation, are encircled by mountain ranges including the Beaverhead, Pintler, Pioneer, Tendoy, Centennials, Ruby, and Blacktail. In these valleys and basins there are a variety of soil types that host the substantial agricultural producers that are a backbone of the county economy. Winter and spring wheat, barley, alfalfa, oats, and seed potatoes are major crops on lands that are mostly irrigated. The county also ranks first in the state in the production of livestock, mostly cattle and sheep, which graze on USFS lands.

The county’s major valleys contain rivers that are both important sources of water for crop irrigation and for recreational fishing. These rivers include the Big Hole, Wise, Beaverhead, Red Rock, and more than 30 other small and large streams and creeks. These rivers and their tributaries are home to populations of cutthroat, rainbow and brown trout that attract anglers from around the world. The Big Hole River is also home to a rare population of Arctic Fluvial Grayling that is only located in this part of Montana. Clark Canyon Reservoir, Swan Lake, and Lima Reservoir are among the major lakes and reservoirs. These reservoirs store the water for summer crop irrigation water.

Wildlife resources are substantial and include grizzly bear, elk, white tail deer, mule deer, antelope, moose, big horn sheep, coyote, fox, wolverine, gray wolf, mountain lions, and, in some areas, lynx. The Centennial Valley’s Red Rock Lakes National Wildlife Refuge is some 44,000 acres of land that are also home to more than 250 species of birds and 30 species of mammals.

Other important natural resources are timber, minerals, and gemstones. Each of these resources has been an important part of the history of natural resources in Beaverhead County, as well as in most other project counties. Gold has been mined in the area since 1862, and there are deposits of silver and a range of other metals and some garnet. Lodgepole pine and Douglas fir predominate on USFS lands in Beaverhead County. These trees are a timber resource used for firewood as well as for limited commercial purposes; and, they provide other economic, lifestyle, and aesthetic benefits for the county.

Population centers include Dillon, the county seat, Wisdom and Wise River in the Big Hole Valley, Lima and Monida in the southern part of the county, and Glen and Melrose in the northern reaches of the county. This is a rural county dominated by an agricultural and ranching way of life. Its substantial aesthetic and recreational resources are important resources for local residents as well as for visitors from other parts of Montana and elsewhere in the United States. These resources include the Pioneer Mountains Scenic Byway that courses for 27 miles along the Wise River; the Big Hole Valley on the western side of the county; and the Centennial Valley in the south county. However, the rolling sagebrush hills that rise into forested snow-covered peaks are classic “big sky” scenery that creates a spectacular visual setting.

6.1 Land Ownership and Use

*When you come here one of the things that stand out is the mountains. They make this place what it is. It is like there is no one up there, it is really one of the last best places where people have not been and there are no fences. This entire place is special.*⁴³

From the time I was six months old I was out on the land, up in the forest; we were always out in the landscape. We got out and saw the mountains, the forests, and rode horseback or drove the old jeep every place we could. We were privileged we could do that because it developed a sense of attachment to this land that I feel very strongly. No matter what happens to me the rest of my life, I will always have a place here; it is my place and my family's place.

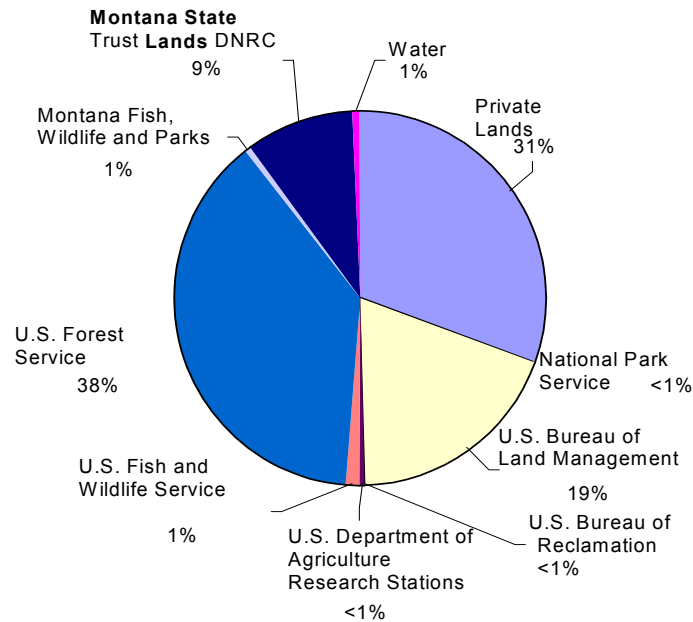
Place is very strongly felt in southwest Montana, whether it is Beaverhead, or any of the project counties. The land, with its mountains, rivers, valleys, and rolling hills is an attraction for residents as well as visitors. This chapter discusses patterns of land ownership and types of land uses as well as other factors that are background for assessing the sense of place expressed by county residents.

6.1.1 Land Ownership

Beaverhead County is the largest county in Montana in terms of land area. Private lands account for 31 percent of the total land area with about 3,566,000 acres. The federal government owns the majority of the land in Beaverhead County, and the USFS manages about 38 percent of those lands. Among all project counties, Beaverhead has the largest percentage of USDA/USFS lands. For all of Montana, only Lincoln and Flathead Counties have higher percentages of public lands. Lincoln County has about 76 percent and Flathead 52 percent. Ravalli County, adjacent to Beaverhead County, has less total USFS owned acreage (about 1 million acres), but 73 percent USFS ownership. In Beaverhead County, the BLM manages 19 percent of county lands. Other federal and state land agencies have relatively small holdings. USFS managed lands are generally in the mountainous areas of the county, whereas a majority of private lands are in the river valleys such as the Big Hole and Beaverhead Valleys.

⁴³ Italics indicate a statement from project participants that were recorded on tape or written in field notes. Exact word for word transcription did not occur in all cases. However, these statements indicate the meaning of what was said. The process of writing field notes and making transcriptions from tapes often results in approximations of what was said that remain true to the meaning of the statement. Quotations from published or other sources are indicated by indentations but not italics.

Figure 6-1. Land Ownership in Beaverhead County



Total land area is approximately 3,566,000 acres.
 Source: Montana State Library, 2001.

6.1.2 Types of Land Use

6.1.2.1 Major Uses or Land Cover Type

Table 6-1 shows the major categories of land use for Beaverhead County. Most of the rangelands are at higher elevations. Brush rangeland accounts for 32.7 of land use type, followed by evergreen forest, which accounts for 31.83 of the total land area. Forest lands are in the higher elevations and the croplands are generally in the valleys.

Table 6-1. Type of Land Use as Percent of Total Land Area for Beaverhead and Study Area Counties

| Type of Land Use | Beaverhead | Study Area Counties |
|------------------|------------|---------------------|
| Brush Rangeland | 32.7 | 17.55 |
| Evergreen Forest | 31.83 | 43.40 |
| Crop Pasture | 6.22 | 7.46 |
| Grass Rangeland | 13.38 | 17.32 |
| Mixed Rangeland | 10.51 | 9.21 |

Source Montana Natural Resource Information System On-line Mapping.

Note: Columns may not add up to 100 percent due to exclusion of land use categories accounting for less than one percent of total land area.

6.1.2.2 Conservation Easements and Special Use Designations

About 4 percent of county lands have some type of conservation easement or special use designation. Conservation easements total 1.82 percent and special use designations, including wilderness areas, total 2.09 percent. Table 6-2 indicates the county's percentage of the total for each category. The county has 50.48 percent (27,495 acres) of the total state lands (54,889) acreage in conservation easements and 75.5 percent of the total BLM special designation (30,953) acreage. About 1 percent of county lands have a wilderness designation.

Table 6-2. Beaverhead County Conservation Easements and Special use Designations

| Land Use | County Acreage Total | Percent County Total | Project Area Total | Percent Total Project Area |
|--|----------------------|----------------------|--------------------|----------------------------|
| Conservation Easement | | | | |
| Private Conservation | 35,049 | .98 | 260,038 | 13.48 |
| USFWS | 2,416 | .07 | 27,113 | 8.91 |
| State Lands | 27,495 | .77 | 54,889 | 50.48 |
| Conservation Total | 64,960 | 1.82 | 342,050 | 18.29 |
| Special Use Designation | | | | |
| BLM Special | 23,370 | .66 | 30,953 | 75.5 |
| Research Natural Areas | 5,007 | .14 | 19,266 | 25.99 |
| Wilderness | 46,013 | 1.29 | 611,925 | 7.52 |
| Special Use Total | 74,390 | 2.09 | 662,114 | 11.23 |
| Total of Conservation Easements and Special Use | 139,350 | 3.91 | 1,004,194 | 13.64 |

Source Montana Natural Resource Information System On-line Mapping.

6.1.2.3 Agriculture Profile

The 1997 Census of Agriculture indicates that about 1,152,008 acres of the county lands are in agricultural use (about 32 percent of total acreage). This indicates the importance of agriculture in the economy and lifestyle of Beaverhead County. Farming focuses on grains and hay, but cattle and sheep ranching make the most significant economic contribution. Table 6-3 summarizes information about recent trends in farms, farm size, acreage, and market value of crops for farms and agricultural products sold. The data indicate that full time farming has decreased as well as the total acreage in farms and average farm size. This is consistent with trends in other project counties where subdivision of farms is resulting in an increase in "hobby farms" and a decrease in full-time farming.

Table 6-3. Census of Agriculture for Beaverhead County, 1987, 1992, and 1997

| Characteristic | 1987 | 1992 | 1997 | Percent Change |
|--|-----------|-----------|-----------|----------------|
| Number of Farms | 373 | 345 | 360 | -3.49% |
| Number of Full Time Farms | 271 | 239 | 223 | -17.71% |
| Acreage in Farms | 1,525,564 | 1,342,484 | 1,152,008 | -24.49% |
| Average Size Farms (acres) | 4,090 | 3,891 | 3,200 | -21.76% |
| Average Market Value of Ag. Products Products per Farm Sold | 131,979 | 189,258 | 153,815 | 16.55 |
| Market Value of Agricultural Products Sold (10000) | 42,868 | 57,405 | 45210 | 5.46 |

Source: 1997 Census of Agriculture.

Beaverhead County’s substantial natural resources, including its mountains, rivers, and wildlife, also support a variety of recreational uses that are important for residents as well as visitors. The Big Hole, Ruby, and Beaverhead rivers are nationally recognized trout streams that attract fishermen from other parts of Montana, the west, and the whole United States as well as other countries. Clark Canyon Reservoir, Grasshopper Creek, Blacktail Creek, and other small streams are also important recreational resources. Elk, whitetail and mule deer, as well as moose and other big game animals are important hunting resources for local residents, outfitters, and out-of-area hunters. Each fall, hunters fill local motels in Dillon, Lima, Jackson, Wisdom, and elsewhere in the county to hunt the uplands for birds and big game. Historically, taking a jeep track into the mountains for a day’s ride was a common recreational outing. More recently, ORV use has become an increasingly popular recreational activity for both county residents and visitors from Butte and other metropolitan areas in southwest Montana. Other recreational uses of the area’s resources include birding, trail riding, snowmobiling, skiing, wildlife photography, and sightseeing. The recreational opportunities of the county are an important asset that motivates both long-time residents and new migrants to stay.

6.2 Demographic Characteristics and Trends

We’re a small place; we don’t change much, and we like it that way. Sure, we could use some more stores, but we don’t want any strip malls; and we don’t want any big subdivisions. We don’t want to see a lot of growth. We always want to walk down the street and know the person walking toward you.

Information about population helps describe the general nature of a community or area. An analysis of population trends can help determine if changes are occurring for specific groups defined by age, gender, education level, or ethnicity, thereby influencing the nature of social and economic relationships in the community. Population characteristics may influence resources available to respond to changing socioeconomic conditions. Population growth or decline has a greater relative impact in smaller, rural areas. For example, the smaller and less dense population base found in rural areas makes delivery of basic services more difficult. In urban areas, the logistics and mechanisms for providing public services produce economies of scale impossible for rural areas to duplicate. In addition, in single-sector resource-dependent communities, the variables of population and employment tend to be highly related.

6.2.1 Rural-Urban Classification

The 2000 Census population for the county is about 9,202. Towns and locales in the county include Argenta, Bannack, Dell, Dewey, Dillon, Elkhorn, Glen, Grant, Jackson, Lima, Monida, Polaris, Wisdom and Wise River. The largest population concentrations are in Dillon (3,752), Lima (242), and Wisom (114) as indicated in Table 6-4.

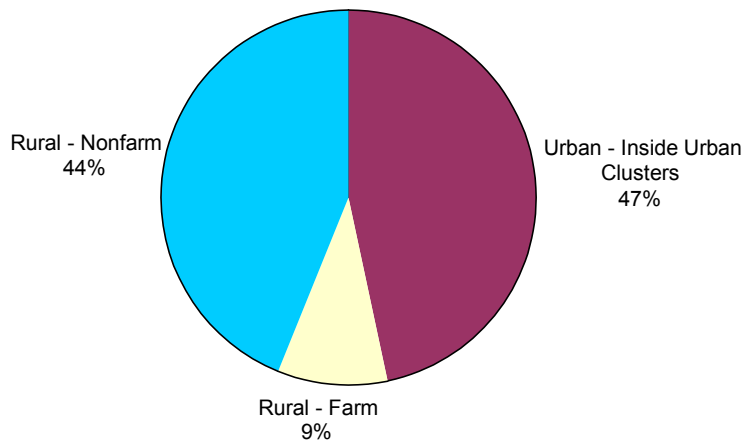
Table 6-4. Population Centers in Beaverhead County

| Place | Population | Percent of County Population | Type |
|--------------------------------------|--------------|------------------------------|---------------------------|
| Beaverhead County^a | 9,202 | | |
| Dillon | 3,752 | 40.8 | Incorporated Place (city) |
| Lima | 242 | 2.6 | Incorporated Place (town) |
| Wisdom | 114 | 1.2 | Census Designated Place |

Source: U.S. Census Bureau, Census 2000.

The Census Bureau uses an urban-rural typology to classify land as rural nonfarm, rural farm, urban, or urban-cluster. Figure 6-2 indicates that approximately 44 percent of the county’s population is in the “rural nonfarm” category and another 9 percent in rural farms. Dillon accounts for the majority of the 47 percent “urban-inside urban clusters” category.

Figure 6-2. Population in Urban and Rural Areas for Beaverhead County



Source: U.S. Census Bureau, Census 2000.

6.2.2 Population Trends

Table 6-5 shows the historical population trends for Beaverhead County in comparison to the total for the seven project counties. The table indicates that for the past thirty years the county has had a higher percentage of growth than the total project areas, although other counties, especially Jefferson County, have a much higher percentage of growth. Figure 6-3 shows more detail about the population changes since 1970. Total population peaked in 1996 at 9,394. Between 1970 and 2000, the total population increase was 12.4 percent for the county, which lagged behind the state growth of 30 percent and the United States growth of 40 percent for the same period. Although the decade

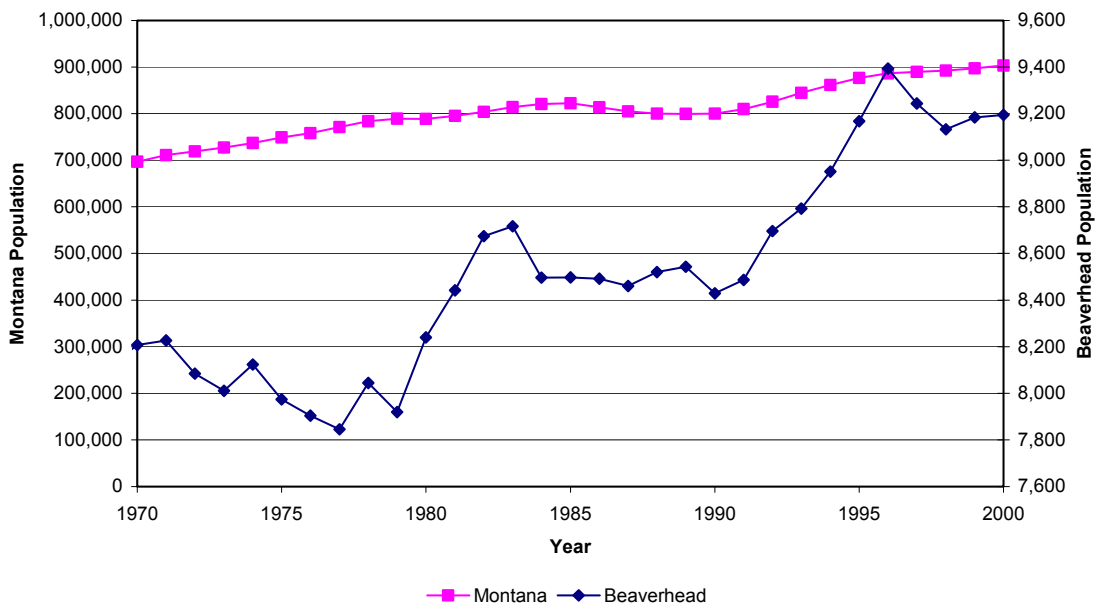
between 1960 and 1970 shows about a 14 percent population increase, the 30-year trend shows stability that is characteristic of most agricultural counties in the project area.

Table 6-5. Beaverhead County and Project Area Counties Historic Population Trends 1890-200

| County | Year | | | | | | | | | | | |
|--------------------------|--------|--------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|
| | 1890 | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | 2000 |
| Beaverhead | 4,655 | 5,615 | 6,446 | 7,369 | 6,654 | 6,943 | 6,671 | 7,194 | 8,187 | 8,186 | 8,424 | 9,202 |
| Population Change | | 960 | 831 | 923 | -715 | 289 | 272 | 523 | 993 | -1 | 238 | 778 |
| Beaverhead % Change | | 20.62 | 14.80 | 14.32 | -9.70 | 4.34 | -3.92 | 7.84 | 13.80 | -0.01 | 2.91 | 9.24 |
| Project Area % Change | | 62.07 | 11.37 | 9.00 | -6.74 | -4.32 | -4.78 | 1.30 | -7.01 | -5.19 | -6.43 | 5.70 |
| Project Area Pop. Change | | 33,686 | 10,000 | 8,821 | -7,192 | -4,299 | -4,556 | 1,180 | -6,443 | -4,438 | -5,214 | 4,318 |
| Project Area Total | 54,272 | 87,958 | 97,958 | 106,779 | 99,587 | 95,288 | 90,732 | 91,912 | 85,469 | 81,031 | 75,817 | 80,135 |

Source: U.S. Census Bureau Census 2000.

Figure 6-3. Montana and Beaverhead County Population, 1970-2000



Source: Bureau of Economic Analysis, Regional Accounts Data, <http://www.bea.doc.gov/bea/regional/reis/> accessed on September 19, 2002.

Table 6-6 shows recent sources of population growth resulting from births, deaths, and net-migration. Births outpaced deaths in the county during this period, but out-migration is the primary source of population change.

**Table 6-6. Components of Population Change for Montana and Beaverhead County
April 1, 2000 to July 1, 2001**

| Place | Births | Deaths | Natural Increase (Births-Deaths) | Net International Migration | Net Internal Migration | Population Change | April 1, 2000 Population | July 1, 2001 Population |
|------------|--------|--------|----------------------------------|-----------------------------|------------------------|-------------------|--------------------------|-------------------------|
| Montana | 13,320 | 10,165 | 3,155 | 470 | -1,377 | 2,238 | 902,195 | 904,433 |
| Beaverhead | 129 | 96 | 33 | 7 | -155 | -113 | 9,202 | 9,089 |

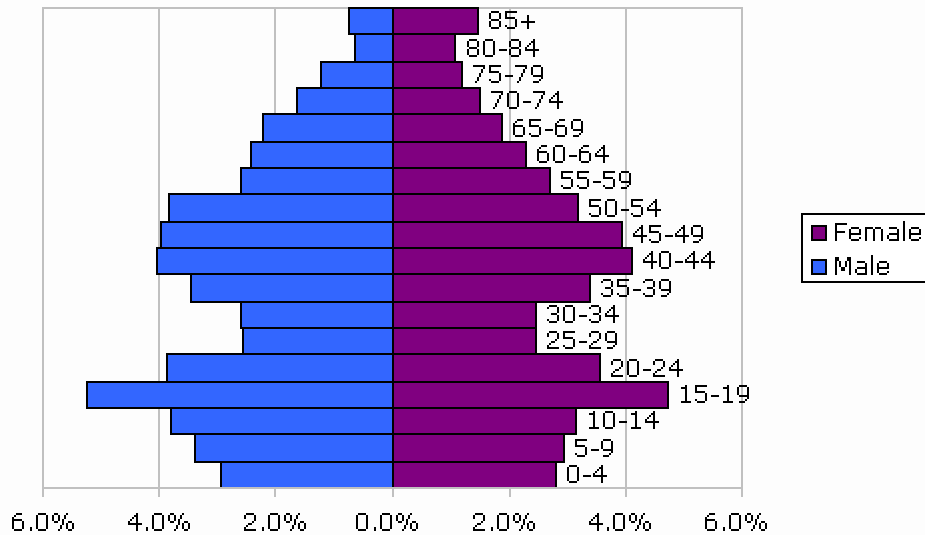
Source: Population Division, U.S. Census Bureau Released April 29, 2002.

Note: Net internal migration is the difference between in-migration and out-migration.

6.2.3 Age and Gender

Figure 6-4 shows the 2000 Census data for gender and age distribution in Beaverhead County.

Figure 6-4. Age Distribution, 2000



Source: Census 2000 analyzed by the Social Science Data Analysis Network (SSDAN).

Table 6-7 provides a comparison of trends in age structure for Beaverhead County and Montana. As with the rest of Montana, the county shows a decrease in younger age groups and an increase in older age cohorts, especially the over 65 cohort. However, Beaverhead has the lowest median age of any of the project counties. The table also shows that there are about 105 males to every 100 females.

Table 6-7. Beaverhead County, Age and Gender, 2000

| Geographic Area | Percent of Total Population | | | | | | Males per 100 Females | | |
|-----------------|-----------------------------|----------------|----------------|----------------|----------------|-------------------|-----------------------|----------|-------------------|
| | Total Population | Under 18 Years | 18 to 24 Years | 25 to 44 Years | 45 to 64 Years | 65 Years and Over | Median Age (Years) | All Ages | 18 years and Over |
| State Total | 902,195 | 25.5 | 9.5 | 27.2 | 24.4 | 13.4 | 37.5 | 99.3 | 97.2 |
| Beaverhead | 9,202 | 24.6 | 11.9 | 25.1 | 24.9 | 13.6 | 37.6 | 105.0 | 102.5 |

Source: U.S. Census Bureau Census 2000, Summary File 1, Matrices PCT12 and P13.

Table 6-8. Changes in Age Structure of Three Cohort Groups for Montana and Beaverhead County, 1990 and 2000

| Location | Under 18 Years | 18 to 65 Years | 65 and Years and Over |
|-------------------|----------------|----------------|-----------------------|
| Montana | | | |
| 1990 | 27.8 | 58.9 | 13.3 |
| 2000 | 25.5 | 61.1 | 13.4 |
| Beaverhead | | | |
| 1990 | 27.8 | 59.3 | 12.9 |
| 2000 | 24.6 | 61.9 | 13.6 |

Source: U.S. Census Bureau Census 2000, Summary File 1, Matrices PCT12 and P13 and 1990 Census of Population and Housing, Summary Tape File 1.

6.2.4 Race

Historically, the county's population has not shown much ethnic diversity, other than for the early mining years when large numbers of Chinese and other ethnic groups lived in the region. In the recent past, whites have constituted the majority of the county's population, as indicated in Table 6-9. Whites were 94.4 percent of total population in 2000, 96.6 percent in 1990, and 97.85 in 1980. Hispanics show an increase of .66 percent to 2.67 percent from 1980 to 2000. This may reflect an increasing use of Hispanics as farm and ranch workers.

Table 6-9. Population Distribution by Race for Beaverhead County, 2000

| Race | 1980 | | 1990 | | 2000 | |
|--------------------------------|--------|---------|--------|---------|--------|---------|
| | Number | Percent | Number | Percent | Number | Percent |
| Total Population | 8,186 | 100.00% | 8,424 | 100.00% | 9,202 | 100.00% |
| Total Hispanics | 54 | 0.66% | 133 | 1.58% | 246 | 2.67% |
| White* | 8,010 | 97.85% | 8,138 | 96.60% | 8,687 | 94.40% |
| Black* | 4 | 0.05% | 8 | 0.09% | 12 | 0.13% |
| American Indian and AK Native* | 100 | 1.22% | 116 | 1.38% | 128 | 1.39% |
| Asian* | 16 | 0.20% | 29 | 0.34% | 17 | 0.18% |
| Hawaiian and Pacific Islander* | - | - | - | - | 2 | 0.02% |
| Other* | 2 | 0.02% | 0 | 0.00% | 13 | 0.14% |
| Two or More Races* | - | - | - | - | 97 | 1.05% |

* Non-Hispanic only; in 1980 and 1990 "Asians" includes Hawaiians and Pacific Islanders. Census 2000 analyzed by the Social Science Data Analysis Network (SSDAN).

6.2.5 Housing and Households

Another important descriptive characteristic of Beaverhead County's demography is household composition, as indicated by Table 6-10. The county shows a slightly lower rate of home ownership than the rest of Montana, and an average of 2.4 persons per household and an average family size of 3 persons.

Table 6-10. Housing Units and Households for Beaverhead County, 2000

| Characteristic | Beaverhead | Montana |
|---|------------|---------|
| Population | 9,202 | 902,195 |
| Housing Units | 4,571 | 412,633 |
| Occupied Housing Units | 3,684 | 358,667 |
| Housing Units per Square Mile of Land Area | 0.8 | - |
| Homeownership Rate | 63.4% | 69.1% |
| Households | 3,684 | 358,667 |
| Nonfamily households | 1,329 | 121,260 |
| Households with individuals 65 years and over | 885 | 83,982 |
| Households with persons under 18 | 1,179 | 119,550 |
| Average Persons per Household | 2.4 | 2.5 |
| Average Family Size | 3.0 | 3.0 |

Source: U.S. Census Bureau, Census 2000.

Table 6-11 shows the changes in household composition for the last decade. Although the changes are relatively small, there is a decrease in households with married couples and other decreases in households with children but an increase in households without children. Non-family households increase almost 4 percent in the 10-year interval.

Table 6-11. Beaverhead County Household Types, 1990-2000

| Household Type | 1990 | | 2000 | |
|--------------------------|--------------|--------------|--------------|--------------|
| | Number | Percent | Number | Percent |
| Total Households | 3,211 | 100.0 | 3,684 | 100.0 |
| Married Couple | 1,828 | 56.9 | 2,017 | 54.8 |
| With Children* | 906 | 28.2 | 908 | 24.6 |
| Without Children* | 922 | 28.7 | 1,109 | 30.1 |
| Female-Headed | 246 | 7.7 | 228 | 6.2 |
| With Children* | 158 | 4.9 | 137 | 3.7 |
| Without Children* | 88 | 2.7 | 91 | 2.5 |
| Male-Headed | 82 | 2.6 | 110 | 3.0 |
| With Children* | 43 | 1.3 | 65 | 1.8 |
| Without Children* | 39 | 1.2 | 45 | 1.2 |
| Non-Family | 1,055 | 32.9 | 1,329 | 36.1 |
| Householder Living Alone | 887 | 27.6 | 1,094 | 29.7 |
| Two or More Persons | 168 | 5.2 | 235 | 6.4 |

Source: [Census 2000](#) analyzed by the [Social Science Data Analysis Network \(SSDAN\)](#).

* For the purposes of this table, “children” are people under age 18.

One of the most remarkable characteristics about county demography is its consistency in composition and size. The population has remained relatively homogenous and stable over the past decade. Although there are fluctuations, these are not as dramatic as in some other project counties that have experienced either significant population gains or losses.

6.3 Economic Conditions and Trends

It is a place that could really use a jump in morale, some kind of expansion, new shops, new people, and more of a feeling of growth rather than a slow decline. It just has that feeling of being a kind of tired place that is not growing economically and that is mostly because of what is happening in agriculture. When cattle prices are up, our economy is up, when they are down, so is our economy.

We have an enviable quality of life here, but it is expensive to live here. You have to have a job or some outside source of income. Kids leave here because they can't find jobs, and that is a problem. In the past the tendency was to keep the place 'as is' but now the feeling is different, now people know we are going to grow. Because of the way of life here, people will want to come here.

There have been some hard feelings about timber here. I don't think some people ever got over the closure of the mill, the Stoltze Mill. The county lost a hundred jobs and some people think it was because of government actions that it happened, but not everyone feels that way. Those jobs have been replaced, but some people say it is the low-paying service jobs, not the types of jobs that were at the mill. It is hard to realize that the way we made a living in the past is not coming back...

There are contrasting images of Beaverhead County and its potential for growth and what type of future growth is best for the county. This section is an overview that reviews compiled economic data regarding economic sectors and diversity, employment, and income as a means to assess the

contributions to community resiliency. Other important qualitative factors include community self-assessments such as the ones above, since these reflect attitudes about and expectations for change.

6.3.1 Economic Sectors and Diversity

This section provides information on the diversity of the economy of Beaverhead County from two perspectives, both based on 1999 IMPLAN⁴⁴ Model Year Data for the county. A more detailed description of input-output models and IMPLAN is located in Chapter 4 of this report. One perspective looks at the contributions to the local economy made by industrial sectors that are dependent on natural resources. The other perspective presents value-added estimates for the contributions of different sectors of the county economy.

Table 6-12 is an updated version of the model that appears in the USFS Region 1 Economic Library. The same industry sectors were used in the update as are found in the USFS 1996 model. "Wildland" related sectors account for 17.1 percent of total industry output for the county and 9.5 percent of the employment. Agriculture, forestry, and fishery services industries account for less than .5 percent of total industry output and just over 1 percent of county employment. Range fed cattle accounts for 7.3 of total industry output in the county and generates 3.2 percent of the employment. Mining of miscellaneous nonmetallic minerals accounts for 6.1 percent of total industry output and 3.4 percent of total employment.

⁴⁴ IMPLAN Pro™ is Social Accounting and Impact Analysis software; produced by MIG, Incorporated

**Table 6-12. Direct Effects of "Wildland" Related Sectors
in Beaverhead County, 1999**

| | Industry Description | Industry Output (Millions of \$) | Industry Output as % of County Total | Employment | Industry Employment as % of County Total | Labor Income (Millions of \$) | Average Laborer Income (\$/Job) |
|---------------------------|--|----------------------------------|--------------------------------------|------------|--|-------------------------------|---------------------------------|
| Timber Industries | | | | | | | |
| 24 | Forestry Products | 0.5 | 0.1 | 9 | 0.2 | 0.1 | 7,557 |
| 26 | Agricultural, Forestry, Fishery Services | 1.1 | 0.3 | 63 | 1.1 | 0.5 | 8,504 |
| 133 | Logging Camps and Logging Contractors | 0.1 | 0.0 | 1 | 0.0 | 0.0 | 12,235 |
| 134 | Sawmills and Planing Mills, General | 0.8 | 0.2 | 5 | 0.1 | 0.1 | 19,849 |
| | Total | 2.4 | 0.7 | 78 | 1.4 | 0.7 | 9,051 |
| Grazing Industries | | | | | | | |
| 4 | Range Fed Cattle | 25.6 | 7.3 | 181 | 3.2 | 3.3 | 18,343 |
| 6 | Sheep, Lambs and Goats | 0.7 | 0.2 | 21 | 0.4 | 0.1 | 4,885 |
| 26 | Agricultural, Forestry, Fishery Services | 1.1 | 0.3 | 63 | 1.1 | 0.5 | 8,504 |
| | Total | 27.4 | 7.8 | 265 | 4.7 | 4.0 | 14,947 |
| Mineral Industries | | | | | | | |
| 41 | Sand and Gravel | 8.6 | 2.5 | 62 | 1.1 | 3.6 | 58,984 |
| 47 | Misc. Nonmetallic Minerals, N.E.C. | 21.4 | 6.1 | 127 | 2.3 | 8.0 | 63,207 |
| | Total | 30.0 | 8.6 | 189 | 3.4 | 11.7 | 61,889 |

Table based on Beaverhead County 1999 IMPLAN Model Year Data.

Note: NAIC code categories reporting no output were not included in the table.

Table 6-13, Figure 6-5 and Figure 6-6 show the IMPLAN value-added percentages for Beaverhead County in comparison to all project counties and to Montana as whole. Value-added refers to the total value of payments to the different factors of production and is equivalent to the gross regional product. These data indicate that agriculture has a higher percentage of value-added in Beaverhead than in most other project counties, although government, service, finance, insurance, and real estate (FIRE), and wholesale and retail trade each have higher percentages of the total value-added. Transportation, communication and public utilities (TCPU) is lower than other project counties and in comparison to all of Montana.

Table 6-13. Value-Added by Basic Industries as Percentage of Total Value-Added, 1999

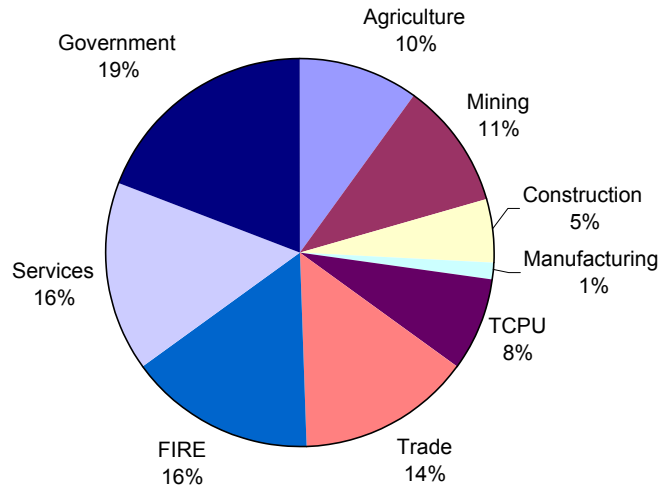
| Categories | Beaverhead County | All Project Counties | Montana |
|---------------|-------------------|----------------------|---------|
| Agriculture | 10 | 4 | 5 |
| Mining | 11 | 7 | 2 |
| Manufacturing | 1 | 6 | 7 |
| Government | 19 | 17 | 17 |
| Services | 16 | 18 | 21 |
| FIRE | 16 | 11 | 14 |
| Trade | 14 | 14 | 18 |
| TCPU | 8 | 18 | 10 |
| Construction | 5 | 5 | 6 |

Source: MIG Group, Inc., IMPLAN Model Output, based on 1999 IMPLAN Model data.

Note: TCPU=transportation, communications, and public utilities

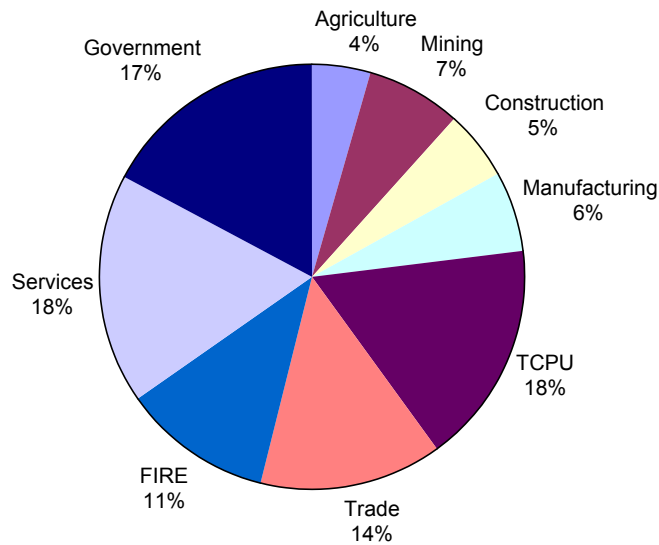
FIRE= Finance, Insurance, and Real Estate

Figure 6-5. Value-Added by Basic Industries in Beaverhead County as Percentage of Total Value-Added, 1999



Source: MIG Group, Inc., IMPLAN Model Output, based on county 1999 IMPLAN Model.

Figure 6-6. Value-Added by Basic Industries in the Study Area as Percent of Total Value-Added, 1999



Source: MIG Group, Inc., IMPLAN Model Output, based on 1999 IMPLAN Model.

6.3.2 Employment

Employment data are collected in many different ways and can be presented in many different forms. In this section we present information on the number and percent of individuals in the labor force, unemployment rates, employment by occupation and industry, the number of businesses, employees, and payroll by industry sector, and information on self-employed individuals and receipts. The information in this section has been gathered from the U.S. Census Bureau, the U.S. Bureau of Economic Analysis, the Montana Department of Labor Industry, and the Bureau of Economic Analysis Regional Economic Information System.

6.3.2.1 Labor Force

Table 6-14 shows number of individuals 16 years and older, number of individuals in this age category that participated in the civilian labor force, and number of employed and unemployed individuals. "Civilian labor force" is defined as "the number of persons 16 years and older, employed or unemployed, excluding members of the armed forces. Beaverhead County had a similar percentage of individuals 16 and over in the labor force as Montana at the time of the census, 63.6 percent and 65.4 percent respectively. The percentage of population 16 and over in the labor force was slightly higher than the study area, which had 60.6 percent in the labor force.

Table 6-14. Population 16 Years and Older in the Labor Force for Montana, the Study Area, and Beaverhead County, Census 2000

| Area | Population 16 Years and Older | Population in Labor force | % in Labor Force | Population Not in Labor Force | % Not in Labor Force |
|------------|-------------------------------|---------------------------|------------------|-------------------------------|----------------------|
| Montana | 701,168 | 458,306 | 65.4 | 242,862 | 34.6 |
| Study Area | 63,566 | 38,516 | 60.6 | 25,050 | 39.4 |
| Beaverhead | 7,338 | 4,664 | 63.6 | 2,674 | 36.4 |

Source: U.S. Bureau of the Census, Census 2000.

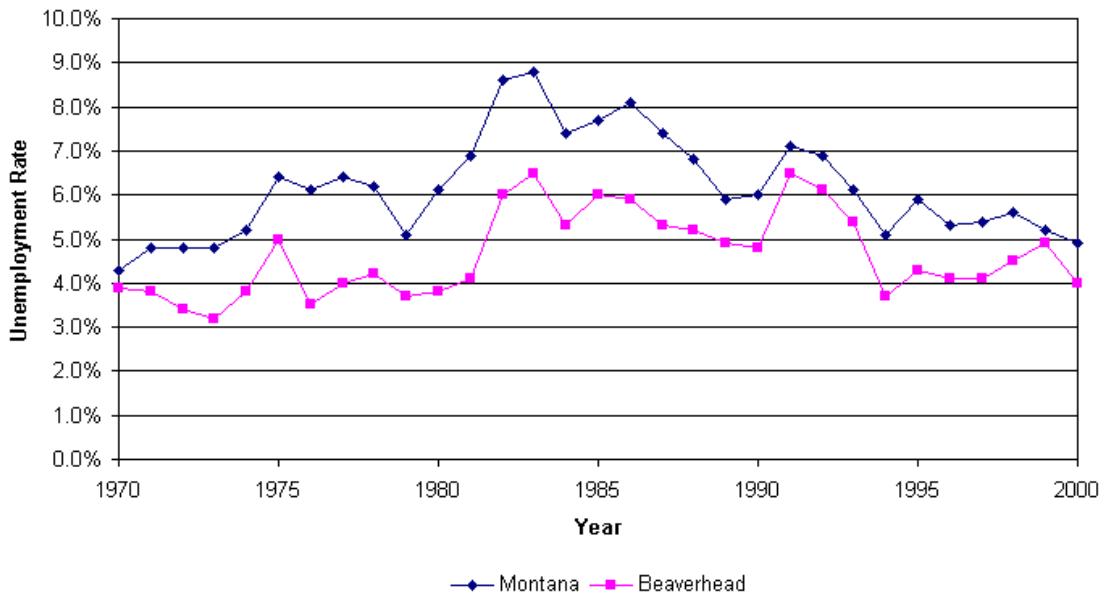
6.3.2.2 Unemployment

“Employed” includes those persons who work for pay or profit during a week or, as unpaid family workers, work 15 hours or more during a week. “Unemployed” are persons who, for an entire week, did not work at all but were able and available to work. According to the Montana Department of Labor and Industry, unemployment rates are calculated by dividing the number of people looking for work by the total number of available workers in the labor force. Unemployment rates in the double digits usually indicate a depressed or stagnant economy while rates under four percent are considered full employment.⁴⁵ However, there are limitations to unemployment figures and rates, because no differentiation is made between full-time and part-time jobs. In addition, the unemployment rate does not account for the individuals who are underemployed or for the discouraged worker who has given up hope of finding a job. These discouraged workers make up some of the population who are considered not in the labor force.

Figure 6-7 shows the unemployment rate for Beaverhead County and Montana. Beaverhead County has consistently had a lower unemployment rate than the state of Montana, although its ups and downs follow the pattern of the state unemployment rate.

⁴⁵ 4th Quarter 2001 - *Montana Employment and Labor Force Trends*.

Figure 6-7. Unemployment Rate for Montana and Beaverhead County, 1970-2000



Source: Montana Department of Labor Industry, Research Analysis Bureau, Local Area Unemployment Statistics.

6.3.2.3 Class of Workers

Table 4-27 shows the percentage of four different classes of workers: private wage and salary workers, government workers, self-employed workers in their own business who are not incorporated, and unpaid family workers. According to Census 2000, approximately 69 percent of Montana workers are private wage and salary workers, 18 percent are government workers, 12 percent are self employed, and less than 1 percent are unpaid family workers. Beaverhead County had a lower percentage of private and salary workers (63 percent) and a higher percentage (25.4 percent) of government workers. The county also had a slightly higher percentage of unpaid family workers.

Table 6-15. Percent of Class of Worker, 2000

| Class of Worker | Montana | Beaverhead |
|--|---------|------------|
| Private Wage and Salary Workers | 69.2 | 63.0 |
| Government Workers | 18.3 | 25.4 |
| Self-employed Workers in Own Not Incorporated Business | 11.8 | 10.6 |
| Unpaid Family Workers | 0.7 | 1.1 |

Source: U.S. Census Bureau, Census 2000.

6.3.2.4 Employment by Occupation and Industry

Table 6-16 shows the percent of employment in Montana and Beaverhead County by occupation and by industry according to Census 2000. Approximately 33 percent of Montana workers are in management, professional, and related occupations compared to 34 percent of workers in

Beaverhead County. Twenty percent of Beaverhead County workers are in service occupations compared to 17 percent of Montana workers. Only two percent of Montana workers gave their occupations as farming, fishing, or forestry related, while nearly seven percent of Beaverhead workers reported such occupations. Beaverhead County had a smaller percentage (17.5 percent) reporting sales and office occupations than the state numbers (25.5 percent). The percent of workers in construction, extractions, maintenance occupations and production, transportation, and material moving occupations were similar for Beaverhead County and Montana.

In terms of employment by industry (Table 6-16), what stands out is that 19.3 percent of Beaverhead County workers reported working in agriculture, forestry, fishing and hunting, mining industries, compared to 7.9 percent of Montana workers as a whole.

Table 6-16. Percent of Employment by Occupation and Industry, Census 2000

| | Montana | Beaverhead |
|---|----------------|-------------------|
| Occupation | | |
| Management, Professional, and Related Occupations | 33.1 | 34.6 |
| Service Occupations | 17.2 | 20.0 |
| Sales and Office Occupations | 25.5 | 17.5 |
| Farming, Fishing, and Forestry Occupations | 2.2 | 6.8 |
| Construction, Extractions, and Maintenance Occupations | 10.7 | 10.1 |
| Production, Transportation, and Material Moving Occupations | 11.2 | 11.0 |
| Industry | | |
| Agriculture, Forestry, Fishing and Hunting, and Mining | 7.9 | 19.3 |
| Construction, Extractions, and Maintenance Occupations | 7.4 | 7.0 |
| Manufacturing | 6.0 | 4.5 |
| Wholesale Trade | 3.0 | 2.1 |
| Retail Trade | 12.8 | 9.2 |
| Transportation and Warehousing, and Utilities | 5.4 | 4.5 |
| Information | 2.2 | 1.9 |
| Finance, Insurance, Real Estate, and Rental and Leasing | 5.5 | 3.9 |
| Professional, Scientific, Management, Administrative, and Waste Management Services | 6.5 | 3.6 |
| Educational, Health and Social Services | 21.7 | 26.0 |
| Arts, Entertainment, Recreation, Accommodation and Food Services | 10.4 | 10.3 |
| Other Services (except Public Administration) | 5.3 | 2.5 |
| Public Administration | 5.9 | 5.1 |

Source: U.S. Census Bureau, Census 2000, DP-3.

Table 6-17 shows employment and payroll data for Beaverhead County in 1999 by industry sectors. During the week of March 12 of that year, 2,180 people were employed by a total of 390 establishments. Almost \$39.0 million was paid out during 1999. The retail trade sector had the highest number of employees, 479, and the largest annual payroll, \$7.3 million. Health care and social service was the second largest industry sector in terms of payroll of approximately \$7 million with 343 employees. The accommodations and food services sector had 430 employees with an annual payroll of approximately \$3.0 million.

Table 6-17. Beaverhead County, Number of Employees, Payroll, and Total Number of Establishments by Industry Sector, 1999

| NAICS Code | Description | Number of Employees for week including March 12 | Payroll (\$1,000) | | Total Establishments |
|------------|---|---|-------------------|--------|----------------------|
| | | | 1st Quarter | Annual | |
| | Total | 2,180 | 8,680 | 38,989 | 367 |
| 11 | Forestry, fishing, hunting, and agriculture support | 0-19 | 0 | 0 | 2 |
| 21 | Mining | 100-249 | 0 | 0 | 3 |
| 22 | Utilities | 20-99 | 0 | 0 | 2 |
| 23 | Construction | 135 | 500 | 2,355 | 40 |
| 31 | Manufacturing | 81 | 253 | 1,317 | 16 |
| 42 | Wholesale trade | 67 | 367 | 1,673 | 10 |
| 44 | Retail trade | 479 | 1,680 | 7,338 | 63 |
| 48 | Transportation warehousing | 32 | 135 | 544 | 11 |
| 51 | Information | 47 | 275 | 1,135 | 9 |
| 52 | Finance insurance | 109 | 701 | 2,719 | 17 |
| 53 | Real estate rental leasing | 72 | 265 | 1,857 | 14 |
| 54 | Professional, scientific technical services | 62 | 268 | 1,260 | 25 |
| 56 | Admin, support, waste mgt, remediation services | 13 | 63 | 339 | 7 |
| 62 | Health care and social assistance | 343 | 1,673 | 6,970 | 36 |
| 71 | Arts, entertainment recreation | 59 | 98 | 554 | 16 |
| 72 | Accommodation food services | 430 | 608 | 3,043 | 50 |
| 81 | Other services (except public administration) | 100 | 254 | 1,081 | 36 |
| 99 | Unclassified establishments | 2 | 4 | 57 | 10 |

Source: U.S. Census Bureau, County Business Patterns, 1999 County Business Patterns, CenStats, Major Industry Group.

Table 6-18 shows the number of establishments by employee size class. Beaverhead County had 367 establishments in 1999. Approximately 67 percent or 246 establishments had 1 to 4 employees. There were only three establishments in the county with 50 to 99 employees—a health care and social assistance establishment and two retail trade businesses. These were the largest businesses in the county. Retail trade had a total of 63 establishments, of which 33 establishments had 1 to 4 employees, 17 had 5 to 9 employees, 10 establishments had 10 to 19 employees, and 1 had 20 to 49 employees.

Table 6-18. Beaverhead County, Number of Establishments by Employee Size Class for Selected Industry Sectors, 1999

| NAICS Code | Description | Total Establishments | Number of Establishments by Employment-size class | | | | | | | | |
|------------|---|----------------------|---|-----|-------|-------|-------|---------|---------|---------|--------------|
| | | | 1-4 | 5-9 | 10-19 | 20-49 | 50-99 | 100-249 | 250-499 | 500-999 | 1000 or more |
| | Total | 367 | 246 | 62 | 43 | 11 | 4 | 1 | 0 | 0 | 0 |
| 11 | Forestry, fishing, hunting, and agriculture support | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | Mining | 3 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 22 | Utilities | 2 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 23 | Construction | 40 | 35 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| 31 | Manufacturing | 16 | 9 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 42 | Wholesale trade | 10 | 5 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 44 | Retail trade | 63 | 33 | 17 | 10 | 1 | 2 | 0 | 0 | 0 | 0 |
| 48 | Transportation warehousing | 11 | 9 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 51 | Information | 9 | 5 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 52 | Finance insurance | 17 | 11 | 3 | 2 | 1 | 0 | 0 | 0 | 0 | 0 |
| 53 | Real estate rental leasing | 14 | 10 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 54 | Professional, scientific technical services | 25 | 22 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 56 | Admin, support, waste mgt, remediation services | 7 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 62 | Health care and social assistance | 36 | 23 | 8 | 3 | 0 | 1 | 1 | 0 | 0 | 0 |
| 71 | Arts, entertainment recreation | 16 | 12 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72 | Accommodation food services | 50 | 23 | 10 | 12 | 5 | 0 | 0 | 0 | 0 | 0 |
| 81 | Other services (except public administration) | 36 | 29 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 99 | Unclassified establishments | 10 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Source: U.S. Census Bureau, County Business Patterns, 1999 County Business Patterns, CenStats, Major Industry Group.

Table 6-19 shows nonemployment statistics for Beaverhead County. Nonemployer statistics summarize the number of establishments and sales or receipts of companies with no paid employees. These nonemployers are typically self-employed individuals or partnerships operating businesses that have chosen not to incorporate. (Self-employed owners of incorporated businesses typically pay themselves wages or salary, so that the business is an employer.) In 1997, there were 725 such establishments in Beaverhead County, with total receipts in excess of \$17.2 million. The number of establishments increased slightly between 1997 and 1999 to 735. Receipts have increased, going to \$24.8 million in 1999. In terms of sales or receipts, nonemployers usually account for roughly three percent of business activity. At the same time, nonemployers account for nearly three-fourths of all

businesses. Most nonemployer businesses are very small, and many are not the primary source of income for their owners.

Table 6-19. Nonemployment Statistics for Beaverhead County, 1999 and 1997

| NAICS Code | Description | No. of Establishments | | Receipts (\$1,000) | |
|------------|--|-----------------------|------|--------------------|--------|
| | | 1999 | 1997 | 1999 | 1997 |
| 0 | All Industries | 735 | 725 | 24,797 | 17,198 |
| 11 | Forestry, fishing hunting, ag support services | 61 | 56 | 1,639 | 1,640 |
| 21 | Mining | D | D | D | D |
| 22 | Utilities | D | D | D | D |
| 23 | Construction | 91 | 111 | 2,495 | 2,995 |
| 31-33 | Manufacturing | 24 | 18 | 350 | 116 |
| 42 | Wholesale trade | D | D | D | D |
| 44-45 | Retail trade | 94 | 100 | 5,590 | 2,413 |
| 48-49 | Transportation warehousing | 20 | 20 | 1,356 | 867 |
| 51 | Information | D | D | D | D |
| 52 | Finance and insurance | 14 | D | 313 | |
| 53 | Real estate, rental, and leasing | 59 | 41 | 2,714 | 925 |
| 54 | Professional, scientific, and technical services | 83 | 92 | 1,411 | 2,145 |
| 56 | Administrative and support and waste management and remediation services | 28 | 24 | 329 | 450 |
| 61 | Educational services | 11 | 15 | 82 | 104 |
| 62 | Health care and social assistance | 50 | 58 | 2,025 | 649 |
| 71 | Arts, entertainment, and recreation | 52 | 40 | 1,078 | 1,039 |
| 72 | Accommodation and food services | 23 | 20 | 850 | 598 |
| 81 | Other services (except public administration) | 110 | 102 | 2,505 | 1,990 |

Source: Nonemployer Statistics, available at www.census.gov/epdc/nonemployer/1999/mt/MT001.HTM
D = Withheld to avoid disclosure.

6.3.2.5 Top Employers

The problem is more than just the number of jobs. It is the kinds of jobs available. People here are seriously underemployed. We need better quality jobs than what we have now; that is what will make a difference in how we do in the future.

Table 6-20 presents the top ten private employers in the county as given by the Montana Department of Labor Industry, Research and Analysis Bureau. The list does not include city, county and federal government agencies. Public school districts and universities are also excluded. However, according to the *Area Plan/Comprehensive Economic Development Strategy 2002* by Headwaters Resource Conservation Development Area, Inc. (RC&D), the major employer in the county is most likely the University of Montana, Western with approximately 300 employees. According to RC&D, the U.S. Forest Service employs around 54 individuals in the county.

Table 6-20. Top Ten Private Employers in Beaverhead County (in alphabetical order)

| |
|---|
| Barrett Memorial Hospital |
| Barretts Minerals Inc. |
| Best Western Paradise Inn |
| Great Harvest Bread |
| Maverick Ski Company |
| McDonald's of Dillon |
| Parkview Acres Care Rehabilitation Center |
| R E Miller Sons |
| Safeway |
| State Bank Trust |

Source: Montana Department of Labor Industry, Research Analysis Bureau, First Quarter 2001 Unemployment Insurance Information.

6.3.2.6 Commuting

In Montana, approximately 74 percent of all workers drive alone in a truck, car, or van to work (Table 4-29), while in Beaverhead County 69.5 percent of workers drive alone in a car, truck, or van. Of note is that 11.4 percent report walking to work, which can probably be attributed to the farming and ranching in the county. The mean travel time to work for Montana as a whole is 17.7 minutes compared to Beaverhead County with a mean travel time of 14.3 minutes.

Table 6-21. Commuting to Work, 2000 Census

| Characteristic | Montana | Beaverhead |
|---|---------|------------|
| Workers 16 year and over (No.) | 422,159 | 4,403 |
| Car, truck, or van-drove alone (%) | 73.9 | 69.5 |
| Car, truck, or Van – carpooled (%) | 11.1 | 10 |
| Public transportation (including taxicab) (%) | 0.7 | 0.5 |
| Walked (%) | 5.5 | 11.4 |
| Other means (%) | 1.7 | 1.3 |
| Worked at home (%) | 6.4 | 7.2 |
| Mean travel time to work (minutes) | 17.7 | 14.4 |

Sources U.S. Bureau of the Census, Census 2000, DP-3.

6.3.3 Income

Personal per capita and household income are shown in the following tables and charts for Montana and Beaverhead County. As defined by the Bureau of Business Economic Research, School of Business Administration, University of Montana:⁴⁶

Personal income is the income received by people from all sources—private sector and government wages, and salary disbursements, other labor income, farm and nonfarm self employment income, rental income of people, personal dividend income, personal interest income, and transfer payments. Personal income does not have taxes subtracted from it.

Per capita personal income is the annual total personal income of residents divided by their resident population. Per capita personal income is a measure of economic well-being. The amount of goods and services that people can afford is directly related to their personal income.

6.3.3.1 Per Capita Personal Income

Table 6-22 shows per capita personal income and total personal income along with the in-state ranking of the county and a breakdown of the sources of personal income for Beaverhead County compared with the State of Montana. Figure 6-8 shows a picture of the components of per capita personal income for Beaverhead County. For 2000, Montana's per capita personal income was \$22,518, which places it 47th out of the 50 states. Per capita personal income in Beaverhead was \$21,069 in 2000. Beaverhead County ranked number 21 out of the 56 counties in Montana. In 2000, earnings as a component of total personal income for the State of Montana accounted for 61.2 percent. Transfer payments are income payments by government and businesses to individuals and nonprofit institutions for which no current services are performed. Transfer payments include retirement and disability insurance benefit payments, medical benefits such as Medicare and Medicaid, income maintenance benefits, unemployment insurance benefit payments, veterans benefit payments, and federal education and training benefits. Transfer payments in 2000 were 18.5 percent of total personal income. Transfer payments on a statewide basis accounted for 16.1 percent of total personal income in 2000.

Table 6-22. Per Capita Personal Income, Total Personal Income, and Components of Total Personal Income for Montana and Beaverhead County, 1999 and 2000

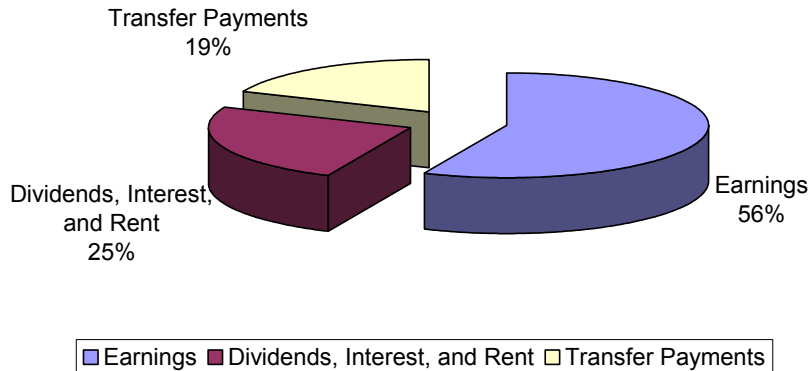
| Place | Per Capita Personal Income | | Total Personal Income | | Components of Total Personal Income | | |
|-------------------|----------------------------|---------|-----------------------|-----------------|-------------------------------------|-----------------------------------|-----------------------|
| | (\$) | Rank | (\$1,000s) | Rank | Earnings (%) | Dividends, Interest, and Rent (%) | Transfer Payments (%) |
| Montana | | | | | | | |
| 2000 | 22,518 | 47 (US) | 20,336,883 | 46 (US) | 61.2 | 22.7 | 16.1 |
| Beaverhead | | | | | | | |
| 2000 | 21,069 | 22 | 193,729 | 21 ^a | 56.7 | 24.8 | 18.55 |

Source: Regional Economic Information System, Bureau of Economic Analysis, Bearfacts.

Note: Montana contains 56 counties.

⁴⁶ [Http://www.bber.mt.edu/ecomomicanalysis/personalincome.htm](http://www.bber.mt.edu/ecomomicanalysis/personalincome.htm) accessed April 22, 2002.

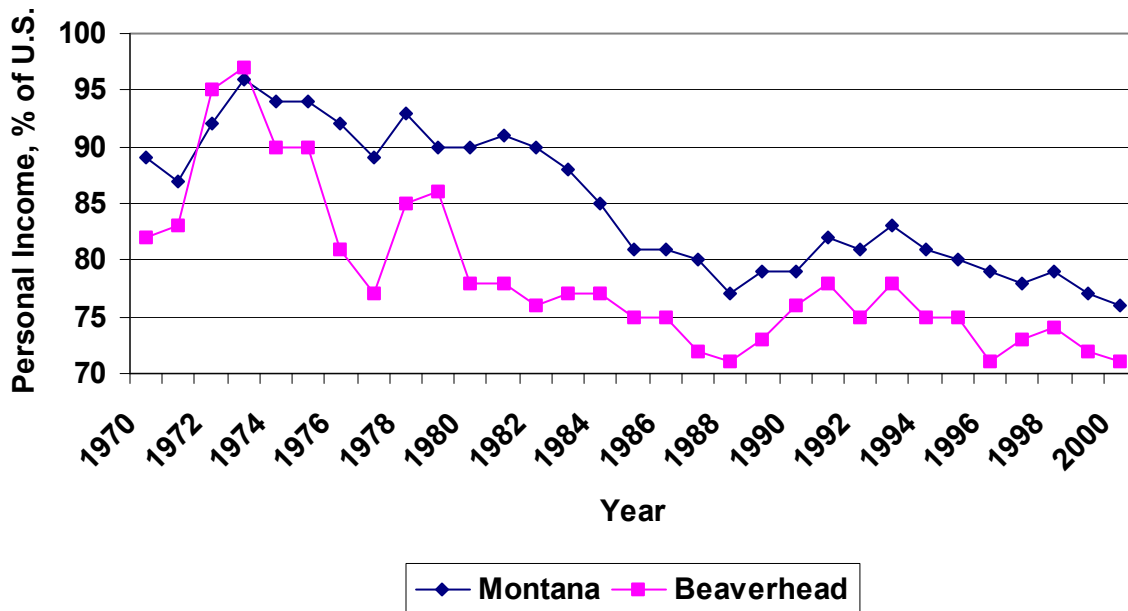
Figure 6-8. Components of Total Personal Income for Beaverhead County, 2000



Source: Regional Economic Information System, Bureau of Economic Analysis, Bearfacts.

Figure 6-9 shows per capita personal incomes for Beaverhead County and Montana as a percent of the United States as a whole. At both the state and the county levels, residents are losing ground relative to the nation. In 1970, Montanans' per capita personal total income was 89 percent of the United States, and Beaverhead County's was 82 percent. By 2000, per capita personal income for Montanans had dropped to 76 percent of the United States per capita, and Beaverhead County's had dropped to 71 percent.

Figure 6-9. Percent of Per Capita Personal Income as Percent of U.S. for Montana and Beaverhead County, 1970-2000

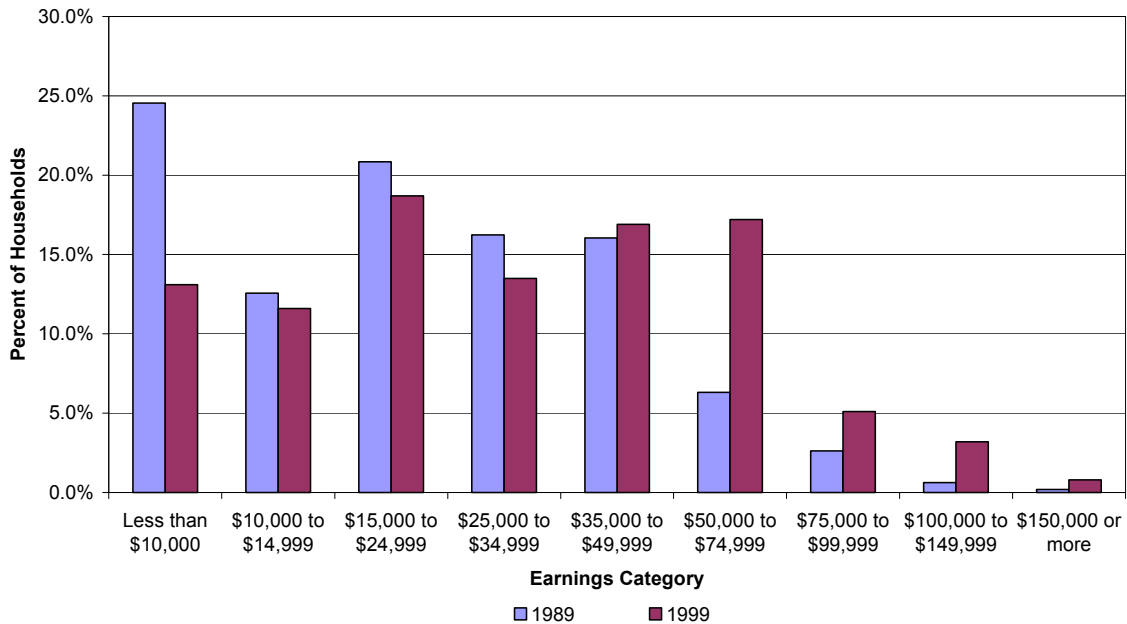


Source: Bureau of Economic Analysis Regional Accounts at <http://www.bea.doc.gov/bea/regional/reis/>.

6.3.3.2 Household Income

Figure 6-10 shows household income for Beaverhead County for 1989 and 1999, based on the U.S. Census for 1990 and 2000. It is important to take into account inflation and growth in the cost of living. Some of the shift from lower to higher income categories is due to a change in the cost of living and adjustments to pay rates for the cost of living. Inflation also has an effect on household income. Income in 1999 is valued less than income in 1989 due to inflation. As seen in the figure, the largest income category was the less than \$10,000 in 1989. By 1999, the largest income group had shifted to the \$15,000 to \$24,999 category.

Figure 6-10. Household Income for Beaverhead County, 1989 and 1999



Source: U.S. Census Bureau, 1990 Census and Census 2000.

6.4 Community Resources

It is a small place in the middle of nowhere. It is a place where you can still find the old west, or what is left of it anyway, and people don't want that changed much. It is pretty close to unspoiled Montana, almost pristine and not a lot of people. And when you talk about the community, you are really talking about the people who live here year round, the ones who stay for longer than a couple of years, the ones who stay and tough it out together.

In terms of land area, Beaverhead County is the largest county in Montana. However, this is a rural county with a total population of approximately 9,202 persons and a population density of about 2 per square mile. Dillon, the county seat, is the largest population concentration (3,752) with the next largest population concentrations in the Big Hole Valley and the south county community of Lima. Dillon is the center for most county services. Big Hole Valley residents are more oriented to Butte-Silver Bow for retail services and often for medical and other services as well. However, their children attend school in Dillon, but the long commute (more than 100 miles) results in some parents relying on relatives, friends, or boarding homes to house their children for all or part of a school week.

The rural nature of the county substantially influences the nature and types of community resources. An important social division of this and similar counties (e.g., Madison, Granite, and Powell) is the “rural” and “town” distinction. Rural residents are primarily agriculturalists (ranchers or farmers) while town residents provide services to the agricultural industry and to other businesses. Rural residents have their own sense of community, as do town residents. Events such as the annual County Fair provide an important occasion for rural and town residents to socialize and consolidate a sense of community, but volunteer organizations such as search and rescue and volunteer fire departments also provide a means for forging and reinforcing social bonds that construct a consolidated sense of community. The county has particular community characteristics as well as infrastructure and human resources that influence capacity to adapt to changing conditions. These resources are discussed in this section as part of the mix of variables that influence community resiliency.

6.4.1 Infrastructure and Community Services

The transportation infrastructure of Beaverhead County links local communities with the urban services and resources of southwestern Montana. Union Pacific has rail services in the county that connect with the east-west lines of Montana Rail Link. There are four airfields, located in Dillon, Dell, Wisdom, and Wise River, that serve Beaverhead County. The Dillon, Wisdom, and Wise River facilities are owned by Beaverhead County, and the Dell Airport is state owned. There are about 86 miles of Interstate 15 in the county. This is a major north-south route that provides all-weather highway access north to Butte, Helena, Bozeman, and other communities, and south to Idaho Falls and Pocatello. The major arterial routes are Highways 43 (56 miles), 41 (16 miles), and 278 (61 miles). Highways 324, 509, and 91 south and north are the major connector highways. There are three different companies providing telephone service for residents, and two of these have installed fiber optic cabling. Three different carriers provide cellular phone service. Internet access is available through telephone dial-up, but broadband services are limited. Television is available through local cable carriers as well as satellite. Natural gas and electricity are provided by two different entities. An electric cooperative provides power outside of Dillon, and currently Montana Power is transferring its distribution and generation operations within the city of Dillon. The county operates a landfill five miles west of Dillon.

Dillon and Lima are the two incorporated communities in the county and both have an elected mayor and city council form of government. Beaverhead County has three full time commissioners. Administrative offices in Dillon include the clerk and recorder, treasurer, justice and district courts, planning, and sanitation. Additionally, the county provides or administers the following services:

- **Public Safety.** There is a Sheriff’s office with seven sworn officers and three patrol units, two reserve officers, emergency dispatchers, and a detention center.
- **Noxious Weed Control.** The county has 13 seasonal part-time employees and 1 full-time supervisor for weed control and education.
- **Solid Waste Disposal.** These services are provided at the county landfill that also serves Madison and parts of Butte-Silver Bow, Anaconda-Deer Lodge, and Madison counties.
- **Roads.** The county maintains 170 miles of paved road and 1,264 miles of mostly gravel unpaved roads as well as 76 bridges.
- **Schools.** The county maintains 1 high school (520 students), 8 elementary schools, and 1 K-12 school located in Lima with 44 high school students and 70 elementary students. The elementary districts and their enrollments are: Dillon (820); Grant (27); Wise River (25); Wisdom (24); Polaris

(4); Jackson (24); and Reichle (23). High school enrollments are increasing (approximately 38 percent since 1991), middle school enrollments are steady, and elementary school enrollments are declining (approximately 17 percent since 1991).

- **Public Health.** The county contracts with Barrett Memorial Hospital for public health services throughout the county, although the hospital funds a major portion of those costs.
- **Social Services.** The county administers a Families Achieving Independence in Montana (FAIM) program that served an average of about 9 families per month in 1991. The county also administers daycare, food stamps, and low-income energy assistance programs.
- **Library.** There is a county library located in Dillon.

Volunteer EMS personnel provide emergency medical services. The City of Dillon has a police force, and ambulance services are available in Dillon, Lima, and Wisdom. There are also three volunteer fire department districts, operated mostly through property tax revenues and donations.

The Barrett Memorial Hospital in Dillon is a 312-bed facility providing inpatient and outpatient care. The hospital provides important health care services to the county as a whole, but especially to residents in Dillon and nearby rural residents. The Western Montana Mental Health Center is also located in Dillon providing primarily outpatient care and case management services. Residents perceive that local medical care is adequate, although physicians appear to be at capacity and it is difficult to get a local appointment. Consequently, those county residents who cannot obtain local appointments seek medical care in Butte or one of the other metropolitan areas in the region. Data from the Montana Department of Public Health and Human Services summarize the status of all health services in Montana by county (Table 6-23).

Table 6-23. Health Resource Assessment for Beaverhead County

| | | | | |
|---|---|-----|----------------------------------|--------|
| Local Hospitals or Medical Assistance Facilities (MAF) (Type of facility and number of beds) | 1 local hospital(s), 0 MAF(s); 31 beds | | | |
| Rural Health Clinics (RHC), Federally Qualified Health Centers (FQHC), IHS and Tribal Health Facilities (Number and type) | 0 RHCs, 0 FQHCs, 0 IHS/Tribal Health Facilities | | | |
| Availability of 911 and Advanced Life Support Services | 911 | | Adv. Life Support | |
| | Yes | | 3 Services: Dillon, Lima, Wisdom | |
| Nursing Homes (Number of facilities and beds) | 1 / 108 beds | | | |
| Aging Services Licensed (Number of Personal Care [PC], Adult Foster Care [AFC], and Retirement Home [RH] Licenses) | PC | AFC | RH | |
| | 1 | 1 | 0 | |
| Home Care Services Licensed (Number of Home Health Agency [HHA] and Hospice Licenses) | HHA | | Hospice | |
| | 2 | | 1 | |
| Public Health Resources (Number of Full-time Equivalent Public Health Nurses, Public Health Sanitarians [PHS], Registered Dietitians [RD], and Health Educators [HlthEd]) | Nurse | PHS | RD | HlthEd |
| | 1.0 | 1.0 | 1.0 | 0.0 |
| Primary Care Provider Resources (Number of doctors [MDs and DOs ⁷], Nurse Midwives [NMW], Nurse Practitioners [NP], and Physician's Assistants [PA]) | MD/DO | NMW | NP | PA |
| | 8 | 0 | 1 | 1 |
| Health Care Provider Shortage Status (Federal Health Professional Shortage Area [Fed. HPSA], State HPSA, Medically Underserved Area [MUA], or Medically Underserved Population [MUP]) | Federal HPSA - None; State HPSA - No; MUAs - Big Hole Basin and Lima-Centennial Valley CCD; MUPs - None | | | |

Source: Montana State Department of Public Health and Human Services.

Federal and state agencies also maintain offices in the county, including the USFS, the Bureau of Land Management, and the Bureau of Reclamation. The State of Montana presence in the county includes the Montana Highway Patrol, the Montana Fish, Wildlife and Parks, and an extension agent.

Other locally important resources include:

- Western Montana College, a four-year institution located in Dillon with about 1,000 students and an annual budget of about \$5 million. The college is an important source of local human resources as well as providing employment for faculty and staff, and educational opportunities for students in the region.
- Dillon Chamber of Commerce provides resources to promote economic development for Dillon and the rest of the county.
- Search and Rescue is an important volunteer organization that provides a range of rescue, emergency, and disaster response services throughout the county.

The county also has more than 20 different churches and over 75 service organizations, including Rotary, Kiwanis, Soroptimists, Elks, Lions, Masonic Orders, 4-H clubs, Jaycees and Jaycee Auxiliary, and other groups that support children and other community interests. The county maintains a museum and gift shop Dillon, and the county fair grounds are also located there. Dillon has a newspaper and radio station, and the major retail and entertainment resources for the county are also there.

There is one major grocery store (Safeway) in the county, as well as several smaller stores in Dillon. Retail is generally perceived as adequate for “general” needs:

We have the basics; you can get food, clothing; its general food and general clothes, and you can get your car fixed, but for anything upper level you go out of town. Part of it is that small town folks have higher prices, so you get lower prices and usually upper level services if you go out of town.

Retail stores are perceived as having a relatively large turn over, although no compiled data were collected to assess this perception. Nonetheless, this assessment of local merchants as providing usual but high-priced services is consistent with small towns throughout the west that are competing with superstores and diverse retail options in larger communities within reasonable travel distance.

Beaverhead County has the services of a rural town center. It has more than the usual amenities in a reasonably large hospital and a college, as well as the resources provided by different federal and state agencies, including the USFS. The outlying areas, such as the Big Hole Valley, and to some extent communities in the southern part of the county such as Lima and Monida, have the option to seek services in other areas—Butte for Big Hole residents and Idaho Falls for south county residents. Although people desire more diverse retail and entertainment options, there is a strong appreciation for the amenities provided by the physical setting and the small town character of all of its population centers. Although this last best place may not have the most up to date retail and entertainment amenities, there appears to be a strong sense that these deficits are compensated for by the social and physical characteristics of the county and the presence of those amenities in nearby urban areas such as Butte, which is within an hour or so drive.

6.4.2 Community Characteristics

The community characteristics addressed in this discussion are community values, self-images, and the selected components of county-level social organization. Community values and self-image describe aspects of community that influence residents to reside in their community and participate in community processes. The discussion of social organization describes county-level social groupings that affect how individuals and groups associate with one another.

County residents have a strong sense of attachment to place as expressed in the following statement:

I stand here and look out this window and I see the lands of my father and my grandfather. I was born on this piece of land, I am tied to it, and I can't let it go. Part of that is voluntary and part of it is involuntary in a way that I cannot put into words. We, my family, we are indigenous to this place. Most people came here from somewhere else, but we feel like we and the land have a tie that (long pause)...Well it is a tie I cannot put into words, one that urban folks have lost touch with.

Beaverhead County residents such as this rancher connect place, lifestyle, and community identity. This connection contributes to evaluations of community membership among residents of county towns and rural areas. Another town resident noted that living in the county requires a commitment to community and an appreciation of the values of rural Montana towns:

This is a place people choose to live. We come here or people stay here because they want to be here, they sometimes have to work two or maybe three jobs to do it. But we like the community. We like a traditional small town atmosphere where you walk down the street and know the people you see and they know you. For better or worse, everyone knows you and knows your businesses here. It is hard to disappear into the woodwork here.

There are different images or aspects of community identity expressed in the statements of residents interviewed for this work. One community image is the tightly knit rural area that values face-to-face relationships and “knowing one’s neighbors.” This view emphasizes and values stability as a community characteristic. As one resident observed: *We have never had a boom and never had a bust. It may make it kind of dull, but that is the way we like it.* This wish for stability is expressed in resident’s desires to “keep things the same” and skepticism about any changes, especially those that are outside community norms. This skepticism about change is often attributed to the longer-term residents and the agricultural component of the community. Some suggest this desire for stability leads to the view of the county as “tired” and lacking in economic and social vitality.

A complimentary image is that the county is “a conservative place.” This not only means conservative in economic and value terms, but also in political terms. The county is described as composed of those with a conservative Republican Party orientation. “Liberals” are perceived to be in short supply and they are often described as the source of local problems. For example: *It is the liberals that want to kick us off the forest. The ones back east are the real problem. We don’t have many local ones, but a few are at the college.* Democrats and liberals are not necessarily the same, but the standing joke in the county is that the Democratic Party holds their county meetings in a local telephone booth. Another component of this conservatism is what some view as zealous support for property rights. For example: *This is the kind of place where people are very individualistic and they have the attitude that ‘this is my land and I will do what I want with it.’* Yet, the conservative image expressed by county residents is itself conservative. As one community observer noted, *If you get too far on either side, the moderates here will beat you down.* Residents describe individuals with different political perspectives working cooperatively on projects of mutual interests that will benefit the community. Although in most cases ideology does not appear to be a major impediment to cooperative efforts, unless the ideology is about natural resource use. This is developed in later discussions in this chapter.

Another component of community identity is the natural resources and particularly the agricultural character of the community. County history and the types of community celebrations such as the JC Rodeo and the themes in the county fair express the natural resources and agricultural values of the county. Although ranching and farming are important, so are other resource-based industries in assessments of county identity. For example, a resident observed:

Originally we were a timber and mining county, then agriculture developed and we have been a ranching county for a long time. But timber and mining have evolved, but they just don’t have the clout they used to. When the Stoltze Mill closed, lots of those people left town. I have ranching friends that are going out of business too. Maybe 60 percent of the agricultural land here is now owned by people out of state.

Changes in agriculture and the timber industry are affecting community identity, although there is some resistance to becoming a service-based or tourism-based economy with a “mini Jackson Hole” identity.

The social distinctions in the county have two major components: “town” and “agricultural.” The “ag” or rural and “town” distinction is important for understanding the sense of community in Beaverhead County. Rural residents, primarily ranchers, are a distinct group with a common lifestyle and common economic pressures and problems. “Townsppeople” are more diverse in their occupations and lifestyles. Townsppeople may distinguish persons more by their occupation and tenure in the

community, but even in the towns, there is an ethic of social egalitarianism. However, from a county-level social perspective, rural residents and townspeople constitute the major social distinctions. Ranchers or townspeople may also be labeled by their views about natural resources with terms such as “conservationist”, “preservationist/environmentalist” or “resource-use supporter.” However, the most obvious distinction that influences the local sense of community is that of rancher and townspeople. As one interviewee noted, *Here there are the people that own the land and the people that own the shops, that is the social landscape.*

The sense of community among ranchers and townspeople differs. Townspeople emphasize place, tenure, participation in community events, and the importance of face-to-face relationships in their sense of community. Ranchers share these values, but they also incorporate others. They place strong value on lifestyle, history, ties to the land, and participation in lifestyle specific groups (i.e., state or national interest groups). These groups usually are ones that address common ranching or agricultural problems. Participation in these groups connects ranchers with a wider lifestyle-based group with members throughout southwestern Montana. The sense of attachment to place and community is different among townspeople and rural ranchers and farmers, but it does not appear to adversely affect community integration, although it may influence the activities in which each group participates.

6.4.3 Mutual Support and Cooperative Problem Solving

County residents interviewed for this project describe mutual assistance and volunteerism as important community values. Volunteerism is exemplified in the organizations such as the volunteer fire department and Search and Rescue as well as service clubs such as the Lions, Elks, Moose, and Kiwanis. The fund raising efforts and activities of the service clubs such as operating food banks and planting gardens in public places provide services often not affordable by local government. There are also informal volunteer efforts to build a swimming pool in Dillon. Rancher’s wives, local businesspersons, and other citizens have participated in bake sales and other fund raising efforts to acquire the funds to build the pool. Although the effort has not yet reached its goal, people point with pride to the cooperative efforts of citizens to accomplish what is perceived to be an important community effort. Interviews also indicate that such volunteerism is an important civic duty that is an important contribution to maintaining a sense of community. This is the kind of community participation that newcomers find appealing and at a scale where they can observe a difference from their actions. At the same time, their participation provides a means for integration and a display of respect for local values.

Residents also observe that they assist each other when the need arises. For example:

We have a bunch of proud people here. Many of them would not take welfare even if they needed it. Now, if someone is hungry, then I help out and see they get what they need. We have a food bank that people contribute to and that helps out. If someone needs a shirt, then I will give them the one off my back. I have several more at home!

A community newcomer also observed:

This is a community that has a big heart. Whenever people need something, the community responds. There is a “coats for kids” program here and we had more than 600 coats contributed. The local dry cleaner cleaned the coats and we had people help out in lots of ways. For a small place with not many resources, people care about their neighbors; they do whatever they can in a pinch to help out.

This kind of neighborly assistance reinforces a sense of solidarity and mutual support that is an important integrating force in this county.

Cooperation among community members contributes to community cohesiveness. Cooperative activities such as the County Fair, the JC Rodeo, and similar events contribute to reinforcing social bonds and promoting community integration. Church and school activities are also important community activities that local residents value as a means to interact with others and to express their sense of community cooperation. Although cooperative action is valued, there is also a perception that such activity is dispersed:

There is no nucleus to bring the community together. There do not appear to be town fathers or other key community institutions that act to pull the parts together. It is a very dispersed sense of community.

People do engage in cooperative activities that reinforce social bonds, but these do not always integrate diverse community components.

Traditionally, a socially and culturally homogenous population has supported community integration. As newcomers and other socially and culturally diverse people have moved into the county, there have been conflicts about lifestyles, values, and ideological positions, especially concerning natural resource issues. Some newcomers observed that as long as individuals participate in community activities and do not try to replace local rural values with the urban values and lifestyles they left, community acceptance occurs with time. Others have observed that different ideological positions about natural resource issues or related political points of view have resulted in hostile responses from some community residents. The arrival of newcomers with different lifestyles, ideologies, or cultural orientations results in some conflict that appears to undermine overall community integration and create a sense of “us” and “them” that polarizes individuals and social groups.

Other locally-defined sub-groups include federal and state agency employees, churches, and the college. Each group appears to make efforts to participate in community activities, either through individual actions or as an institution that sponsors particular events. This promotes cohesiveness by creating cross-cutting ties that integrate these sub-groups with other community members. However, each of these groups is perceived as representing particular points of view or particular religious affiliations, and these groups can become isolated in response to local conflicts and interact primarily with other sub-group members. As long as these groups are not isolated, they act to reinforce social bonds among diverse individuals and support community cohesiveness.

There do not appear to be persistent or intense social conflicts among community groups other than tensions between some newcomers and between those who hold different positions about natural resource use or management. Such conflicts are common in western communities that are experiencing growth pressures. If such conflicts remain unresolved, this undermines the capacity of communities to organize resources for cooperative problem solving. Furthermore, the experience of the “unwelcome” actions of other community members creates or exacerbates polarization.

Natural resource-use issues have been a source of conflict in Beaverhead County. Examples include such issues as grazing, timber cutting, off-road vehicle use, and wilderness areas. Community groups have formed to address these problems and to work with federal agencies, primarily BLM and the B-DNF, to resolve conflict issues and to provide input regarding planning. These efforts include the Beaverhead County Community Forum and the B-DNF, the Big Hole and Beaverhead Watershed Committees, as well as a county-sponsored Resource Use Plan group.

The Beaverhead County Community Forum resulted from efforts by the Montana Consensus Council to develop a public input and collaboration process for diverse community groups to work with the B-DNF and other federal agencies. The Forum worked with the USFS to provide a vision statement

for the Pioneer Mountains, and a Memorandum of Understanding was also developed to provide collaboration about other natural resource planning issues. Although the group still exists, internal conflicts among resource-use supporters and other interest groups decreased participation among many of the interested parties. Although this group represented a cross-section of interests, it appears that different assessments of the group's purpose and function resulted in conflicts that did not allow the group to continue functioning as envisioned. Some observers note that the group was sabotaged because *one side did not get its way* and others observe that the process was never a valid problem-solving approach. The gulf between these perspectives seems wide enough to be of concern for future problem-solving efforts.

An outgrowth of the Beaverhead County Community forum was the Beaverhead County Resource Use Group. With the involvement of county personnel and others who were also involved in the Forum, the Resource Use Group produced a document titled, "Beaverhead County Resource Use Plan" (Beaverhead County, July 2001). Page 2 of the plan states:

It is the intent of Beaverhead County government to protect the custom and culture of county citizens through a variety of actions. It is the policy of Beaverhead County to work with federal and state agencies, so that they will hereafter coordinate and consider county, State and Federal policies before implementing actions, both within and without the boundaries of Beaverhead County that affect local communities and citizens.

Federal and state laws require federal and state agencies to coordinate with the local government and consider the local land use plans in the process of planning and managing federal and state lands within the geographic boundaries of Beaverhead County, Montana. Federal and state agencies proposing actions that will impact the county, its citizens, and resources therein should prepare and submit in writing, in a timely manner, report(s) on the purposes, objectives and estimated impacts of such actions, including economic, to the Beaverhead County Board of County Commissioners... (Beaverhead County 2001: 2).

From the perspective of some of those involved in the development of the resource use plan, its purpose is to *rationalize the process of interacting with the government*. The perception exists that in the past, county citizens had no more say on resource management issues: *... than a person in New York with a 32 cent stamp they could send to the Forest Service. We had the same standing at the table as that person*. These same interests argue that past community involvement also was not meaningful since the USFS could gather input but not act on it. The Resource Use Plan is perceived as an effort to developing meaningful cooperation and coordination with the USFS.

Although sponsored by county government, there is sentiment in the county that the Resource Use Planning effort is not necessarily a broad-based planning process. Indeed, the perception is that the plan represents a relatively narrow point of view focused on promoting resource extraction. As one critic of the plan observed:

It is a very conservative approach; it came out of Idaho I think. It is strictly a resource user approach. It is not oriented to the recreation or environmental communities, whereas the previous MOU (memorandum of understanding) was pretty diverse. The Resource Use Plan has a narrow base, but it is better than nothing. I don't think it is pragmatic; it cannot be accomplished in my opinion. It is a plan that points to the past, not the reality of the present.

Two points in this statement were expressed by others not involved with the process: (1) it has a narrow base that does not represent a cross-section of the community and (2) it is a plan anchored in past uses of natural resources and not current realities that limit those uses. Others perceive the plan as an effort by the county to assume management of natural resources. For example, a resident with a long-term history of community development efforts commented about the Resource Use Plan effort:

The government, the Forest Service, has the first say on management of public lands, not the county. Some people involved in that plan came out firing both guns, but that did not fly well with anyone here. That kind of planning should be left to the Forest Service.

These represent diverse perspectives. From the perspective of the Resource Use Plan group members, their efforts are ones that can make what appears to be a one-sided decision-making process more rational and more considerate of how public land management influences local economies and ways of life. From another perspective, the effort is based in past conflicts and has a narrow base of support, and those involved are willing to undermine any other cooperative problem-solving effort that does not support the perspective of the Resource Use Plan group.

Other entities such as the Big Hole Watershed Committee and the Beaverhead Watershed Committee are composed of a cross section of local interest groups including those representing ranching, environmental, recreational, and other community interest groups. These groups attend to a more narrow set of issues that are focused around water use and riparian issues in their respective watersheds. For example, the Beaverhead Watershed Committee has the following mission statement:

The purpose of the Beaverhead Watershed Committee (BWC) is to seek an understanding of the watershed—how it functions and supports the human communities dependent on it—and to build agreement on watershed-related planning issues among stakeholders with diverse viewpoints.

Issues specifically indicated in the draft ground rules for the committee include Clark Canyon Dam renewal, water quality, and weed management. Participating members include ranchers, outfitters and guides, tourist businesses, the city and county, the Beaverhead Conservation District, and fisheries interests, including Trout Unlimited. Anyone can participate in these watershed groups if they express an interest.

In summary, problem-solving efforts about natural resource issues have exhibited some notable successes (e.g., the Big Hole Watershed Committee), others with limited success (the Beaverhead County Community Forum), and some that are process oriented (Resource Use Plan group), whose ultimate success will be assessed in the future. There is also divisiveness among resource use supporters and others who see this point of view as inconsistent with present-day realities of natural resource use in the county.

6.4.4 Leadership

Leadership is an important community resource. Leaders contribute to identifying, organizing, and responding to crises or uncertainty. Communities with strong leadership resources have an advantage in situations where change is occurring or may occur in the future. Consequently, interviews developed information about Beaverhead County community leadership. Several themes emerged in the information collected.

One theme is illustrated in the following response to a question about identifiable leaders: *Well, there is the Mayor, and the Hospital CEO, the College President, our local political representatives, and some of the key organization heads.* Specific individuals were not identified, rather a theme in information about leadership is that leadership exists in institutional positions and not necessarily in particular individuals outside of those positions.

Another theme is the passing of old leadership and the lack of emerging leadership:

The leadership pool in the county is just not being replenished as the older ones retire. More than individuals, it is the churches and some other organizations that have the leadership role.

The old leadership has mostly died, and if you ask the old ones that are surviving, they will tell you there is none. The old ones, they are the ones who volunteered all the time and did what they could to serve the community. They tell me they don't see it now, they don't see the leadership the way it used to be.

A related theme also is critical of existing leadership and community commitment to participation in leadership roles. For example, an assessment of current county leadership is expressed in the following statements:

There is a leadership vacuum here. The best and the brightest young people leave here. They cannot find anything to do. Now the best and the brightest people are the retirees and other folks moving in here.

There are a number of people that spout off about what needs to be done, but not many step up to the plate and get involved. There is just no energy for leaders here.

Most people here are tending to their business. They are working hard just trying to make a living and attending to their problems. There isn't much time to do much of anything else. Being a leader is a luxury here.

These are relatively harsh criticism of community participation in leadership positions. There is also a contrarian theme about leadership as expressed in the following statement:

As a community, we have some tough problems, but people don't walk away from it here. I have never seen the kind of public willingness to do stuff, to step up when needed. Now, sometimes jobs go wanting, like City Council jobs especially, but someone always steps up. It can make your heart warm....

This theme was less prevalent than ones critical of local leadership, but it also indicates a mixed message about the overall success of community participation in leadership roles.

A final leadership theme concerns the limited role of ranchers in community leadership. This theme was not one that naturally emerged in interviews. However, in conducting interviews the absence of any ranchers in the discussion of leadership was notable. In response to a follow up question about this point, a resident made the following observation:

Ranchers tend not to be involved in community organizations in town because they are working 24/7. The townspeople have the time. The agriculture people are not the town leaders; it is the townspeople who take that role. The agriculture people get involved in leadership in agriculture organizations, national ones and state ones. Our interests are in Washington, D.C. or Helena, not in the town.

This point reinforces earlier observations about the different spheres of activity for "rural" and "town" residents in the county. That is, the rural and town social distinction influences participation in the social activities of both groups and this may have an affect on the participation of ranchers in county and especially town leadership roles.

The availability of leadership resources in the county presents a mixed picture. There may be explanations that account for this apparent deficit. For example there is an egalitarian ideology in the county that may inhibit individual leadership, and individuals who live in demanding economic environments may not be predisposed to invest time in leadership activities that consume time in an environment where time is extraordinarily limited. Similarly, leaders may become involved in conflicts that may compromise other relationships that are socially or economically important, and these factors may also inhibit the emergence of new leaders. Whatever the reason, the pattern in Beaverhead County appears to be institutional rather than individual leadership.

6.5 Human Resources

If a community has limited educational, employment, or financial resources, then these may adversely affect the ability to adapt to changing social or economic conditions. These types of resources are sometimes referred to as “human capital” or for our purposes “human resources.” This section presents a summary of information about educational attainment, income, employment, and poverty as indicators of Beaverhead County human resources.

Table 6-24 summarizes information about some human resources indicators based on Census 2000 data. Comparative numbers are included for the United States and the State of Montana. As this table indicates, unemployment is relatively low in comparison to the rest of Montana and the United States. More of an issue is both underemployment and the need to hold multiple jobs for wage earners to meet their financial obligations. Beaverhead County residents appear to have strong educational resources with more than 89 percent of those over the age of 25 having a high school diploma and slightly more than the national average having a college degree (26.4 percent). The table depicting educational attainment also profiles the different levels of educational attainment for the years 1990 and 2000, suggesting an overall increase in persons over 25 with a college education although there is also a decrease in the percentage of persons with at least a high school diploma.

Table 6-24. Measures of Human Resources in Beaverhead County, 2000 Census

| | Percent Unemploy- ment | Percent of High School Graduates >25 | Percent College Graduates (BA+) >25 | Median Household Income (\$) | Per Capita Income (\$) | Percent Individuals Below Poverty | Percent Related Children Under 18 Below Poverty |
|------------------|------------------------------|--|---|------------------------------------|---------------------------|--|--|
| United States | 3.7 | 80.4 | 24.4 | 41,994 | 21,587 | 12.4 | 16.1 |
| State of Montana | 4.1 | 87.2 | 24.4 | 33,024 | 17,151 | 14.6% | 18.4 |
| Beaverhead | 2.4 | 89.3 | 26.4 | 28,962 | 15,621 | 17.1% | 20.3 |

Source: U.S. Census Bureau Census 2000.

Beaverhead County residents have lower median household incomes, lower per capita incomes, and higher rates of poverty in comparison to the United States and Montana as a whole. Table 6-25 shows that 43.4 percent of households have incomes below \$24,999, 56.9 percent have incomes less than \$35,000, and 73.8 percent less than \$44,999.

Table 6-25. Percent of Households in Selected Income Ranges for Beaverhead County and Montana, 1999

| Income in 1999 | Beaverhead | Montana |
|-----------------------|------------|---------|
| Less than \$10,000 | 13.1 | 11.3 |
| \$10,000 - \$14,999 | 11.6 | 8.9 |
| \$15,000 - \$24,999 | 18.7 | 17.1 |
| \$25,000 - \$34,999 | 13.5 | 15.4 |
| \$35,000 - \$44,999 | 16.9 | 18.2 |
| \$50,000 - \$74,999 | 17.2 | 17.1 |
| \$75,000 - \$99,999 | 5.1 | 6.4 |
| \$100,000 - \$149,000 | 3.2 | 3.6 |
| \$150,000 - \$199,999 | 0.4 | 0.9 |
| \$200,000 or more | 0.4 | 1.0 |

Source: U.S. Census Bureau Census 2000.

Based on these statistics, residents would appear to have limited financial resources to meet basic needs, and the higher rates of poverty, and especially children in poverty, may require the use of social and community resources that might be used otherwise for community enhancement. However, these statistics do not represent a complete assessment of human resources. These are data that indicate that people have substantial educational skills, but limited employment and income opportunities.

6.6 Community Resiliency

Resiliency is a concept used to address the resources that exist for communities to adapt to changing conditions. This assessment of resiliency is presented by discussing the following indicators: land use, attitudes to change, services and infrastructure, community characteristics, mutual support, cooperative problem solving, leadership, human resources, and economics/economic diversity. The strengths or weaknesses of each of these resiliency indicators are discussed. This assessment is based on data collected for this project and represents one view of community resiliency. Planners and community members can use this format to augment this assessment and use it for future resiliency assessments.

Land Use and Ownership. Thirty-one percent of Beaverhead county lands are privately owned. The remaining 69 percent is in federal and state ownership, with the USFS managing 38 percent of those lands and the BLM 19 percent. These federal lands create open space; they also provide recreational opportunities for residents and visitors, and commercial opportunities for ranchers, the timber industry, outfitters, mushroom gatherers, and other commercial interests. The open space valued by county residents is a strength created by the pattern of land ownership and land use in the county. As in other counties with this pattern of land ownership, development and other private land uses are concentrated within 31 percent of county lands. This can be assessed as a weakness if demands for land uses exceed the available supply. Similarly, federal ownership also limits the control that residents have over the types of uses on those lands. This may be also assessed as a weakness.

The qualities of place in Beaverhead County are important elements of lifestyles and the sense of place in the county. Open space, wildlife, rivers, mountains, and valleys construct what residents describe as the experience of “wild Montana” in Beaverhead County. This is a valued characteristic of the quality of life that is a strength for local communities.

Attitude to Change. Local culture values stability and maintenance of the status quo. While progress is desirable, it is progress toward maintaining things as they are or have been in the past. The positive value of this attitude to change is that it focuses attention on conditions that can reinforce the valued attributes and characteristics of local communities. The weakness of this view is that it may inhibit thinking about adaptation to new circumstances and new solutions to old problems.

Community Characteristics. The county has a relatively homogenous population with limited social differentiation. The major county-level social groupings (townspeople and ranchers/farmers) identified by this work are stable and do not appear to have any significant inter-group conflicts. There are ties that integrate social groups, but these tend to be more within sub-groups than across major county-level social groupings. The size of the county and the dispersion of its population inhibit a strong sense of a county-level identity. However, school activities, churches, and common lifestyle activities promote community cohesiveness within the dispersed communities of the county. In both towns and rural areas, residents have a strong sense of attachment to place that is connected with community. This sense of attachment is a strength that promotes community cohesiveness. That is, people have a strong sense of belonging to their communities. However, there is some divisiveness regarding different perspectives on natural resource issues, and this contributes to community conflicts that weaken social bonds. Such divisiveness is a weakness that undermines cohesiveness.

Local Services and Infrastructure. There are both county services and municipal services in the incorporated communities. The county ranks fifth among all seven project counties in per capita expenditures (\$514.04) for services. However, the county has some notable strengths in its infrastructure and services that are not present in other rural counties, including Barrett Hospital, Montana Western College, and a significant presence of federal land management agencies (BLM and USFS). These are infrastructure and service strengths for the county. The county also has more retail services than some rural counties, although these services are concentrated in Dillon. The presence of regional services in Butte or Bozeman offers residents access to services or a wider range of services than are present within the county. The proximity of these regional services combined with the educational, medical, and federal agency services in the county also contributes to the quality of life in the community. County residents perceive this combination of local and regional services as a strength.

Mutual Support. Communities have a history of community-based social support through volunteer efforts, fund raising events, and neighboring. Some of these activities are organized by service clubs or churches. Others are organized by groups or individuals. The high value placed on mutual support combined with the expression of this value contributes to the sense of belonging in county communities. This diversity in the expression of mutual support within these communities is a strength.

Cooperative Problem Solving. County communities exhibit both strengths and weaknesses in cooperative problem solving. The strengths lie in a history of developing community groups to address identified problems. These groups are sometimes ad hoc and focused around a particular issue. Others are more long standing and provide a forum for raising and resolving issues of concern to community members. The weakness in problem solving is associated with some community divisiveness about natural resource management issues. Although organizations such as the Big Hole River Watershed Group and the Beaverhead Watershed Group exemplify successful forums for cooperative problem solving about natural resource issues, other efforts have been less successful from the perspective of group participants. These past failures may undermine future cooperative problem solving.

Leadership. Recognized leadership resources appear concentrated in institutional positions such as mayors and other municipal and county officials. Community-based leadership is evaluated as less

than desirable. However, when leadership resources are needed, they emerge. The desire for more available and higher quality leadership suggests that leadership is a perceived weakness in the county. However, the university, hospital, government agencies, and ranchers are a reservoir of leadership resources that appears under-exploited by county communities.

Human Resources. Within the county, educational attainment is higher than average for Montana, in part because of the university, hospital, and professionals employed in government agencies. The overall educational level of the county is a human resources strength. Unemployment is among the lowest of all the project area counties, and this is also a human resources strength. However, local sources suggest that underemployment is an issue for local workers, and this is a noteworthy weakness. Lower than average income and higher than average poverty levels, along with underemployment, appear to be the most prominent human resources weaknesses in the county.

Economic Diversity. Economic diversity is not the only component of economic resiliency, but it is a key indicator associated with overall community resiliency. IMPLAN value added data (Table 6-13) are the primary indicators of economic diversity used here. Measures of “wildland dependency” (Table 6-12) are also used as indicators of the interaction of community economies with natural resources. An assumption of resiliency analysis is that economic diversity buffers communities from downturns in any one economic sector. Consequently, if communities are “economically diverse,” then they have more capacity to adapt to changing conditions and can recover from economic impacts more quickly, i.e., they are “economically resilient.” However, current approaches to assessing economic diversity are often problematic because they either use measures that oversimplify economic realities, (e.g., total number of economic sectors) or they do not account for interdependences among economic sectors. This discussion of economic diversity is comparative.

The “wildland dependency” (Table 6-12) data presented show that 17.1 percent of the total county output is accounted for by grazing, timber, and mining industries combined. The county ranks fourth among all project counties in wildlands output. Mining has the largest share, accounting for about 9 percent of the total followed by grazing industries with 7.8 percent. The grazing industries output is the largest among all project counties. The county ranks fourth among all project counties in wildland industries employment with 9.5 percent of the county total.

IMPLAN value-added output data (Table 6-13) indicate the portion of output that stays within the county. These data show that the county has 6 of 9 sectors that are each more than 10 percent of the total value-added output. This is the same as the averages for all seven project counties and for the state as well. Government is the sector with the highest percentage (19 percent) followed by services (16 percent), FIRE⁴⁷ (16 percent), and wholesale and retail trade (14 percent). Agriculture accounts for 10 percent of the total value-added.

Residents describe Beaverhead County as an agricultural, and specifically, a ranching-based economy. Government is a significant contributor to the local economy and adds to overall economic diversification. Barrett Hospital and the university are each economic assets not present in other rural counties in the project area. Guiding, outfitting, and other tourism jobs are steady sources of employment also. Unemployment is lower than in other project counties, although discussions with residents suggest that underemployment is a more significant economic issue. The county has an active, locally based Economic Development Council and a Chamber of Commerce that is attending to both developing and diversifying the local economy. The county has more diversification than other rural counties because of its government, hospital, and university assets. The importance of agriculture in the economy is both an asset and a potential source of weakness since it is interconnected with other sectors of the economy.

⁴⁷ FIRE=Finance, insurance, and real estate.

7 Butte-Silver Bow County

*Butte is a historic mining town with a colorful past. It is ideally situated for people interested in outdoor recreation.*⁴⁸

Mining produced Superfund sites. We are more environmentally aware as a community than we ever have been.

Butte-Silver Bow County has a consolidated city-county government and is located in southwestern Montana. It is the smallest county in land area in the study area, but the most populous with 34,606 residents in 2000. Butte-Silver Bow County shares borders with Anaconda-Deer Lodge County, Jefferson County, Madison County and Beaverhead County. Most residents of the county live in Butte, which is located at an elevation of 5,700 feet on the western flank of the Rocky Mountains.

Butte-Silver Bow County, like other counties in the project area, includes rugged mountain peaks with valleys along the major drainage systems. Elevation ranges from a low of approximately 4,430 feet along the Jefferson River to a high of 10,223 feet. The northern part of the county is in the headwaters of the Columbia River drainage while the southern portion is in the headwaters of the Missouri River drainage. The Big Hole River forms most of the boundary between Butte-Silver Bow and Beaverhead County to the south. The Continental Divide forms much of the eastern boundary between Butte-Silver Bow and Jefferson counties.

In the southeastern portion of the county is the Humbug Spires Primitive Area with its impressive 300-600 foot outcroppings of white granite. The spires are believed to be part of the Boulder Batholith, which is a 40-mile wide mass of igneous rock that extends from near Helena to the Big Hole River. Mines in the Butte area are located in this formation.

According to the Montana Rivers Information System, the county contains 41 streams with 612 stream miles. The biggest rivers in Butte-Silver Bow include the Jefferson, the Big Hole, and the Missouri. According to the Butte-Silver Bow Master Plan (1995), drinking water for the city comes in part from the Big Hole River and the South Fork of the Divide Creek.

Butte-Silver Bow County is rich in mineral resources, which attracted miners to the area in the mid 1800s. Extensive deep shaft mining and smelting took place particularly in the northern portion of the county. Eventually, open-pit mining replaced deep shaft mining. The Berkeley Pit, the largest truck-operated open pit mine in the country, is approximately one mile across and more than 2,500 feet deep. Between 1955, when mining began in the Berkeley Pit and 1982, when the mine was closed, more than a half a billion tons of copper were removed. What remains is the largest open body of contaminated water in the United States

Almost every aspect of life in Butte-Silver Bow County has been shaped by Butte's mining history. The gold rush of the 1860s brought prospectors to Butte. A silver boom followed the gold rush in the 1870s. By the 1880s, Butte was the world's biggest copper producer. The copper lode was found at 300 feet below the surface. The completion of the Utah Northern Railway in the early 1880s connected Butte to markets outside of Montana, which helped to accelerate Butte's commercial and industrial development.

⁴⁸ Italics indicate a statement from project participants that were recorded on tape or written in field notes. Exact word for word transcription did not occur in all cases. However, these statements indicate the meaning of what was said. The process of writing field notes and making transcriptions from tapes often results in approximations of what was said that remain true to the meaning of the statement. Quotations from published or other sources are indicated by indentations but not italics.

The city of Butte was incorporated in 1879, and at one time was the largest city in the Northwest. Butte has experienced significant socioeconomic upheavals and the serious disruption of individual lives, but has survived against big odds.

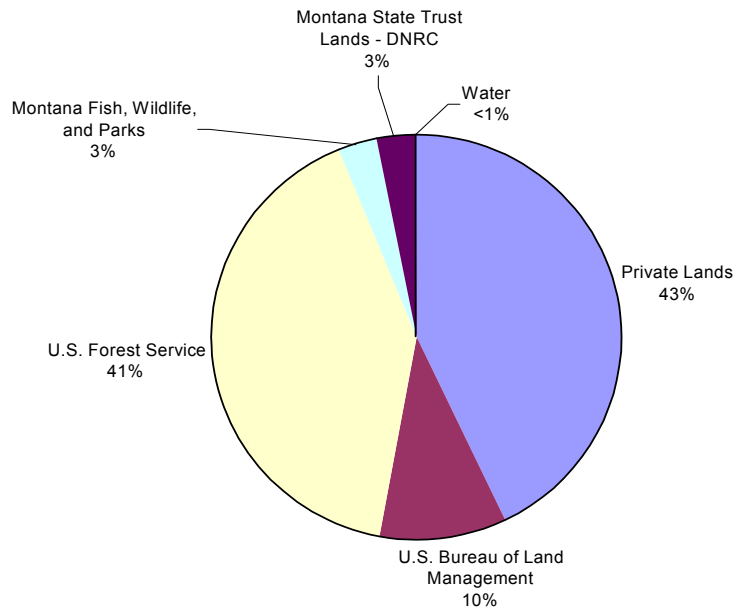
7.1 Land Ownership and Use

This section on land ownership and type describes ownership patterns of the county and types of land use found within the county. The subsection on land use includes a brief discussion of the impacts of copper mining on land use in the county, types of other uses and land cover, amount of land in conservation easements and special use designations, and a summary of agricultural land use.

7.1.1 Land Ownership

As shown in Figure 7-1, approximately 57 percent of the lands in the Butte-Silver Bow County are managed by the federal government or the state. Lands in private ownership account for only 43 percent of the total land area in the county. Of the federal portion, the Forest Service accounts for approximately 41 percent while the BLM accounts for another 10 percent.

Figure 7-1. Percent of Land Ownership of the Major Land Owners in Butte-Silver Bow County



Total area in Silver Bow County is approximately 460,000 acres.
Source: Montana State Library, 2001.

7.1.2 Types of Land Use

The most striking feature of Butte’s landscape is the gigantic Berkeley Pit, which is a very visible reminder of Butte’s mining history. The Berkeley Pit is a former open-cut copper mine that is

approximately one and one-half mile wide, one mile across, and the water level is 900 feet deep. It is not actually within the narrow confines of the city but is located right next to the central business area. The Anaconda Company began open pit mining in 1955 and entire neighborhoods were forced to relocate to accommodate mining.

7.1.2.1 Superfund Site

A potential constraint on future development of Butte-Silver Bow County is the largest superfund sites in the United States. Decades of mining and mineral processing in and around the cities of Butte in Butte-Silver Bow County and Anaconda in Anaconda-Deer Lodge County have severely injured the area's natural resources. While the specific reasons for designation vary site by site, all are related to historic mining and processing activities. The Silver Bow Creek/Butte Area site is one the four contamination sites that make up Clark Fork Basin Sites. It includes the cities of Butte and Walkerville, the Berkeley Pit, miles of interconnected mine workings and approximately 40 miles of stream and stream-side habitat along Silver Bow Creek. According to the EPA, for over 100 years Silver Bow Creek was used as a conduit for mining, smelting, industrial, and municipal wastes. Details of the sites in Butte and completed and anticipated cleanup actions can be found on the Environmental Protection Agency's (EPA) web site⁴⁹

When mining was discontinued and the mining company ended dewatering operations, thousands of miles of underground mines and the pit began to fill with water. The pit is now filled with approximately 21 billion gallons of highly acidic mine water. Construction began in June 2002 on a treatment plant that will treat the water draining into the pit and eventually the water in the pit. The sludge generated by the treatment process will be discharged into the pit. Treatment operations will focus on removing copper, zinc, and cadmium.⁵⁰

7.1.2.2 Major Uses or Land Cover Type

The information in Table 7-1 was compiled from the Montana Natural Resource Information System On-Line Mapping system. It presents major types of land use as a percentage of the total land area for the county compared to the study area as a whole. Approximately 48 percent of county land is designated evergreen forest, compared to 43 percent of land in the study area counties. Grass rangeland accounts for approximately 27 percent of land area, followed by brush rangeland at 11 percent. Although there are numerous visible reminders of Butte-Silver Bow's past as a mining center, only a fraction over one percent of the land area is designated as mines/quarries.

Butte-Silver Bow County is experiencing one problem that is related in part to land use. Pine beetles have infected trees in Thompson Park and the Basin Creek watershed, which according to interview data is the source of about one third of the city's water. The county would like remove the large heavily infected trees to help curb the disease, gain some economic benefit from the trees, and prevent a forest fire in Thompson Park, but while the county shares management with the USFS, the county owns only about 20 of the 3,500 acres. The beetles are also a problem in the Basin Creek watershed, which is the source of about one-third of city's water.

⁴⁹ http://www.epa.gov/region8/superfund/sites/mt/silver_html.

⁵⁰ Landers Jay, "Montana Mining Firms to begin Huge Berkeley Pit Cleanup" Civil Engineering Vol. 72, Issue 6, June 2002.

Table 7-1. Major Types of Land Use as Percent of Total Area for Butte-Silver Bow County and Study Area

| Type | Butte-Silver Bow | Study Area Counties |
|------------------|------------------|---------------------|
| Brush Rangeland | 11.10 | 17.55 |
| Evergreen Forest | 47.99 | 43.40 |
| Crop/Pasture | 1.76 | 7.46 |
| Grass Rangeland | 27.47 | 17.32 |
| Mixed Rangeland | 4.87 | 9.21 |
| Mines/Quarries | 1.28 | 0.23 |
| Residential | 1.00 | 0.11 |
| Mixed Forest | 3.00 | 0.60 |

Source: Montana Natural Resource Information System On-Line Mapping, nris.state.mt.us/mapper/county/html, February 19, 2002.

Note: Columns may not add up to 100 percent due to exclusion of land use categories accounting for less than one percent of total land area.

7.1.2.3 Conservation Easements and Special Use Designations

Table 7-2 details acres held in private, U.S. Fish and Wildlife Service, and state conservation easements in Butte-Silver Bow County and acres with special use designation including BLM special lands, research natural areas, and wilderness areas. Just over two percent of the land area in the county is under conservation easements or designated for special uses.

Table 7-2. Conservation Easements and Special Use Designations in Butte-Silver Bow County and the Project Area

| | Acres | Percent of Total County Lands | Project Area Total | Percent of Total Project Area |
|--|---------------|-------------------------------|--------------------|-------------------------------|
| Conservation Easements | | | | |
| Private Conservation Easement | 2,356 | 0.51 | 2,600,338 | 2.49 |
| USFWS | 0 | 0 | 27,173 | 0.26 |
| State Lands | 0 | 0 | 54,899 | 0.52 |
| Total | 2,356 | 0.51 | 2,682,410 | 3.27 |
| Special Use Designation | | | | |
| BLM Special | 6,928 | 1.51 | 30,953 | 0.30 |
| Research Natural Areas | 940 | 0.20 | 19,226 | 0.18 |
| Wilderness Area | 0 | 0 | 611,925 | 5.85 |
| Total | 07,868 | 1.71 | 662,104 | 6.33 |
| Total of Conservation Easements and Special Use | 10,224 | 2.22 | 3,344,514 | 9.60 |

Source: Montana Natural Resource Information System On-Line Mapping, nris.state.mt.us/mapper, February 19, 2002.

7.1.2.4 Agriculture Profile

Butte-Silver Bow County has the smallest amount of acreage in farmland of any of the counties in the study area. In 1997, the county had 51 full-time farms with an average size of 950 acres. In comparison, the average size farm in Granite county was 2,294 acres and in Beaverhead County 3,200 acres. Table 7-3 compares number of farms, full-time farms, acreage, average size of farms, market value of agricultural crops, and average market value of farms in the county for 1987, 1992, and 1997. The total number of farms and number of full-time farms remained essentially the same between 1987 and 1997. However, total acreage in farmland and the average size of a farm decreased between 1987 and 1997. The market value of agricultural product sold increased from \$2.2 million in 1987 to \$3.2 million in 1997. The average market value of agricultural products per farm in the county averaged \$27,910 in 1997. The 2002 Census of Agriculture will begin in December 2002.

Table 7-3. Census of Agriculture County Profiles for Butte-Silver Bow County, 1987, 1992, and 1997

| Characteristic | 1987 | 1992 | 1997 |
|--|---------|--------|---------|
| Number of Farms | 114 | 105 | 116 |
| Full-Time Agriculture | 51 | 45 | 51 |
| Acreage in Farms | 115,350 | 99,746 | 100,181 |
| Average Size of Farms (Acres) | 1,012 | 950 | 864 |
| Market Value of Agricultural Products Sold (\$1,000) | 2,202 | 2,476 | 3,238 |
| Average Market Value of Agricultural Products per Farm Sold (\$) | 19,312 | 23,585 | 27,910 |

Source: Census of Agriculture County Profile, United States Department of Agriculture, Montana Agricultural Statistics Service <http://govinfo.library.orst.edu/cgi-bin/ag-list>.

7.2 Demographic Characteristics and Trends

Historical and recent population trends are briefly described in this section.

7.2.1 Rural-Urban Classification

The 2000 Census for Butte-Silver Bow County shows a population of 34,606 people, making it by far the most densely populated county within the study area. For example, Butte-Silver Bow's density is 48.2 persons per square mile compared to Beaverhead County's average of 1.7 persons per square mile. The state average is 6.2 persons per square mile.

Table 7-4. Census 2000 Total Population Density, and Land Area for Study Area Counties

| County | Total Population. | Land Area in Square Miles | Density (Persons per Square Mile) | Land Area Rank |
|------------------|-------------------|---------------------------|-----------------------------------|----------------|
| Montana | 902,195 | 145,552 | 6.2 | n/a |
| Butte-Silver Bow | 34,606 | 718 | 48.2 | 56 |

Source: U.S. Census Bureau, Released March 21, 2001, compiled by: Census and Economic Information Center, Montana Dept. of Commerce.

Butte-Silver Bow, like Anaconda-Deer Lodge, is a consolidated city-county government, so that county-city populations are similar. Most of the population lives in Butte (33,892) while approximately 714 people live in Walkerville.

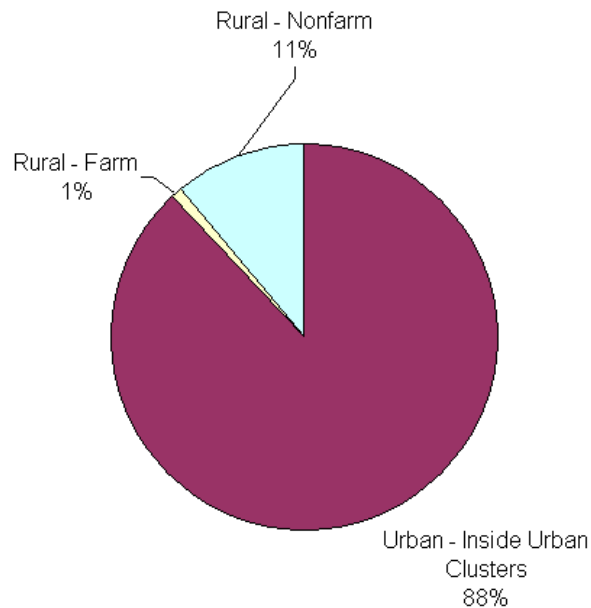
Table 7-5. Population Centers in Butte-Silver Bow County

| Place | Population | Percent of County Population | Type |
|-------------------------------------|---------------|------------------------------|---------------------------|
| Butte-Silver Bow^b | 34,606 | | |
| Butte-Silver Bow | 33,892 | 97.9 | Consolidated City-County |
| Walkerville | 714 | 2.1 | Incorporated Place (town) |

Source: U.S. Bureau of the Census, Census 2000.

The Census Bureau uses an urban-rural typology to classify land as rural-nonfarm, rural farm, urban, or urban-cluster. The densely populated “urban” classification is not found anywhere in the study area. According to the typology, 88 percent of Butte-Silver Bow is classified “urban-inside urban cluster,” 11 percent is rural-nonfarm, and 1 percent is rural farm.

Figure 7-2. Population in Urban and Rural Areas for Butte-Silver Bow County



Sources: U.S. Census Bureau, Census 2000.

7.2.2 Population Trends

Table 7-6 presents the population for Butte-Silver Bow County in comparison with other counties in the study area at 10-year intervals beginning in 1890. The population of Butte-Silver Bow was at its highest in 1920 with a population of 60,313. Population has headed downward every decade since then until 1990. Between 1990 and 2000, the population increased from 33,941 to 34,606. Figure

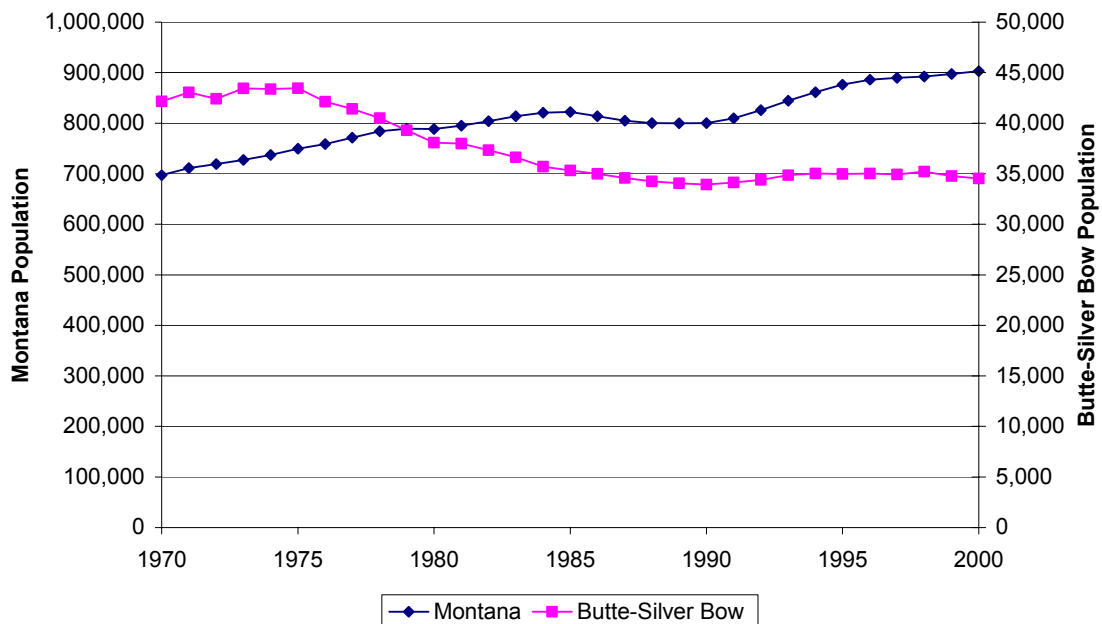
7-3 shows Butte-Silver Bow County’s population compared to the state for 1970 through 2000. Butte has a high level of vacancies in its building stock downtown because the city was built for a population double the present one. Many of the historic buildings remain “white elephants.” These empty buildings contribute to a lack of density and have an impact on street vitality. At the same time, the central area of Butte has been placed on the National Historic Register.

Table 7-6. Seven County Project Area, Population, 1890-2000.

| County | Year | | | | | | | | | | | |
|---------------------|--------|--------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|
| | 1890 | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | 2000 |
| Beaverhead | 4,655 | 5,615 | 6,446 | 7,369 | 6,654 | 6,943 | 6,671 | 7,194 | 8,187 | 8,186 | 8,424 | 9,202 |
| Butte-Silver Bow | 23,744 | 47,635 | 56,848 | 60,313 | 56,969 | 53,207 | 48,422 | 46,454 | 41,981 | 38,192 | 33,941 | 34,606 |
| Anaconda-Deer Lodge | 15,155 | 17,393 | 12,988 | 15,323 | 16,293 | 13,627 | 16,553 | 18,640 | 15,652 | 12,518 | 10,356 | 9,417 |
| Granite | - | 4,328 | 2,942 | 4,167 | 3,013 | 3,401 | 2,773 | 3,114 | 2,737 | 2,700 | 2,548 | 2,830 |
| Jefferson | 6,026 | 5,330 | 5,601 | 5,203 | 4,133 | 4,664 | 4,014 | 4,297 | 5,238 | 7,029 | 7,939 | 10,049 |
| Madison | 4,692 | 7,695 | 7,229 | 7,495 | 6,323 | 7,294 | 5,998 | 5,211 | 5,014 | 5,448 | 5,989 | 6,851 |
| Powell County | | | 5,904 | 6,909 | 6,202 | 6,152 | 6,301 | 7,002 | 6,660 | 6,958 | 6,620 | 7,180 |
| Total | 54,272 | 87,958 | 97,958 | 106,779 | 99,587 | 95,288 | 90,732 | 91,912 | 85,469 | 81,031 | 75,817 | 80,135 |

Source: <http://ceic.commerce.state.mt.us/Demog/historic/Censuscty18902000.htm>.

Figure 7-3. Total Population of Montana and Butte-Silver Bow County, 1970-2000



Source: Bureau of Economic Analysis, Regional Accounts Data, <http://www.bea.doc.gov/bea/regional/reis/> accessed on September 19, 2002.

Table 7-7 shows recent sources of population growth resulting from births, deaths, and net migration. The population of Butte-Silver Bow decreased from 34,606 in April 1, 2000 to 33,604 by July 1,

2001. This loss in population can be attributed both to out-migration and to the fact that there were more deaths in the county than births during this time.

**Table 7-7. Components of Population Change for Montana and Butte-Silver Bow County
April 1, 2000 to July 1, 2001**

| Place | Births | Deaths | Natural Increase (Births-Deaths) | Net International Migration | Net Internal Migration | Population Change | April 1 2000 Population | July 1, 2001 Population |
|------------------|--------|--------|----------------------------------|-----------------------------|------------------------|-------------------|-------------------------|-------------------------|
| Montana | 13,320 | 10,165 | 3,155 | 470 | -1,377 | 2,238 | 902,195 | 904,433 |
| Butte-Silver Bow | 478 | 560 | -82 | 19 | -951 | -1,002 | 34,606 | 33,604 |

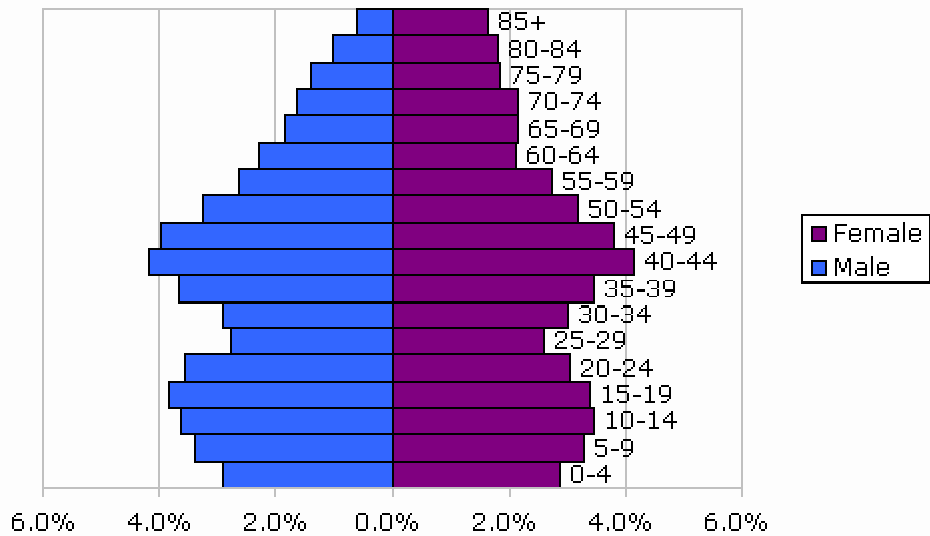
Source: Population Division, U.S. Census Bureau Released April 29, 2002.

Note: Net internal migration is the difference between in-migration and out-migration

7.2.3 Age and Gender

Figure 7-4 shows the age and gender distribution for Butte-Silver Bow County in 2000. The median age in the county was 38.5 in 2000 compared to 37.5 for the state. In 2000, approximately 24 percent of the population was under 18 and 16 percent was 65 and older (Table 7-8). In 2000, 49.4 percent of the population was male and 50.6 percent was female.

Figure 7-4. Age and Gender Distribution for Butte-Silver Bow County, 2000



Source: [Census 2000](#) analyzed by the [Social Science Data Analysis Network \(SSDAN\)](#).

Table 7-8. Changes in Age Structure of Three Cohort Groups for Butte-Silver Bow County and Montana, 1990 and 2000

| Location | Under 18 Years | 18 to 65 Years | 65 Years and Over |
|-------------------------|----------------|----------------|-------------------|
| Montana | | | |
| 1990 | 27.8 | 58.9 | 13.3 |
| 2000 | 25.5 | 61.1 | 13.4 |
| Butte-Silver Bow | | | |
| 1990 | 24.9 | 58.1 | 17.1 |
| 2000 | 23.7 | 60.3 | 16.0 |

Source: U.S. Census Bureau Census 2000, Summary File 1, Matrices PCT12 and P13 and 1990 Census of Population and Housing, Summary Tape File 1.

7.2.4 Race

Historically, the county's population has not shown much racial diversity other than in the early mining years when large numbers of Chinese lived in the area. Rapid growth occurred in Butte during the late 1800s and early 1900s with the introduction of successful ore smelting. In the late 1800s and early 1900s, thousands of immigrants from Ireland, England, Italy, Germany, Finland, China, and eastern Europe came to work in the mines or the smelters. Butte had many ethnic neighborhoods with names like Meaderville, Dublin Gulch, and Seldom Seen. These immigrants left a lasting imprint, not only on Butte, but on much of Montana.

In the 1980 census, 96 percent of the population was white; in 1990, 95.75 percent was white; and in the 2000 census 93.65 percent of the population was white. Hispanics accounted for 2.17 percent of the population in 1980 and 2.75 percent in 2000.

Table 7-9. Race Distribution for Butte-Silver Bow County, 1980, 1990, and 2000

| Race | 1980 | | 1990 | | 2000 | |
|--------------------------------|--------|---------|--------|---------|--------|---------|
| | Number | Percent | Number | Percent | Number | Percent |
| Total Population | 38,092 | 100 | 33,941 | 100 | 34,606 | 100 |
| Total Hispanics | 827 | 2.17 | 810 | 2.39 | 950 | 2.75 |
| White* | 36,569 | 96.00 | 32,500 | 95.75 | 32,410 | 93.65 |
| Black* | 40 | 0.11 | 32 | 0.09 | 45 | 0.13 |
| American Indian and AK Native* | 539 | 1.41 | 469 | 1.38 | 619 | 1.79 |
| Asian* | 117 | 0.31 | 125 | 0.37 | 147 | 0.42 |
| Hawaiian and Pacific Islander* | - | - | - | - | 20 | 0.06 |
| Other* | 0 | 0 | 5 | 0.01 | 18 | 0.05 |
| Two or More Races* | - | - | - | - | 397 | 1.15 |

Source: [Census 2000](#) analyzed by the [Social Science Data Analysis Network \(SSDAN\)](#).

* Non-Hispanic only; in 1980 and 1990 "Asians" includes Hawaiians and Pacific Islanders.

7.2.4.1 Housing and Households

Table 7-10 shows total population, number of housing units, percentage of housing units per square mile of land area, home ownership rates, number of households, the average number of people per household, and number of households with persons over 65 and under 18 years of age. Butte-Silver Bow County has 22.5 housing units per square mile. The county has a home ownership rate of about 70 percent compared to 69 percent for Montana. There are 14,432 households in the county with an average household size of 2.3 persons. The average family size is 3.0 persons. Approximately 28 percent of the households have individuals 65 years and over and 30 percent of households in the county have individuals under 18 years.

**Table 7-10. Housing Units and Households
for Butte-Silver Bow County and Montana, 2000**

| | Butte-Silver Bow | Montana |
|--|------------------|---------|
| Population | 34,606 | 902,195 |
| Housing Units | 16,176 | 412,633 |
| Occupied Housing Units | 14,432 | 358,667 |
| Housing Units per Square Mile of Land Area | 22.5 | - |
| Homeownership Rate | 70.4% | 69.1% |
| Households | 14,432 | 358,667 |
| Number of Nonfamily Households | 5,501 | 121,260 |
| Number of Households with Individuals 65 Years and Over | 3,981 | 83,982 |
| Percent of Households with Individuals 65 Years and Over | 27.6 | 23.4 |
| Households with Individuals Under 18 | 4,349 | 119,550 |
| Percent of Households with Individuals Under 18 | 30.1 | 33.3 |
| Average Persons per Household | 2.3 | 2.5 |
| Average Family Size | 3.0 | 3.0 |

Source: U.S. Census Bureau, Census 2000.

Table 7-11 shows the changes in household types for Butte-Silver Bow County and Montana between 1990 and 2000. The percent of married couples and the percent of married couples with children dropped between 1990 and 2000. The percent of both female-headed and male-headed households increased slightly.

Table 7-11. Household Types for Butte-Silver Bow, 1990 and 2000

| Household Types | 1990 | | 2000 | |
|--------------------------|---------------|------------|---------------|------------|
| | Number | Percent | Number | Percent |
| Total Households | 13,899 | 100 | 14,432 | 100 |
| Married Couple | 7,284 | 52.4 | 6,893 | 47.8 |
| With Children* | 3,258 | 23.4 | 2,849 | 19.7 |
| Without Children* | 4,026 | 29.0 | 4,044 | 28.0 |
| Female-Headed | 1,316 | 9.5 | 1,514 | 10.5 |
| With Children* | 771 | 5.5 | 899 | 6.2 |
| Without Children* | 545 | 3.9 | 615 | 4.3 |
| Male-Headed | 425 | 3.1 | 524 | 3.6 |
| With Children* | 185 | 1.3 | 289 | 2.0 |
| Without Children* | 240 | 1.7 | 235 | 1.6 |
| Non-Family | 4,874 | 35.1 | 5,501 | 38.1 |
| Householder Living Alone | 4,431 | 31.9 | 4,734 | 32.8 |
| Two or More Persons | 443 | 3.2 | 767 | 5.3 |

Source: Census 2000 analyzed by the Social Science Data Analysis Network (SSDAN).

* For the purposes of this table, "children" are people under age 18.

7.2.5 Education

Table 7-12 compares the educational attainment of individuals 25 years and over for Montana with each of the seven counties in the study area. Approximately 85 percent of the persons 25 years and over in Butte-Silver Bow County have a high school diploma or higher and about 22 percent have a bachelor's degree or higher.

Table 7-12. Educational Attainment of Persons 25 Years of Age and Over, 2000

| | Anaconda Deer Lodge | Beaver- head | Butte- Silver Bow | Granite | Jefferson | Madison | Powell | MT |
|---------------------------------|---------------------------|-----------------|-------------------------|---------|-----------|---------|--------|---------|
| Total Persons 25 Years and Over | 6,584 | 5,825 | 23,097 | 1,988 | 6,717 | 4,945 | 5,098 | 586,621 |
| Educational Attainment (%) | | | | | | | | |
| Less than Ninth Grade | 6.0 | 3.8 | 4.6 | 4.2 | 3.5 | 3.0 | 5.6 | 4.3 |
| Some High School, No Diploma | 9.5 | 7.0 | 10.3 | 8.0 | 6.3 | 7.3 | 12.5 | 8.6 |
| High School Diploma | 43.0 | 29.1 | 34.3 | 34.9 | 31.2 | 32.6 | 38.9 | 31.3 |
| Some College, No Degree | 22.1 | 28.3 | 24.6 | 26.5 | 25.1 | 25.8 | 25.3 | 25.6 |
| College, Associate Degree | 4.8 | 5.5 | 4.5 | 4.4 | 6.2 | 5.8 | 4.7 | 5.9 |
| College, Bachelor's Degree | 10.6 | 18.7 | 14.8 | 18.3 | 18.7 | 19.7 | 8.5 | 17.2 |
| College, Graduate Degree | 4.1 | 7.7 | 6.9 | 3.8 | 8.9 | 5.9 | 4.6 | 7.2 |

Source: U.S. Census Bureau Census 2000.

7.2.6 Economic Condition and Trends

This section reviews economic data regarding economic sectors and diversity, employment, and income as a means to assess the community's capacity for change or community resiliency.

7.2.6.1 Economic Sectors and Diversity

This section provides information on the diversity of the economy of Butte-Silver Bow County from two perspectives both based on 1999 IMPLAN⁵¹ Model Year Data for the county. A more detailed description of input-output models and IMPLAN is located in Chapter 4 of this report. One perspective looks at the contributions to the local economy made by industrial sectors dependent on natural resources. The other perspective presents value-added estimates for contributions by different industrial sectors to the county economy.

Table 7-13 is an updated version of the model that appears in the USFS Region 1 Economic Library. The same industry sectors are used in the update as found in the USFS 1996 model. According to the 1999 IMPLAN model, "Wildland" related sectors accounted for almost 10 percent of industry output and 5 percent of employment—most of this from the mining sectors. The mine that generated most of this industry output and employment has closed. Only a very small percent of total industry and employed is derived from timber or grazing industries.

⁵¹ IMPLAN Pro™ is Social Accounting and Impact Analysis software; produced by MIG, Incorporated

**Table 7-13. Direct Effects of "Wildland" Related Sectors
Butte-Silver Bow County, 1999**

| Industry Description | | Industry Output (Millions of \$) | Industry Output as % of County Total | Employment | Industry Employment as % of County Total | Labor Income (Millions of \$) | Average Laborer Income (\$/Job) |
|---------------------------|---|----------------------------------|--------------------------------------|--------------|--|-------------------------------|---------------------------------|
| Timber Industries | | | | | | | |
| 24 | Forestry Products | 1.0 | 0.1 | 13 | 0.1 | 0.1 | 10,392 |
| 26 | Agricultural, Forestry, Fishery Services | 0.5 | 0.0 | 23 | 0.1 | 0.3 | 11,514 |
| 133 | Logging Camps and Logging Contractors | 0.2 | 0.0 | 2 | 0.0 | 0.0 | 16,985 |
| 134 | Sawmills and Planing Mills, General | 0.2 | 0.0 | 1 | 0.0 | 0.0 | 30,298 |
| Total | | 1.9 | 0.1 | 39 | 0.2 | 0.5 | 12,051 |
| Grazing Industries | | | | | | | |
| 4 | Range Fed Cattle | 1.0 | 0.1 | 23 | 0.1 | 0.4 | 18,583 |
| 6 | Sheep, Lambs and Goats | 0.0 | 0.0 | 5 | 0.0 | 0.0 | 4,911 |
| 26 | Agricultural, Forestry, Fishery Services | 0.5 | 0.0 | 23 | 0.1 | 0.3 | 11,514 |
| Total | | 1.6 | 0.1 | 51 | 0.3 | 0.7 | 14,275 |
| Mineral Industries | | | | | | | |
| 29 | Copper Ores | 55.3 | 4.1 | 541 | 2.8 | 20.7 | 38,207 |
| 30 | Lead and Zinc Ores | 0.9 | 0.1 | 5 | 0.0 | 0.1 | 15,400 |
| 31 | Gold Ores | 0.9 | 0.1 | 4 | 0.0 | 0.1 | 27,151 |
| 34 | Metal Mining Services | 41.0 | 3.0 | 1,715 | 0.0 | 3.8 | 41,683 |
| 38 | Natural Gas and Crude Petroleum | 28.7 | 2.1 | 236 | 1.2 | 7.1 | 29,941 |
| 41 | Sand and Gravel | 0.9 | 0.1 | 10 | 0.1 | 0.4 | 37,270 |
| 46 | Nonmetallic Minerals (Except Fuels) Service | 0.7 | 0.0 | 7 | 0.0 | 0.1 | 21,616 |
| 47 | Misc. Nonmetallic Minerals, N.E.C. | 1.4 | 0.1 | 13 | 0.1 | 0.5 | 36,801 |
| Total | | 129.7 | 9.5 | 817.7 | 4.2 | 32.8 | 40,080 |

Source: Economic Diversity—MIG Group, Inc., IMPLAN Model Output, Based on 1999 IMPLAN Model.

Note: NAIC code categories reporting no output were not included in the table.

Table 7-14 shows the value-added by basic industries as a percent of the total value-added for Butte-Silver Bow County, the project area counties as group, and Montana. Value-added refers to the total value of payments to the different factors of production, and is equivalent to the gross regional product. Value-added can be an important indicator of industry economic activity. It is derived by subtracting the costs of materials, supplies, containers, fuel, purchased electricity, and contract work from the value of shipments for the product manufactured. Value-added represents the amount available in the county for wages, salaries, and profits in an industry.

In Butte-Silver Bow County, the largest value-added sectors are services and TCPU (transportation, communications, and public utilities), which each account for 22 percent of the total value-added in the county. The services sector is similar in size to the services sector value-added for the state, but the TCPU sector is over twice as large as this sector for the state as a whole. Mining accounts for seven percent of the value-added and agriculture accounts for only one percent. In contrast to most of the other counties in the study area, government accounts for only nine percent of the value-added in Butte-Silver Bow County.

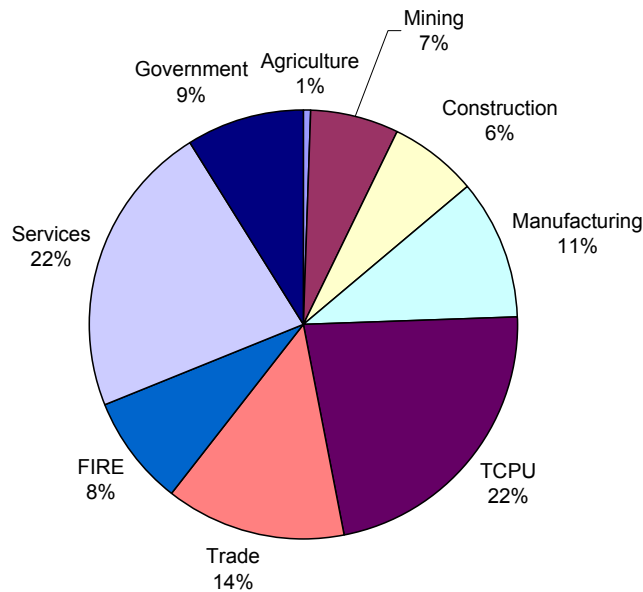
Table 7-14. Value-Added by Basic Industries as Percent of Total Value-Added for Butte-Silver Bow County, All Project Counties, and Montana, 1999

| Categories | Butte-Silver Bow | All Project Counties | Montana |
|---------------|------------------|----------------------|---------|
| Agriculture | 1 | 4 | 5 |
| Mining | 7 | 7 | 2 |
| Manufacturing | 11 | 6 | 7 |
| Government | 9 | 17 | 17 |
| Services | 22 | 18 | 21 |
| FIRE | 8 | 11 | 14 |
| Trade | 14 | 14 | 18 |
| TCPU | 22 | 18 | 10 |
| Construction | 6 | 5 | 6 |

Source: MIG Group, Inc., IMPLAN Model Output, based on 1999 IMPLAN Model.

Note: TCPU=transportation, communications, and public utilities, FIRE= finance, insurance, and real estate.

Figure 7-5. Value-Added by Basic Industries as Percentage of Total Value-Added for Butte-Silver Bow County, 1999



Source: MIG Group, Inc., IMPLAN Model Output. Based on 1999 IMPLAN Model.

7.2.7 Employment

Information in this section focuses on number and percent of individuals in the labor force, unemployment rates, employment by occupation and industry, the number of businesses, employees, and payroll by industry sector, and information on self-employed individuals and receipts. The information in this section has been gathered from the U.S. Census Bureau, the U.S. Bureau of Economic Analysis, the Montana Department of Labor Industry, and the Bureau of Economic Analysis Regional Economic Information System.

7.2.7.1 Labor Force

Table 7-15 shows number of individuals 16 years and older, number of individuals in this age category that participated in the civilian labor force, and number of employed and unemployed individuals. “Civilian labor force” is defined as the number of persons 16 years and older, employed or unemployed, excluding members of the armed forces. “Employed” includes those persons who work for pay or profit during a week or, as unpaid family workers, work 15 hours or more during a week. “Unemployed” are persons who, for an entire week, did not work at all but were able and available to work.

Table 7-15. Population 16 Years and Older in the Labor Force, Employed, and Unemployed, Census 2000

| Area | Population 16 Years and Older | Population in Labor force | % in Labor Force | Population Not in Labor Force | % Not in Labor Force | No. Employed | % Employed | No. Unemployed | % Unemployed |
|------------------|-------------------------------------|---------------------------------|------------------------|-------------------------------------|----------------------------|-----------------|---------------|-------------------|-----------------|
| Montana | 701,168 | 458,306 | 65.4 | 242,862 | 34.6 | 425,977 | 60.8 | 28,710 | 4.1 |
| Study Area | 63,566 | 38,516 | 60.6 | 25,050 | 39.4 | 35,974 | 56.6 | 3,238 | 5.1 |
| Butte-Silver Bow | 27,369 | 16,959 | 62.0 | 10,410 | 38.0 | 15,768 | 57.6 | 1,159 | 4.2 |

Source: U.S. Bureau of the Census, Census 2000, DP-3.

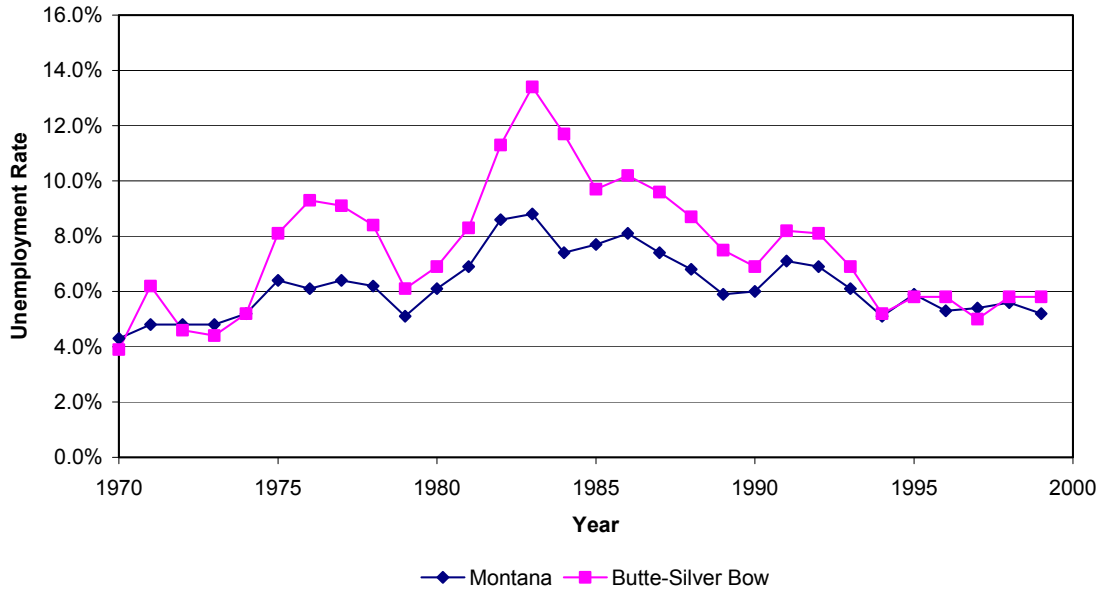
7.2.7.2 Unemployment

Table 7-15 above shows the unemployment rate (5.1) for Butte-Silver Bow County according to Census 2000. Figure 7-6 compares unemployment for Butte-Silver Bow County and Montana for 1970 through 1999. Unemployment rates are calculated by dividing the number of people looking for work by the total number of available workers in the labor force. Unemployment rates in the double digits usually indicate a depressed or stagnant economy while rates under four percent are considered full employment.⁵² However, there are limitations to unemployment figures and rates, because no differentiation is made between full-time and part-time jobs. In addition, the unemployment rate does not account for the individuals who are underemployed or for the discouraged worker who has given up hope of finding a job. As an update, the revised, not seasonally adjusted, unemployment rate for Butte-Silver Bow County for August 2002 was 4.7 percent.⁵³

⁵² 4th Quarter 2001 - *Montana Employment and Labor Force Trends*.

⁵³ <http://rad.dli.state.mt.us/press/ptab0802.asp>

Figure 7-6. Unemployment Rate for Montana and Butte-Silver Bow County, 1970-1999



Source: Montana Department of Labor Industry, Research Analysis Bureau, Local Area Unemployment Statistics.

7.2.7.3 Class of Workers

Table 7-16 shows the percentage of four different classes of workers: private wage and salary workers, government workers, self-employed workers in their own business who are not incorporated, and unpaid family workers. Approximately 76 percent of Butte-Silver Bow workers were private wage and salary workers compared to about 69 percent of state workers. Butte-Silver Bow County had lower percentages of both government workers and self-employed workers than the state.

Table 7-16. Percent of Class of Worker, 2000

| Class of Worker | Montana | Butte-Silver Bow |
|--|---------|------------------|
| Private Wage and Salary Workers | 69.2 | 76.4 |
| Government Workers | 18.3 | 16.4 |
| Self-employed Workers in Own Not Incorporated Business | 11.8 | 6.6 |
| Unpaid Family Workers | 0.7 | 0.6 |

Source: U.S. Census Bureau, Census 2000.

7.2.7.4 Employment by Occupation and Industry

Table 7-17 shows the percent of employment in Butte-Silver Bow County and Montana by occupation and by industry according to Census 2000.

The percent of employment by occupation for Butte-Silver Bow County was very similar to the employment percentages of the state. Approximately 32 percent of county workers reported working

in management, professional, and related occupations, 19 percent in service occupations, 27 percent in sales and office occupations, less than 1 percent in farming, fishing, and forestry occupations, 9 percent in construction, extractions, and maintenance occupations, and 11 percent in production, transportation, and material moving occupations.

However, in terms of employment by industry, the percentages are also similar between the county and the state. The percent of employment in agriculture, forestry, fishing and hunting, and mining in the county was only around four percent in Butte-Silver Bow, in contrast to the state's eight percent.

Table 7-17. Percent of Employment by Occupation and Industry, Census 2000

| | Montana | Butte-Silver Bow |
|---|----------------|-------------------------|
| Occupation | | |
| Management, Professional, and Related Occupations | 33.1 | 32.4 |
| Service Occupations | 17.2 | 19.4 |
| Sales and Office Occupations | 25.5 | 27.0 |
| Farming, Fishing, and Forestry Occupations | 2.2 | 0.7 |
| Construction, Extractions, and Maintenance Occupations | 10.7 | 9.4 |
| Production, Transportation, and Material Moving Occupations | 11.2 | 11.1 |
| Industry | | |
| Agriculture, Forestry, Fishing and Hunting, and Mining | 7.9 | 4.1 |
| Construction, Extractions, and Maintenance Occupations | 7.4 | 5.4 |
| Manufacturing | 6.0 | 4.0 |
| Wholesale Trade | 3.0 | 2.4 |
| Retail Trade | 12.8 | 15.4 |
| Transportation and Warehousing, and Utilities | 5.4 | 9.3 |
| Information | 2.2 | 2.9 |
| Finance, Insurance, Real Estate, and Rental and Leasing | 5.5 | 3.9 |
| Professional, Scientific, Management, Administrative, and Waste Management Services | 6.5 | 7.1 |
| Educational, Health and Social Services | 21.7 | 23.8 |
| Arts, Entertainment, Recreation, Accommodation and Food Services | 10.4 | 11.5 |
| Other Services (except Public Administration) | 5.3 | 5.0 |
| Public Administration | 5.9 | 5.1 |

Source: U.S. Census Bureau, Census 2000, DP-3.

Table 7-18 shows number of employees, payroll, and total number of establishments in the county in 1999. There were 1,151 establishments with 12,470 employees and an annual payroll of \$298.1 million.

Table 7-18. Butte-Silver Bow County, Number of Employees, Payroll, and Total Number of Establishments by Industry Sector, 1999

| NAICS Code | Description | Number of Employees for week including March 12 | Payroll (\$1,000) | | Total Establishments |
|--------------|--|---|-------------------|----------------|----------------------|
| | | | 1st Quarter | Annual | |
| Total | | 12,470 | 68,767 | 298,146 | 1,151 |
| 11 | Forestry, fishing, hunting, and agriculture support | 0-19 | 0 | 0 | 1 |
| 21 | Mining | 415 | 3,343 | 14,905 | 12 |
| 22 | Utilities | 1,000-2,499 | 0 | 0 | 10 |
| 23 | Construction | 437 | 2,693 | 13,847 | 107 |
| 31 | Manufacturing | 497 | 3,520 | 15,759 | 34 |
| 42 | Wholesale trade | 459 | 2,480 | 11,043 | 52 |
| 44 | Retail trade | 2,176 | 8,561 | 37,429 | 197 |
| 48 | Transportation warehousing | 201 | 1,219 | 5,296 | 26 |
| 51 | Information | 318 | 1,839 | 8,902 | 18 |
| 52 | Finance insurance | 287 | 2,472 | 9,883 | 58 |
| 53 | Real estate rental leasing | 100-249 | 0 | 0 | 43 |
| 54 | Professional, scientific technical services | 1,012 | 6,810 | 31,465 | 96 |
| 55 | Management of companies enterprises | 252 | 900 | 4,252 | 5 |
| 56 | Admin, support, waste mgt, remediation services | 564 | 1,523 | 6,602 | 49 |
| 61 | Educational services | 100-249 | 0 | 0 | 5 |
| 62 | Health care and social assistance | 2,239 | 11,516 | 51,725 | 150 |
| 71 | Arts, entertainment recreation | 316 | 769 | 3,495 | 35 |
| 72 | Accommodation food services | 1,510 | 3,241 | 14,355 | 119 |
| 81 | Other services (except public administration) | 449 | 1,704 | 7,373 | 115 |
| 95 | Auxiliaries (exc corporate, subsidiary regional mgt) | 20-99 | 0 | 0 | 3 |
| 99 | Unclassified establishments | 0-19 | 0 | 0 | 16 |

Source: U.S. Census Bureau, County Business Patterns, 1999 County Business Patterns, CenStats, Major Industry Group.

Table 7-19 shows number of establishments by employee size class for selected industry sectors in 1999. Butte-Silver Bow County had one establishment in the health and social assistance industry with 500 to 999 employees. The county had three establishments with 250 to 499 employees, and 16 with 100 to 249 employees. However, over half (638) of the establishments in the county had 1 to 4 employees.

Table 7-19. Butte-Silver Bow County, Number of Establishments by Employee Size Class for Selected Industry Sectors, 1999

| NAICS Code | Description | Total Establishments | Number of Establishments by Employment-size class | | | | | | | | |
|------------|--|----------------------|---|-----|-------|-------|-------|---------|---------|---------|--------------|
| | | | 1-4 | 5-9 | 10-19 | 20-49 | 50-99 | 100-249 | 250-499 | 500-999 | 1000 or more |
| | Total | 1,151 | 638 | 242 | 132 | 98 | 21 | 16 | 3 | 1 | 0 |
| 11 | Forestry, fishing, hunting, and agriculture support | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | Mining | 12 | 9 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 |
| 22 | Utilities | 10 | 1 | 0 | 0 | 3 | 1 | 4 | 1 | 0 | 0 |
| 23 | Construction | 107 | 74 | 19 | 10 | 4 | 0 | 0 | 0 | 0 | 0 |
| 31 | Manufacturing | 34 | 15 | 8 | 3 | 7 | 0 | 1 | 0 | 0 | 0 |
| 42 | Wholesale trade | 52 | 24 | 13 | 8 | 6 | 1 | 0 | 0 | 0 | 0 |
| 44 | Retail trade | 197 | 89 | 55 | 29 | 15 | 7 | 2 | 0 | 0 | 0 |
| 48 | Transportation warehousing | 26 | 11 | 6 | 6 | 3 | 0 | 0 | 0 | 0 | 0 |
| 51 | Information | 18 | 9 | 1 | 1 | 6 | 0 | 1 | 0 | 0 | 0 |
| 52 | Finance insurance | 58 | 38 | 8 | 9 | 3 | 0 | 0 | 0 | 0 | 0 |
| 53 | Real estate rental leasing | 43 | 34 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 54 | Professional, scientific technical services | 96 | 61 | 22 | 2 | 9 | 0 | 1 | 1 | 0 | 0 |
| 55 | Management of companies enterprises | 5 | 3 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| 56 | Admin, support, waste mgt, remediation services | 49 | 29 | 8 | 6 | 3 | 2 | 1 | 0 | 0 | 0 |
| 61 | Educational services | 5 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 62 | Health care and social assistance | 150 | 82 | 32 | 18 | 8 | 4 | 5 | 0 | 1 | 0 |
| 71 | Arts, entertainment recreation | 35 | 15 | 10 | 6 | 3 | 1 | 0 | 0 | 0 | 0 |
| 72 | Accommodation food services | 119 | 48 | 21 | 22 | 24 | 4 | 0 | 0 | 0 | 0 |
| 81 | Other services (except public administration) | 115 | 77 | 29 | 9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 95 | Auxiliaries (exc corporate, subsidiary regional mgt) | 3 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 99 | Unclassified establishments | 16 | 15 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Source: U.S. Census Bureau, County Business Patterns, 1999 County Business Patterns, CenStats, Major Industry Group.

Table 7-20 shows nonemployment statistics for Butte-Silver Bow County. Nonemployment Statistics summarize the number of establishments and sales or receipts of companies with no paid employees. These nonemployers are typically self-employed individuals or partnerships operating businesses that have chosen not to incorporate. (Self-employed owners of incorporated businesses typically pay themselves wages or salary, so that the business is an employer.) In 1999, there were 1,986 such establishments in Butte-Silver Bow County, with total receipts in excess of \$85.7 million. While the number of establishments only increased by about five percent between 1997 and 1999, receipts increased approximately 35 percent from \$63.4 million to \$85.7 million in 1999. In terms of sales or receipts, nonemployers usually account for roughly three percent of business activity. At the same time, nonemployers usually account for nearly three fourths of all businesses. Most nonemployer businesses are very small, and many are not the primary source of income for their owners.

Table 7-20. Nonemployment Statistics for Butte-Silver Bow County, 1999 and 1997

| NAICS Code | Description | No. of Establishments | | Receipts (\$1,000) | |
|------------|--|-----------------------|-------|--------------------|--------|
| | | 1999 | 1997 | 1999 | 1997 |
| 0 | All Industries | 1,986 | 1,887 | 85,708 | 63,466 |
| 11 | Forestry, fishing hunting, ag support services | 24 | 26 | 238 | 195 |
| 21 | Mining | D | D | D | D |
| 22 | Utilities | D | D | D | D |
| 23 | Construction | 239 | 218 | 9,197 | 8,051 |
| 31-33 | Manufacturing | 27 | 32 | 705 | 788 |
| 42 | Wholesale trade | 34 | 34 | 2,343 | 1,917 |
| 44-45 | Retail trade | 222 | 244 | 11,282 | 11,771 |
| 48-49 | Transportation warehousing | 50 | 33 | 2,211 | 1,865 |
| 51 | Information | 14 | D | 186 | D |
| 52 | Finance and insurance | 89 | 84 | 11,422 | 3,716 |
| 53 | Real estate, rental, and leasing | 210 | 167 | 14,094 | 10,068 |
| 54 | Professional, scientific, and technical services | 255 | 282 | 6,526 | 5,515 |
| 56 | Administrative and support and waste management and remediation services | 107 | 97 | 1,301 | 997 |
| 61 | Educational services | 34 | 30 | 264 | 241 |
| 62 | Health care and social assistance | 200 | 194 | 5,488 | 4,987 |
| 71 | Arts, entertainment, and recreation | 84 | 85 | 1,256 | 1,333 |
| 72 | Accommodation and food services | 69 | 60 | 12,769 | 4,866 |
| 81 | Other services (except public administration) | 319 | 283 | 2,172 | 6,871 |

Source: Nonemployer Statistics, available at www.census.gov/epdc/nonemployer/1999/mt/MT001.HTM.

D = Withheld to avoid disclosure.

7.2.7.5 Top Employers

Table 7-21 presents the top **private** employers in Butte-Silver Bow County. It is of note that the list does not include city, county, and federal government agencies. Public school districts and universities are also excluded. However, according to the *Area Plan/Comprehensive Economic Development Strategy 2002* by Headwaters Resource Conservation and Development Area, Inc.

(RC&D), the third largest employer in the county is Butte School District with approximately 640 employees. Various agencies of the federal government employ approximately 830 people. Montana Tech accounts for approximately 650 jobs. The county has 470 employees.

Table 7-21. Top Twenty Private Employers in Butte-Silver Bow County (in alphabetical order)

| |
|--|
| Advanced Silicon Materials |
| Butte Convalescent Center |
| Children's Comprehensive Services |
| Community Counseling Correctional Services |
| Crest Nursing Home |
| Evergreen Butte Health Rehabilitation |
| Herberger's |
| Human Resources Council District XII |
| Interim Personnel |
| Kmart |
| M S E Inc. |
| Montana Power Company |
| Montana Resources |
| Montana Standard |
| Rocky Mountain Clinic |
| Safeway |
| St. James Community Hospital |
| Smith's Food Drug |
| Thurman Electric Plumbing Supply |
| Wal-Mart |

Source: Montana Department of Commerce, Census and Economic Information Center. Available at <http://ceic.commerce.state.mt.us/>.

7.2.7.6 Commuting

Approximately 81 percent of Butte-Silver Bow commuters drive alone in a car, truck, or van. While the county has the highest percentage of individuals who commute alone to work of any of the project counties, these commuters have the shortest mean travel time of any of the project counties, 14.3 minutes.

Table 7-22. Commuting to Work, 2000 Census

| | Montana | Anaconda- Deer Lodge | Beaver- head | Butte- Silver Bow | Granite | Jefferson | Madison | Powell |
|---|---------|----------------------------|-----------------|-------------------------|---------|-----------|---------|--------|
| Workers 16 year and over (No.) | 422,159 | 3,744 | 4,403 | 15,601 | 1,261 | 4,842 | 3,109 | 2,553 |
| Car, truck, or van-drove alone (%) | 73.9 | 81.2 | 69.5 | 81.2 | 65 | 75.2 | 62.7 | 66.9 |
| Car, truck, or Van – carpooled (%) | 11.1 | 10.5 | 10 | 10.5 | 11.4 | 14 | 15.1 | 13.1 |
| Public transportation (including taxicab) (%) | 0.7 | 0.6 | 0.5 | 36.0 | 0.4 | 0.2 | 0.1 | 0.1 |
| Walked (%) | 5.5 | 4.2 | 11.4 | 4.2 | 10.4 | 3.7 | 9 | 9.3 |
| Other means (%) | 1.7 | 0.8 | 1.3 | 0.8 | 2 | 0.9 | 1.1 | 0.6 |
| Worked at home (%) | 6.4 | 2.7 | 7.2 | 2.7 | 10.5 | 6.1 | 11.9 | 9.9 |
| Mean travel time to work (minutes) | 17.7 | 21.1 | 14.4 | 14.3 | 26.4 | 22.4 | 22.4 | 22.3 |

Source: U.S. Bureau of the Census, Census 2000, DP-3.

7.2.8 Income

Per capita personal income and household income are shown in the following tables and charts for Butte-Silver Bow County and Montana.

7.2.8.1 Per Capita Personal Income

As defined by the Bureau of Business Economic Research, School of Business Administration, University of Montana:⁵⁴

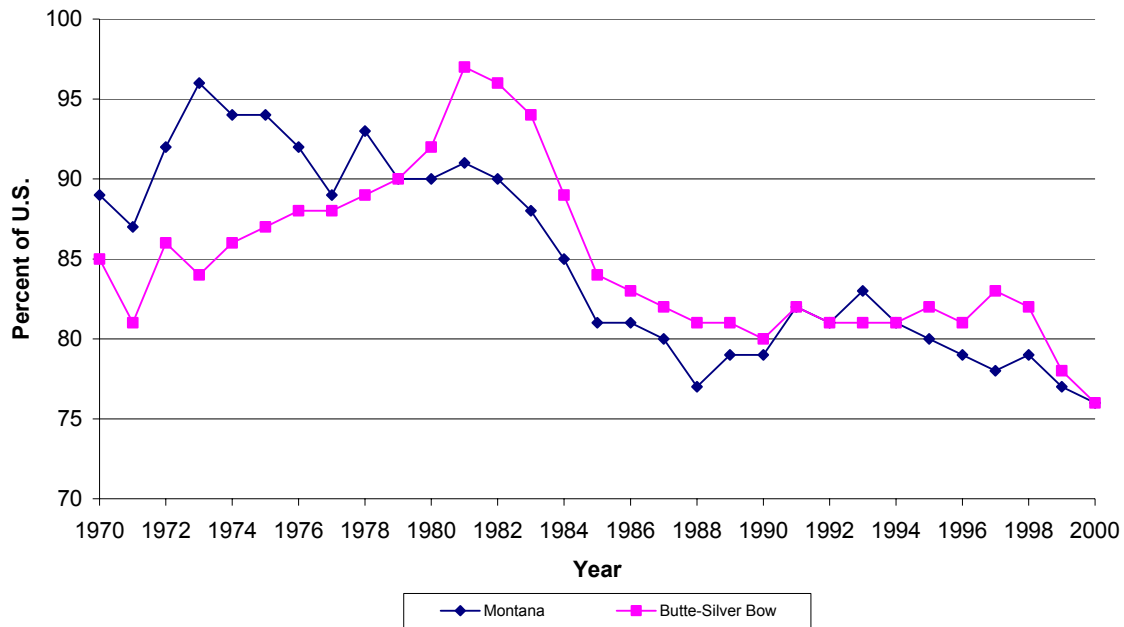
Personal income is the income received by people from all sources—private sector and government wages, and salary disbursements, other labor income, farm and nonfarm self employment income, rental income of people, personal dividend income, personal interest income, and transfer payments. Personal income does not have taxes subtracted from it.

Per capita personal income is the annual total personal income of residents divided by their resident population. Per capita personal income is a measure of economic well-being. The amount of goods and services that people can afford is directly related to their personal income.

Figure 7-7 compares the per capita income of Montana and Butte-Silver Bow County as percentages of the U.S. per capita income. Table 7-23 shows per capita personal income, total personal income along with in-state rankings, and a breakdown of the sources of personal income for the State of Montana and Butte-Silver Bow County. Montana has not been able to keep pace with the nation. For 2000, Montana’s per capita personal income was \$22,518, which places it 47th out of the 50 states. Montana has 56 counties and Butte-Silver Bow ranks 12th. Butte-Silver Bow has the second highest per capita income among the project counties (\$22,456). Only Jefferson County has a higher per capita income.

⁵⁴ <http://www.bber.mt.edu/economicanalysis/personalincome.htm> accessed April 22, 2002.

Figure 7-7. Percent of Per Capita Personal Income as Percent of U.S. for Montana and Butte-Silver Bow County, 1970-2000



Source: Bureau of Economic Analysis Regional Accounts at <http://www.bea.doc.gov/bea/regional/reis/>.

Personal income has three components: earnings; dividends, interest and rent; and transfer payments. Earnings as a component of total personal income for the State of Montana accounted for about 62 percent of total personal income, while in Butte-Silver Bow earnings accounted for approximately 60 percent of total income.

Table 7-23. Per Capita Personal Income, Total Personal Income, and Components for Montana and Butte-Silver Bow County, 1999 and 2000

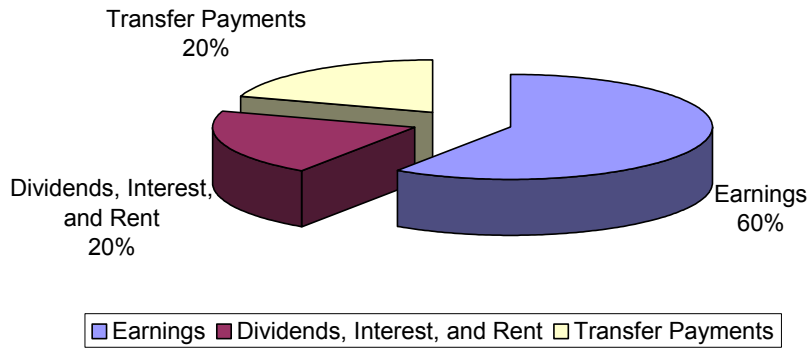
| County | Per Capita Personal Income | | Total Personal Income | | Components of Total Personal Income | | |
|-------------------------|----------------------------|---------|-----------------------|---------|-------------------------------------|-----------------------------------|-----------------------|
| | (\$) | Rank | (\$1,000s) | Rank | Earnings (%) | Dividends, Interest, and Rent (%) | Transfer Payments (%) |
| Montana | | | | | | | |
| 2000 | 22,518 | 47 (US) | 20,336,883 | 46 (US) | 61.2 | 22.7 | 16.1 |
| Butte-Silver Bow | | | | | | | |
| 2000 | 22,456 | 12 | 775,306 | 7 | 59.5 | 20.4 | 20.2 |

Source: Regional Economic Information System, Bureau of Economic Analysis, Bearfacts.
 Note: Montana contains 56 counties.

Figure 7-8 presents a pie chart of the components of total personal income for the county. The economy of the county appears to depend on transfer payments for a significant portion of personal income, accounting for approximately 20 percent of total personal income. Transfer payments are income payments by government and businesses to individuals and nonprofit institutions for which no

current services are performed. Transfer payments include retirement and disability insurance benefit payments, medical benefit such as Medicare and Medicaid, income maintenance benefits, unemployment insurance benefit payments, veterans benefit payments, and federal education and training benefits.

Figure 7-8. Components of Total Personal Income for Butte-Silver Bow County, 2000

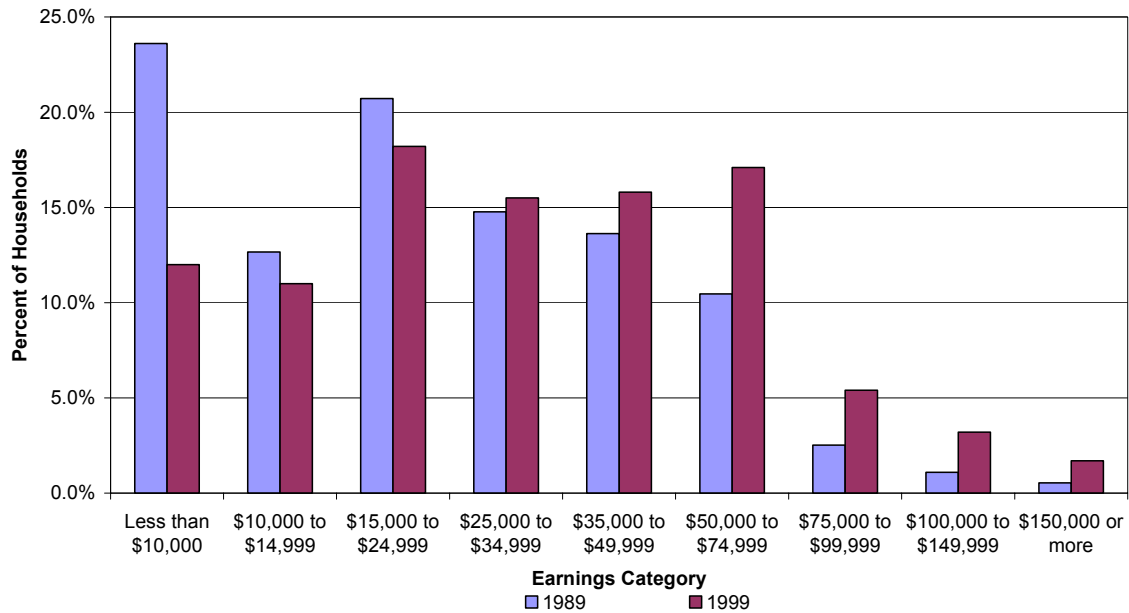


Source: Regional Economic Information System, Bureau of Economic Analysis, Bearfacts

7.2.8.2 Household Income

Figure 7-9 compares household income for 1989 and 1999 in Butte-Silver Bow County. It is important to take into account inflation and growth in the cost of living. Some of the shift from lower to higher income categories is due to a change in the cost of living, and adjustments to pay rates for the cost of living. Inflation also has an effect on household income. Income in 1999 is valued less than income in 1989, due to inflation. As seen in the figure, the largest income category was less than \$10,000 in 1989. By 1999, the largest income group had shifted to the \$15,000 to \$24,999 category.

Figure 7-9. Household Income for Butte-Silver Bow County, 1989 and 1999

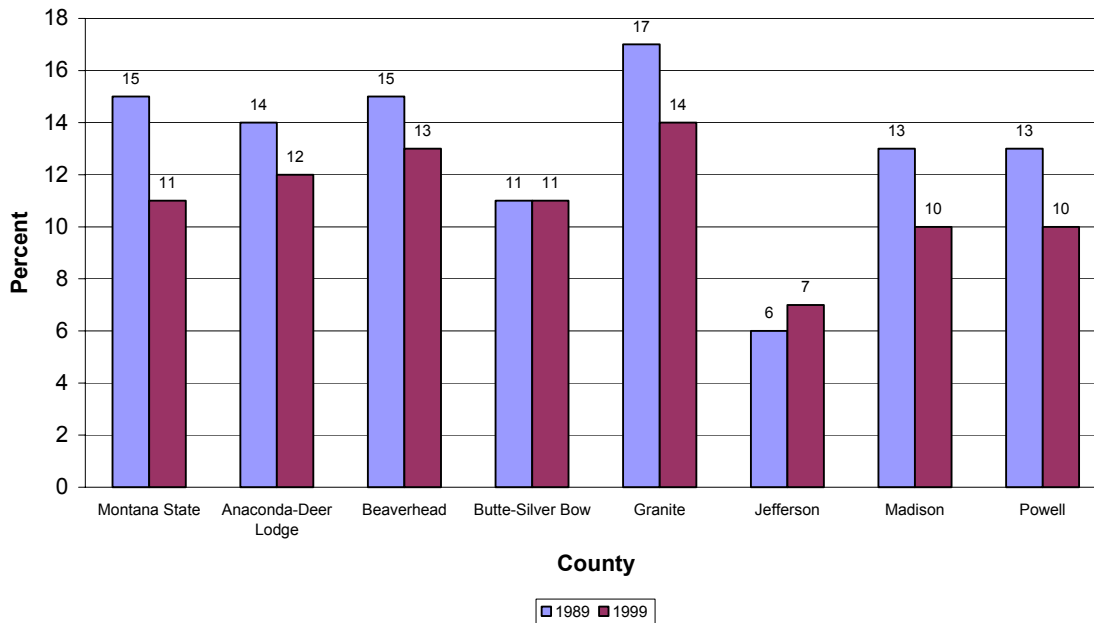


Source: U.S. Census Bureau, Census 2000 and 1990 Census.

7.2.9 Poverty Status

The Census Bureau uses a set of money income thresholds that vary by family size and composition to determine who is poor. If a family's total income is less than that family's threshold, then that family, and every individual in it, is considered poor. The poverty thresholds do not vary geographically, but they are updated annually for inflation using the Consumer Price Index (CPI-U). The poverty rate for families in Butte-Silver Bow County was approximately 11 percent in 1989 and again in 1999 (Figure 7-10).

Figure 7-10. Percent Poverty Status of Families, 1989 and 1999



Source: U.S. Census Bureau, Census 2000 and 1990 Census.

7.3 Community Resources

7.3.1 Infrastructure and Services

Community infrastructure and services are summarized in this section. County infrastructure influences economic development as well as social well-being and community quality of life.

Butte is served by both I-15 and I-90, which provide a north-south and an east-west transportation network. Bert Mooney Airport is a public airport with lighted and hard-surfaced runways, the longest of which is 9,000 feet. The airport serves as the regional jet center with services by Horizon Air and Delta Connection/Skywest. Two major railroads serve Butte-Silver Bow: the Burlington Northern/Santa Fe and the Union Pacific railroad. The Port of Montana, an intermodal transportation center, opened in 1988. The center is located six miles west of the city of Butte where I-90 and I-15 intersect and where two intercontinental rail carriers pass through. The Port's storage facilities were expanded in 1994.

Community services indicate the types of resources residents have available to meet basic and other human needs that contribute to personal well-being and community quality of life. Butte-Silver Bow has eight communities, including Butte, which contains a majority of the county's population.

Butte-Silver Bow has operated as a consolidated city/county government since 1977. The Chief Executive Officer is an elected official who serves as the CEO of the city and county. The 12-member Council of Commissioners is the legislative body of the City and are elected from single member districts. The commissioners in turn elect one of their members to serve as Chair of the Council. City and county officials also include an elected City Judge who presides over all misdemeanors and ordinances in the county. The elected County Attorney oversees prosecution of criminal cases within the city and county, serves as legal advisor to local and state governments, and the school districts,

represents the city and county on all civil and criminal appeals to the Montana State Court and the Federal Courts, investigates consumer protection problems, and issues legal opinions upon authoritative request.

- **Public Health.** The Butte-Silver Bow Health Department's responsibilities include prevention of epidemics; protection of the environment, workplace, and food and water; monitoring of the health status of the community; mobilization of the community to respond to severe health risks; and responding to disasters.
- **Public Safety.** Butte-Silver Bow is divided into nine fire services districts and has 34 full time, paid staff and approximately 250 volunteers. The State Highway Patrol has an office in Butte. When the city and county were consolidated, the Butte Police Department and the County Sheriffs Office were merged into a single law enforcement agency. The office of Sheriff is an elected position. The Butte-Silver Bow Law Enforcement Office also maintains the jail facilities
- **Public Transit.** The County Department of Public Works operates the Butte-Silver Bow Transit Systems. Seven routes operate Monday through Friday from 6:45 a.m. until 5:45 p.m. Buses are wheelchair accessible, air conditioned, and have bike racks.
- **Recreation:** The county maintains 30 public parks, a public swimming pool, a golf course, 9 ice skating rinks, 5 softball fields, 5 Babe Ruth baseball fields, 5 little League baseball fields, and 24 tennis courts.
- The Butte-Silver Bow Civic Center, with a seating capacity of up to 6,000, is equipped for figure skating, hockey, basketball, wrestling, musical concerts, high school graduations, trade shows, and annual stockholders meetings.
- **Roads.** 95 percent of the county's roads are paved.
- **Solid Waste.** These services are provided at the public landfill, which opened in 1994 with disposal services provided for both public and private garbage collection. The Solid Waste Division of the county operates a recycle program.
- **Schools.** Butte School District No. 1 is a public school district with 500 instructional staff members and 150 support staff. The system includes 7 elementary schools with an enrollment of 2,684 in 2001. The middle school has an enrollment of 800 and high school including grades 9 through 12 has an enrollment of 1,542. There are 12 elementary schools, 3 middle schools, and 2 high schools. The district also owns and operates its own transportation fleet. More than 25 percent of the students in the district received free or reduced-price lunches.⁵⁵ Butte Central Catholic schools including an elementary, a junior high, and a high school have an enrollment of approximately 550 students.
- **Weed Control.** The weed control program is supported by a tax levied throughout the county. Their mission is to locate, map, and eliminate or control noxious weeds.

Data from the Montana Department of Public Health and Human Services summarize the status of all health services in Montana on a county-by-county basis, as indicated in Table 7-24.

⁵⁵ [Http://stjameshealthcare.org/generalinfo/hospitalnews/n281.aspx](http://stjameshealthcare.org/generalinfo/hospitalnews/n281.aspx).

Table 7-24. Health Resource Assessment for Butte-Silver Bow County

| | | | | |
|---|--|-----|-------------------|--------|
| Local Hospitals or Medical Assistance Facilities (MAF) (Type of facility and number of beds) | 1 local, 1 child psych. hospital(s), 0 MAF(s); 184 beds | | | |
| Rural Health Clinics (RHC), Federally Qualified Health Centers (FQHC), IHS and Tribal Health Facilities (Number and type) | 0 RHCs, 2 FQHCs, 0 IHS/Tribal Health Facilities | | | |
| Availability of 911 and Advanced Life Support Services | 911 | | Adv. Life Support | |
| | Yes | | 1 Service: Butte | |
| Nursing Homes (Number of facilities and beds) | 4 / 401 beds | | | |
| Aging Services Licensed (Number of Personal Care [PC], Adult Foster Care [AFC], and Retirement Home [RH] Licenses) | PC | AFC | RH | |
| | 6 | 5 | 0 | |
| Home Care Services Licensed (Number of Home Health Agency [HHA] and Hospice Licenses) | HHA | | Hospice | |
| | 3 | | 1 | |
| Public Health Resources (Number of Full-time Equivalent Public Health Nurses, Public Health Sanitarians [PHS], Registered Dietitians [RD], and Health Educators [HlthEd]) | Nurse | PHS | RD | HlthEd |
| | 8.3 | 4.0 | 0.0 | 1.0 |
| Primary Care Provider Resources (Number of doctors [MDs and DOs ⁷], Nurse Midwives [NMW], Nurse Practitioners [NP], and Physician's Assistants [PA]) | MD/DO | NMW | NP | PA |
| | 36 | 2 | 4 | 3 |
| Health Care Provider Shortage Status (Federal Health Professional Shortage Area [Fed. HPSA], State HPSA, Medically Underserved Area [MUA], or Medically Underserved Population [MUP]) | Federal HPSA - Low-income Population; State HPSA - No; MUAs - All; MUPs - None | | | |

Source: Montana State Department of Public Health and Human Services.

Other socially important resources include:

- Montana Tech of the University of Montana provides undergraduate programs in engineering, sciences, and mathematics. The school has over 100 full-time faculty. Graduate programs are available in engineering, technical communications, and the geosciences. Approximately 2,000 students attend Montana Tech. A recent article in *The Montana Standard* describes the enviable placement rate of Montana Tech, which the placement officer describes as bittersweet since most of the new grads accept jobs out of state.
- A daily newspaper, *The Montana Standard*.
- Butte Healthy Community Coalition is a group composed of representatives from more than 60 government agencies, businesses, and organizations in Butte-Silver Bow, working together to create a community profile to detail community needs, and to development collaborative actions plans for the community. Their report was issued in July 2001.
- The United States High Altitude Sports Center, an outdoor Olympic-sized speed skating oval, is open to the public when not in use by the U.S. National Speed Skating Team.

- St. James Healthcare is a 108-bed comprehensive hospital that is part of the Montana Region Sisters of Charity of Leavenworth Health Services Corporation. The hospital serves the needs of people in a seven-region area and employs approximately 600 people. The full range of services provided by St. James are augmented by a Cancer Treatment Center, Advanced Imaging Diagnostics, Magnetic Resonance Imaging, Renal Dialysis Unit, Cardiac Catheterization Lab, Cardiopulmonary Rehabilitation, Sports Medicine Clinic, and a Senior Services Program.

St. James Healthcare is in the midst of a three-phase \$32.5 million renovation that includes construction of a new surgery, urgent care center, lobby, kitchen, and radiology department, and renovation of the emergency room.

Butte is also served by the Butte Community Health Center, which is a federally certified community and migrant health care center offering discounted fees for patients with limited incomes. Children's Comprehensive Services of Montana, Inc. provides a private 52-bed acute care hospital for in-patient mental health care to emotionally disturbed children, ages 5 to 18. Residential in-patient care treatment for chemical dependency is provided by the 64-bed Montana Chemical Dependency Center.

Butte is also served by the Butte Convalescent Center, Butte Park Royale Convalescent Center, and Crest Nursing Homes.

- The Southwest Montana Service Center, Small Business Development Center is a part of the Montana Small Business Development Center Network. The Network combines information and resources from federal, state, and local governments, with resources from the educational system and private sector to provide regulatory, management, financial, and marketing experts to assist small businesses.
- Service Corps of Retired Executives (SCORE) has a chapter in Butte, which provides professional one-on-one consulting and conducts monthly workshops on business development.

7.3.2 Community Characteristics

The community characteristics addressed in this discussion are collective values, self-images, and selected components of county-level social organization. Values and self-image are aspects of a community that influence residents to reside there and to participate in local activities. Some of the different images or aspects of community identity are expressed in the following statements:

Butte is stigmatized by its mining history.

We're an older community and like to preserve our history.

People in Butte define themselves by the organizations they belong to.

Butte-Silver Bow County has a consolidated city-county government. Most county residents live in Butte, and in many ways the social structure of Butte defines the county. Self-image and self-identify are important aspects of Butte-Silver Bow County's social organization. Butte is in transition from being a one-company, working class, mining town. However, Butte does not appear to have created and accepted a new vision or new self-identity for its future. Despite significant economic development efforts and successes, it appears to be difficult for some residents to let go of the perceived stability provided by being a one-company town. At the same time, Butte's self-image is based on the values of "independence" and "toughness."

Butte is an anomaly both within Montana and within the project counties. Butte is distinctly urban and it has an industrial history in a state dominated by agriculture and rural lifestyles. One county

extension agent commented that the urban nature of Butte-Silver Bow was demonstrated by the fact that there were never any county extension homemaker clubs referred to as “needle and pan” clubs in Butte-Silver Bow County. These clubs were and are popular in other southwest Montana counties. Butte represents an urban lifestyle tied to mining and the union-company social distinctions that characterize such communities (Mercier, 2001). Social organization was characterized by distinctions between “labor” and “union” or “Irish” and “Slovak.” Culturally, Butte-Silver Bow County has a mix of values, beliefs, and worldviews unique because of their diversity in comparison to the other project counties.

Butte is also a paradox. Butte was a company town, but at the same time became a “Gibraltar of Unionism.” By 1885, there were 1,800 union miners in Butte (Malone and Roeder, 1976, p. 156). Thousands of immigrants came from Ireland, England, Italy, Germany, Finland, China, and Eastern Europe to work in the mines and smelters. Butte had many ethnic neighborhoods with names like Meaderville, Dublin Gulch, and Seldom Seen. These immigrants left a lasting imprint, not only on Butte, but on much of Montana.

Celebrations of these ethnic lifestyles include such events as the Smelterman’s Union Day Parade (Mercier 2001: 140ff) and celebration of St. Patrick’s Day. The recent celebration “Evel Knievel Week”—a week-long celebration of Butte’s homegrown daredevil is similar in context to these ethnic events. In the past, densely populated ethnic neighborhoods (e.g., Irish, Welsh, and Cornish) formed small enclaves in which ethnic culture dominated daily life. These lifestyles were about expressing ethnic identity, mining and millwork, family, and leisure time away from work (Mercier, 2001; Murphy, 1997). In the early days of these communities, recreation and leisure often involved the bar, gambling, and ethnic games. (Murphy, 1997) Drinking alcohol is still part of Butte’s lifestyle. Butte’s St. Patrick’s Day Celebration has become a source of controversy because of the problems related to alcohol use, and under-age drinking is acknowledged as a serious problem in Butte. *The Montana Standard* has taken up a policy of printing the names in the paper of all those arrested for under-age drinking.

Family is important in Butte. Many of the residents of Butte are third and fourth generation, and are part of a strong web of affiliation based on family, church, sporting activities, outdoor recreation, and fraternal organizations. They have a strong sense of community and extensive family and social networks. Just as residents of rural counties move there or stay there because they want to do so, the same is true of Butte residents. Many Butte natives do not want to leave the community even though they have lost their jobs. Many people are underemployed and many work two or more part time jobs. Social relationships transcend economic relationships: *There are a lot of people here who are out of work and won’t leave.*

At the same time newcomers are treated well, and one resident commented:

We don’t have the huge cultural divide between rich newcomers and locals like you find in Bozeman. A sign that you have been accepted into the community is when you get invited to someone’s house for dinner.

A local resident reported that it took his family four years. His family has been accepted as part of the local community through their participation in their children’s school and sporting events, and his wife’s volunteer activities. This same resident also explained that until recently, it was very difficult for the spouses of faculty recruited to Montana Tech to get jobs in the community. It was important to be “from Butte” in order to get a job.

Another component of community identity is that community members are identified by the groups they belong to, what teams they play on, and what sport they are part of; people are supportive of sports and school events. Urbanization is often characterized by particular types of social bonds that

are often described as “single interest,” non-kinship based patterns of association. These social bonds tend to be associated with social contexts such as work, clubs, or friends. These contrast with “multiplex” relationships of rural communities, in which social bonds are built around kinship, religious affiliation, and neighborhoods. However, while Butte may be an urban area in terms of population density and governmental structure, interviews suggest that many of its residents share the values, interaction patterns, and attachments to place found in rural southwest Montana towns.

For example, tenure is very much a value shared by many residents of Butte. But tenure is expressed in slightly different way in Butte than in other parts of the county or in the more rural counties in the study area. In Butte and in Anaconda, tenure is related to a history of extended family, social networks, and self-identity—not as much to land and to a sense of place. People in Butte want to know what neighborhood you are from, where you went to school, who is related to who, and who you know that they know.

It is understandable that previous generations might not have had quite the same attachment or ties to the land as experienced in other southwest counties. In Butte-Silver Bow County, people lived in a landscape drastically altered by mining and mineral processing. Butte urbanites formed sportsmen’s clubs and ventured into the Big Hole and Beaverhead valleys and other nearby areas for hunting, fishing, and outdoor recreation (Munday, 2001). While the majority of life was dominated by the realities of mining work and family life, the availability of these lands and resources was important to the lifestyle of Butte and Anaconda residents. Recreation is still an important lifestyle component in Butte. As one resident commented:

The majority of the community recreates. To me, that is the only way to be here. You’re not going to come here for cultural reasons, but we have developed some culture.

Butte is extremely pro-recreation and has a long history of conservation efforts.

In addition to the environmental and social problems Butte faces from its unique mining history, Butte is facing many of the same problems as other cities throughout the country. Historically, the “downtown” of any city was the simple manifestation of a bounded social and commercial structure. Living downtown was efficient, functional, and desirable. People wanted to live downtown to be near where they worked and where the goods and services they needed were available. However, with the rise of suburbanization, many downtowns have evolved into only employment and entertainment centers. In Butte, entire neighborhoods were forced to relocate to accommodate mining. The population shifted from the downtown area to the “Flats” to the south.

While Butte is an urban area, it is close to the USFS lands, which results in some unique management problems for the USFS such as damage due to drinking parties on public land and aesthetic and potential environmental problems caused by “folging” also known as disc golfing.

7.3.3 Mutual Support and Cooperative Problem Solving

The adaptive capacity of communities is influenced by the ability of its residents to work together to solve common problems. Those communities that can organize and apply their social resources to respond to problems appear to have a higher likelihood of making adaptations that enhance their future instead of constraining it. Limited social conflict and disruption, effective identification of problems, and working together with limited resources in difficult times help communities adapt to change. It is important for communities to respond to events on a local basis instead of always depending on assistance from outside the community.

Butte-Silver Bow County, like Anaconda-Deer Lodge County, has a long history of social conflict and social and economic disruption, yet it has survived and demonstrated time and again its resiliency.

This survival is due in part to the fact that mutual support and volunteerism are important community values. Activism is part of the county's history as expressed through community unionism, and the community's continuing efforts to reclaim contaminated land. Volunteerism is exemplified in the numerous service and fraternal organizations including, but by no means limited to, the Elks, Eagles, Moose, American Legion, Pythian Sisters, Butte Pioneers Club, and Kiwanis.

Numerous fund raising events are held in Butte in support of families and individuals with major health problems, involvement in accidents, or a death in the family. Yellow plastic hard hats representing Butte mining connections are placed at the check out counters of Wal-Mart collecting money for worthy causes.

An example of a mutual support and cooperative problem solving in a uniquely Butte fashion was the recent Evel Knievel Week held in August 2002. Evel Knievel was a famous daredevil-stuntman in the 1970s. He was born in Butte and worked for a while in the mines. Evel Knievel Week started with a late night conversation and grew into an event that attracted thousands of people to the Uptown historic district of Butte, many of them on their way to the annual motorcycle rally in Sturgis, South Dakota. Civic leaders, the business community, and many volunteers pitched to put on this event with very little lead time. At first there was some concern about attracting bikers to Butte, but as the Planning Director explained to a reporter from the *Christian Science Monitor*:

Then the business community realized that maybe attracting bikers to town was not such a bad idea. Let's face it, most bikers going to Sturgis are more well-off financially than the people of Butte. Evel's helping us make hay while the sun is shining.⁵⁶

The week concluded with a parade, a Joan Jett Concert, fireworks, and a flaming jump off the tallest building in Uptown Butte's historic Hotel Finlen by Spanky Spankler—a stuntman friend of Evel Knievel.

7.3.4 Leadership

Leadership is an important community resource. Leadership is straightforward: it addresses the range and diversity of persons in formal and informal leadership positions in local government, community, special interest, or volunteer organizations. If communities have a diversity of leaders, who can both lead and manage, then they have substantial resources to adapt to changing conditions. Leaders contribute to identifying, organizing, and responding to problems or potential opportunities. Communities with strong leadership resources have an advantage in responding to change. One theme that emerged from interviews in Butte-Silver Bow County is that the county appears to have a very significant pool of leadership talent available in many different arenas inside and outside of institutional positions. Individuals were identified in the county who are recognized as leaders. Many of them were members of the business community. Butte-Silver Bow County was one of the few counties where leaders were specifically identified from the "conservation" and "recreational" communities.

In conclusion, it appears that Butte-Silver Bow County may have the necessary leadership resources in their community to handle both the everyday needs of the county and to provide leadership to take advantage of any available opportunities and to help the county create and fulfill a new self-image.

⁵⁶ Todd Wilkinson, "A Small Town's Stunt: Evel Knievel Week," *Christian Science Monitor*, August 2, 2002.

7.4 Human Resources

Secondary source census and other data are typically used to describe human resources in communities. Education, income, and persons in poverty are usual measures of human resources. Table 7-25 below shows recent census data concerning unemployment, educational attainment, income, and poverty. Butte-Silver Bow County residents appear to have adequate educational resources. Approximately 85 percent of individuals 25 years and older have a high school degree or equivalency and 22 percent have a bachelor's degree or higher.

Butte-Silver Bow County residents have lower median household and per capita incomes. While it does not appear in the following table, almost 25 percent of families with related children under five live in poverty.

Table 7-25. Quantitative Measures of Human Resources for Butte-Silver Bow County, 2000 Census

| | Percent of Unemployment | Percent of High School Graduates >25 | Percent of College Graduates (BA+) >25 | Median Household Income (\$) | Per Capita Income (\$) | Percent of Individuals in Poverty | Percent of Related Children Under 18 in Poverty |
|------------------|-------------------------|--------------------------------------|--|------------------------------|------------------------|-----------------------------------|---|
| United States | 3.7 | 80.4 | 24.4 | 41,994 | 21,587 | 12.4 | 16.1 |
| State of Montana | 4.1 | 87.2 | 24.4 | 33,024 | 17,151 | 14.6 | 18.4 |
| Butte-Silver Bow | 4.2 | 85.1 | 21.7 | 30,402 | 17,009 | 14.9 | 19.2 |

Source: U.S. Census Bureau, Census 2000.

Based on these statistics, residents would appear to have limited financial resources to meet basic needs and the higher rates of poverty and especially children in poverty may require use of social and community resources that might have otherwise been used for community enhancement.

7.5 Community Resiliency

Resiliency is a concept used to address the resources that exist for communities that can be used by communities to adapt to changing conditions. This assessment of resiliency is presented in a "situational analysis" framework briefly discussed in Chapters 1 and 12. This framework describes the strengths and weaknesses of community indicators of resiliency. The community indicators are land use, attitudes to change, infrastructure and services, community characteristics, mutual support, cooperative problem solving, leadership, human resources, and economics/economic diversity.

The following summaries of variables that may affect community resiliency are drawn from both the quantitative and qualitative information gathered for this report.

Land Use. Butte has a good location at the intersection of I-90 and I-15 and a multimodal port. Butte is centrally located for much of southwest Montana, has a large urban center, and serves an area much larger area than the county itself. Butte is the first community in Montana participating in the Main Street Program established by the National Trust for Historic Preservation to help communities use their historic resources to promote their downtown areas. Approximately 57 percent of the land is owned by either federal or state governments. While the landscape of Butte is dominated by the Berkeley Pit, Butte is surrounded by blue-ribbon trout streams and gorgeous mountain scenery with easy access to numerous outdoor recreation opportunities. Clean up efforts in the Superfund sites are

expected to continue for years, but at the same time may provide employment opportunities for residents.

Attitude to Change. Local culture reflects Butte's history as a one-company mining town with over a hundred years of mining. Most of the residents contacted as part of this study really believe the mine will open again soon. However, at the same time, the county is engaged in numerous economic development activities.

Community Characteristics. In the past, community unionism functioned as a tie that helped to draw together the numerous social groupings in the county. While many of the residents of the county share similar values based on the importance of family and other social ties, it remains to be seen whether the diverse groups in the county can unite in forging and attaining a common vision of the future of the county. Independence and maintenance of their hard working and hard playing self-identity appear to be important values in Butte.

Local Services and Infrastructure. Basic services exist in the community. In fact, Butte is a draw for residents from surrounding counties who come to shop, for medical treatment, and to fly in and out of the Butte Airport. Headwaters Resource Conservation and Development Area, Inc.'s *Area Plan/Comprehensive Economic Development Strategy, 2002*, points out that Butte has the potential to become a regional commercial center, but that it lacks industrial infrastructure.

Leadership. Leadership appears to be one of Butte-Silver Bow County's strengths. Leadership is apparent in both institutional and non-institutional positions. While the county faces many social, economic, and environmental problems, leaders seem to emerge to deal with these problems.

Human Resources. While residents have adequate educational resources to draw on, it would appear that they have limited financial resources to meet basic needs. The higher rates of poverty and especially the number of children in poverty may require the use of social and community resources that might have otherwise been used for community enhancement.

Economic Diversity. In contrast to other project counties, government provides very little value-added to the county. Government value-added can provide a local economy with some stability. Butte is experiencing growth in transportation, communications, and public utilities sectors. Their services sector is growing. According to 1999 IMPLAN data, "Wildland" related industry sectors contribute very little to the local economy. Before the most recent closure of a mine, mining contributed approximately 7 percent of total industry output and 3 percent of employment.

8 Granite County

Granite County covers 1,727 square miles in southwest Montana. Philipsburg, the county seat, is located in the Flint Creek Valley along the Pintler Scenic Route, which runs between Anaconda and Philipsburg. Philipsburg has been designated a National Historic District. The discovery of gold brought many prospectors into Montana and the area known as Granite County in the 1860s. This rapid influx of people led to boomtowns that grew rapidly and declined just as quickly when the gold ran out. In the mid to late 1800s, Granite County was one of the richest gold and silver mining areas in Montana. The county has a long history of mining, timbering, and agriculture.

The county was named for Granite Mountain, which at one time may have been the worlds' most productive silver mine (Malone and Roeder, 1976). The city of Granite was located approximately 4 miles from the current town of Philipsburg and had a population in the early 1890s of approximately 3,200, larger than the total population of Granite County in 2000 (2,830). The railroads reached Drummond in 1883, and a spur was completed to Philipsburg in 1897.⁵⁷ Over \$40 million in gold and silver was extracted from Granite Mountain, primarily during the 19th century. Granite County was hard hit by repeal of the Sherman Silver Purchase act, which ended the mandatory government purchases of silver. The mining and smelting operation at Granite closed in August 1893 and it is said that approximately 3,000 people left the Granite-Philipsburg area in less than 24 hours (Malone and Roeder, 1976). Today, Granite is a ghost town. According to the *Montana Standard*, the last full-time resident of the town of Granite, Mae Werning, died in 1966.

In addition to the towns that sprang up around the mines, Granite County had another thriving community called New Chicago—the major stagecoach stop on the Mullen Road between Missoula and Deer Lodge (Malone and Roeder, 1976). Miners were not the only early settlers in Montana and Granite County. Cattle ranches began flourishing in the western valleys during the 1860s as demand for beef in the new mining communities increased.

According to the Montana Rivers Information Database Query and Reporting System, the county has 109 streams with 1,086 stream miles. Georgetown Lake, a popular recreational area, is located on the southern boundary of the county. The lake is owned in part by the county and USFS. The lake is used for both recreation and irrigation. The John Long Mountains and Garnet Range border the county to the north. The Flint Creek Range is located in the southeastern portion of the county. Rock Creek flows north from the southern end of the county joining the Clark Fork River. The Clark Fork River runs east-west through the northern portion of the county. Mountain goats, Rocky Mountain sheep, moose, elk, deer, and bear are found in the county. Cutthroat and rainbow trout are found in some of lakes and streams in the county.

8.1 Land Ownership and Use

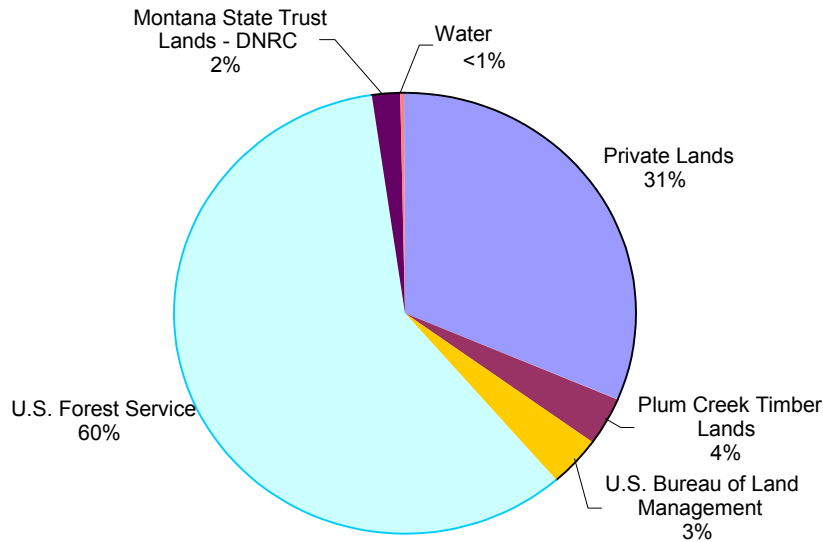
This section on land ownership and type describes ownership patterns of the county and types of land use found within the county. The subsection on land use includes types of use, amount of land in conservation easements and special use designations, and a summary of agricultural land use.

⁵⁷ Granite County Natural Resources Land Use Plan.

8.1.1 Land Ownership

As shown in Figure 8-1, private lands account for only 35 percent of the land area in Granite County, including the 4 percent owned by Plum Creek Timber Lands. Approximately 60 percent is USFS land, which is the highest percentage among the project counties. Two percent of the land is Montana State Trust Lands, and three percent comes under BLM management. USFS lands include portions of the B-DNF and the Lolo National Forest. The Rock Creek Sub-basin is managed in part by the B-DNF and the Lolo National Forest. Most of the sub-basin lies within Granite County.

Figure 8-1. Percent of Land Ownership of Major Land Owners in Granite County



Source: Montana State Library, 2001.
 Total area in Granite County is approximately 1,108,000 acres.

8.1.2 Types of Land Use

Granite County's land use history includes mining, timbering, and agriculture as described in the *Granite County Natural Resources Land Use Plan*.

8.1.2.1 Major Uses of Land Cover Type

Table 8-1 shows the major categories of land use and cover type for Granite County. Almost 70 percent of Granite County is evergreen forest, 15 percent is mixed rangeland, 7 percent is brush rangeland, and 5 percent is crop/pasture. Exposed rock accounts for just over one percent and grass rangeland accounts for less than one percent of county lands. Granite County owns and operates Flint

Creek Dam on Georgetown Lake, and in the past the county has been sued over the amount of water released from the lake for downstream irrigators.

Table 8-1. Major Land Uses as Percent of Total Land Area for Granite County and Study Area

| Type | Granite | Study Area Counties |
|------------------|---------|---------------------|
| Brush Rangeland | 6.53 | 17.55 |
| Evergreen Forest | 69.99 | 43.40 |
| Crop/Pasture | 4.57 | 7.46 |
| Grass Rangeland | 0.97 | 17.32 |
| Mixed Rangeland | 14.64 | 9.21 |
| Exposed Rock | 1.17 | 0.75 |

Source: Montana Natural Resource Information System On-Line Mapping, nris.state.mt.us/mapper/county/html, February 19,2002.

8.1.2.2 Conservation Easements and Special Use Designations

Less than two percent of county lands are in conservation easements and approximately seven percent of county lands are designated for special use. The majority of the land designated for special use is categorized as wilderness. Wilderness areas include portions of the Anaconda-Pintler Wilderness, named for the Anaconda Mountains and an early settler to the Big Hole, Ellsworth Pintler.

Table 8-2. Conservation Easements and Special Use Designations in Granite County and the Project Area Counties

| Land Use | Acres | Percent of Total County Lands | Project Area Total | Percent of Total Project Area |
|--|---------------|-------------------------------|--------------------|-------------------------------|
| Conservation Easements | | | | |
| Private Conservation Easement | 655 | 1.1 | 2,600,338 | 2.49 |
| USFWS | 2,597 | 0 | 27,173 | 0.26 |
| State Lands | 70,353 | 0.41 | 54,899 | 0.52 |
| Total | 16,676 | 1.51 | 2,682,410 | 3.27 |
| Special Use Designation | | | | |
| BLM Special | 655 | 0.06 | 30,953 | 0.30 |
| Research Natural Areas | 2,597 | 0.23 | 19,226 | 0.18 |
| Wilderness Area | 70,353 | 6.35 | 611,925 | 5.85 |
| Total | 73,605 | 6.64 | 662,104 | 6.33 |
| Total of Conservation Easements and Special Use | 90,281 | 8.15 | 3,344,514 | 9.60 |

Source: Montana Natural Resource Information System On-Line Mapping, nris.state.mt.us/mapper/county/html, February 19, 2002.

8.1.2.3 Agriculture Profile

Table 8-3 summarizes information about recent trends in the number of farms, farm size, acreage and the market value of agricultural crops sold. The number of farms in the county decreased from 149 in 1987 to 117 in 1997. The number of full time farms decreased from 113 to 91 during the same period. Acreage in farms has also decreased—from 348,102 acres to 268,413 acres. The average size of farms has remained almost the same, going from 2,336 acres in 1987 to 2,294 acres in 1997. The market value of agricultural products sold increased from \$57,663 per farm in 1987 to \$82,412 per farm in 1997. The market value of agricultural products sold in the county increased from \$8.6 million in 1987 to \$9.6 million in 1997. Some land is being converted from agricultural use to rural uses, such as rural living or recreations sites. Second home ownership is increasing around Georgetown Lake. There are subdivisions around the Drummond area.

Table 8-3. Census of Agriculture for Granite County, 1978, 1992, and 1997

| Characteristic | 1987 | 1992 | 1997 |
|--|-------------|-------------|-------------|
| Number of Farms | 149 | 138 | 117 |
| Full-Time Agriculture | 112 | 107 | 91 |
| Acreage in Farms | 348,102 | 349,938 | 268,413 |
| Average Size of Farms (Acres) | 2,336 | 2,536 | 2,294 |
| Market Value of Agricultural Products Sold (\$1,000) | 8,592 | 10,085 | 9,642 |
| Average Market Value of Agricultural Products per Farm Sold (\$) | 57,663 | 73,081 | 82,412 |

Source: 1997 Census of Agriculture.

8.2 Demographic Characteristics and Trends

Information about population helps describe the general nature of a community or area. An analysis of population trends can help determine if changes are occurring for specific groups defined by age, gender, education level, or ethnicity, thereby influencing the nature of social and economic relationships in the community. Population characteristics may influence resources available to respond to changing socioeconomic conditions. Population growth or decline has a greater relative impact in smaller, rural areas. For example, the smaller and less dense population base found in rural areas makes delivery of basic services more difficult. In urban areas, the logistics and mechanisms for providing public services produce economies of scale impossible for rural areas to duplicate. In addition, in single-sector resource-dependent communities, the variables of population and employment tend to be highly related.

8.2.1 Rural-Urban Classification

Approximately 32 percent of the county's population lives in the county seat of Philipsburg, which had a population of 914 in Census 2000. Another eleven percent (318) of the population lives in Drummond.

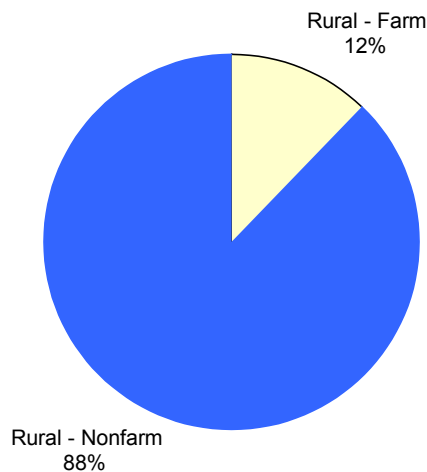
Table 8-4. Population of Counties Compared to Incorporated Cities, Towns, and Designated Census Places, 2000

| Place | Population | Percent of County Population | Type |
|-----------------------|--------------|------------------------------|---------------------------|
| Granite County | 2,830 | | |
| Drummond | 318 | 11.2 | Incorporated Place (town) |
| Philipsburg | 914 | 32.3 | Incorporated Place (town) |

Source: U.S. Census Bureau, Census 2000.

The Census Bureau uses an urban-rural typology to classify land as rural-nonfarm, rural farm, urban, or urban-cluster. Granite County is the only county among the study area counties that does not have any land classified as urban-cluster. Twelve percent of the land in the county is classified as rural farm and the other 88 percent is classified as rural-nonfarm.

Figure 8-2. Population in Urban and Rural Areas for Granite County



Sources: U.S. Census Bureau, Census 2000.

8.2.2 Population Trends

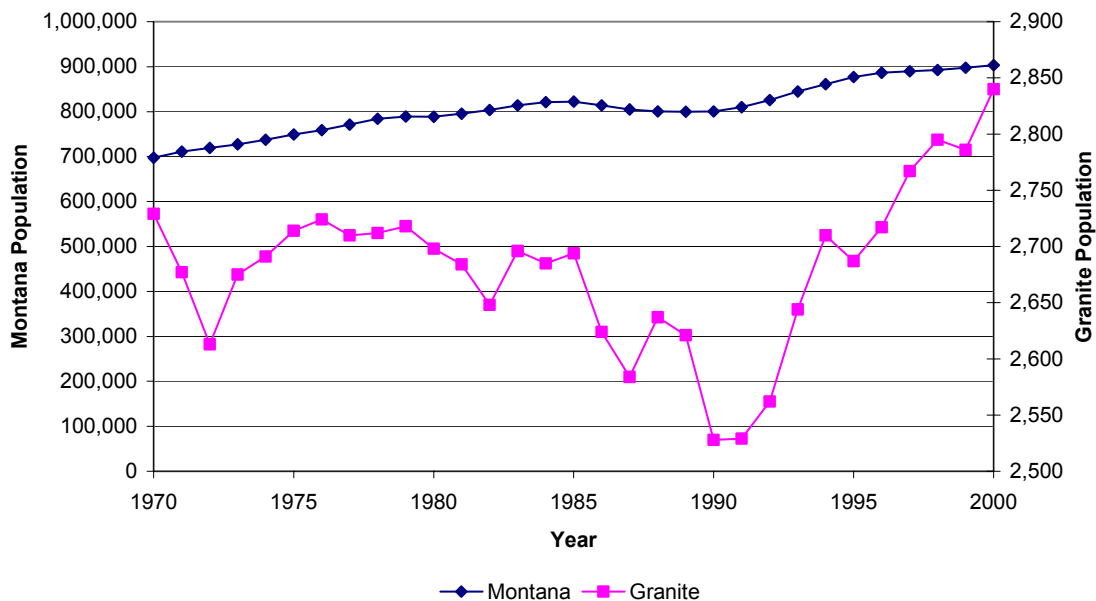
Table 8-5 shows the historical population trends for Granite County compared to the other counties in the study area for 1890 to 2000 at 10-year intervals. Granite County's population increases and decreases have been tied to boom and bust cycles in the resource industry sectors. The population decreased steadily between 1960 and 1990, but then increased between 1990 and 2000. Figure 8-3 compares the population of Granite County with Montana for 1970 and 2000 at one-year intervals and readily shows the volatility of Granite County's population growth.

Table 8-5. Seven County Project Area, Population, 1890-2000.

| County | Year | | | | | | | | | | | |
|---------------------|--------|--------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|
| | 1890 | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | 2000 |
| Beaverhead | 4,655 | 5,615 | 6,446 | 7,369 | 6,654 | 6,943 | 6,671 | 7,194 | 8,187 | 8,186 | 8,424 | 9,202 |
| Butte-Silver Bow | 23,744 | 47,635 | 56,848 | 60,313 | 56,969 | 53,207 | 48,422 | 46,454 | 41,981 | 38,192 | 33,941 | 34,606 |
| Anaconda-Deer Lodge | 15,155 | 17,393 | 12,988 | 15,323 | 16,293 | 13,627 | 16,553 | 18,640 | 15,652 | 12,518 | 10,356 | 9,417 |
| Granite | - | 4,328 | 2,942 | 4,167 | 3,013 | 3,401 | 2,773 | 3,114 | 2,737 | 2,700 | 2,548 | 2,830 |
| Jefferson | 6,026 | 5,330 | 5,601 | 5,203 | 4,133 | 4,664 | 4,014 | 4,297 | 5,238 | 7,029 | 7,939 | 10,049 |
| Madison | 4,692 | 7,695 | 7,229 | 7,495 | 6,323 | 7,294 | 5,998 | 5,211 | 5,014 | 5,448 | 5,989 | 6,851 |
| Powell County | | | 5,904 | 6,909 | 6,202 | 6,152 | 6,301 | 7,002 | 6,660 | 6,958 | 6,620 | 7,180 |
| Total | 54,272 | 87,958 | 97,958 | 106,779 | 99,587 | 95,288 | 90,732 | 91,912 | 85,469 | 81,031 | 75,817 | 80,135 |

Source: U.S. Census Bureau Census 2000.

Figure 8-3. Total Population of Granite County and Montana, 1970-2000



Source: Bureau of Economic Analysis, Regional Accounts Data, <http://www.bea.doc.gov/bea/regional/reis/> accessed on September 19, 2002.

Table 8-6 shows recent sources of population growth for Granite County and Montana between April 1, 2000 and July 1, 2001. Granite County's population increased from 2,830 in April 2000 to 2,899 in July 2001. This slight increase can be attributed to in-migration, since the number of deaths exceeded the number of births in the county.

**Table 8-6. Components of Population Change for Granite County and Montana
April 1, 2000 to July 1, 2001**

| Place | Births | Deaths | Natural Increase (Births-Deaths) | Net International Migration | Net Internal Migration | Population Change | April 1, 2000 Population | July 1, 2001 Population |
|---------|--------|--------|-------------------------------------|-----------------------------|------------------------|-------------------|-----------------------------|----------------------------|
| Montana | 13,320 | 10,165 | 3,155 | 470 | -1,377 | 2,238 | 902,195 | 904,433 |
| Granite | 22 | 42 | -20 | 1 | 86 | 69 | 2,830 | 2,899 |

Source: Population Division, U.S. Census Bureau Released April 29, 2002.

Note: Net internal migration is the difference between in-migration and out-migration.

8.2.3 Age and Gender

The median age of Granite County is 42.8 years compared to the median age of 37.5 for the state. Table 8-7 shows the change in age structure of three cohort groups between 1990 and 2000 for Granite County and Montana. Granite County has only a slightly higher percentage of population 65 years and older (15.9 percent) than the state (13.4 percent), but similar portions of the age cohort 18 years and under, 24.2 percent and 25.5 percent respectively. In Granite County, 51.2 percent of the population is male while 48.8 percent is female.

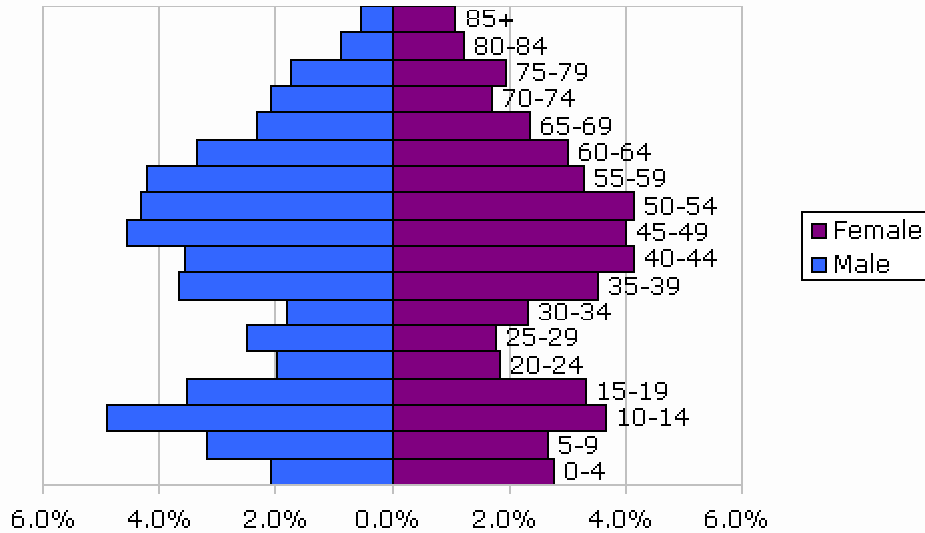
**Table 8-7. Changes in Age Structure of Three Cohort Groups
for Montana and Study Area Counties, 1990 and 2000**

| Location | Under 18 Years | 18 to 65 Years | 65 and Years and Over |
|----------------|----------------|----------------|-----------------------|
| Montana | | | |
| 1990 | 27.8 | 58.9 | 13.3 |
| 2000 | 25.5 | 61.1 | 13.4 |
| Granite | | | |
| 1990 | 26.6 | 54.9 | 18.4 |
| 2000 | 24.2 | 59.9 | 15.9 |

Source: U.S. Census Bureau Census 2000, Summary File 1, Matrices PCT12 and P13 and 1990 Census of Population and Housing, Summary Tape File 1.

Drawn as a “population pyramid,” an area’s age-sex structure hints at its patterns of growth. A top-heavy pyramid suggests negative population growth that might be due to any number of factors, including high death rates, low birth rates, and increased emigration from the area. A bottom-heavy pyramid suggests high birth rates, falling or stable death rates, and the potential for rapid population growth. Most areas, however, fall somewhere between these two extremes, and have a population pyramid that resembles a square, indicating slow and sustained growth with the birth rate exceeding the death, though not by a great margin. As the population in Figure 8-4 demonstrates, Granite County has several notable population characteristics. There are more males than females in the 10 to 14 years age cohort. The smallest cohort group is the 20 to 24 years of age group, accounting for around four percent of the population.

Figure 8-4. Age Distribution for Granite County, 2000



Source: [Census 2000](#) analyzed by the [Social Science Data Analysis Network \(SSDAN\)](#).

8.2.4 Race

Historically, the county’s population has not shown much ethnic diversity, other than for the early mining years, when large number of Chinese and other ethnic groups lived in the area. According to Census 2000, 96.3 percent of the population was white, 1.3 percent Native American, and 1.3 Hispanic.

Figure 8-5. Population Distribution by Race for Granite County 1980, 1990, and 2000

| Race | 1980 | | 1990 | | 2000 | |
|--------------------------------|--------|---------|--------|---------|--------|---------|
| | Number | Percent | Number | Percent | Number | Percent |
| Total Population | 2,700 | 100.00 | 2,548 | 100.00 | 2,830 | 100.00 |
| Total Hispanics | 14 | 0.52 | 9 | 0.35 | 36 | 1.27 |
| White* | 2,646 | 98.00 | 2,514 | 98.67 | 2,696 | 96.3 |
| Black* | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| American Indian and AK Native* | 27 | 1.00 | 21 | 0.82 | 36 | 1.30 |
| Asian* | 2 | 0.07 | 4 | 0.16 | 4 | 0.14 |
| Hawaiian and Pacific Islander* | - | - | - | - | 1 | 0.04 |
| Other* | 11 | 0.41 | 0 | 0.00 | 6 | 0.21 |
| Two or More Races* | - | - | - | - | 51 | 1.80 |

* Non-Hispanic only; in 1980 and 1990 “Asians” includes Hawaiians and Pacific Islanders.

Source: [Census 2000](#) analyzed by the [Social Science Data Analysis Network \(SSDAN\)](#).

8.2.5 Housing and Households

Another important descriptive characteristic of Granite County's demography is household composition. Table 8-8 summarizes information on housing units, home ownership, households, and family size. Granite County has 2,074 housing units with a density of 1.2 housing units per square mile of land area. The county's home ownership rate is about 74 percent compared to approximately 70 percent for Montana as a whole. There are 1,200 households with an average household size of 2.3 and an average family size of 2.9.

Table 8-9 shows the changes in household composition for the last decade. There is about a four percent decrease in the percent of households of married couples, and just over a four percent decrease in the percent of married couples with children. The percent of married couples without children has remained approximately the same. The percent of male-headed households has increased slightly, as has the percent of non-family households.

Table 8-8. Housing Units and Households for Granite County and Montana, 2000

| Characteristic | Granite | Montana |
|---|---------|---------|
| Population | 2,830 | 902,195 |
| Housing Units | 2,074 | 412,633 |
| Occupied Housing Units | 1,200 | 358,667 |
| Housing Units per Square Mile of Land Area | 1.2 | - |
| Homeownership Rate | 74.4% | 69.1% |
| Households | 1,200 | 358,667 |
| Number of Nonfamily Households | 415 | 121,260 |
| Number of Households with Individuals 65 Years and Over | 322 | 83,982 |
| Percent of Household with Individuals 65 Years and Over | 26.8 | 23.4 |
| Households with Persons Under 18 | 351 | 119,550 |
| Percent of Households with Persons Under 18 | 29.3 | 33.3 |
| Average Persons per Household | 2.3 | 2.5 |
| Average Family Size | 2.9 | 3.0 |

Source: U.S. Census Bureau, Census 2000.

Table 8-9. Household Types for Granite County, 1990 and 2000

| Characteristic | 1990 | | 2000 | |
|--------------------------|----------------|--------------|----------------|--------------|
| | Number | Percent | Number | Percent |
| Total Households | 306,163 | 100.0 | 358,667 | 100.0 |
| Married Couple | 176,526 | 57.7 | 192,067 | 53.6 |
| With Children* | 83,514 | 27.3 | 82,384 | 23.0 |
| Without Children* | 93,012 | 30.4 | 109,683 | 30.6 |
| Female-Headed | 26,397 | 8.6 | 32,016 | 8.9 |
| With Children* | 17,981 | 5.9 | 21,201 | 5.9 |
| Without Children* | 8,416 | 2.7 | 10,815 | 3.0 |
| Male-Headed | 8,743 | 2.9 | 13,324 | 3.7 |
| With Children* | 4,947 | 1.6 | 8,222 | 2.3 |
| Without Children* | 3,796 | 1.2 | 5,102 | 1.4 |
| Non-Family | 94,497 | 30.9 | 121,260 | 33.8 |
| Householder Living Alone | 80,491 | 26.3 | 98,422 | 27.4 |
| Two or More Persons | 14,006 | 4.6 | 22,838 | 6.4 |

Source: Census 2000 analyzed by the Social Science Data Analysis Network (SSDAN).

* For the purposes of this table, "children" are people under age 18.

8.2.6 Educational Attainment

Table 8-10 shows the educational attainment of the population of Granite County, 25 years of age and over, in 2000. Approximately 89 percent had high school diplomas or higher, and approximately 22 percent had bachelor's degrees or higher.

Table 8-10. Educational Attainment of Population 25 Years and Over in Granite County, 2000

| Education Level | Number | Percent |
|---------------------------------|--------|---------|
| Less than 9th grade | 84 | 4.2 |
| Some high school, no diploma | 159 | 8.0 |
| High school graduate* | 693 | 34.9 |
| Some college, no degree | 526 | 26.5 |
| Associate degree | 87 | 4.4 |
| Bachelor's degree | 364 | 18.3 |
| Graduate or professional degree | 75 | 3.8 |
| Total Population Age 25+ | 1,988 | 100 |

Source: U.S. Bureau of the Census, Census 2000, DP-2.

8.3 Employment Characteristics and Trends

8.3.1 Economic Sectors and Diversity

This section provides information on the diversity of the economy of Granite County from two perspectives, both based on 1999 IMPLAN⁵⁸ Model Year Data for the county. A more detailed description of input-output models and IMPLAN is located in Chapter 4 of this report. One perspective looks at the contributions of natural resources-based sectors to total output and employment of all sectors of the county. The other perspective compares value-added contributions of different sectors in the county.

Table 8-11 is an updated version of the model that appears in the USFS Region 1 Economic Library. The same industry sectors were used in the update as found in the USFS 1996 model. "Wildland" related sectors appear to be a significant source of total industry output and employment for Granite County, accounting for approximately 33 percent of total industry output and approximately 16 percent of total employment. Timber industries accounted for about 28 percent of total industry output and 12 percent of employment for the county.

Table 8-11. Direct Effects of "Wildland" Related Sectors in Granite County, 1999

| Industry Description | Industry Output (Millions of \$) | Industry Output as % of County Total | Employment | Industry Employment as % of County Total | Labor Income (Millions of \$) | Average Laborer Income (\$/Job) |
|---|----------------------------------|--------------------------------------|------------|--|-------------------------------|---------------------------------|
| Timber Industries | | | | | | |
| 24 Forestry Products | 0.3 | 0.3 | 6 | 0.4 | 0.0 | 7,502 |
| 26 Agricultural, Forestry, Fishery Services | 0.1 | 0.1 | 8 | 0.5 | 0.0 | 6,341 |
| 133 Logging Camps and Logging Contractors | 14.4 | 14.4 | 102 | 6.6 | 2.3 | 22,689 |
| 134 Sawmills and Planing Mills, General | 12.0 | 12.0 | 71 | 4.6 | 1.8 | 25,065 |
| Total | 26.8 | 26.8 | 187 | 12.0 | 4.2 | 22,342 |
| Grazing Industries | | | | | | |
| 4 Range Fed Cattle | 2.5 | 2.5 | 21 | 1.4 | 0.4 | 20,267 |
| 6 Sheep, Lambs and Goats | 0.0 | 0.0 | 1 | 0.1 | 0.0 | 4,562 |
| 26 Agricultural, Forestry, Fishery Services | 0.1 | 0.1 | 8 | 0.5 | 0.0 | 6,341 |
| Total | 2.6 | 2.6 | 30 | 1.9 | 0.5 | 15,900 |
| Mineral Industries | | | | | | |
| 31 Gold Ores | 0.8 | 0.8 | 4 | 0.3 | 0.1 | 26,684 |
| 32 Silver Ores | 0.1 | 0.1 | 5 | 0.3 | -0.2 | -38,284 |
| 41 Sand and Gravel | 3.0 | 3.0 | 32 | 2.1 | 1.2 | 38,578 |
| Total | 3.9 | 3.9 | 41 | 2.6 | 1.2 | 28,317 |

Source: Table based on Granite County 1999 IMPLAN model year data.

Note: NAIC code categories reporting no output were not included in the table.

⁵⁸ IMPLAN Pro™ is Social Accounting and Impact Analysis software; produced by MIG, Incorporated

Table 8-12 shows the value-added to the total value of payments to the different factors of production, and is equivalent to the gross regional product. Value-added can be an important indicator of industry economic activity. It is derived by subtracting the costs of materials, supplies, containers, fuel, purchased electricity, and contract work from the value of shipments for the product manufactured. Value-added represents the amount available in the county for wages, salaries, and profits in an industry.

In Granite County the largest value-added sector is government, accounting for 21 percent of the total value-added. The next largest sectors are manufacturing and FIRE (finance, insurance, and real estate), each accounting for 16 percent of value-added, followed by agriculture at 12 percent. The services sector is unusually small at 9 percent compared to 18 percent for all project counties and 21 percent for the state as a whole. Mining accounts for four percent of the value-added in Granite County. The trade industries sector accounts for nine percent. While in some ways, Granite County's value-added shows some diversity, what may be more important is the small size of the economy. As noted in Table 8-16 in the employment section of this chapter, in 1999 there were 89 establishments in Granite County with an employment of 489 employees.

Table 8-12. Value-Added by Basic Industries as Percentage of Total Value-Added for Granite County, All Project Counties, and Montana, 1999

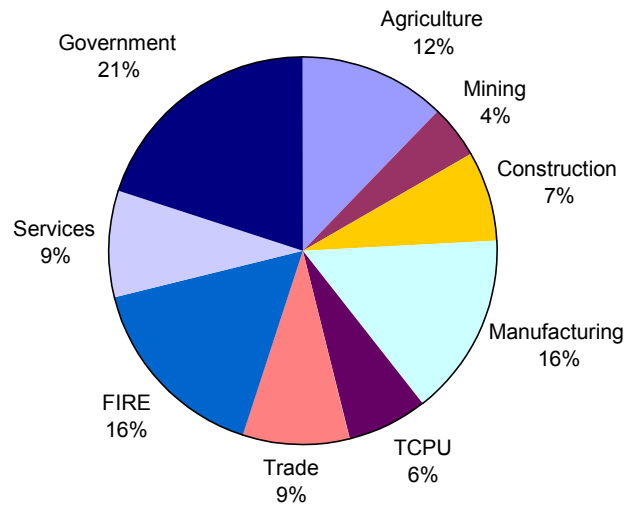
| Categories | Granite County | All Project Counties | Montana |
|---------------|----------------|----------------------|---------|
| Agriculture | 12 | 4 | 5 |
| Mining | 4 | 7 | 2 |
| Manufacturing | 16 | 6 | 7 |
| Government | 21 | 17 | 17 |
| Services | 9 | 18 | 21 |
| FIRE | 16 | 11 | 14 |
| TRADE | 9 | 14 | 18 |
| TCPU | 6 | 18 | 10 |
| Construction | 7 | 5 | 6 |

Source: MIG Group, Inc., IMPLAN Model Output, based on Granite County 1999 IMPLAN Model.

Note: TCPU=transportation, communications, and public utilities

FIRE= Finance, Insurance, and Real Estate

Figure 8-6. Value-Added by Basic Industries in Granite County as Percent of Total Value-Added, 1999



Source: MIG Group, Inc., IMPLAN Model Output, based on Granite County 1999 IMPLAN Model.

8.3.2 Employment

In this section we present information on the number and percent of individuals in the labor force, unemployment rates, employment by occupation and industry, the number of businesses, employees, and payroll by industry sector, and information on self-employed individuals and receipts. Information has been gathered from the U.S. Census Bureau, the U.S. Bureau of Economic Analysis, the Montana Department of Labor Industry, and the Bureau of Economic Analysis Regional Economic Information System.

8.3.2.1 Labor Force

Table 8-13 shows number of individuals 16 years and older and number of individuals in this age category that participated in the civilian labor force, and number of employed and unemployed individuals. "Civilian labor force" is defined as the number of persons 16 years and older, employed or unemployed, excluding members of the armed forces. "Employed" includes those persons who work for pay or profit during a week or, as unpaid family workers, work 15 hours or more during a week. "Unemployed" are persons who, for an entire week, did not work at all but were able and available to work.

At the time of Census 2000, approximately 39 percent of individuals 16 years and older were not in the labor force in Granite County compared to about 35 percent in the study area counties as a whole and 39 percent for Montana.

Table 8-13. Population 16 Years and Older in the Labor Force, Employed, and Unemployed, for Granite County, Montana, and the Study Area, Census 2000

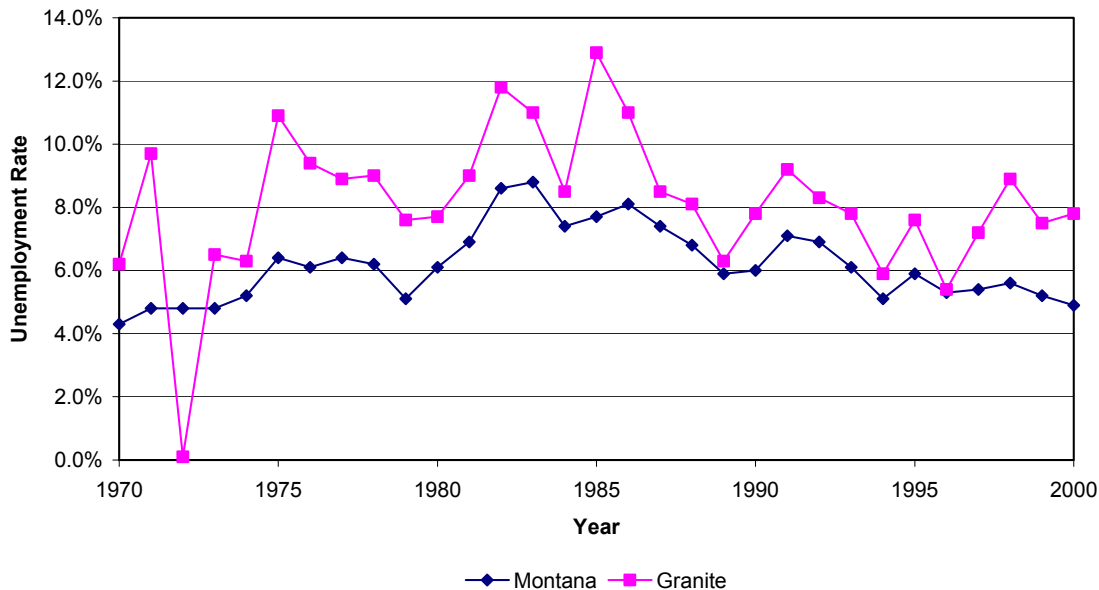
| Area | Population 16 Years and Older | Population in Labor force | Population | | % Not in Labor Force | No. Employed | % Employed | No. Unemployed | % Unemployed |
|------------|-------------------------------------|---------------------------------|------------------------|--------------------------|----------------------------|-----------------|---------------|-------------------|-----------------|
| | | | % in Labor Force | Not in Labor Force | | | | | |
| Granite | 2,219 | 1,344 | 60.6 | 875 | 39.4 | 1,272 | 57.3 | 875 | 3.2 |
| Montana | 701,168 | 458,306 | 65.4 | 242,862 | 34.6 | 425,977 | 60.8 | 28,710 | 4.1 |
| Study Area | 63,566 | 38,516 | 60.6 | 25,050 | 39.4 | 35,974 | 56.6 | 3,238 | 5.1 |

Source: U.S. Bureau of the Census, Census 2000, DP-3.

8.3.2.2 Unemployment

Figure 8-7 shows the unemployment for Granite County and Montana for 1970 through 2000. Granite County's unemployment rate has typically been higher than the state's unemployment rate except during the early 1970s. As an update, the preliminary, not seasonally adjusted employment rate for Granite County in August 2002 was 4.2 percent.

Figure 8-7. Unemployment Rate for Granite County and Montana, 1970-2000.



Source: Montana Department of Labor Industry, Research Analysis Bureau, Local Area Unemployment Statistics.

8.3.2.3 Class of Workers

Table 8-14 shows the percentage of four different classes of workers: private wage and salary workers, government workers, self-employed workers in their own business who are not incorporated, and unpaid family workers. Around 58 percent of Granite County workers are private wage and salary

workers compared to approximately 69 percent of state workers. About 21 percent of Granite workers are government workers, 19 percent are self-employed, and around 2 percent are unpaid family workers.

Table 8-14. Percent of Class of Worker, 2000

| Class of Worker | Granite | Montana |
|--|----------------|----------------|
| Private Wage and Salary Workers | 58.0 | 69.2 |
| Government Workers | 20.9 | 18.3 |
| Self-employed Workers in Own Not Incorporated Business | 18.9 | 11.8 |
| Unpaid Family Workers | 2.1 | 0.7 |

Source: U.S. Census Bureau, Census 2000.

8.3.2.4 Employment by Occupation and Industry

Table 8-15 shows the percent of employment in Granite County and Montana by occupation and by industry according to Census 2000. Approximately 31 percent of Granite County workers reported working in management, professional, and related occupations, 17 percent in service occupations, 18 percent in sales and office occupations, 14 percent in construction, extractions, and maintenance occupations, 11 percent in production, transportation, and material moving occupations, and 9 percent in farming, fishing, and forestry occupations.

In terms of employment by industry, what stands out in Granite County is that employment in the agriculture, forestry, fishing and hunting, and mining sectors accounts for 21 percent of employment compared to approximately 8 percent for the state as a whole.

Table 8-15. Percent of Employment by Occupation and Industry, Census 2000

| | Granite | Montana |
|---|---------|---------|
| Occupation | | |
| Management, Professional, and Related Occupations | 31.2 | 33.1 |
| Service Occupations | 17.2 | 17.2 |
| Sales and Office Occupations | 17.9 | 25.5 |
| Farming, Fishing, and Forestry Occupations | 9.1 | 2.2 |
| Construction, Extractions, and Maintenance Occupations | 14.0 | 10.7 |
| Production, Transportation, and Material Moving Occupations | 10.5 | 11.2 |
| Industry | | |
| Agriculture, Forestry, Fishing and Hunting, and Mining | 21.1 | 7.9 |
| Construction, Extractions, and Maintenance Occupations | 9.7 | 7.4 |
| Manufacturing | 8.9 | 6.0 |
| Wholesale Trade | 1.7 | 3.0 |
| Retail Trade | 7.9 | 12.8 |
| Transportation and Warehousing, and Utilities | 4.5 | 5.4 |
| Information | 1.0 | 2.2 |
| Finance, Insurance, Real Estate, and Rental and Leasing | 3.5 | 5.5 |
| Professional, Scientific, Management, Administrative, and Waste Management Services | 3.7 | 6.5 |
| Educational, Health and Social Services | 17.5 | 21.7 |
| Arts, Entertainment, Recreation, Accommodation and Food Services | 7.9 | 10.4 |
| Other Services (except Public Administration) | 5.5 | 5.3 |
| Public Administration | 7.0 | 5.9 |

Source: U.S. Census Bureau, Census 2000, DP-3.

Table 8-16 shows the employment and payroll data for Granite County in 1999 by industry sector. During the week including March 12 of that year, 489 people were employed by a total of 89 establishments with an annual payroll of approximately \$8.7 million. An establishment is a single physical location at which business is conducted or services or industrial operations are performed.

Table 8-16. Granite County, Number of Employees, Payroll, and Total Number of Establishments by Industry Sector, 1999

| NAICS Code | Description | Number of Employees for week including March 12 | Payroll (\$1,000) | | Total Establishments |
|------------|---|---|-------------------|--------|----------------------|
| | | | 1st Quarter | Annual | |
| | Total | 489 | 1,953 | 8,736 | 89 |
| 11 | Forestry, fishing, hunting, and agriculture support | 72 | 335 | 1,390 | 15 |
| 22 | Utilities | 0-19 | 0 | 0 | 2 |
| 23 | Construction | 43 | 259 | 1,721 | 10 |
| 31 | Manufacturing | 20-99 | 0 | 0 | 2 |
| 42 | Wholesale trade | 22 | 97 | 418 | 4 |
| 44 | Retail trade | 79 | 224 | 892 | 10 |
| 48 | Transportation warehousing | 20-99 | 0 | 0 | 6 |
| 51 | Information | 0-19 | 0 | 0 | 2 |
| 52 | Finance insurance | 20-99 | 0 | 0 | 1 |
| 53 | Real estate rental leasing | 0-19 | 0 | 0 | 2 |
| 54 | Professional, scientific technical services | 9 | 27 | 106 | 6 |
| 61 | Educational services | 0-19 | 0 | 0 | 1 |
| 62 | Health care and social assistance | 60 | 227 | 834 | 5 |
| 71 | Arts, entertainment recreation | 0-19 | 0 | 0 | 1 |
| 72 | Accommodation food services | 67 | 116 | 513 | 15 |
| 81 | Other services (except public administration) | 20-99 | 0 | 0 | 4 |
| 99 | Unclassified establishments | 0 | 0 | 19 | 3 |

Source: U.S. Census Bureau, County Business Patterns, 1999 County Business Patterns, CenStats, Major Industry Group.

Table 8-17 shows the number of establishments in the county by employee size class. Of the 89 establishments in the county, 59 of them had between 1 to 4 employees and 16 had 5 to 9 employees. The largest establishment in the county was in the manufacturing sector, and had 50 to 99 employees.

Table 8-17. Granite County, Number of Establishments by Employee Size Class for Selected Industry Sectors, 1999

| NAICS Code | Description | Total Establishments | Number of Establishments by Employment-size class | | | | | | | | |
|------------|---|----------------------|---|-----|-------|-------|-------|---------|---------|---------|--------------|
| | | | 1-4 | 5-9 | 10-19 | 20-49 | 50-99 | 100-249 | 250-499 | 500-999 | 1000 or more |
| | Total | 89 | 59 | 16 | 9 | 4 | 1 | 0 | 0 | 0 | 0 |
| 11 | Forestry, fishing, hunting, and agriculture support | 15 | 7 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | Utilities | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23 | Construction | 10 | 9 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 31 | Manufacturing | 2 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 42 | Wholesale trade | 4 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 44 | Retail trade | 10 | 4 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 48 | Transportation warehousing | 6 | 5 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 51 | Information | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 52 | Finance insurance | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 53 | Real estate rental leasing | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 54 | Professional, scientific technical services | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 61 | Educational services | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 62 | Health care and social assistance | 5 | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 71 | Arts, entertainment recreation | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72 | Accommodation food services | 15 | 8 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 81 | Other services (except public administration) | 4 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 99 | Unclassified establishments | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Source: U.S. Census Bureau, County Business Patterns, 1999 County Business Patterns, CenStats, Major Industry Group.

Table 8-18 shows nonemployment statistics for Granite County. Nonemployer statistics summarize the number of establishments and sales or receipts of companies with no paid employees. These nonemployers are typically self-employed individuals or partnerships operating businesses that have chosen not to incorporate. (Self-employed owners of incorporated businesses typically pay themselves wages or salary, so that the business is an employer.) In 1997, there were 274 such establishments in Granite County, with total receipts in excess of \$7.6 million. The number of establishments increased very slightly between 1997 and 1999 from 274 to 282. Receipts increased from \$7.6 million in 1997

to \$8.5 million in 1999. In terms of sales or receipts, nonemployers usually account for roughly three percent of business activity. At the same time, nonemployers account for nearly three-fourths of all businesses. Most nonemployer businesses are very small, and many are not the primary source of income for their owners. However, in Granite County in 1999, receipts for nonemployment establishments were \$8.5 million compared to establishments with employees, which had an annual payroll of \$8.7 million.

Table 8-18. Nonemployment Statistics for Granite County, 1999 and 1997

| NAICS Code | Description | No. of Establishments | | Receipts (\$1,000) | |
|------------|--|-----------------------|------|--------------------|-------|
| | | 1999 | 1997 | 1999 | 1997 |
| 0 | All Industries | 282 | 274 | 8,549 | 7,610 |
| 11 | Forestry, fishing hunting, ag support services | 51 | 50 | 2,402 | 2,027 |
| 21 | Mining | D | D | D | D |
| 22 | Utilities | D | D | D | D |
| 23 | Construction | 38 | 35 | 1,463 | 828 |
| 31-33 | Manufacturing | D | 23 | D | 902 |
| 42 | Wholesale trade | D | D | D | D |
| 44-45 | Retail trade | 37 | 33 | 787 | 801 |
| 48-49 | Transportation warehousing | 11 | 13 | 822 | 671 |
| 51 | Information | D | D | D | |
| 52 | Finance and insurance | D | D | D | D |
| 53 | Real estate, rental, and leasing | 21 | 21 | 540 | 332 |
| 54 | Professional, scientific, and technical services | 23 | 20 | 556 | 314 |
| 56 | Administrative and support and waste management and remediation services | D | D | D | D |
| 61 | Educational services | D | D | D | D |
| 62 | Health care and social assistance | 16 | 11 | 87 | 59 |
| 71 | Arts, entertainment, and recreation | D | D | D | D |
| 72 | Accommodation and food services | D | D | D | D |
| 81 | Other services (except public administration) | 36 | 38 | 713 | 801 |

Source: Nonemployer Statistics, available at www.census.gov/epdc/nonemployer/1999/mt/MT001.HTM.

D = Withheld to avoid disclosure.

8.3.2.5 Top Employers

Headwaters Resource Conservation and Development Area, Inc. *Area Plan/Comprehensive Economic Development Strategy, 2002* lists the following top employers for Granite County:

- Drummond School District
- Flint Creek Valley Bank
- Granite County
- Town of Philipsburg
- Sweet Palace

8.3.2.6 Commuting

Table 8-19 presents information on commuting for study area counties. Approximately 65 percent of workers in Granite County commute alone in a car, truck, or van. This is the second lowest percentage of any of the study area counties. Workers in Granite County have the longest mean travel time to work, at just over 26 minutes.

Table 8-19. Commuting to Work, 2000 Census

| Characteristic | Montana | Anaconda- Deer Lodge | Beaver- head | Butte- Silver Bow | Granite | Jefferson | Madison | Powell |
|---|---------|----------------------------|-----------------|-------------------------|---------|-----------|---------|--------|
| Workers 16 year and over (No.) | 422,159 | 3,744 | 4,403 | 15,601 | 1,261 | 4,842 | 3,109 | 2,553 |
| Car, truck, or van-drove alone (%) | 73.9 | 81.2 | 69.5 | 81.2 | 65.0 | 75.2 | 62.7 | 66.9 |
| Car, truck, or Van – carpooled (%) | 11.1 | 10.5 | 10 | 10.5 | 11.4 | 14 | 15.1 | 13.1 |
| Public transportation (including taxicab) (%) | 0.7 | 0.6 | 0.5 | 36.0 | 0.4 | 0.2 | 0.1 | 0.1 |
| Walked (%) | 5.5 | 4.2 | 11.4 | 4.2 | 10.4 | 3.7 | 9 | 9.3 |
| Other means (%) | 1.7 | 0.8 | 1.3 | 0.8 | 2 | 0.9 | 1.1 | 0.6 |
| Worked at home (%) | 6.4 | 2.7 | 7.2 | 2.7 | 10.5 | 6.1 | 11.9 | 9.9 |
| Mean travel time to work (minutes) | 17.7 | 21.1 | 14.4 | 14.3 | 26.4 | 22.4 | 22.4 | 22.3 |

Sources U.S. Bureau of the Census, Census 2000, DP-3.

8.3.3 Income

Per capita personal income and household income are shown in the following tables and charts for Granite County and Montana.

8.3.3.1 Per Capita Personal Income

As defined by the Bureau of Business Economic Research, School of Business Administration, University of Montana:⁵⁹

Personal income is the income received by people from all sources—private sector and government wages, and salary disbursements, other labor income, farm and nonfarm self employment income, rental income of people, personal dividend income, personal interest income, and transfer payments. Personal income does not have taxes subtracted from it.

Per capita personal income is the annual total personal income of residents divided by their resident population. Per capita personal income is a measure of economic well-being. The amount of goods and services that people can afford is directly related to their personal income.

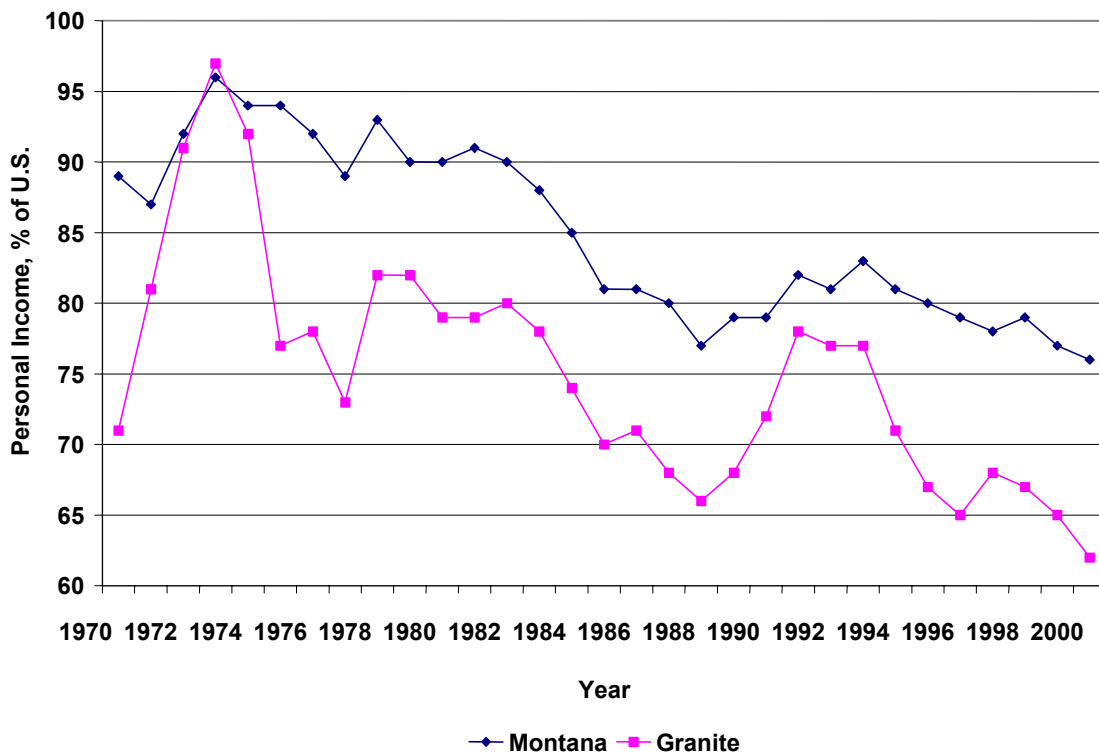
Figure 8-8 shows the per capita incomes of Granite County and Montana as a percent of the United States income for 1970 to 2000. Table 8-20 shows per capita personal income, total personal income along with in-state rankings, and a breakdown of the sources of personal income for the Granite County and Montana. Figure 8-9 shows the components of total personal income for the county.

⁵⁹ <http://www.bber.mt.edu/economicanalysis/personalincome.htm> accessed April 22, 2002.

Montana has not been able to keep pace with the nation, and Granite County has not been able to keep pace with Montana. In terms of personal income, Montana was ranked 47th of the 50 states, and Granite County was ranked 36th out of the 56 counties in Montana. Granite County's per capita personal income was \$18,322 in 2000.

Personal income has three components: earnings; dividends, interest and rent; and transfer payments. In 2000 in Granite County, earnings accounted for approximately 54 percent of total income and transfer payments accounted for about 20 percent. The economy of the county appears to depend on transfer payments for a significant portion of personal income. Transfer payments are income payments by government and businesses to individuals and nonprofit institutions for which no current services are performed. Transfer payments include retirement and disability insurance benefit payments, medical benefits such as Medicare and Medicaid, income maintenance benefits, unemployment insurance benefit payments, veterans benefit payments, and federal education and training benefits.

Figure 8-8. Percent of Per Capita Personal Income as Percent of U.S. Total-1970-2000



Source: Bureau of Economic Analysis Regional Accounts at <http://www.bea.doc.gov/bea/regional/reis/>.

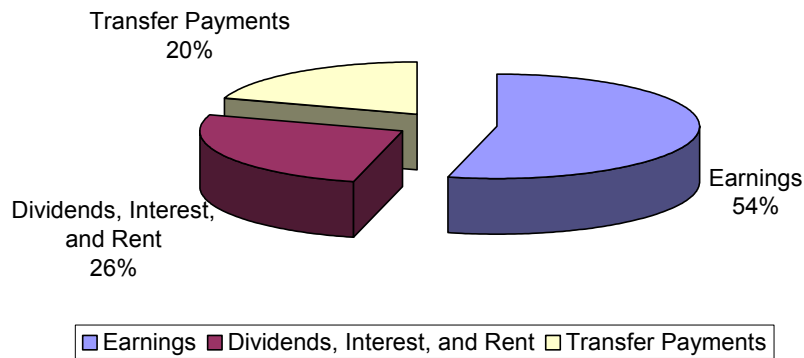
Table 8-20. Per Capita Personal Income, Total Personal Income, and Components for Granite County and Montana, 2000

| County | Per Capita Personal Income | | Total Personal Income | | Components of Total Personal Income | | |
|----------------|----------------------------|---------|-----------------------|---------|-------------------------------------|-----------------------------------|-----------------------|
| | (\$) | Rank | (\$1,000s) | Rank | Earnings (%) | Dividends, Interest, and Rent (%) | Transfer Payments (%) |
| Montana | | | | | | | |
| 2000 | 22,518 | 47 (US) | 20,336,883 | 46 (US) | 61.2 | 22.7 | 16.1 |
| Granite | | | | | | | |
| 2000 | 18,322 | 36 | 52,034 | 43 | 53.8 | 26.0 | 20.1 |

Source: Regional Economic Information System, Bureau of Economic Analysis, Bearfacts.

Note: Montana contains 56 counties.

Figure 8-9. Components of Total Personal Income for Granite County, 2000

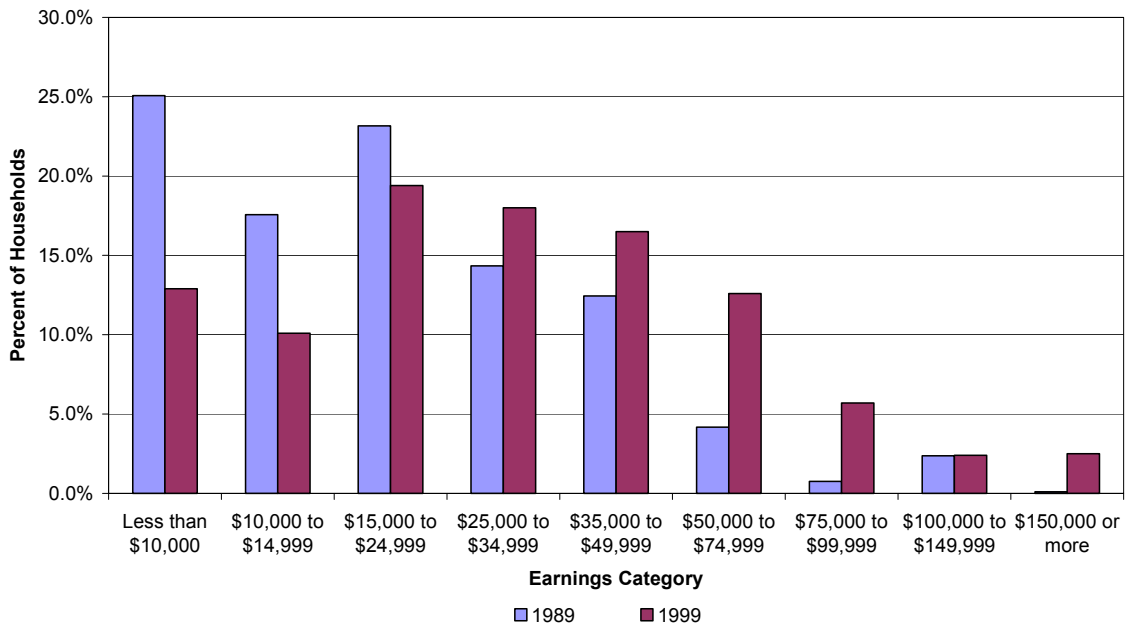


Source: Regional Economic Information System, Bureau of Economic Analysis, Bearfacts.

8.3.3.2 Household Income

Figure 8-10 shows household income for Granite County in 1989 and 1999. It is important to take into account inflation and growth in the cost of living. Some of the shift from lower to higher income categories is due to a change in the cost of living, and adjustments to pay rates for the cost of living. Inflation also has an effect on household income. Income in 1999 is valued less than income in 1989 due to inflation. As seen in the figure, the largest income category in 1989 was less than \$10,000. In 1999, approximately 13 percent of households had an income less than \$10,000 per year. In 1999, the largest category had shifted to the \$15,000 to \$24,999 category. Median household income for Granite County was \$27,813 in 1999.

Figure 8-10. Household Income for Granite County, 1989 and 1999

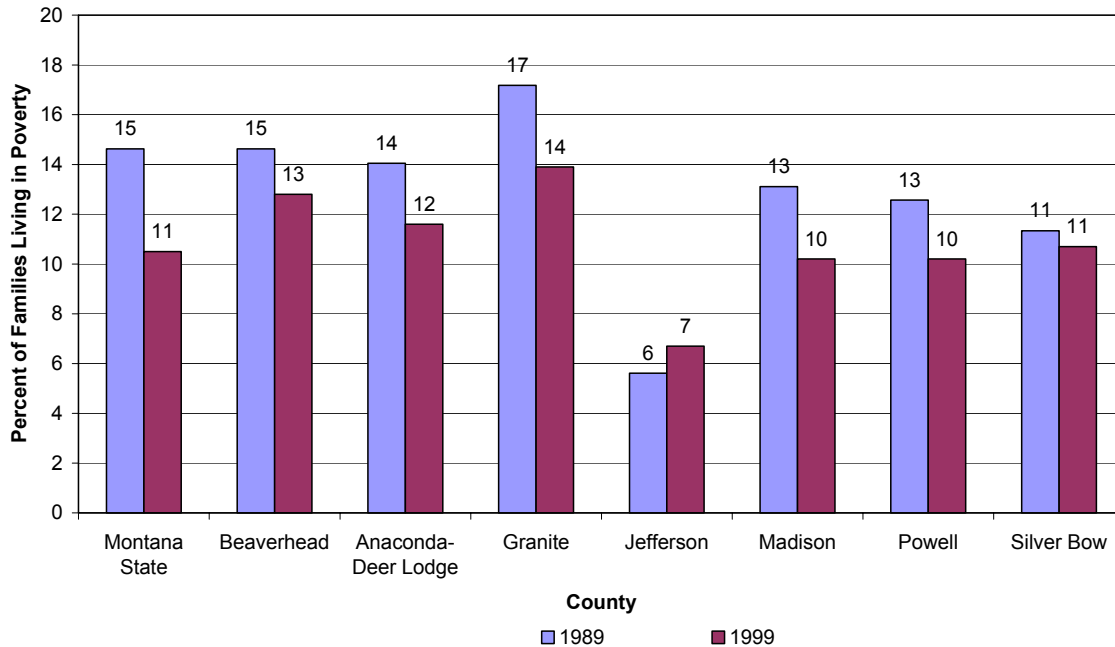


Source: U.S. Census Bureau, Census 1990 and Census 2000.

8.3.4 Poverty Status

The Census Bureau uses a set of money income thresholds that vary by family size and composition to determine who is poor. If a family's total income is less than that family's threshold, then that family, and every individual in it, is considered poor. Poverty thresholds do not vary geographically, but are updated annually for inflation for the Consumer Price Index (CPI-U). The poverty rate for families in Granite County was approximately 17 percent in 1989 and 14 percent in 1999 (Figure 8-11).

Figure 8-11. Percent Poverty Status of Families, 1989 and 1999



Source: U.S. Bureau of the Census, Census 2000, DP-3.

8.4 Community Resources

8.4.1 Infrastructure and Community Services

Community infrastructure and services are summarized in this section. County infrastructure influences economic development as well as social well-being and community quality of life. Community services indicate the type of resources residents have available to meet basic and other human needs that contribute to personal well-being and community quality of life.

Philipsburg and Drummond are the two incorporated communities in Granite County. Montana Highway 1 runs north-south through Granite County. Philipsburg, the county seat, with around 32 percent of the population, is located at the intersection of Highway 1 and Highway 38. While Philipsburg is around 30+ miles from Anaconda in Anaconda-Deer Lodge, the drive takes about an hour. Anaconda is the closest place to go for many items such as prescriptions. The community of Drummond is located in the northwest portion of the county on I-90. Other communities include Hall and Maxville. Granite County is home to several ghost towns.

The Philipsburg Public Schools includes Philipsburg Elementary and Granite High School. The high school was originally built in 1970 and was rebuilt in 1987 following a fire. Philipsburg Elementary operates in one of the oldest school buildings in Montana still in use. It was built in 1896.

The Philipsburg Business Directory’s web page lists one grocery store, Huffman Grocery. According to interview data, there is no pharmacy in the county.

Data from the Montana Department of Public Health and Human Services summarize the status of all health services in Montana, by county as indicated in the Table 8-21.

Two container sites are located in Granite County and waste is hauled to Missoula. In addition, Lower Flint Creek West Disposal handles recycling for Drummond.⁶⁰ In 2001, Drummond completed an outfall sewer replacement. The wastewater system for Philipsburg is composed of facultative lagoons with a capacity of 200,000 gallons per day with discharge into Flint Creek.⁶¹ Drinking water in Drummond comes from private wells, and in Philipsburg, a public water system draws water from Fred Burr Lake and Silver Springs.

Granite County has entered into a contract with a Bozeman-based Energy firm, Hydrodynamics, to restore hydropower generation at the Flint Creek Dam, which has a 1.5-megawatt, turn-of-the-century plant.⁶²

Table 8-21. Health Resource Assessment for Granite County

| | | | | |
|---|---|----------------------------------|--------------|---------------|
| Local Hospitals or Medical Assistance Facilities (MAF) (Type of facility and number of beds) | 0 hospital(s), 1 MAF(s); 3 beds | | | |
| Rural Health Clinics (RHC), Federally Qualified Health Centers (FQHC), IHS and Tribal Health Facilities (Number and type) | 0 RHCs, 0 FQHCs, 0 IHS/Tribal Health Facilities | | | |
| Availability of 911 and Advanced Life Support Services | 911 Yes | Adv. Life Support 0 Services: | | |
| Nursing Homes (Number of facilities and beds) | 1 / 32 beds | | | |
| Aging Services Licensed (Number of Personal Care [PC], Adult Foster Care [AFC], and Retirement Home [RH] Licenses) | PC 0 | AFC 0 | RH 0 | |
| Home Care Services Licensed (Number of Home Health Agency [HHA] and Hospice Licenses) | HHA 1 | | Hospice 0 | |
| Public Health Resources (Number of Full-time Equivalent Public Health Nurses, Public Health Sanitarians [PHS], Registered Dietitians [RD], and Health Educators [HlthEd]) | Nurse 1.0 | PHS 0.3 | RD 0.1 | HlthEd 0.0 |
| Primary Care Provider Resources (Number of doctors [MDs and DOs ⁷], Nurse Midwives [NMW], Nurse Practitioners [NP], and Physician’s Assistants [PA]) | MD/DO 1 | NMW 0 | NP 0 | PA 1 |
| Health Care Provider Shortage Status (Federal Health Professional Shortage Area [Fed. HPSA], State HPSA, Medically Underserved Area [MUA], or Medically Underserved Population [MUP]) | Federal HPSA - All; State HPSA - Yes; MUAs - All; MUPs - None | | | |

Source: Montana State Department of Public Health and Human Services.

⁶⁰ Headwaters Resource Conservation and Development Area, Inc. *Area Plan/Comprehensive Economic Development Strategy*, 2002, p. 93.

⁶¹ Ibid p. 96.

⁶² <http://www.fwee.org/news/getStory?story=799>.

Granite County Memorial Assistance Facility and Nursing Home in Philipsburg has an emergency room, and lab and x-ray facilities along with three acute care beds for short-term stays. The nursing home includes 28 long-term beds. Voters in Granite County will be voting on November 5, 2002, on a special levy to raise \$150,000 for general operations and additional personnel for the health care facilities in the county. The levy will cost homeowners an additional \$43.73 a year for every \$100,000 in tax-assessed value on their property. Last year a similar levy failed by seven votes.⁶³

8.4.2 Community Characteristics

The community characteristics addressed in this discussion are collective values, self-images, and selected components of county-level social organization. Values and self-image are aspects of a community that influence residents to reside there and to participate in local activities. In this analysis, community characteristics are taken from the *Granite County Natural Resource Land Use Plan* adopted to ensure cooperation between the county and federal and state governmental agencies and to ensure the county's rights in decision making on federal and state lands. In the plan, the culture and custom of Granite County are described. The plan emphasizes the distinctions between the definitions of culture and custom:

Culture deals more with human activities and practices and the acceptance and adoption of those activities and practices as community norms. In many ways, culture is invisible, at least in the sense of not being immediately evident on the surrounding landscape. It pertains to what people believe, and value and how they pursue and realize those beliefs and values.

Custom, on the other hand, is the way that people implement their culture. It deals with the way that people traditionally use the land and its natural resources, make a living, and act toward each other. Custom is the visible and tangible manifestation of the shared beliefs that binds a group of people into a community.

Some of the shared values and beliefs identified in the plan include independence, self-sufficiency, equality, and devotion to family, work, and the land. In the chapter on culture and custom, the customs of mining, timbering, and agriculture are described.

The plan states on page 2-3 of Part I:

The citizens of Granite County are inseparable from their culture. They are also unique products of a complex web of land uses and practices, values and beliefs that nurture their communities, sustain their economies, empower their local government and give form and shape to their spiritual and physical environments. Stripped of their land use and other practices and usages, denied their values and beliefs, they would lose coherence as a people. If stripped and denied of their private property rights, their equitable estates on federal lands their right to practice self-rule, to pursue equality and to live and practice the challenge of political freedom they would lose the very essence of what it means to be American...

8.4.3 Leadership

Leadership is an important community resource. Leadership is straightforward: it addresses the range and diversity of persons in formal and informal leadership positions in local government, community, special interest, or volunteer organizations. If communities have a diversity of leaders who can both lead and manage, then they have substantial resources to adapt to changing conditions. Leaders

⁶³ Lindsay Henderson "Granite County Voters Face Health Care Services Levy" at <http://www.missoulian.com/archives/>.

contribute to identifying, organizing, and responding to problems or potential opportunities. Communities with strong leadership resources have an advantage in responding to change.

Limited information was collected about leadership. However, considering the small population of Granite County, the county appears to have a diversity of leadership resources as exemplified by their Economic Development Commission. Many local governments of this size would not have such an active economic development group. Community members have identified a need for their community and are working together to solve an identified problem. The difficulty for the some leaders in Granite County may be in adapting to change.

8.4.4 Mutual Support and Cooperative Problem Solving

The adaptive potential of communities is influenced by the capacity to work together to solve common problems. Those communities that can organize and apply their social resources to respond to problems have a higher likelihood of making adaptations that enhance their future rather than limit it. For example, research about natural and technological disasters illustrates how communities that have a strong base of volunteerism, cooperative problem solving, leadership, and mutual support respond effectively to the stressors of a disruptive event in their social or natural environment (Kroll-Smith and Couch, 1990). Communities are less disrupted when there is limited social conflict, effective appraisal of problems for resolution, working together to apply limited resources, mutual support, and sufficient leadership reserves to organize and apply resources and establish a vision of recovery and progress out of a crisis. The web page for the community of Philipsburg states:⁶⁴

While all of western Montana offers visual and environmental benefits, Philipsburg offers something else, something that provides strong feelings of participation and accomplishments. Our community is known throughout the region for its accomplishments, largely provided by volunteers, and for the intellectual quality of life that comes with achievement. The list of achievements by this community of 930 citizens is sterling.

In addition to some of the volunteer activities found in many rural communities such as the volunteer fire department and the volunteer Ambulance Corps, some of Phillipsburg's other achievements listed include:

- In 1992, volunteers produced a repository of history located at the Granite County Museum and Cultural Center.
- The voluntary undertaking of the replacement of the street lighting system from 1994 to 1997 to preserve historic character of the community.
- In 1998, volunteers reconstructed the high school football field.
- Volunteers helped attract and run the Rocky Mountain Accordion Festival.
- In 1996, volunteers built the granite Mountain Mining Exhibit at the Granite County Museum and Cultural Center.

In addition to the above activities, the Granite County Museum and Cultural Center was founded in 1991 as the result of private financial contributions and efforts by volunteers. The museum is operated by volunteers.

⁶⁴ <http://phipsburgmt.com/town.html>.

Volunteers from the community have formed the Flint Creek Dam Advisory Committee representing citizens dedicated to the responsible use of Georgetown Lake and the Flint Creek Drainage. The committee provides input to Granite County Commissioners from local water users.⁶⁵

8.5 Human Resources

Secondary source census and other data are typically used to describe human resources in communities. Education, income, and persons in poverty are usual measures of human resources. Table 8-22 shows recent census data concerning unemployment, educational attainment, income, and poverty. Granite County residents appear to have strong educational resources with almost 87 percent of those over the age of 25 having a high school diploma and 22 percent having a bachelor's degree or higher.

Granite County's unemployment rate was lower than both the state and the nation. However, the median household income was more than \$5,000 a year less than the median household income in the state. The percent of individuals in poverty is higher in the county than in the state as a whole. The percent of related children under 18 in poverty is highest of any of the study area counties.

Based on these statistics, residents would appear to have limited financial resources to meet basic needs, and the higher rates of poverty and especially children in poverty may require the use of social and community resources that otherwise might be used for community enhancement. However, these statistics do not represent a complete assessment of human resources. These data indicate that people have substantial educational skills, but limited employment and income opportunities.

Table 8-22. Quantitative Measures of Human Resources for Granite County, 2000 Census

| | Percent of Unemploy- ment | Percent of High School Graduates >25 | Percent of College Graduates (BA+) >25 | Median Household Income (\$) | Per Capita Income (\$) | Percent of Individuals in Poverty | Percent of Related Children Under 18 in Poverty |
|------------------|---------------------------------|--|---|------------------------------------|---------------------------|---|---|
| United States | 3.7 | 80.4 | 24.4 | 41,994 | 21,587 | 12.4 | 16.1 |
| State of Montana | 4.1 | 87.2 | 24.4 | 33,024 | 17,151 | 14.6 | 18.4 |
| Granite | 3.2 | 87.8 | 22.1 | 27,813 | 16,636 | 16.8 | 24.2 |

Source: U.S. Census Bureau, Census 2000.

8.6 Community Resiliency

Resiliency is a concept used to address the resources that exist for communities to adapt to changing conditions. This assessment of resiliency is presented in a "situational analysis" framework briefly discussed in Chapters 1 and 12. This framework describes the strengths and weaknesses of community indicators of resiliency. The community indicators are land use, attitudes to change, services and infrastructure, community characteristics, mutual support, cooperative problem solving, leadership, human resources, and economics/economic diversity.

⁶⁵ <http://www.dnrc.state.mt.us/archive/n010712.htm>.

According to their land use plan, the residents of Granite County value community stability, which is equated with economic stability:

Community Stability is equated to Economic Stability, the condition under which communities can change, adapt, and develop by the dictates of custom and culture rather than by the commands of outside groups and governments. Community stability entails an environment where people and their customs and cultures are left to their own democratic means; where every community is the arbiter of its own survival; where people, subject only to the rule of nature and free markets, are masters of their own destinies.

The plan asserts that public policies, whether or not they are intended to be beneficial, “can injure or diminish custom and culture by injecting elements of outside control which are ultimately disruptive to community stability. The county states that custom, culture, and community stability are an obligation placed upon the federal government by law and regulation.

Land Use and Ownership. About 60 percent of the county is USFS lands, the highest percent of all the counties in the study area. Approximately 70 percent of the county is evergreen forest, also the highest percent of the project counties. The strength of this pattern of ownership is that it offers desirable open space, recreational opportunities, grazing for livestock, and other resources for potential commercial use. A weakness of this ownership pattern is the limits on the availability of private lands. Approximately eight percent of the county is in conservation easements or has a special designated land use. The amount of acreage in farmland decreased by approximately 26 percent between the 1992 and 1997 Censuses of Agriculture. Granite County has the second highest average market value of agricultural products sold per farm in 1997 among the study area counties.

The combination of forested mountains, rivers and broad open valleys create dramatic viewsheds that are scenic assets. The county’s wildlands contain a variety of wildlife that add to its western character and also provide recreational resources for area residents as well as visitors. These are strengths that contribute to the county’s quality of life and the attractiveness of the area for tourists and recreationists. The remoteness of some of the county limits development opportunities, but may help in some ways preserve the rural character of the county.

Services and Infrastructure. The provision of services and infrastructure are difficult with the very low population and small tax base of Granite County. The very limited availability of retail and medical services is perceived as a county weakness, both in terms of availability to residents and as a source for keeping dollars from leaking out of the county. County residents spend their money in Helena or Missoula. The county is trying to attract tourism, but it is possible for tourists to drive through Philipsburg and other parts of the county without even stopping for gasoline.

Attitudes to Change. The local cultures value stability, but it is the remembered stability of yesteryear—residents would like things to be as they were in the past, when timbering, mining, and agriculture were important contributors to the local economy. The positive value of this attitude to change is that it focuses attention on conditions that can reinforce the valued attributes and characteristics of local communities. The weakness of this view is that it may inhibit thinking about adaptation to new circumstances and new solutions to old problems.

Community Characteristics. The Granite County Natural Resource Land Use Plan describes the shared values of the community as independence, self-sufficiency, equality, and devotion to family, work, and the land. Local customs include a history of mining timbering, and agriculture.

Mutual Support. Mutual support and volunteering appear to be important values for residents of Granite County.

Cooperative Problem Solving. The citizens of the county have apparently identified a problem pertaining to regulation by state and federal activities that have affected local values and customs. In response, the county has adopted the Granite County Natural Resource Land Use Plan to ensure the rights of county in decisions made about federal and state lands within the county.

Leadership. Little information was collected about leadership, but information from secondary sources shows that leadership may be a strength in this county with the smallest population of the project counties.

Human Resources. The indicators of the human resources available to the county show a mixed picture. The census data regarding educational attainment shows that Granite County has excellent educational resources to draw on and an unemployment rate lower than the state. The home ownership in Granite County is around four percent higher than the home ownership in the state. However, the median household income of Granite County is \$5,000 a year less than the median household income in the state. The percent of related children under 18 in poverty is the highest of any of the project counties. Based on these statistics, residents would appear to have limited financial resources to meet basic needs and the higher rates of poverty and especially children poverty may require the use of social and communities recourses that might otherwise be used for community enhancement.

Economic Diversity. According to the most recent IMPLAN data (1999), the county is very dependent on “Wildland” related industrial sectors of the economy. “Wildland” related sectors appear to be a significant source of total industry output and employment for Granite County, accounting for approximately 33 percent of total industry output and approximately 16 percent of total employment. Timber industries accounted for about 28 percent of total industry output and 12 percent of employment for the county.

9 Jefferson County

Jefferson County was established in 1865. French fur traders and Lewis and Clark were among the first non-natives to visit the area; before their arrival, this was territory the Blackfeet, Crow, and other plains tribes resided in or traveled through hunting bison, elk, and deer. Lewis and Clark named the Jefferson River after President Jefferson, who supported their expedition to find the Northwest Passage. By the first census in 1870, the county population was 1,531, 6th among the 9 original counties. Many of the original settlers were attracted by rich mineral resources, including gold, silver, and other precious metals. Mining has remained an important part of the county's culture and economic history. Mines in the Boulder and Elkhorn districts produced gold and silver, and when the Northern Pacific Railway came to Montana, other ores were mined and shipped to Helena and Butte. The southern part of the county also produced gold in mines such as the Golden Sunlight, which was first operated in 1890 by Anthony Hedley. The Golden Sunlight continues to operate, although it is scheduled for closure in the near future, joining most other precious metal mining as part of the county's history rather than a clear part of its future.

Jefferson County identifies itself as the "undiscovered in-between" specifically between Butte and Bozeman or Butte and Helena. The southern boundary of this in-between county is the Jefferson River. In the western part of the county, the Continental Divide is part of the county boundary. To the southeast is Butte-Silver Bow County, to the west is Powell County, and to the northwest is Lewis and Clark County. Broadwater County is along the eastern county border, and in the southeast is Gallatin County. Helena to the north, Butte to the southeast, and Three Forks and Bozeman to the west certainly make this an "in-between county" that is at the junction of important population growth and residential development in southwestern Montana.

Mountains, valleys, and rivers describe the county's geography. The Boulder Batholith characterizes the western one third of Jefferson County where, as the name implies, there are large fields and outcropping of boulders. Rolling limestone hills are the topography of the southern part of the county and the northwestern corner. The Boulder Valley is an important agricultural area that is oriented north to south and extends for a major portion of the county's length. There are some 610 miles of streams and rivers in the county, including the Jefferson, Boulder, Big Pipestone Creek, Bison Creek, and Fish Creek. Whitetail Reservoir and Delmore Lake are the major bodies of still water. Geothermal resources also have a long history in the county, although these are presently used primarily for recreation and tourism purposes. For example, the Boulder Hot Springs near the town of Boulder is a well-known resort that capitalizes on these geothermal resources. Traditionally, Jefferson has been a resource-extraction county. Minerals, timber, ranching, and farming remain important, but new residents are attracted to the convenient location and its scenic beauty, both of which are influencing county growth and settlement.

9.1 Land Use and Ownership

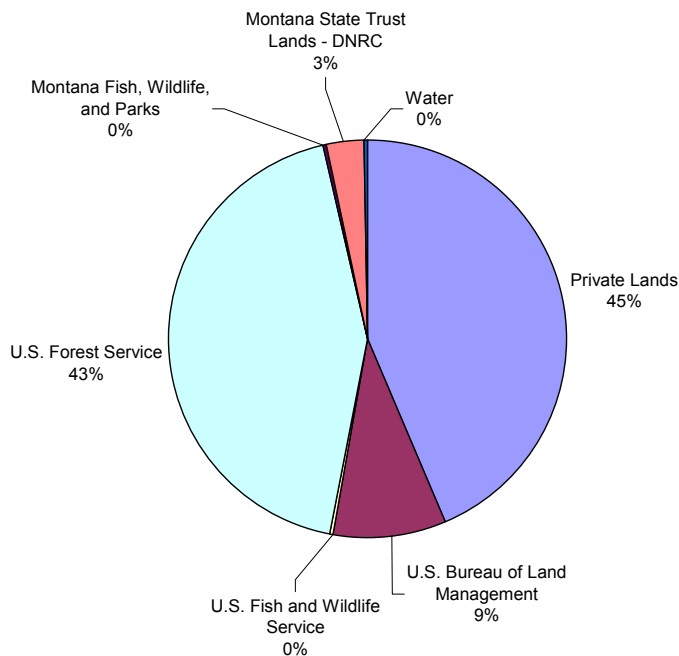
Jefferson County has a total land area of about 1,659 square miles with about 2 square miles in bodies of water. The population density is about six persons per square mile with the major population concentrations in several distinct geographic areas of the north, central, and southern parts of the county. In the north portion of the county are Montana City (population 2,094), Clancy (1,406), and Jefferson City (295). Boulder (1,300) and Basin (255) are the major population areas in the central county area. In the extreme southern portion of the county, Whitehall (1,044) is an important service center for southern Jefferson as well as residents of northern Madison County. Elk in

the western portion of the county and Cardwell in the south are communities of less than 200 persons.

9.1.1 Land Ownership

About 54 percent of county lands are privately owned. Of the remaining lands, the USFS, including the B-DNF, is the next largest owner, although portions of the Helena National Forest are located in the northeastern part of the county also. The B-DNF accounts for approximately 38 percent of the 460,000 acres of USFS lands in Jefferson County. The B-DNF lands are in the western portion of the county, primarily in the higher elevations. The BLM owns about 97,000 acres or 9 percent of lands in the county and the U.S. Fish and Wildlife Service about 1,600 acres.

Figure 9-1. Percentage of Land Ownership of Major Land Owners in Jefferson County



Source: Montana State Library (2001).
 Total area in Jefferson County is approximately 1,061,000 acres.

9.1.2 Types of Land Use

Data about land use types indicate that forestlands account for about 52 percent of the types of land uses. Grass and other rangelands account for more than 40 percent of land use types, and crops approximately 7 percent.

Table 9-1. Type of Land Use as a Percent of Total Land Area for Jefferson and Study Area Counties

| Type of Land Use | Jefferson | Project Area Counties |
|------------------|-----------|-----------------------|
| Evergreen Forest | 51.94 | 43.40 |
| Grass Rangeland | 29.32 | 17.32 |
| Crop/Pasture | 7.01 | 7.46 |
| Mixed Rangeland | 6.28 | 9.21 |
| Brush Rangeland | 4.69 | 17.55 |

Source: Montana Natural Resource Information System On Line Mapping, nris.state.mt.us/mapper/county/html, February 19,2002.

Note: Columns may not add up to 100 percent due to exclusion of land use categories accounting for less than one percent of total land area.

Jefferson County lands in conservation and special use designations are indicated in Table 9-2. Total lands in conservation and special use designation are just over one percent, the lowest amount of all the project counties.

Table 9-2. Jefferson County Lands in Conservation Easements or Special Use Designations

| Land Use | Acreage | Percent Total County Lands | Project Area Total | Percent Total Project Area |
|--|--------------|----------------------------|--------------------|----------------------------|
| Conservation Easement | | | | |
| Private Conservation | 3,514 | 0.33 | 260,038 | 1.35 |
| USFWS | 0 | 0 | 27,113 | 0 |
| %State Lands | 7,381 | .70 | 54899 | 13.44 |
| Conservation Total | 10,895 | 1.03 | 342,050 | |
| Special Use Designation | | | | |
| BLM Special | 0 | 0 | 30,953 | 0 |
| Research Natural Areas | 2,275 | .21 | 19,266 | 11.81 |
| Wilderness | 0 | 0.00 | 611,925 | 0 |
| Special Use Total | 2,275 | .21 | 662,144 | |
| Total of Conservation Easements and Special Use | 13.17 | 1.45 | 1,004,194 | 1.31 |

Source: Montana Natural Resource Information System On Line Mapping, nris.state.mt.us/mapper/county/html, February 19, 2002.

Some of the earliest settlers to Jefferson County established homesteads that developed into ranches in the Boulder Valley as well as north to Clancy and south to the area off Whitehall. Traditionally, this has been the most important agricultural area for Jefferson County. Today, ranching and farming is concentrated primarily in the Boulder Valley where family ranching remains an important lifestyle. In the years between 1987 and 1992, the number of farms decreased about 9 percent, and the acreage in farms decreased 3 percent, but the average farm size increased about 5 percent, suggesting some subdivision of lands during this period. Similarly, between 1992 and 1997, the number of farms increased about 11 percent and the acreage in farms shows only a small decrease, but the average farm size decreased about 14 percent, again suggesting some subdivision or other pressure on agricultural lands. The general pattern also holds for the market value of crops sold: an increase in the

1987 to 1992 interval and a significant decrease in the 1992 to 1997 period, although the overall value of crops sold from 1987 to 1997 shows about a six percent increase.

Table 9-3. Census of Agriculture for Jefferson County, 1987, 1992, and 1997

| Farm, Farm Size, and Acreage And Market Value of Crops Sold | 1987 | 1992 | 1997 | Percent Change 1987-1997 |
|--|-------------|-------------|-------------|-------------------------------------|
| Number of Farms | 256 | 236 | 266 | 3.7 |
| Full Time Agriculture | 126 | 125 | 128 | 1.56 |
| Acreage in Farms | 378,805 | 367,482 | 364,153 | -4.02 |
| Average Size Farms (acres) | 1,480 | 1,557 | 1,369 | -8.11 |
| Market Value Crops Sold Average/ Farm | 32,274 | 43,228 | 32,198 | -.24 |
| Market Value of Ag Products Sold | 6,206,000 | 7,763,000 | 6,605,000 | 6.04 |

Source: 1997 Census of Agriculture County Profile, United States Department of Agriculture, Montana Agricultural Statistics Service.

9.2 Demographic Characteristics and Trends

Jefferson County is primarily a rural county, although it has four communities with populations of more than a thousand, as indicated in Table 9-4. The location of the county's major communities also suggests three major social divisions: Clancy and Montana City in the north, Boulder in the central region, and Whitehall in the south.

The county has some distinct demographic characteristics and trends that influence its social and cultural character, including recent population growth and changes. Historical and recent population trends as well as the compositions of the county's population are briefly described in this section.

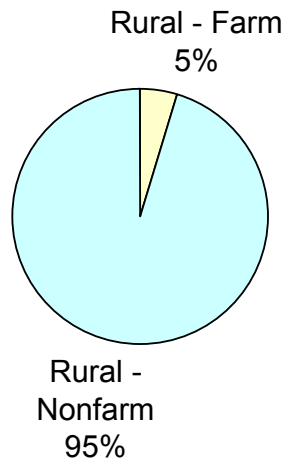
Table 9-4. Population Centers in Jefferson County

| Place | Population | Percent of County Population | Type |
|-------------------------------------|-------------------|---|---------------------------|
| Jefferson County^e | 10,049 | | |
| Basin | 255 | 2.5 | Census Designated Place |
| Boulder | 1,300 | 12.9 | Incorporated Place (town) |
| Cardwell | 40 | <1 | Census Designated Place |
| Clancy | 1,406 | 14.0 | Census Designated Place |
| Jefferson City | 295 | 2.9 | Census Designated Place |
| Montana City | 2,094 | 20.8 | Census Designated Place |
| Whitehall | 1,044 | 10.4 | Incorporated Place (town) |

Source: U.S. Census Bureau, Census 2000.

The Census Bureau uses an urban-rural typology to classify land as rural-nonfarm, rural farm, urban, or urban-cluster as shown in Figure 5-2. Using this typology, approximately 95 percent of the county is classified as rural nonfarm and 5 percent as rural-nonfarm..

Figure 9-2. Population in Rural and Urban Areas of Jefferson County

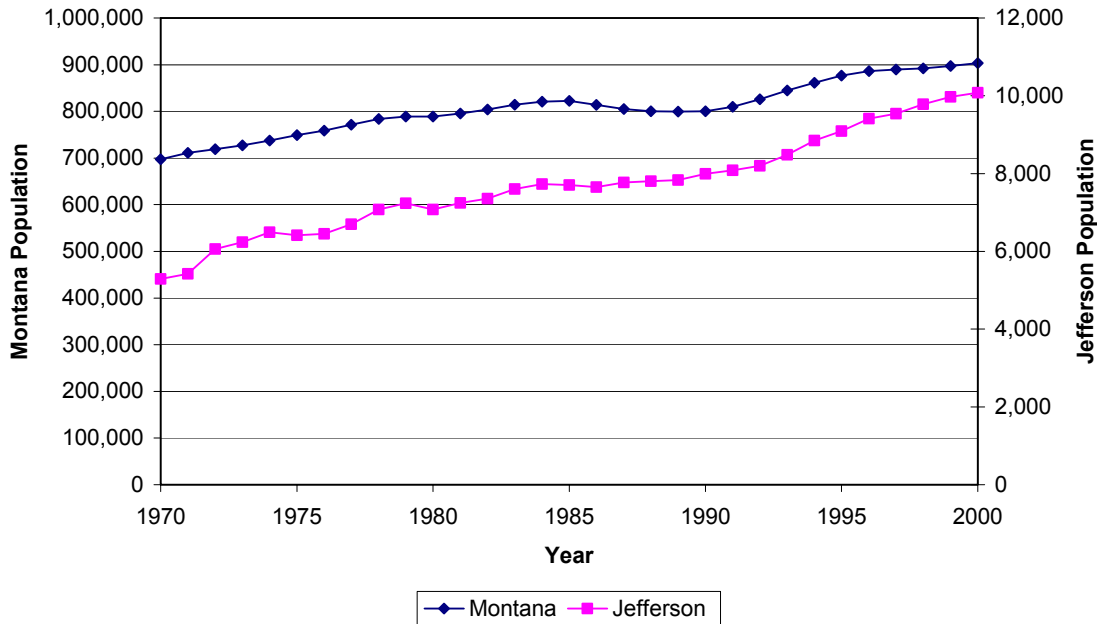


Source: U.S. Census Bureau, Census 2000.

9.2.1 Population Trends

Census 2000 shows Jefferson County's total population is approximately 1,049 persons, ranking second in overall population among the seven counties, and comprising about 13 percent of the total population of all study counties (80,135). In the 30-year interval between 1970 and 2000, the population grew almost 92 percent, from 5,238 in 1970 to 10,049 in 2000. During the same interval, the total project area population decreased about 8 percent while the state population increased about 30 percent, and the United States about 40 percent. From 1990 to 2000, the county population increased about 27 percent, and the total project area population increased about 6 percent, while the state's population increased 12.9 percent. These population trends indicate that Jefferson County is among the fastest growing counties in the project area, and one of the fastest growing counties in Montana. Interview data suggest that this growth is occurring in the communities that are within commuting distance of Helena and also in the south county near Whitehall.

Figure 9-3. Montana and Jefferson County Population, 1970-2000



Source: Bureau of Economic Analysis, Regional Accounts Data, <http://www.bea.doc.gov/bea/regional/reis/> accessed on September 19, 2002.

Table 9-5. Jefferson County Historic Population Changes 1890-2000

| County | Year | | | | | | | | | | | |
|--------------------|--------|---------|--------|---------|---------|--------|---------|--------|--------|--------|--------|--------|
| | 1890 | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | 2000 |
| Jefferson | 6,026 | 5,330 | 5,601 | 5,203 | 4,133 | 4,664 | 4,014 | 4,297 | 5,238 | 7,029 | 7,939 | 10,049 |
| Pop. Change | - | -696 | 271 | -398 | -1,070 | 531 | -650 | 283 | 941 | 1,791 | 910 | 2,110 |
| Percent Change | - | -11.55% | 5.08% | -7.11% | -20.57% | 12.85% | -13.94% | 7.05% | 21.90% | 34.19% | 12.95% | 26.58% |
| Total Project Area | 54,272 | 87,958 | 97,958 | 106,779 | 99,587 | 95,288 | 90,732 | 91,912 | 85,469 | 81,031 | 75,817 | 80,135 |
| Pop Change | - | 33,686 | 10,000 | 8,821 | -7,192 | -4,299 | -4,556 | 1,180 | -6,443 | -4,438 | -5,214 | 4,318 |
| Percent Change | - | 62.07% | 11.37% | 9.00% | -6.74% | -4.32% | -4.78% | 1.30% | -7.01% | -5.19% | -6.43% | 5.70% |

Source: <http://ceic.commerce.state.mt.us/Demog/historic/Censuscty18902000.htm>.

The sources of population change in Jefferson County for the time between April 1, 2000 and July 1, 2001 indicates that in-migration accounts for the major sources of population growth. This is a limited amount of data, but it appears consistent with the interpretations of local residents about the sources of growth in county population, especially in those areas where residents can commute to either Butte or Helena.

**Table 9-6. Components of Population Change for Montana and Jefferson County
April 1 2000 to July 1, 2001**

| Place | Births | Deaths | Natural Increase (Births- Deaths) | Net International Migration | Net Internal Migration | Numeric Population Change | April 1, 2000 Population | July 1, 2001 Population |
|-----------|--------|--------|---|-----------------------------------|------------------------------|---------------------------------|-----------------------------|-------------------------------|
| Montana | 13,320 | 10,165 | 3,155 | 470 | -1,377 | 2,238 | 902,195 | 904,433 |
| Jefferson | 106 | 112 | -6 | 2 | 351 | 356 | 10,049 | 10,405 |

Source: Population Division, U.S. Census Bureau Released April 29, 2002

Note: Net internal migration is the difference between in-migration and out-migration.

9.2.2 Age and Gender

Age structure, gender, and ethnicity are the important components of population composition considered here. For the 2000 census year, the county shows a slightly higher median age than the state as a whole, a higher ratio of males to females in the 18 and over age cohort, and a higher percentage of population in the 45 to 64 age cohort.

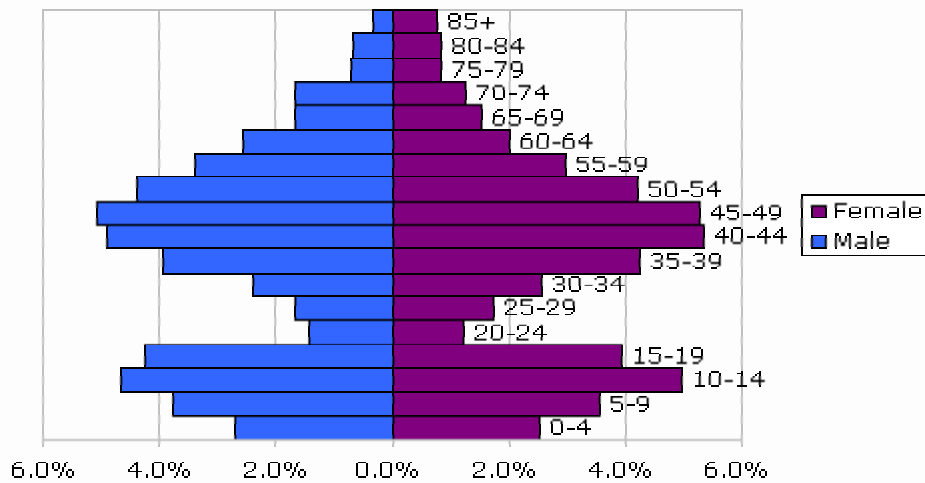
Table 9-7. Age and Gender, 2000

| Geographic Area | Total Population | Percent of Total Population | | | | | 65 Years and Over | Median Age (Years) | Males per 100 Females | |
|-----------------|------------------|-----------------------------|----------------|----------------|----------------|-------------------|-------------------|--------------------|-----------------------|-------------------|
| | | Under 18 Years | 18 to 24 Years | 25 to 44 Years | 45 to 64 Years | 18 years and Over | | | All Ages | 18 years and Over |
| State Total | 902,195 | 25.5 | 9.5 | 27.2 | 24.4 | 13.4 | 37.5 | 99.3 | 97.2 | |
| Jefferson | 10,049 | 27.8 | 5.2 | 26.8 | 29.9 | 10.3 | 40.2 | 100.8 | 100.4 | |

Source: U.S. Census Bureau Census 2000, Summary File 1, Matrices PCT12 and P13.

The age and gender composition of the county is depicted in Figure 9-4, and shows that about 50 percent of the population is female and the overall percentage of females increases in the over 54 age group.

Figure 9-4. Age Distribution, 2000



Source: [Census 2000](#) analyzed by the [Social Science Data Analysis Network \(SSDAN\)](#).

The trend in three age cohorts for the 1990 to 2000 census years indicates no remarkable characteristics in comparison to the rest of Montana other than an increase in the under 18 group and a decrease in the 65 and over cohort.

Table 9-8. Changes in Age Structure of Three Cohort Groups for Montana and Jefferson County 1990 and 2000

| Location | Under 18 Years | 18 to 65 Years | 65 and Years and Over |
|------------------|----------------|----------------|-----------------------|
| Montana | | | |
| 1990 | 27.8 | 58.9 | 13.3 |
| 2000 | 25.5 | 61.1 | 13.4 |
| Jefferson | | | |
| 1990 | 29.4 | 60.1 | 10.5 |
| 2000 | 27.8 | 61.9 | 10.3 |

Source: U.S. Census Bureau, Census 2000 and 1990 Census.

9.2.3 Race

Jefferson County also shows a relatively homogenous racial composition, with 95.17 percent “white.” As with other rural areas, there has been a slight decline in the “white” population. In the years from 1980 to 2000, the “white” population declined 1.83 percent and the Hispanic population increased from .98 percent to 1.48 percent.

Table 9-9. Race Distribution for Jefferson County 1980, 1990, and 2000

| Race | 1980 | | 1990 | | 2000 | |
|--------------------------------|--------|---------|--------|---------|--------|---------|
| | Number | Percent | Number | Percent | Number | Percent |
| Total Population | 7,029 | 100.00 | 7,939 | 100.00 | 10,049 | 100.00 |
| Total Hispanics | 69 | 0.98 | 83 | 1.05 | 149 | 1.48 |
| White* | 6,818 | 97.00 | 7,715 | 97.18 | 9,564 | 95.17 |
| Black* | 2 | 0.03 | 4 | 0.05 | 13 | 0.13 |
| American Indian and AK Native* | 115 | 1.64 | 117 | 1.47 | 119 | 1.18 |
| Asian* | 23 | 0.33 | 15 | 0.19 | 42 | 0.42 |
| Hawaiian and Pacific Islander* | - | - | - | - | 6 | 0.06 |
| Other* | 2 | 0.03 | 5 | 0.06 | 4 | 0.04 |
| Two or More Races* | - | - | - | - | 152 | 1.51 |

Source: [Census 2000](#) analyzed by the [Social Science Data Analysis Network \(SSDAN\)](#).

* Non-Hispanic only; in 1980 and 1990 “Asians” includes Hawaiians and Pacific Islanders.

9.2.4 Housing and Households

The average household size in Jefferson County is 2.6 persons, and the average family size is 3 persons, almost identical to the state of Montana as a whole. All project counties show similar household characteristics, although Jefferson is distinguished by the highest home ownership rate, the third lowest percentage of nonfamily households, and the second highest percentage of households with persons in the under age 18 cohort.

Table 9-10. Housing Units and Households for Study Area Counties, 2000

| Characteristic | Jefferson | Montana |
|---|-----------|---------|
| Population | 10,049 | 902,195 |
| Homeownership Rate | 83.2% | 69.1% |
| Households | 3,747 | 358,667 |
| Nonfamily households | 901 | 121,260 |
| Households with individuals 65 years and over | 735 | 83,982 |
| Households with persons under 18 | 1,402 | 119,550 |
| Average Persons per Household | 2.6 | 2.5 |
| Average Family Size | 3.0 | 3.0 |

Source: U.S. Census Bureau, Census 2000.

Table 9-11. Jefferson County Household Types, 1990-2000

| Household Type | 1990 | | 2000 | |
|--------------------------|--------------|--------------|--------------|--------------|
| | Number | Percent | Number | Percent |
| Total Households | 2,867 | 100.0 | 3,747 | 100.0 |
| Married Couple | 1,909 | 66.6 | 2,515 | 67.1 |
| With Children* | 957 | 33.4 | 1,122 | 29.9 |
| Without Children* | 952 | 33.2 | 1,393 | 37.2 |
| Female-Headed | 186 | 6.5 | 222 | 5.9 |
| With Children* | 119 | 4.2 | 138 | 3.7 |
| Without Children* | 67 | 2.3 | 84 | 2.2 |
| Male-Headed | 73 | 2.5 | 109 | 2.9 |
| With Children* | 44 | 1.5 | 73 | 1.9 |
| Without Children* | 29 | 1.0 | 36 | 1.0 |
| Non-Family | 699 | 24.4 | 901 | 24.0 |
| Householder Living Alone | 614 | 21.4 | 758 | 20.2 |
| Two or More Persons | 85 | 3.0 | 143 | 3.8 |

Source: [Census 2000](#) analyzed by the [Social Science Data Analysis Network \(SSDAN\)](#).

* For the purposes of this table, “children” are people under age 18.

9.3 Economic Conditions and Trends

Whitehall is looking at putting in what they call Liberty Place. It is not a big thing, but they will be decent jobs. I think they are talking about 12 jobs and everyone is very excited about it. I guess that tells you something when the county is excited about getting 12 new jobs. It tells you a lot; it is going to be a hard time for some folks in the future.⁶⁶

⁶⁶ Italics indicate a statement from project participants that were recorded on tape or written in field notes. Exact word for word transcription did not occur in all cases. However, these statements indicate the meaning of what was said. The process of writing field notes and making transcriptions from tapes often results in

Historically, mining and ranching have been among the most important economic components of the Jefferson County economy. Mining remains important, although the Golden Sunlight Mine is scheduled to close in the immediate future and this may have important consequences for the economic vulnerability of the county. Ranching is also an important part of the county economy, although the 1997 agricultural census shows that the market value of products sold declined from 1992 levels and the market value of agricultural products sold per farm also declined from 1992 levels. However, in terms of the value of export goods sold, ranching products continue to be an important economic asset. As with most other project counties, government is a major employer with an important contribution to the total county economy. The remainder of this section summarizes readily available information about current economic characteristics, including economic sectors, employment, and income. This information should be considered as a supplement to documents that thoroughly analyze the economic conditions and potential of the county, specifically *Targeted Economic Development for Local Communities: Targeted Industry Analysis for Jefferson County* and a related document: *Targeted Economic Development: Park, Jefferson, and Deer Lodge Counties, Montana Part I*. Each of these documents was produced by or in cooperation with the Jefferson County Extension Office.

9.3.1 Economic Sectors and Diversity

This section provides information on the diversity of the economy of Jefferson County from two perspectives, both based on 1999 IMPLAN⁶⁷ Model Year Data for the county. A more detailed description of input-output models and IMPLAN is located in Chapter 4 of this report. One perspective looks at the contributions to the local economy made by industrial sectors that are dependent on natural resources. The other perspective presents value-added estimates for the contributions of different sectors of the county economy.

Table 9-12 shows an updated version of the model that appears in the USFS Region 1 Economic Library. The same industry sectors were used in the update as are found in the USFS 1996 model. “Wildland” related sectors appear to be a significant source of total industry output for Jefferson County. Grazing and timber industries each account for less than one percent of total industry output and employment. However, mineral industries account for approximately 26 percent of total industry output, and just over 9 percent of total industry employment.

approximations of what was said that remain true to the meaning of the statement. Quotations from published or other sources are indicated by indentations but not italics.

⁶⁷ IMPLAN Pro™ is Social Accounting and Impact Analysis software; produced by MIG, Incorporated

Table 9-12. Direct Effects of "Wildland" Related Sectors for Jefferson County, Montana, 1999

| | Industry Description | Industry Output (Millions of \$) | Industry Output as % of County Total | Employment | Industry Employment as % of County Total | Labor Income (Millions of \$) | Average Laborer Income (\$/Job) |
|---------------------------|--|----------------------------------|--------------------------------------|------------|--|-------------------------------|---------------------------------|
| Timber Industries | | | | | | | |
| 24 | Forestry Products | 0.2 | 0.1 | 3 | 0.1 | 0.0 | 7,354 |
| 26 | Agricultural, Forestry, Fishery Services | 0.5 | 0.1 | 25 | 0.6 | 0.2 | 9,118 |
| 133 | Logging Camps and Logging Contractors | 0.5 | 0.2 | 4 | 0.1 | 0.1 | 22,202 |
| 134 | Sawmills and Planing Mills, General | 1.1 | 0.3 | 6 | 0.1 | 0.2 | 39,217 |
| | Total | 2.2 | 0.7 | 38 | 0.9 | 0.6 | 14,737 |
| Grazing Industries | | | | | | | |
| 4 | Range Fed Cattle | 2.4 | 0.7 | 39 | 0.9 | 0.8 | 21,373 |
| 6 | Sheep, Lambs and Goats | 0.1 | 0.0 | 5 | 0.1 | 0.0 | 5,672 |
| 26 | Agricultural, Forestry, Fishery Services | 0.5 | 0.1 | 25 | 0.6 | 0.2 | 9,118 |
| | Total | 3.0 | 0.9 | 69 | 1.7 | 1.1 | 15,855 |
| Mineral Industries | | | | | | | |
| 31 | Gold Ores | 86.3 | 25.9 | 378 | 9.2 | 15.3 | 40,478 |
| 41 | Sand and Gravel | 0.7 | 0.2 | 5 | 0.1 | 0.3 | 52,313 |
| | Total | 86.9 | 26.1 | 383 | 9.3 | 15.6 | 40,689 |

Source: Table Based on Jefferson County 1999 IMPLAN Model Year Data.

Note: NAIC code categories reporting no output were not included in the table.

Agriculture, mining, and manufacturing are important basic industries that usually bring monies into local economies. Based on 1999 IMPAN data, these industries account for about 38 percent of the total county value-added. The county has the highest percentage of mining production in the project area, with manufacturing the next largest basic sector (Table 9-13). Cement production is a significant component of this manufacturing sector. Government accounts for 18 percent, which is similar to the aggregate number for all project counties and comparable to the state as a whole. Service industries are substantially less as are FIRE (finance, insurance, and real estate) and trade, although construction is similar to Montana as a whole, and slightly more than the aggregate number for other project counties.

Table 9-13. Value-Added by Basic Industries as Percentage of Total Value-Added, 1999

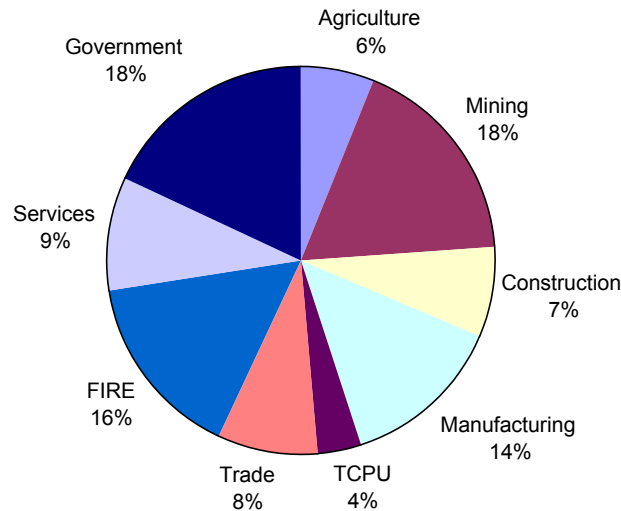
| Categories | Jefferson County | Study Area | Montana |
|---------------|------------------|------------|---------|
| Agriculture | 6 | 4 | 17 |
| Mining | 18 | 7 | 2 |
| Manufacturing | 14 | 6 | 7 |
| Government | 18 | 17 | 17 |
| Services | 9 | 18 | 21 |
| FIRE | 16 | 11 | 14 |
| TRADE | 8 | 14 | 18 |
| TCPU | 4 | 18 | 10 |
| Construction | 7 | 5 | 6 |

Source: MIG Group, Inc., IMPLAN Model Output, based on county 1999 IMPLAN Model.

Note: TCPU=transportation, communications, and public utilities

FIRE= Finance, Insurance, and Real Estate

Figure 9-5. Value-Added by Basic Industries in Jefferson County, as Percent of Total Value-Added, 1999



Source: MIG Group, Inc., IMPLAN Model Output, based on county 1999 IMPLAN Model.

9.3.2 Employment and Unemployment

Mining operations account for two of the top ten county employers. Other important employers include the Ash Grove Cement operation, and various retail and other service-related businesses.

Table 9-14. Top Ten Private Employers in Jefferson County (in alphabetical order)

Ash Grove Cement Company
 Aspen Youth Alternatives
 Evergreen Clancy Health Rehab. Center
 Golden Sunlight Mine
 Harlow's School Bus Service
 Jefferson IGA
 Montana City Grill Saloon
 Montana City Store
 Montana Tunnels Mining
 Peace Valley Hot Springs

Source: Montana Department of Commerce, Census and Economic Information Center. Available at <http://ceic.commerce.state.mt.us/>.

In comparison to other project counties, the percent of persons in the labor force is higher than the aggregate numbers for the study area. Jefferson also has a lower percentage of persons not in the labor force, higher numbers of persons employed, and lower numbers of persons unemployed. From 1997 to 2001, the unemployment rate has remained relatively flat (4.4 percent in 1997 and 2001), although during that interval the rate did vary some .3 percent up and down. An important characteristic of Jefferson County employment is the place of employment. The Jefferson County Comprehensive Plan indicates that employment in nearby municipalities such as Helena and Butte is an important economic characteristic that links the county's economic well-being to that of these nearby municipalities.

Table 9-15. Population 16 Years and Older in the Labor Force, Employed, and Unemployed, Census 2000

| Area | Population 16 Years and Older | | | Population Not in Labor Force | | | Employed | | Unemployed | |
|------------|-------------------------------|------------|-------|-------------------------------|----------|----------|----------|------------|------------|--|
| | Population | Population | % in | Population | % Not in | No. | % | No. | % | |
| | Years | in Labor | Labor | Not in | Labor | Employed | Employed | Unemployed | Unemployed | |
| | and Older | force | Force | Force | Force | | | | | |
| Montana | 701,168 | 458,306 | 65.4 | 242,862 | 34.6 | 425,977 | 60.8 | 28,710 | 4.1 | |
| Study Area | 63,566 | 38,516 | 60.6 | 25,050 | 39.4 | 35,974 | 56.6 | 3,238 | 5.1 | |
| Jefferson | 7,665 | 5,183 | 67.6 | 2,482 | 32.4 | 4,895 | 63.9 | 265 | 3.5 | |

Source: U.S. Census Bureau, Census 2000.

Table 9-16. Annual Average Labor Force for Jefferson County and Montana

| | 2000 | 1999 | 1998 | 1997 |
|-----------------------|---------|---------|---------|---------|
| Montana | | | | |
| Civilian Labor Force | 479,132 | 474,006 | 466,450 | 454,614 |
| Employment | 455,608 | 449,361 | 440,248 | 430,261 |
| Unemployment | 23,524 | 24,645 | 26,202 | 24,353 |
| Unemployment Rate (%) | 4.9 | 5.2 | 5.6 | 5.4 |
| Jefferson | | | | |
| Civilian Labor Force | 5,260 | 5,145 | 5,087 | 4,915 |
| Employment | 4,993 | 4,914 | 4,842 | 4,697 |
| Unemployment | 267 | 231 | 245 | 218 |
| Unemployment Rate (%) | 5.1 | 4.5 | 4.8 | 4.4 |

Source: Regional Economic Information System.

9.3.3 Income

Personal, per capita, and household incomes are depicted in the tables and charts for this description of the income characteristics for Jefferson County. The county has the highest total personal income of all Montana counties. Additionally, in comparison to other project area counties, Jefferson has the highest percentage of personal income from earnings (70 percent) and the lowest percentage from transfer payments. In comparison to all of Montana, Jefferson County is also above the state average for earnings as a component of personal income and lower than the state average for transfer payments. Per capita income in 2000 was the highest of project area counties and fourth in the state. Similarly, in the 1990 to 1999 interval, Jefferson led all other counties in the percentage of increase in both personal and per capita income. Jefferson also has the highest median household income in the state—\$41,506—about 125 percent of the state average of \$33,204.

Table 9-17. Per Capita Income, Total Personal Income, and Components for Montana and Jefferson County, 1999 and 2000

| Place | Per Capita Personal Income | | Total Personal Income | | Components of Total Personal Income | | |
|------------------|----------------------------|---------|-----------------------|---------|-------------------------------------|-----------------------------------|-----------------------|
| | (\$) | Rank | (\$1,000s) | Rank | Earnings (%) | Dividends, Interest, and Rent (%) | Transfer Payments (%) |
| Montana | | | | | | | |
| 2000 | 22,518 | 47 (US) | 20,336,883 | 46 (US) | 61.2 | 22.7 | 16.1 |
| Jefferson | | | | | | | |
| 2000 | 25,120 | 4 | 253,314 | 14 | 70.0 | 17.6 | 12.4 |

Source: Regional Economic Information System, Bureau of Economic Analysis, Bearfacts.

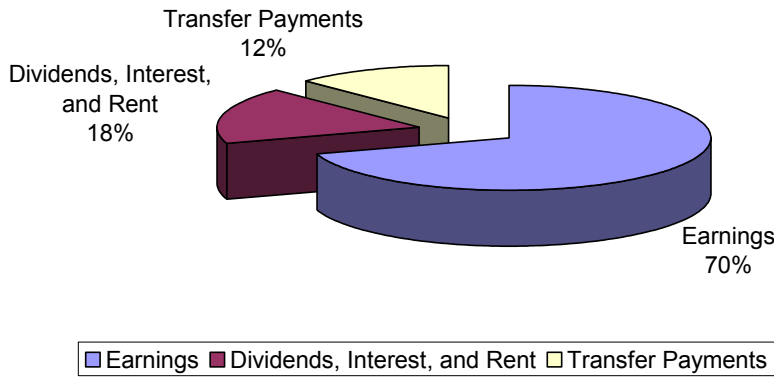
Note: Montana contains 56 counties.

Table 9-18. Population, Total Personal Income, and Per Capita Income for Jefferson County, Study Group, and State of Montana, 1990 and 1999

| Characteristic | Jefferson | Study Group | State of Montana |
|----------------------------------|-----------|-------------|------------------|
| Population | | | |
| 1990 | 7,999 | 75,812 | 799,824 |
| 1999 | 10,367 | 79,366 | 882,779 |
| Percent Change | 30% | 5% | 10% |
| Personal Income (\$1000s) | | | |
| 1990 | 137,345 | 1,127,650 | 12,416,204 |
| 1999 | 239,596 | 1,666,291 | 19,418,790 |
| Percent Change | 74% | 48% | 56% |
| Per Capita Income | | | |
| 1990 | 17,170 | 14,874 | 15,524 |
| 1999 | 23,111 | 21,373 | 21,997 |
| Percent Change | 35% | 43% | 42% |

Source: Regional Economic Information System 1969-99, U.S. Department Of Commerce, Economics and Statistics Administration, Bureau of Economic Analysis, Regional Economic Measurement Division, CD-ROW RCN-0279,

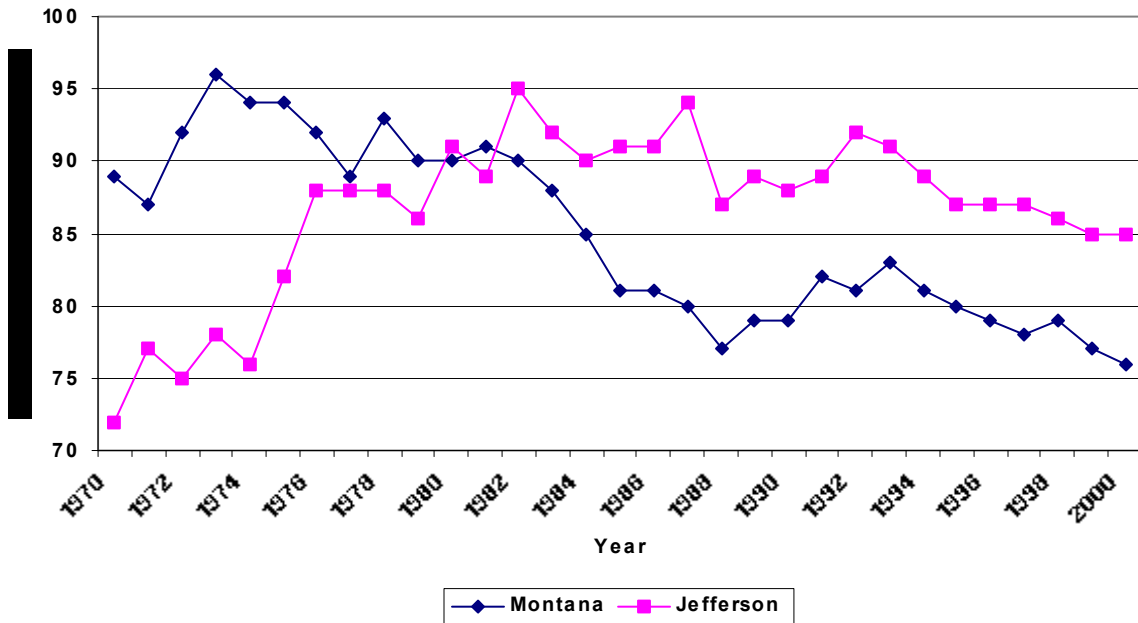
Figure 9-6. Components of Total Personal Income for Jefferson County, 2000



Source: Regional Economic Information System, Bureau of Economic Analysis, Bearfacts.

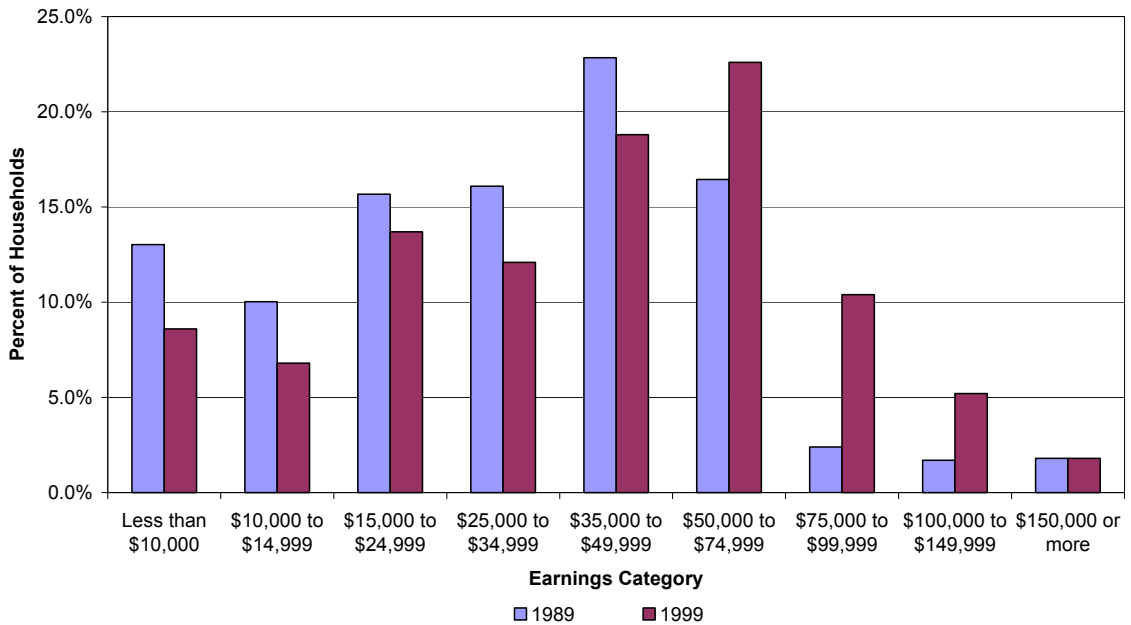
Figure 9-7 shows per capita personal income as a percent of the United States per capita income for Montana and Jefferson County, 1970 through 2000. Figure 9-8 shows household income for Jefferson County for 1989 and 1999.

Figure 9-7. Per Capita Personal Income as Percent of United States Total for Montana and Jefferson County, 1970-2000



Source: Bureau of Economic Analysis Regional Accounts at <http://www.bea.doc.gov/bea/regional/reis/>.

Figure 9-8. Household Income for Jefferson County, 1989 and 1999



Source: U.S. Census Bureau, 1990 Census and Census 2000.

9.4 Community Resources

The data presented about population, income, and employment indicates that Jefferson County has different socioeconomic conditions than other project counties. It has the highest percentage of population change from 1990 to 2000, the highest income levels, and relatively high employment rates. Recent growth is a noteworthy factor affecting the community resources in this county. As one resident commented:

As I look out at the future and anticipate what will happen, it is growth. Right now growth is the biggest thing affecting us. There are new people moving in down around Whitehall and up around Montana City too. Sometimes they bring their city ways with them and local people don't care too much for that. But it remains to be seen if they are a catalyst for good change or if we just become a suburb like where all the newcomers came from.

Jefferson County is in the process of responding to change and anticipating what is in store for the future. In this section, some of the prominent characteristics of these communities that may affect the change process are described.

9.4.1 Infrastructure and Community Services

Community infrastructure and services are summarized in this section. County infrastructure influences economic development as well as social well-being and community quality of life. Community services indicate the type of resources residents have available to meet basic and other human needs that contribute to personal well-being and community quality of life.

As the “in-between” county, Jefferson has access to major interstate highways that connect the county to other parts of Montana. I-90 travels east-west along the southern border of the county and Interstate 15 connects Helena and Butte through the north-northwest portions of the county. Highway 69 connects the southern portion of the county with Boulder and points north. Rail lines once ran east and west from Whitehall and north and south connecting Helena and Butte through Clancy and Jefferson City. Today, rail service is available in Whitehall and Montana City, but not in the remainder of the county, although track remains in some areas of the county that may have development potential for the future. However, the proximity to the major north-south and east-west interstate routes in Montana provides the county with important transportation resources. These resources allow fast access to the three major sections of the county by commercial freight carriers and package and parcel services. These same routes also connect all portions of the county to commercial air service readily available in Butte, Helena, and Belgrade. There is also a local airport near Boulder that is owned by Boulder and Jefferson County, and a private airport near Whitehall as well as a heliport used for life-flight and other helicopter services. Both Trailways and Greyhound operate commercial bus services with stops in both Boulder and Whitehall.

Other major components of county services and infrastructure include the following:

- Elementary schools are located in Basin, Boulder, Cardwell, Clancy, Montana City, and Whitehall. High schools are located in both Whitehall and Boulder. Libraries exist in all three major geographic regions of the county: Whitehall, Boulder, and a new satellite location in Clancy.
- Volunteer fire departments are the primary source of fire protection services; and the Sheriff's office is located in Boulder with a deputy satellite office in Whitehall. Patrol services are available throughout the county.

- The county solid waste department operates two class three land fills (inert materials only) in Boulder and Whitehall. There are seven collection stations throughout the county, including Montana City, Jefferson City, and Clancy. Private waste collection services exist for front door pickup. Class three wastes are shipped to Helena, Butte, Logan, or deposited in a privately operated facility within the county. Recycling services operate in cooperation with the Headwaters agency.
- Electricity and natural gas are supplied by two commercial entities: Northwest Power and the Vigilante Electric Coop, which services Whitehall and other southern parts of the county.
- Both Whitehall and Boulder have municipal water supplies. Rural areas of the county rely primarily on wells for drinking water
- Communications resources include two newspapers, one printed in Whitehall and the other in Clancy. U.S. West and Qwest provide landline telephone services. Cell phone services are provided by several carriers including Cell One and Three Rivers. However, many parts of the county do not have cell service. Fiber optic cable exists in the county, but it is not yet operational. Most internet access is through dial up services with only limited broadband access.
- Whitehall offers the most retail services within the county, including a feed store that serves ranchers in the Boulder Valley. Boulder has grocery stores, some limited retail clothing stores, a hardware store, restaurants, and other limited retail services. Residents often shop in Butte or Helena for major purchases and other retail services. In the winter months residents of Whitehall can be relatively self-contained for retail services.
- Physician services as well as a pharmacy are available in Whitehall. Boulder has a physician but no pharmacy, and many residents travel to either Butte or Helena for medical care and pharmacy services. Other health care resources are indicated in Table 9-19.

Table 9-19. Health Resource Assessment for Jefferson County

| Facility Type | Description | | | |
|---|---|----------------------|-----|--------|
| Local Hospitals or Medical Assistance Facilities (MAF) (Type of facility and number of beds) | 0 hospital(s), 0 MAF(s); 0 beds | | | |
| Rural Health Clinics (RHC), Federally Qualified Health Centers (FQHC), IHS and Tribal Health Facilities (Number and type) | 1 RHCs, 0 FQHCs, 0 IHS/Tribal Health Facilities | | | |
| Availability of 911 and Advanced Life Support Services | 911 | Adv. Life Support | | |
| | Yes | 1 Service: Whitehall | | |
| Nursing Homes (Number of facilities and beds) | 2 / 177 beds | | | |
| Aging Services Licensed (Number of Personal Care [PC], Adult Foster Care [AFC], and Retirement Home [RH] Licenses) | PC | AFC | RH | |
| | 2 | 2 | 0 | |
| Home Care Services Licensed (Number of Home Health Agency [HHA] and Hospice Licenses) | HHA | Hospice | | |
| | 0 | 0 | | |
| Public Health Resources (Number of Full-time Equivalent Public Health Nurses, Public Health Sanitarians [PHS], Registered Dietitians [RD], and Health Educators [HlthEd]) | Nurse | PHS | RD | HlthEd |
| | 2.0 | 0.1 | 0.0 | 0.0 |
| Primary Care Provider Resources (Number of doctors [MDs and DOs7], Nurse Midwives [NMW], Nurse Practitioners [NP], and Physician's Assistants [PA]) | MD/DO | NMW | NP | PA |
| | 6 | 1 | 5 | 2 |
| Health Care Provider Shortage Status (Federal Health Professional Shortage Area [Fed. HPSA], State HPSA, Medically Underserved Area [MUA], or Medically Underserved Population [MUP]) | Federal HPSA - None; State HPSA - Yes; MUAs - None; MUPs - None | | | |

Source: Montana State Department of Public Health and Human Services.

There are three elected county commissioners for Jefferson County. District One represents Whitehall, Cardwell and major portions of the Boulder valley; District Two represents Boulder, Basin, and other areas in the western portion of the county; and District Three, the northeastern sections of the county. Other elected officials are county attorney/public administrator; sheriff; clerk/recorder; clerk of the court; superintendent of schools; treasurer; justice of the peace; and district court judge. The county has the following administrative departments:

- Solid waste
- Road Maintenance
- Weed Control
- Planning
- Information Technology
- Sanitation
- Public Health
- Probation
- Human and Family Services

The county has an extension agent based in Whitehall that specializes in economic development. He also performs functions for the Jefferson County Development organization and has important functions as a catalyst for local leadership and development activities.

The two incorporated communities are Boulder and Whitehall, and each of these has fire, police, water and sewer, parks and recreation, roads, and other basic municipal services.

9.4.2 Community Characteristics

A county resident made the following observation:

We are different than most of the other counties around other than Madison. Both of us don't have a bigger city—a base city so to speak. We are a rural county in population and culture. We are a county with three different parts that are demographically and socially distinct.

Another resident observed:

This is mostly a rural county, but you have the urban sprawl in the Montana City area and there are the rural town centers in Boulder and Whitehall. The town centers pull people together. In those areas they have a city council, a mayor, and a town hall. The rural areas look to the town centers for services. There isn't anything like that in the Montana City area. They are only seven miles from Helena. They are more oriented to there than the county.

Knowledgeable local observers suggest that the county has three distinct community groupings:

- The north county: Montana City, Jefferson City, and Clancy
- The central county: Boulder and Basin
- The south county: Whitehall and Cardwell

These three geographic groupings also appear to distinguish communities with different interests and lifestyles:

The Montana City, Jefferson City area is mostly people that work in Helena. They like living here (in the county) because of the amenities and the recreational and lifestyle opportunities it offers. But they are oriented to Helena. They don't participate much in the county. They just live here, that is all they do.

The central region is described as having a different lifestyle and culture:

People in the Boulder area, they rely on themselves because they have to. People particularly in the Basin area are the back-to-earth types. They enjoy nature and they live there because they want the culture, and it is an artist community.

Basin and Boulder are lumped together; they share a lot of culture and ways of doing things. They are older people too, anyway a little older than Whitehall and they have a strong sense of community. There also isn't much in the way of housing in Boulder. You might find a place to rent, but housing is limited. And people here (in Boulder) tend to go to both ends of the county. They go, to Butte or to Helena when they need to shop or do their market runs.

The Whitehall-Cardwell area in the very south region of the county is described in terms of its amenities, sociability, and its mining and agricultural heritage:

Whitehall has been a mining town, dependent on the Golden Sunlight Mine, but it is phasing out. It will be closing in 2004. It has been in shutdown for a few years. Whitehall used to be mostly an agricultural community. There were some subdivisions, and then people started to recreate more. Whitehall also tries to capitalize on tourism too. There are more things in Whitehall than anywhere else in the county. It is the town with the most amenities available. They have full time medical, more shopping, and maybe more resources than other towns.

I think Whitehall is a little more open than other areas of the county. People just seem friendlier there and they relate to each other well. You can go talk to people and get the same answer to a question when you ask different people and it isn't like that everywhere in the

county. People just relate to each other better there. Maybe it is because of the mines and more of a mix of people.

Lifestyles, interaction patterns, and community identity are perceived as distinct.

Residents of different communities appear to have limited interaction with one another. As one resident commented

Someone going from Whitehall to Montana City just does not happen. People from the different areas tend not to interact with each other much. I know there have been some efforts among the businesses to get familiar with what people do in the different areas, but that hasn't worked. People would just not come over the hill; even when they did familiarization tours, there just wasn't any interest. It has been difficult to pull the county together as a whole.

Another knowledgeable person offered a different observation:

They put on moxies (a gathering to display horseback riding and other western skills) in Whitehall. Parents and kids from Boulder and Whitehall go to them. They get together and show off their horsemanship and it is a kind of lifestyle thing. It is our western heritage and that brings like-minded people together at those kinds of events. I know I go with my daughter from here (Boulder) because, you know what they say: if you don't introduce your teenage daughter to horses, then they will find the boys! I keep her focused on the horses for now.

Here the sense of community that promotes integration is based in the common values and activities associated with western lifestyles.

Although the north, central, and south parts of the county are described as "distinct" regions, it appears the Boulder Valley constitutes a fourth community grouping. Traditional ranching and farming families are concentrated in the valley. An interviewee describes the Boulder Valley as follows:

Almost the whole Boulder Valley is ranching, maybe 90 percent of the people there are old ranching families and lots of them are related to each other. They tend to socialize together and they have common interests based on their lifestyle. They have branding parties and they do round-ups together. They just do those things with each other more than with people from other parts of the county. And, it is really based on lifestyle.

Although not identified by county residents interviewed for this work as a distinct community, it appears that the ranching lifestyle, kinship connections, and the geographic boundaries of the Boulder Valley constitute a community grouping.

The segmentation and orientation of these different groupings is consistent with other rural communities in the project area where geographic location and lifestyle interests contribute to forming community groupings that have a local focus. For example:

Each part of the county has their own event that brings them together. For Whitehall it is the County Fair the one in Twin (Twin Bridges), in the north they have Clancy Days and the old people, I mean the people who have been in the community for a long time, go to that. In the Boulder area we have the fair, the fair that is here in Boulder, the Boulder Fair. So, you see there isn't one event that brings everyone together. Each part has its own draw. Most areas have a core, but we don't have one. No one thing brings everyone together, no one sense of community.

Some activities do provide a forum in which different segments of the county do work together. The Jefferson County Local Development Corporation is an important example of such a forum. This entity works to address business development interests across communities. Individuals from each region of the county participate. It appears to be an important community resource that functions to

integrate the economic interests of county residents. Such forums provide a means to develop cooperative working relationships across community and lifestyle divisions.

Another county characteristic is the mix of lifestyles: suburban lifestyles exist in the north part of the county where commuters to Helena from Jefferson City and Montana City are oriented to the services, amenities, and jobs in Helena. Clancy, Boulder, and Whitehall exhibit rural town lifestyles with some agriculture and some commuters who live in subdivisions and commute to Butte. Residents of the Boulder Valley as well as other parts of the county are ranchers or farmers that have long-standing ties to their lands. These lifestyle characteristics also contribute to the local focus of each county grouping.

Another characteristic of these communities is the boom-bust experience that has influenced community stability and demographics. For example:

Whitehall is getting older because the younger people that used to work at the mine are going elsewhere they can find work. There isn't anything for them to do here without the mine. A few years ago there were 600 people working there. Now it is down to a hundred. It is the older people who have been here or that are retiring here that are the ones increasing the age of the community.

In the northern end of the county, the dynamic is more of boom than bust with spill over from Helena contributing to significant population growth in Montana City and surrounding areas. This “boom” has been significant as southwest Montana urban communities such as Helena, Bozeman, and Missoula have grown, with consequences for nearby rural areas. Although the loss of the Golden Sunlight Mine will have economic consequences for the entire county, local residents also acutely experience the population boom and buildup of the north county.

9.4.3 Mutual Support and Cooperative Problem Solving

Mutual support and volunteerism are important resources for Jefferson County communities. However, these resources are also dispersed into localized, lifestyle-based communities. Within these communities, mutual support and volunteer efforts are important social processes, but how these processes occur is also distinct:

In the north end of the county people don't work together as much as elsewhere just because of their orientation to Helena. But search and rescue and the fire department (a volunteer fire department) is where you would find the proactive people. That is where you would go if you wanted to get things done. They made the effort to get that, and that was important.

In Boulder you see people pulling together to get the Boulder Fair done. They work real hard to put that on and it takes coordination. It is the same in Whitehall: they work together on rodeos and murals and other things, but it is pretty local. You don't find people in Whitehall helping much with the Boulder Fair.

Within these local areas, there are multiple venues that express mutual support and the ability of community members to work together to solve common problems. These venues include school events—especially athletic activities, service clubs, and emergent groups that form in response to particular local issues. For example, there is a swimming pool committee in Whitehall that conducts fund raising efforts with the goal of building a local pool. There is also a volunteer group known as “Jefferson Valley Presents” that uses volunteer labor to produce outdoor plays with historical themes. These types of localized cooperative efforts are also exemplified in what might be termed “micro-networks” that form for socializing as well as mutual support. The following interview excerpt describes one such network:

There are probably 30 people or so that get together in different kinds of parties and gatherings. We get together once a month or so. It does not matter what the reason is, and there is always an excuse. Last time it was a shower for someone having a baby. It is the kind of thing that you come if you can or if you can't that is OK too. Next week we are going to have a back-to-school party and everyone who can come will come to my house.

We let people know through the phone or sometimes the computer or we just put a note in their mailbox. When we had fires here a few years ago, we already had this system in place. We knew that we could call this person and they would take care of these ten people, especially if there is an urgent issue. We had plans and maps with dots on them that showed the houses that needed help and we then identified people who could go and tell those people to get out if it was necessary. It is an important kind of resource for us.

These types of networks exist in various parts of the county and they are similar to other “micro networks” in other rural counties throughout the project area. These are important informal local resources for mutual support.

There are also resources provided by businesses and specifically by the Golden Sunlight Mine. The mine has volunteered labor as well as machinery to assist Whitehall, Cardwell, and other communities to accomplish locally important goals. Residents perceive that the mine closure will result in the loss of a valued community resource, but there is also the expectation that the other resources will fill the void. Similarly, the Jefferson Local Development Corporation and other business roundtables are examples of countywide resources for both mutual support and providing local problem solving. Such entities provide a forum in which problems and issues can be raised and resources identified to respond. Current economic development efforts exemplify how such entities can provide community-level resources that go beyond micro-networks to address more countywide issues.

Limited interview data were collected about cooperative problem solving concerning natural resources, but some information suggests there is a history of cooperative working relationships between the county and the USFS, particularly the B-DNF. For example:

I know that the county has had a project with the Forest Service, the Deer Lodge, doing a whole road ownership program, trying to figure out which roads are BLM, forest service, private and county roads. There have been public meetings. They were well attended because access to the public lands is a big issue here—a big, big issue. I tell you what: the meetings I went to went super. There were some people that came that had concerns, but it worked out. There is a good working relationship with the forest, they were just very helpful and that was a big positive for people in this county.

This type of cooperative working relationship between the county and the B-DNF suggests that there is a basis for cooperative problem solving at least at an institutional level within the county.

9.4.4 Leadership

Interview data suggest several important points about local leadership:

- Leadership is a reflection of the particular characteristics of each community. For example, in Boulder there are some key individuals that *know how to get things done and people go to them when they want something to happen*. Leadership in this part of the county is also vested in institutional positions: *The mayor is an important person to see if you want to get things done. The mayor's office is always a place to stop in if you are looking for a mover and shaker in town*. In Whitehall and Cardwell there is also mixture of individual and institutional leadership that appears to have a broader base than in most areas of the county. In the past, the Golden Sunlight

Mine has been a source of leadership resources. The north county is described as follows: *It is a place that just does not organize well. You have to go to the Volunteer Fire Department there to get anything done*

- Community members have multiple obligations and often only a few individuals have the time to participate in leadership roles. For example, one resident commented about local leaders:

People have other lives. They really don't have much time to step up and be leaders when they are taking their kids to rodeo, working their jobs, and everything else it takes to live your life here. There is just not enough time to really do things and take care of all the community things that need to be done too.

Organizations such as the Jefferson County Local Development Corporation make efficient use of resources by sharing the demands of leadership within the county and providing a forum in which community issues requiring leadership resources can be raised.

- An external catalyst can mobilize local leadership, but external groups cannot replace local leadership resources. Residents mentioned specific regional entities that sometimes provide information, funds, or staff resources that “spark” or act as a catalyst to form local groups from which leaders emerge. These types of “catalyst” efforts appear to be effective in facilitating community leadership resources more so than efforts to supply those resources from outside the community.

Jefferson County has both individual and institutional resources that are assets for responding to changing demands for county residents. The time demands on local households, the cohesiveness of particular communities, and the insular nature of still other communities limit these resources. The emergence of local leadership can be facilitated by external resources or by providing specialized and dedicated personnel to perform functions that otherwise would require volunteer labor from community members.

9.5 Human Resources

Census and other secondary-source economic data provide one measure of human resources available within the county that may influence the capacity to adapt to changing conditions. The table below summarizes recent key indicators of human resources: unemployment rate, educational attainment, income, and poverty levels. Jefferson County enjoys lower than average unemployment for the age 18 and over cohort (3.5 percent) when compared to the rest of Montana (4.1 percent), and it is among the lowest in the study area, which has an average unemployment rate of 5.1 percent for the same cohort. Similarly, educational attainment for Jefferson County residents is above the average in both high school and college graduates. The county also has the highest median household income in the state and higher than average per capita income when compared to the rest of Montana.

Jefferson County household incomes have a lower percentage in the lower income categories and a higher percentage in the upper income categories in comparison to the rest of Montana. Similarly, the county has lower than average numbers of persons below the poverty level and significantly lower numbers of children under the age of 18 below the poverty level.

Table 9-20. Measures of Human Resources for Jefferson County, 2000 Census

| | Unemploy- ment | Percent High School Graduates >25 | Percent College Graduates (BA+) >25 | Median Household Income (\$) | Per Capita Income (\$) | Percent Individuals Below Poverty | Percent Related Children Under 18 Below Poverty |
|------------------|-------------------|---|---|---------------------------------------|---------------------------------|--|---|
| United States | 3.7 | 80.4 | 24.4 | 41,994 | 21,587 | 12.4 | 16.1 |
| State of Montana | 4.1 | 87.2 | 24.4 | 33,024 | 17,151 | 14.6 | 18.4 |
| Jefferson | 3.5 | 90.2 | 27.7 | 41,506 | 18,250 | 9.0 | 10.4 |
| Data year | 2000 | 2000 | 2000 | 1999 | 1999 | 1999 | 1999 |

Source: U.S. Census Bureau Census 2000.

Table 9-21. Percent of Households in Selected Income Ranges for Jefferson County and Montana, 1999

| Income in 1999 | Jefferson | Montana |
|-----------------------|-----------|---------|
| Less than \$10,000 | 8.6 | 11.3 |
| \$10,000 - \$14,999 | 6.8 | 8.9 |
| \$15,000 - \$24,999 | 13.7 | 17.1 |
| \$25,000 - \$34,999 | 12.1 | 15.4 |
| \$35,000 - \$44,999 | 18.8 | 18.2 |
| \$50,000 - \$74,999 | 22.6 | 17.1 |
| \$75,000 - \$99,999 | 10.4 | 6.4 |
| \$100,000 - \$149,000 | 5.2 | 3.6 |
| \$150,000 - \$199,999 | 1.0 | 0.9 |
| \$200,000 or more | 0.8 | 1.0 |

Source: U.S. Census Bureau Census 2000.

These secondary data indicators of human resources suggest that Jefferson County has a base of human resources to draw upon. These human resources are potential assets for county residents. However, for this potential to be realized, these resources need to be mobilized and organized. Tapping the substantial human resources potential is a challenge that faces the county.

9.6 Community Resiliency

Resiliency is a concept used to address the resources that exist for communities to adapt to changing conditions. This assessment of resiliency is presented in a “situational analysis” framework, briefly discussed in Chapters 1 and 12. The community indicators are land use, attitudes to change, services and infrastructure, community characteristics, mutual support, cooperative problem solving, leadership, human resources, and economics/economic diversity. The strengths or weaknesses of each of these indicators are discussed.

Land Use and Ownership. Almost 52 percent of county lands are forested and nearly 40 percent are in rangelands. There are ample water resources in the county’s rivers, lakes and reservoirs; and mountain ranges such as the Elkhorn, Tobacco Roots, and Boulder are present throughout the county. The combination of forested mountains, rivers and broad open valleys create dramatic viewsheds that

are scenic assets. The county's wildlands contain a variety of wildlife that add to its western character and also provide recreational resources for area residents as well as visitors. These are strengths that contribute to the county's quality of life.

In October 1999, the Basin Mining Area was added to the National Priorities list and evaluated for public health concerns.⁶⁸ Weaknesses associated with this status include any potential health effects from site contamination as well as any stigma that might affect property values and in-migration to the Basin region.

Of the 1,061,000 acres of land in the county, approximately 464,000 acres are privately owned. The USFS manages about 460,000 acres (43 percent) of federally owned land and the BLM about 97,000 acres. The strength of this pattern of ownership is that it offers desirable open space, recreational opportunities, grazing for livestock, and other resources for commercial use. A weakness of this ownership pattern is the limits on the availability of private lands and the way in which this may affect development pressure throughout the county. It also concentrates development in only 44 percent of the county land area.

Services and Infrastructure. County residents have access to east-west and north-south interstate highways, and major air carriers are available in Butte, Helena, and Bozeman. There is some limited rail service in the Montana City and Clancy areas as well as in Whitehall. Retail services not available in the major town centers are accessible in nearby urban centers at Butte, Helena, and Bozeman. Medical services, especially pharmacy services, are less available in the central parts of the county than in other locations. The county provides essential services to residents, although it ranks sixth in 2001 per capita expenditures (513.89) among all project counties. Although there are no prominent weaknesses other than some limits on retail and medical services, the most obvious strength is the availability of regional services centers in nearby urban communities.

Attitudes to Change. Limited interview information was collected about attitudes to change. The information collected suggests residents are keenly aware of population and lifestyle changes occurring in their county as well as the region. Similarly, the upcoming closure of the Golden Sunlight Mine is also promoting awareness of how to respond to the fiscal demands and changes in community composition that may accompany this closure. County leadership is anticipating these changes and working with residents to develop adaptive strategies. The orientation to change among county leaders is a strength that contributes to resiliency.

Community Characteristics. Characteristics of Jefferson County communities that influence resiliency include:

- A mix of lifestyles. Suburban residents are in the northern areas of the county in Montana City, Clancy, and Jefferson City. Boulder and Whitehall are each rural towns with connections to adjacent agricultural areas. Ranching lifestyles exist in the Boulder Valley and areas near Whitehall.
- Limited interaction among communities in the three major geographic regions of the county (north, central, and south).
 - ⇒ North county communities are perceived as having little potential to integrate with the remainder of the county because of the Helena focus for work and social life.
 - ⇒ The central region communities of Basin and Boulder are older and traditional small town communities that have been oriented to support for mining and agriculture. There is some

⁶⁸ http://www.atsdr.cdc.gov/HAC/PHA/basin/bma_p1.html describes the site and the specific public health issues evaluated.

interaction of central region communities with Whitehall, which also has a history of a rural town supporting agriculture and mining.

Lifestyles within Jefferson County are localized within particular geographically defined communities. There appear to be limited forums in which diverse lifestyles can interact and promote a wider sense of community integration and inclusiveness. The most prominent example of this is the north county commuter communities. They are not necessarily perceived as a source of resources, although these communities appear to have substantial human resources that are a potential asset. A localized sense of community associated with particular lifestyle groups can be an incentive for cohesiveness among that group. However, it works as a constraint against cohesiveness at more aggregated levels of social groupings, such as the county or regional level.

Mutual Support. The characteristics of mutual support that influence resiliency include the following:

- Communities work cooperatively and supportively within localized geographic areas, but county-wide cooperation is limited.
- Localized “micro-networks” are important sources of social support and mutual assistance that contribute to cohesiveness within confined geographic areas or among lifestyle groups.
- Volunteerism is valued as an important community resource and expressed in participation in volunteer fire departments, service clubs, county fair committees, school athletic support, and other formal and informal venues.
- Lifestyle groups appear to provide support for one another in localized settings.

There is a high value place on mutual support and volunteerism. Furthermore, this value is acted upon in service clubs, micro-networks, volunteer fire departments, and other community arenas. These appear to be important community strengths with the only weakness being the localized nature of mutual support efforts.

Cooperative Problem Solving. The Jefferson County Local Development Corporation (JLDC) represents an example of ongoing cooperative problem solving, especially concerning the county’s economic future. Given the potential impacts to the county from closure of the Golden Sunlight Mine, this is a necessary focus for county officials and residents. The presence of an economic development specialist in the county extension office facilitates actions of the JLDC and also provides access to a wider range of regional resources for cooperative problem solving. These are apparent strengths. However, what is unknown is the depth and breadth of cooperative problem-solving resources in the county and the county’s history of natural resource problem solving. Additional information about each of these topics may offer more clarity about the strengths and weaknesses associated with how residents work together to identify and resolve potential conflicts.

Leadership. Institutional leadership exists within the elected political positions of each community. The two incorporated cities, Boulder and Whitehall, also have mayors and city councils that are formal leadership resources. Other leadership resources exist within formal structures such as the local economic development council, volunteer fire departments, and community service clubs. Leadership resources have multiple demands for their services, constraining their availability for participation in a wide range of activities. The county extension agent is an important supplement to these community-based resources. His activities are dedicated to local economic development and facilitating key organizations that also provide problem solving and community leadership. This type of staffing offers dedicated professional resources that can work with community-based leaders when the demands for their resources exceed their ability to respond. While there are strengths in the county’s leadership resources, there are also weaknesses in the potential for those resources to be over-used and to burn out.

Human Resources. The census data regarding educational attainment, income, and poverty levels indicate that the county has among the highest potential human resources in the study area. Since the 2000 census data were collected, the Golden Sunlight Mine has changed its operations and is moving toward complete closure. This is likely to influence per capita and household incomes, although it is not clear if the incomes of commuter residents to Butte and Helena may mitigate the loss of higher paying mining jobs. Human resources do not appear to be a constraint on county resiliency. In fact, the overall level of these resources suggests they should be a substantial incentive. The important issue regarding these resources is how or if they can be mobilized, given the community structure of the county. That is, although the potential resources indicate a strength, the availability of those resources may undermine that strength.

Economic Diversity. Economic diversity enhances community resiliency. Diversity is not the only component of economic resiliency, but it is a key indicator associated with overall community resiliency. IMPLAN valued added data (Table 9-13) are the primary indicators of economic diversity used here. Measures of “wildlands dependency” are also used as indicators of the interaction of community economies with natural resources

The most recent IMPLAN data (1999) for “wildlands dependency” indicate the economic contribution of timber, grazing, and mining industries to the Jefferson County economy. Mining accounts for the most significant contribution, with 86.9 million of the 92.1 million in “wildlands industry” value-added output. Mining accounts for 26.1 million of the 27.7 million total output. These data show the important contribution of mining to the county economy.

Table 9-13 indicates the percentage of total value-added output for basic industries using 1999 IMPLAN data. The county has 4 of the 9 sectors greater than ten percent of total value-added output, whereas the region has 5 and the state 6. These data also indicate the importance of mining as a significant component of this economy, especially in comparison to other project counties and the state. Manufacturing, accounted for primarily by cement production, is also a significant economic sector in comparison to the state and other project counties. As with other project counties, government is also a prominent economic sector, although it is about the same as other project area counties and the state. The county has less economic diversity than the state or region. Additionally, a downturn in mining (that has 18 percent of total value-added output) is likely to have impacts for the entire economy because of likely interdependencies with other sectors. The structure of Jefferson County economic sectors suggests vulnerability because of the current importance of mining and the pending closure of the Golden Sunlight Mine.

The combination of increased population growth with the loss of the jobs and tax base from the Golden Sunlight Mine indicate some economic constraints on the county’s future economic development. However, the county has resources to respond to these conditions. The Jefferson County Local Development Corporation is actively seeking new businesses for the county and promoting local development. Additionally, there is an economic development specialist working full time in the county extension office. The county may have some economic weaknesses, but it also has recognized these and has the infrastructure to develop responses. Nonetheless, there is a perception of economic vulnerability in the county that is likely to have an influence on community resiliency.

10 Madison County

The Blackfeet and other plains tribes traveled through and resided in the vicinity of Madison County at the time Lewis and Clark passed through the region in 1805 and 1806. Blackfeet, Shoshone, and other tribes used the rich natural resources of the region—its bison, elk, deer, bear, fish, and large valleys—to advantage. Fur traders, and later miners and ranchers began establishing themselves in the region by the 1860s. By 1865, towns such as Virginia City and Alder were at the center of the early gold mining rush in southwestern Montana.

By 1870, Madison County had a population of 2,684, and Virginia City was the second largest town in Montana, just behind Helena. After the gold fields' production declined, Virginia City and nearby towns lost population, as did other towns that had boomed with the influx of miners and those providing services for them. Madison County's early history was one of miners and ranchers who took advantage of the substantial natural resources in both the Ruby and Madison Valleys. This history remains today an important part of the culture of Madison County that contributes to a heritage of western values and lifestyles.

Mountains, valleys, and rivers dominate the physical landscape and influence the social landscape of Madison County. Oriented roughly north-south, several mountain ranges separate the western and eastern portions of the county. These mountain ranges include the Tobacco Roots, Greenhorns, Gravellys, as well as the Snowcrest and Ruby ranges. The Madison Range, which extends south into Yellowstone National Park, bounds the eastern portion of the county. There are some eight watersheds that cross the county, including the Red Rock, Beaverhead, Ruby, Big Hole, Madison, Jefferson, Gallatin, and Upper Henry's that contain more than 40 major streams and creeks that total some 1,600 miles. Important bodies of standing water include Cliff and Wade Lakes as well as Ennis, Ruby, and Willow Creek Reservoirs. Important rivers include the Madison and Ruby.

The Ruby and Madison Valleys are two of the major river valleys that define the geography of a major portion of Madison County. The Madison River begins in Hebgen Lake and flows into and out of Ennis Lake and then northeast toward the three forks of the Missouri River. Some describe this 250-mile long river as "the heart of the Madison Valley." The valley is bounded on the east by the Madison Range where significant portions of National Forest lands exist, including portions of the Lee Metcalf Wilderness area. The western boundary of the valley is composed of several mountain ranges including the Gravellys and Tobacco Roots. Highway 287 goes west out of Ennis in the Madison Valley and over a pass to drop into Virginia City and the Ruby Valley. The Ruby River flows through this valley, beginning in the Centennial Valley and flowing into the Ruby Reservoir. Out of the reservoir, it flows west and northwest into the heart of the Ruby Valley where river water is an important source for irrigation for ranchers in Alder, Sheridan, and Twin Bridges. The Ruby flows into the Beaverhead near Twin Bridges.

Although the Madison Mining District was once among the most productive in the world, there are only historical remnants left today. There are some 900 mining claims in the county today, but its mineral resources are not extensively mined. There are some garnet mines in the Ruby Valley just outside of Virginia City, and there is a talc mine in the Madison Valley and a scattering of gold and other metal mining operations in the northern areas of the county. However, existing deposits of gold, silver, lead, copper, manganese, and various other mineral resources are not viable for large-scale extraction at this time. Talc, clay, sand, and gravel are the resources that appear most valuable for present-day miners. The county's timber resources are concentrated on National Forest lands that account for about 35 percent of total land within the county. Timber resources are primarily lodgepole pine and fir. There is only limited commercial use of timber, but it is an important source of

firewood for residents. These forests are also an important recreational area as well as lands of significant importance for grazing cattle.

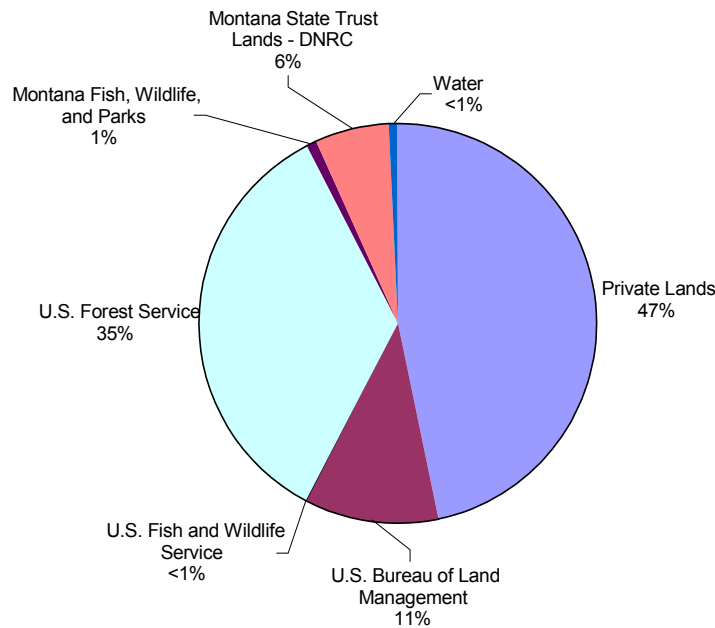
10.1 Land Ownership and Use

Madison County has a total land area of about 3,587 square miles (about 2.3 million acres) with a population density of about 2 persons per square mile. The Madison and Ruby Valleys contain the majority of county's population. Towns in the Madison Valley include Ennis (840), Cameron, and Big Sky (1,221). On the Ruby Valley side of the mountains, Virginia City (130), Alder (116), Sheridan (659), and Twin Bridges (400) are the major population centers. Small agricultural centers such as McAllister, Norris, and Pony are the population concentrations in the northern area of the county.

10.1.1 Land Ownership

Private lands account for 47 percent of Madison County's total land area. The remaining lands are owned by federal or state agencies. As with most other project counties, private lands are primarily in the valleys and public lands occupy higher elevations, including most USFS lands. The B-DNF owns about 35 percent of lands (about 805,144 acres), the lowest percentage of the seven project counties. B-DNF lands in Madison County have three major components, each associated with mountain ranges. In the southwest portion of the county, the largest portion of B-DNF lands is located in the Gravelly Range. In the eastern and southeastern portions of the county, B-DNF lands are located in the Madison range, including portions of the Lee Metcalf Wilderness. The third major component of B-DNF lands is in the county's northwest corner in the Tobacco Roots range.

Figure 10-1. Percentage of Land Ownership of Major Land Owners in Madison County



Source: Montana State Library, 2001.

Total land area in Madison County is approximately 2.31 million acres.

10.1.2 Types of Land Use

Forested mountain tops and broad valleys are significant geographic features of Madison County landscapes. The river valleys and foothills are important resources for farming and ranching, and the high valley meadows are a grazing resource also. This is a dramatic landscape that has varied land types and uses.

10.1.2.1 Major Uses or Land Cover Type

As indicated in Table 10-1, the major categories of land use as a percentage of land area are grass rangeland (37.73 percent), evergreen forest (26.52 percent), brush rangeland (16.54 percent), and crop pasture (11.89 percent). In comparison to other project area counties, Madison County has more grass rangeland and less evergreen forest, brush rangeland, and mixed rangeland.

Table 10-1. Type of Land Use as a Percent of Total Land Area for Madison and Project Area Counties

| Type of Land Use | Madison | Project Area Counties |
|-------------------------|----------------|------------------------------|
| Grass Rangeland | 37.73 | 17.32 |
| Evergreen Forest | 26.52 | 43.40 |
| Brush Rangeland | 16.54 | 17.55 |
| Crop Pasture | 11.89 | 7.46 |
| Mixed Rangeland | .85 | 9.21 |

Source: Montana Natural Resource Information System On Line Mapping, nris.state.mt.us/mapper/county/html, February 19,2002.

Note: Columns may not add up to 100 percent due to exclusion of land use categories accounting for less than one percent of total land area.

10.1.2.2 Conservation Easements and Special Use Designations

Table 10-2 indicates the types of conservation and special use designations for Madison County lands. The county has one of the larger land areas in both conservation easements and wilderness areas, the later in the Lee Metcalf Wilderness in the eastern portion of the county. Overall, about 10 percent of county lands are in either conservation or special use designation areas.

Table 10-2. Madison County Lands in Conservation Easements or Special Use Designations

| Land Use | Acreage | Percent Total County Lands | Project Area Total | Percent Total Project Area |
|--|----------------|----------------------------|--------------------|----------------------------|
| Conservation Easement | | | | |
| Private Conservation | 177,548 | 7.7 | 260,038 | 68.28 |
| USFWS | 0 | 0 | 27,113 | 0.00 |
| State Lands | 8,911 | 0.77 | 54,899 | 16.23 |
| Conservation Total | 186,459 | 8.47 | 342,050 | 54.51 |
| Special Use Designation | | | | |
| BLM Special | 0 | 0 | 30,953 | 0.00 |
| Research Natural Areas | 7,056 | 0.14 | 19,266 | 36.62 |
| Wilderness | 164,251 | 1.29 | 611,925 | 26.84 |
| Special Use Total | 171,307 | 1.43 | 662,144 | 25.87 |
| Total of Conservation Easements and Special Use | 357,766 | 9.9 | 1,004,194 | 35.63 |

Source: Montana Natural Resource Information System On Line Mapping, nris.state.mt.us/mapper/county/html, February 19, 2002.

10.1.2.3 Agriculture Profile

Agriculture is an important component of land use and economy in Madison County. Approximately 12 percent of the county’s total land area is in cropland. Rangeland of various types totals about 55 percent of total land area. Table 10-3 shows more specific information about farms, farm size, acreage, and product market values. These data show that since 1987 the number of farms has decreased, as has the overall number of full time farmers, acreage in farms, and average farm size. This table also indicates the market value of agricultural products for the average farm, and the market value of agricultural products sold, including livestock, poultry, and their products.

Table 10-3. Comparison of 1987, 1992, and 1997 Census of Agriculture County Profiles of Madison County

| Farms, Farm Size and Acreage | 1987 | 1992 | 1997 | Percent Change |
|---|-----------|-----------|-----------|----------------|
| Number of Farms | 453 | 418 | 460 | 1.55 |
| Full Time Agriculture | 339 | 299 | 316 | -6.79 |
| Acreage in Farms | 1,195,898 | 1,271,160 | 1,079,502 | -9.73 |
| Average Size Farms (acres) | 2,640 | 3,041 | 2,347 | -11.10 |
| Market Value Crops Sold Average/ Farm (\$) | 75,775 | 87,890 | 77,709 | 2.55 |
| Market Value of Ag Products Sold (1,000 \$) | 29,522 | 28,662 | 25,563 | -13.41 |

Source: Census of Agriculture 1997.

10.2 Demographic Characteristics and Trends

Newcomers to Madison County are encouraged to read a small booklet titled, “Code of the West” that describes how living in the county is different from living in the city. This guide for PFP (people from pavement)—a term that is used to identify some newcomers—indicates a perception that Madison County is experiencing both a rate and type of growth that is a concern for established

residents. This section describes historical and recent population growth as well as population composition. The implications of recent population changes are examined in the discussion about community characteristics.

10.2.1 Rural-Urban Classification

The 2000 census shows the total population for Madison County is about 6,851. Table 10-4 shows the major centers of population in the county. The three most populous communities are Ennis with 840 persons (12.3 percent of the county), followed by Sheridan with 659 (9.6 percent), and Twin Bridges with 400 (5.8 percent). This is a rural county. About 88 percent of the county is classified as “rural non-farm” and the remaining 12 percent as “rural farm.”

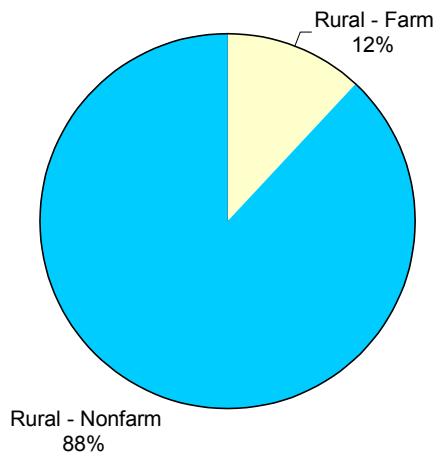
Table 10-4. Population Centers in Madison County

| Place | Population | Percent of County Population | Type |
|-----------------------------------|--------------|------------------------------|---------------------------|
| Madison County^f | 6,851 | | |
| Alder | 116 | 1.7 | Census Designated Place |
| Big Sky | 188 | 2.7 | Census Designated Place |
| Ennis | 840 | 12.3 | Incorporated Place (town) |
| Harrison | 162 | 2.4 | Census Designated Place |
| Sheridan | 659 | 9.6 | Incorporated Place (town) |
| Twin Bridges | 400 | 5.8 | Incorporated Place (town) |
| Virginia City | 130 | 1.9 | Incorporated Place (town) |

Source: U.S. Census Bureau, Census 2000.

Figure 10-2 shows the essentially rural nature of the county. Rural farms accounts for 12 percent of the population distribution, and 88 percent is rural non-farm.

Figure 10-2. Population in Urban and Rural Areas for Madison County



Source: U.S. Census Bureau, Census 2000.

10.2.2 Population Trends

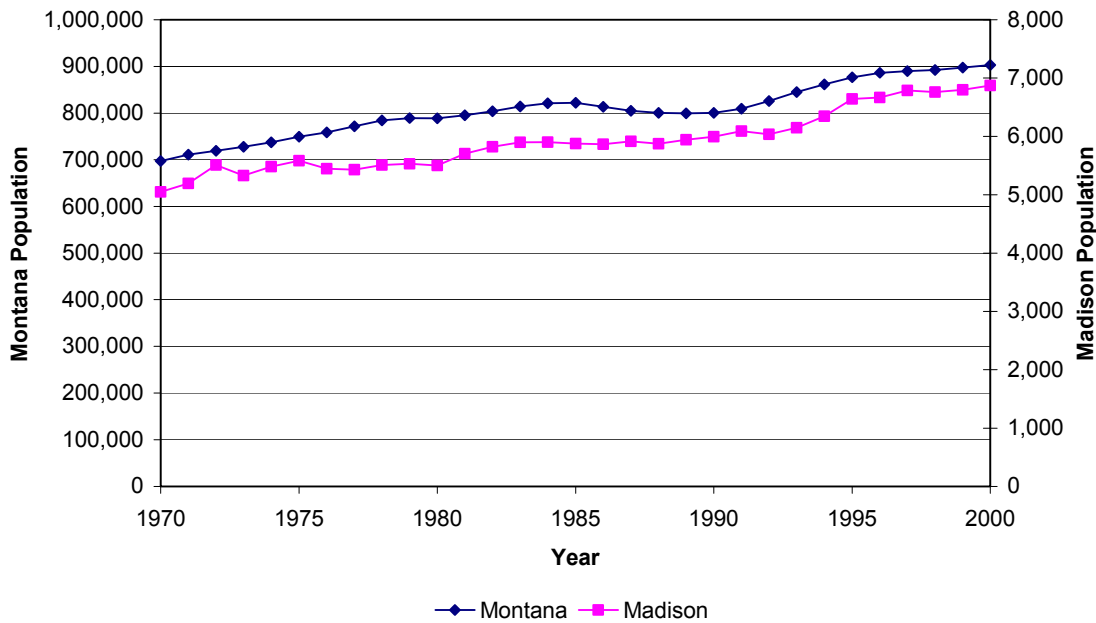
Madison County's 6,851 persons are about .75 percent of the state's total and 8.5 percent of the total project-county population of 80,135. In the 30-year interval between 1970 and 2000, the population grew 36.1 percent (Table 10-5 and Figure 10-1). During the same period, the state increased about 30 percent and the United States about 40 percent. During the 1990 to 2000 decade, the growth rate increased to 14.65 percent from the previous decades of roughly 9 percent each year.

Table 10-5. Madison County and Project Area Counties Historic Population Trends, 1890-2000

| County | Year | | | | | | | | | | | |
|--------------------------|--------|--------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|
| | 1890 | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | 2000 |
| Madison | 4,692 | 7,695 | 7,229 | 7,495 | 6,323 | 7,294 | 5,998 | 5,211 | 5,014 | 5,448 | 5,989 | 6,851 |
| Pop. Change | | 3,003 | -466 | 266 | -1,172 | 971 | -1,296 | -787 | -197 | 434 | 541 | 862 |
| Percent Change | | 64.00 | -6.06 | 3.68 | -15.64 | -15.36 | -17.77 | -13.12 | -3.78 | 8.66 | 9.33 | 14.39 |
| Project Area %Change | | 62.07 | 11.37 | 9.00 | -6.74 | -4.32 | -4.78 | 1.30 | -7.01 | -5.19 | -6.43 | 5.70 |
| Project Area Pop. Change | | 33,686 | 10,000 | 8,821 | -7,192 | -4,299 | -4,556 | 1,180 | -6,443 | -4,438 | -5,214 | 4,318 |
| Project Area Total | 54,272 | 87,958 | 97,958 | 106,779 | 99,587 | 95,288 | 90,732 | 91,912 | 85,469 | 81,031 | 75,817 | 80,135 |

Source: <http://ceic.commerce.state.mt.us/Demog/historic/Censuscty18902000.htm>.

Figure 10-3. Total Population for Montana and Madison County, 1970-2000



Source: Bureau of Economic Analysis, Regional Accounts Data, <http://www.bea.doc.gov/bea/regional/reis/> accessed on September 19, 2002.

Table 10-6 shows recent components of population change. Although they are for a limited time, these data show that deaths out-number births, but the population is increasing. The most remarkable characteristic about Madison County in comparison to other project counties, is the higher median

age of the population (43.4 years). Madison County also has the next to the lowest total population and population density among all project counties. The county's population has increased about 14 percent in the last decade, among the higher rates in western Montana and second highest among all seven project counties. Most of the growth appears to be from in-migration, as indicated by Table 10-6.

**Table 10-6. Components of Population Change for Montana and Madison County
April 1, 2000 to July 1, 2001**

| Place | Births | Deaths | Natural Increase (Births-Deaths) | Net International Migration | Net Internal Migration | Numeric Population Change | April 1, 2000 Population | July 1, 2001 Population |
|---------|--------|--------|----------------------------------|-----------------------------|------------------------|---------------------------|--------------------------|-------------------------|
| Montana | 13,320 | 10,165 | 3,155 | 470 | -1,377 | 2,238 | 902,195 | 904,433 |
| Madison | 75 | 89 | -14 | 14 | 89 | 88 | 6,851 | 6,939 |

Source: Population Division, U.S. Census Bureau Released April 29, 2002.

Note: Net internal migration is the difference between in-migration and out-migration.

10.2.3 Age and Gender

Table 10-7 shows the age and the ratio of males to females for the Madison County population compared to the state. The median age of the Madison County population is 43.4 years, higher than the Montana average of 37.5 years and the highest median age among all project counties. Madison County has a lower percentage than the state of individuals under 18, and a higher percentage of individuals 65 years and older. This may reflect the in-migration of retirees to the county.

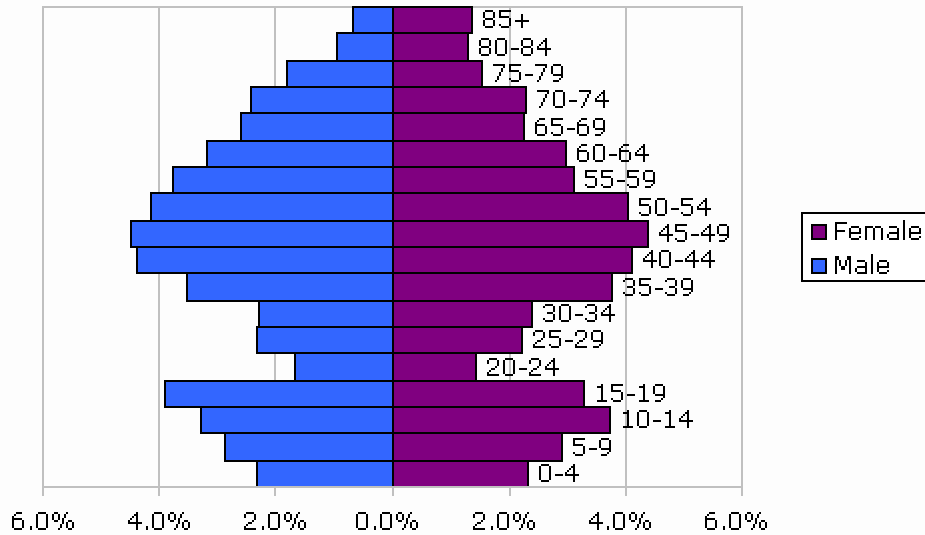
Table 10-7. Age and Gender, 2000

| Geographic Area | Total Population | Percent of Total Population | | | | | Median Age (Years) | Males per 100 Females | |
|-----------------|------------------|-----------------------------|----------------|----------------|----------------|-------------------|--------------------|-----------------------|-------------------|
| | | Under 18 Years | 18 to 24 Years | 25 to 44 Years | 45 to 64 Years | 65 Years and Over | | All Ages | 18 years and Over |
| State Total | 902,195 | 25.5 | 9.5 | 27.2 | 24.4 | 13.4 | 37.5 | 99.3 | 97.2 |
| Madison | 6,851 | 22.9 | 4.9 | 25.0 | 30.1 | 17.2 | 43.4 | 102.3 | 103.9 |

Source: U.S. Census Bureau Census 2000, Summary File 1, Matrices PCT12 and P13.

Figure 10-4 shows the age and gender distribution for males and females in the county. Females comprise 49.4 percent of the total population, a slight increase from the 48.46 percent in the 1990 census. The proportions of males and females are within 1 to 2 tenths of one another until the 50 plus age grouping, when females begin to outnumber males.

Figure 10-4. Age Distribution for Madison County, 2000



Source: [Census 2000](#) analyzed by the [Social Science Data Analysis Network \(SSDAN\)](#).

10.2.4 Race

Whites comprise 95.97 percent of the total population in the 2000 census. This is a decrease of 1.66 percent from 1990 and 2.34 percent from 1980. As elsewhere in Montana, the population of Hispanics is increasing. In Madison County, Hispanics increased from .81 percent in 1980 to 1.90 percent in 2000. However, ethnic diversity within the county is small and if present trends continue, it will remain so well into the future.

Table 10-8. Population Distribution by Race for Madison County, 1980, 1990, and 2000

| Race | 1980 | | 1990 | | 2000 | |
|--------------------------------|--------|---------|--------|---------|--------|---------|
| | Number | Percent | Number | Percent | Number | Percent |
| Total Population | 5,448 | 100.00 | 5,989 | 100.00 | 6,851 | 100.00 |
| Total Hispanics | 44 | 0.81 | 88 | 1.47 | 130 | 1.90 |
| White* | 5,356 | 98.31 | 5,847 | 97.63 | 6,575 | 95.97 |
| Black* | 0 | 0.00 | 0 | 0.00 | 3 | 0.04 |
| American Indian and AK Native* | 30 | 0.55 | 41 | 0.68 | 36 | 0.53 |
| Asian* | 7 | 0.13 | 13 | 0.22 | 17 | 0.25% |
| Hawaiian and Pacific Islander* | - | - | - | - | 0 | 0.00 |
| Other* | 11 | 0.20 | 0 | 0.00 | 5 | 0.07 |
| Two or More Races* | - | - | - | - | 85 | 1.24 |

Source: [Census 2000](#) analyzed by the [Social Science Data Analysis Network \(SSDAN\)](#).

* Non-Hispanic only; in 1980 and 1990 “Asians” includes Hawaiians and Pacific Islanders.

10.2.5 Housing and Households

Table 10-9 and Table 10-10 show information about household composition within the county. The county has an average of 1.3 housing units per square mile. The home ownership rate is similar to the home ownership rate for the state. The data indicate a decline in the number of married-couple and married-couple-with-children households and a slight increase in households without children. Non-family households and households with individuals living alone also show a slight increase. Average household size and average family size are similar to other rural counties in the project areas.

Table 10-9. Housing Units and Households for Madison County and Montana, 2000

| Characteristic | Madison | Montana |
|---|---------|---------|
| Population | 6,851 | 902,195 |
| Housing Units | 4,671 | 412,633 |
| Occupied Housing Units | 2,956 | 358,667 |
| Housing Units per Square Mile of Land Area | 1.3 | - |
| Homeownership Rate | 70.4% | 69.1% |
| Households | 2,956 | 358,667 |
| Nonfamily households | 1,035 | 121,260 |
| Households with individuals 65 years and over | 819 | 83,982 |
| Households with persons under 18 | 807 | 119,550 |
| Average Persons per Household | 2.3 | 2.5 |
| Average Family Size | 2.9 | 3.0 |

Source: U.S. Census Bureau, Census 2000.

Table 10-10. Household Types for Madison County, 1990, 2000

| Household Types | 1990 | | 2000 | |
|--------------------------|--------------|------------|--------------|------------|
| | Number | Percent | Number | Percent |
| Total Households | 2,387 | 100 | 2,956 | 100 |
| Married Couple | 1,451 | 60.8 | 1,708 | 57.8 |
| With Children* | 632 | 26.5 | 642 | 21.7 |
| Without Children* | 819 | 34.3 | 1,066 | 36.1 |
| Female-Headed | 122 | 5.1 | 131 | 4.4 |
| With Children* | 70 | 2.9 | 85 | 2.9 |
| Without Children* | 52 | 2.2 | 46 | 1.6 |
| Male-Headed | 68 | 2.8 | 82 | 2.8 |
| With Children* | 40 | 1.7 | 45 | 1.5 |
| Without Children* | 28 | 1.2 | 37 | 1.3 |
| Non-Family | 746 | 31.3 | 1,035 | 35.0 |
| Householder Living Alone | 673 | 28.2 | 867 | 29.3 |
| Two or More Persons | 73 | 3.1 | 168 | 5.7 |

Source: Census 2000 analyzed by the Social Science Data Analysis Network (SSDAN).

* For the purposes of this table, "children" are people under age 18.

10.3 Economic Conditions and Trends

This section offers a brief descriptive profile of current economic conditions in Madison County. This profile focuses on economic sectors, employment, and income to describe the county's economic characteristics.

10.3.1 Economic Sectors and Diversity

Economic diversity is examined from two perspectives both based on 1999 IMPLAN⁶⁹ Model Year Data for Madison County. A more detailed description of input-output models and IMPLAN is located in Chapter 4 of this report. One perspective looks at the contributions to the local economy made by industrial sectors that are dependent on natural resources. The other perspective presents value-added estimates for the contributions of different sectors of the county economy.

Table 10-11 is an updated version of the model that appears in the USFS Region 1 Economic Library. The same industry sectors were used in the update as are found in the USFS 1996 model. "Wildland" related sectors do not appear to be a significant source of total industry output for Madison County, accounting for less than two percent of total industry output and less than one-half percent of total industry employment.

⁶⁹ IMPLAN Pro™ is Social Accounting and Impact Analysis software; produced by MIG, Incorporated.

**Table 10-11. Direct Effects of "Wildland"
Related Sectors in Madison County.**

| | Industry Description | Industry Output (Millions of \$) | Industry Output as % of County Total | Employment | Industry Employment as % of County Total | Labor Income (Millions of \$) | Average Laborer Income (\$/Job) |
|---------------------------|---|---|---|------------|---|--|--|
| Timber Industries | | | | | | | |
| 24 | Forestry Products | 0.4 | 0.2 | 8 | 0.2 | 0.1 | 7,566 |
| 26 | Agricultural, Forestry, Fishery Services | 0.4 | 0.2 | 18 | 0.5 | 0.2 | 10,244 |
| 133 | Logging Camps and Logging Contractors | 0.7 | 0.3 | 5 | 0.1 | 0.1 | 21,104 |
| | Total | 1.6 | 0.7 | 31 | 0.8 | 0.4 | 11,710 |
| Grazing Industries | | | | | | | |
| 4 | Range Fed Cattle | 14.8 | 6.5 | 130 | 3.3 | 2.6 | 19,886 |
| 6 | Sheep, Lambs and Goats | 0.5 | 0.2 | 1 | 0.0 | 0.1 | 5,288 |
| 26 | Agricultural, Forestry, Fishery Services | 0.4 | 0.2 | 18 | 0.5 | 0.2 | 10,244 |
| | Total | 15.7 | 6.8 | 149 | 3.8 | 2.9 | 19,302 |
| Mineral Industries | | | | | | | |
| 31 | Gold Ores | 1.2 | 0.5 | 7 | 0.2 | 0.1 | 11,098 |
| 34 | Metal Mining Services | 0.0 | 0.0 | 1 | 0.0 | 0.0 | 15,915 |
| 47 | Misc. Nonmetallic Minerals, N.E.C. | 0.4 | 0.2 | 3 | 0.1 | 0.1 | 52,920 |
| | Total | 1.6 | 0.7 | 11 | 0.3 | 0.2 | 21,818 |

Table Based on Madison County 1999 IMPLAN Model Year Data.

Note: NAIC code categories reporting no output were not included in the table.

Table 10-12 and Figure 10-5 show IMPLAN data that indicate that the top six sectors are within one to two percent of one another in their share of the total economic pie: agriculture (16 percent), government (16 percent), services (15 percent), FIRE⁷⁰ (15 percent), construction (13 percent), and retail and wholesale trade (13 percent). Collectively, these account for some 88 percent of the county's economic output; and, in comparison to other counties, the major economic sectors are evenly divided in their proportion of all sectors. The "value-added" table compares Madison County with the average for all project counties and the state. Six of the nine sectors for Madison County are above 10 percent, which is the same for the average of all project counties as well as the state. Sector interdependencies are not indicated here, but it is likely that changes in agriculture will also affect other economic sectors. However, in comparison to other project counties and the state as a whole, the county does not appear to have any major deficits in economic diversity.

⁷⁰ FIRE, is an acronym for: finance, insurance, and real estate, TCPU is an acronym for transportation, communication, and public utilities.

Table 10-12. Value-Added by Basic Industries as Percentage of Total Value-Added, 1999

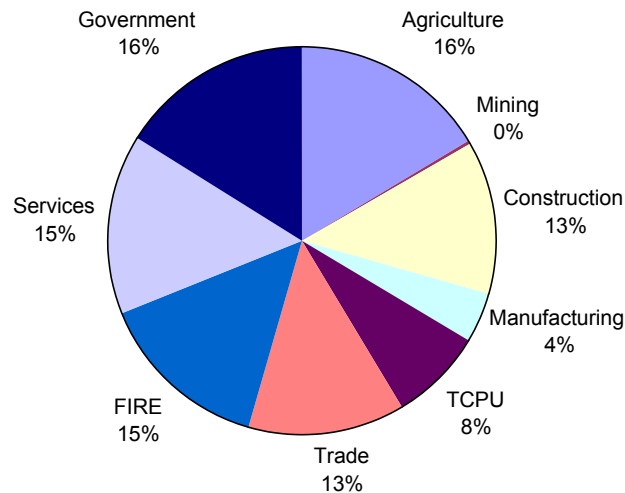
| Category | Madison County | All Project Counties | Montana |
|---------------|----------------|----------------------|---------|
| Agriculture | 16 | 4 | 17 |
| Mining | 0* | 7 | 2 |
| Manufacturing | 4 | 6 | 7 |
| Government | 16 | 17 | 17 |
| Services | 15 | 18 | 21 |
| FIRE | 15 | 11 | 14 |
| TRADE | 13 | 14 | 18 |
| TCPU | 8 | 18 | 10 |
| Construction | 13 | 5 | 6 |

Source: MIG Group, Inc., IMPLAN Model Output, based on county 1999 IMPLAN Model.

Note: TCPU=transportation, communications, and public utilities

FIRE= Finance, Insurance, and Real Estate

Figure 10-5. Value-Added by Basic Industries in Madison County, as Percent of Total Value-Added, 1999



Source: MIG Group, Inc., IMPLAN Model Output, based on Madison County 1999 IMPLAN Model.

10.3.2 Employment

Employment data have considerable variety in their content and form. In this section we present information on the number and percent of individuals in the labor force, unemployment rates, employment by occupation and industry, the number of businesses, employees, and payroll by industry sector, and information on self-employed individuals and receipts. The information in this section has been gathered from the U.S. Census Bureau, the U.S. Bureau of Economic Analysis, the Montana Department of Labor Industry, and the Bureau of Economic Analysis Regional Economic Information System.

10.3.2.1 Labor Force

Table 10-13 shows number of individuals 16 years and older and number of individuals in this age category that participated in the civilian labor force, and number of employed and unemployed individuals. "Civilian labor force" is defined as the number of persons 16 years and older, employed or unemployed, excluding members of the armed forces. "Employed" includes those persons who work for pay or profit during a week or, as unpaid family workers, work 15 hours or more during a week. "Unemployed" are persons who, for an entire week, did not work at all but were able and available to work.

Table 10-13. Population 16 Years and Older in the Labor Force, Employed, and Unemployed, Census 2000

| Area | Population 16 Years and Older | Population in Labor force | Population | | Percent Not in | | Number. Employed | Percent Employed | Number Unemployed | Percent Unemployed |
|------------|-------------------------------------|---------------------------------|------------------------------|--------------------------|----------------|----------------|---------------------|---------------------|----------------------|-----------------------|
| | | | Percent in Labor Force | Not in Labor Force | Labor Force | Labor Force | | | | |
| Montana | 701,168 | 458,306 | 65.4 | 242,862 | 34.6 | 425,977 | 60.8 | 28,710 | 4.1 | |
| Study Area | 63,566 | 38,516 | 60.6 | 25,050 | 39.4 | 35,974 | 56.6 | 3,238 | 5.1 | |
| Madison | 5,516 | 3,353 | 60.8 | 2,163 | 39.2 | 3,169 | 57.5 | 175 | 3.2 | |

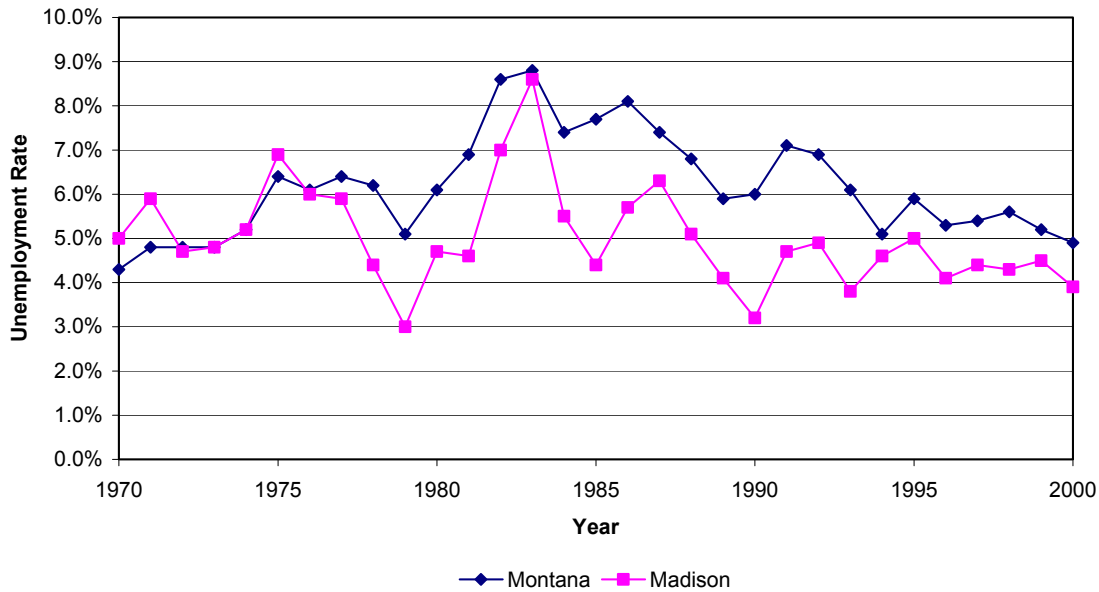
Source: U.S. Census Bureau, Census 2000.

10.3.2.2 Unemployment

In 2000, according to the Montana Department of Labor and Industry, Madison County had an unemployment rate of 3.2 percent, among the lowest of all project counties and 1.9 percent lower than the average of all project counties. Unemployment rates are calculated by dividing the number of people looking for work by the total number of available workers in the labor force. Unemployment rates in the double digits usually indicate a depressed or stagnant economy while rates under four percent are considered full employment.⁷¹ However, there are limitations to unemployment figures and rates, because no differentiation is made between full-time and part-time jobs. In addition, the unemployment rate does not account for the individuals who are underemployed or for the discouraged worker who has given up hope of finding a job. However, in comparison to other project counties and to the state as a whole, unemployment in Madison County is low.

⁷¹ 4th Quarter 2001 - *Montana Employment and Labor Force Trends*.

Figure 10-6. Unemployment Rate for Montana and Madison County, 1970-2000



Source: Montana Department of Labor Industry, Research Analysis Bureau, Local Area Unemployment Statistics.

10.3.2.3 Class of Workers

Table 10-14 shows the percentage of four different classes of workers: private wage and salary workers, government workers, self-employed workers in their own business who are not incorporated, and unpaid family workers. According to Census 2000, approximately 69 percent of Montana workers are private wage and salary workers, 18 percent are government workers, 12 are self employed, and less than 1 percent are unpaid family workers. In Madison County, 60.1 percent are wage and salary workers and 18.1 percent are government workers. Madison County has a higher percentage of self-employed workers than Montana, 20.4 and 11.8 respectively, and a slightly higher percentage of unpaid family workers than Montana.

Table 10-14. Percent of Class of Worker, 2000

| Class of Worker | Montana | Madison |
|--|---------|---------|
| Private Wage and Salary Workers | 69.2 | 60.1 |
| Government Workers | 18.3 | 18.1 |
| Self-employed Workers in Own Not Incorporated Business | 11.8 | 20.4 |
| Unpaid Family Workers | 0.7 | 1.3 |

Source: U.S. Census Bureau, Census 2000.

10.3.2.4 Employment by Occupation and Industry

Table 10-15 shows the percent of employment by occupation in Montana and the study area counties according to Census 2000. In terms of employment by occupation, management, professional, and related occupations account for 32.4 percent of employment for Madison County compared to 33.1 percent for Montana. Madison County has a lower percentage of employment in the service occupations, but a higher rate of employment in the farming, fishing, hunting, and forestry occupations.

In terms of employment by industry, employment in Madison County in agriculture, forestry, fishing and hunting, and mining is twice as high as in the state as a whole. Madison County also has higher employment levels in construction, but less employment in the wholesale trade and information industries.

Table 10-15. Percent of Employment by Occupation and Industry, Census 2000

| | Montana | Madison |
|---|---------|---------|
| Occupation | | |
| Management, Professional, and Related Occupations | 33.1 | 32.4 |
| Service Occupations | 17.2 | 14.8 |
| Sales and Office Occupations | 25.5 | 19.6 |
| Farming, Fishing, and Forestry Occupations | 2.2 | 6.5 |
| Construction, Extractions, and Maintenance Occupations | 10.7 | 15.1 |
| Production, Transportation, and Material Moving Occupations | 11.2 | 11.6 |
| Industry | | |
| Agriculture, Forestry, Fishing and Hunting, and Mining | 7.9 | 20.7 |
| Construction, Extractions, and Maintenance Occupations | 7.4 | 13.2 |
| Manufacturing | 6.0 | 5.2 |
| Wholesale Trade | 3.0 | 0.9 |
| Retail Trade | 12.8 | 10.2 |
| Transportation and Warehousing, and Utilities | 5.4 | 4.3 |
| Information | 2.2 | 1.4 |
| Finance, Insurance, Real Estate, and Rental and Leasing | 5.5 | 4.0 |
| Professional, Scientific, Management, Administrative, and Waste Management Services | 6.5 | 4.3 |
| Educational, Health and Social Services | 21.7 | 16.3 |
| Arts, Entertainment, Recreation, Accommodation and Food Services | 10.4 | 10.3 |
| Other Services (except Public Administration) | 5.3 | 4.3 |
| Public Administration | 5.9 | 5.0 |

Source: U.S. Census Bureau, Census 2000, DP-3.

Table 10-16 shows the employment and payroll data for Madison County in 1999 by industry sector. During the weeks including March 12 of that year, 1,091 people were employed by a total of 255 establishments. Almost \$23.4 million was paid out during 1999, and the construction industry had the largest annual payroll of \$3.8 million for 149 employees.

Table 10-16. Madison County, Number of Employees, Payroll, and Total Number of Establishments by Industry Sector, 1999

| NAICS Code | Description | Number of Employees for week including March 12 | Payroll (\$1,000) | | Total Establishments |
|------------|---|---|-------------------|--------|----------------------|
| | | | 1st Quarter | Annual | |
| | Total | 1,091 | 4,995 | 23,424 | 255 |
| 11 | Forestry, fishing, hunting, and agriculture support | 0-19 | 0 | 0 | 3 |
| 21 | Mining | 20-99 | 0 | 0 | 4 |
| 22 | Utilities | 0-19 | 0 | 0 | 3 |
| 23 | Construction | 149 | 709 | 3,818 | 46 |
| 31 | Manufacturing | 121 | 583 | 2,599 | 14 |
| 42 | Wholesale trade | 16 | 59 | 437 | 5 |
| 44 | Retail trade | 167 | 506 | 2,492 | 40 |
| 48 | Transportation warehousing | 20-99 | 0 | 0 | 6 |
| 51 | Information | 14 | 107 | 477 | 6 |
| 52 | Finance insurance | 70 | 401 | 1,528 | 7 |
| 53 | Real estate rental leasing | 20 | 69 | 414 | 12 |
| 54 | Professional, scientific technical services | 34 | 146 | 687 | 16 |
| 55 | Management of companies enterprises | 0-19 | 0 | 0 | 1 |
| 56 | Admin, support, waste mgt, remediation services | 0-19 | 0 | 0 | 2 |
| 61 | Educational services | 0-19 | 0 | 0 | 1 |
| 62 | Health care and social assistance | 119 | 451 | 1,845 | 12 |
| 71 | Arts, entertainment recreation | 0-19 | 0 | 0 | 8 |
| 72 | Accommodation food services | 153 | 274 | 2,126 | 48 |
| 81 | Other services (except public administration) | 46 | 145 | 656 | 17 |
| 99 | Unclassified establishments | 0 | 0 | 84 | 4 |

Source: U.S. Census Bureau, County Business Patterns, 1999 County Business Patterns, CenStats, Major Industry Group.

In 1999, there were three establishments with 50 to 99 employees. Of the 255 total establishments, 194 of them had 1 to 4 employees (Table 10-17).

Table 10-17. Madison County, Number of Establishments by Employee Size Class for Selected Industry Sectors, 1999

| NAICS Code | Description | Total Establishments | Number of Establishments by Employment-size class | | | | | | | | |
|------------|---|----------------------|---|-----|-------|-------|-------|---------|---------|---------|--------------|
| | | | 1-4 | 5-9 | 10-19 | 20-49 | 50-99 | 100-249 | 250-499 | 500-999 | 1000 or more |
| | Total | 255 | 194 | 36 | 15 | 7 | 3 | 0 | 0 | 0 | 0 |
| 11 | Forestry, fishing, hunting, and agriculture support | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | Mining | 4 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 22 | Utilities | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23 | Construction | 46 | 36 | 7 | 2 | 1 | 0 | 0 | 0 | 0 | 0 |
| 31 | Manufacturing | 14 | 9 | 2 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 42 | Wholesale trade | 5 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 44 | Retail trade | 40 | 27 | 8 | 4 | 1 | 0 | 0 | 0 | 0 | 0 |
| 48 | Transportation warehousing | 6 | 5 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 51 | Information | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 52 | Finance insurance | 7 | 4 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 |
| 53 | Real estate rental leasing | 12 | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 54 | Professional, scientific technical services | 16 | 15 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 55 | Management of companies enterprises | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 56 | Admin, support, waste mgt, remediation services | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 61 | Educational services | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 62 | Health care and social assistance | 12 | 6 | 4 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| 71 | Arts, entertainment recreation | 8 | 7 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72 | Accommodation food services | 48 | 33 | 11 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 81 | Other services (except public administration) | 17 | 15 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 99 | Unclassified establishments | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Source: U.S. Census Bureau, County Business Patterns, 1999 County Business Patterns, CenStats, Major Industry Group.

Table 10-18 shows nonemployment statistics for Madison County. Nonemployer statistics summarize the number of establishments and sales or receipts of companies with no paid employees. These nonemployers are typically self-employed individuals or partnerships operating businesses that they have not chosen to incorporate. (Self-employed owners of incorporated businesses typically pay themselves wages or salary, so that the business is an employer.) In 1999, there were 767 of these establishments in Madison County with annual receipts of \$24.1 million. In terms of sales or receipts,

nonemployers usually account for roughly three percent of business activity. At the same time, nonemployers account for nearly three-fourths of all businesses. Most nonemployer businesses are very small, and many are not the primary source of income for their owners.

Table 10-18. Nonemployment Statistics for Madison County, 1999 and 1997

| NAICS Code | Description | Establishments | | Receipts (\$1,000) | |
|------------|--|----------------|------|--------------------|--------|
| | | 1999 | 1997 | 1999 | 1997 |
| 0 | All Industries | 767 | 736 | 24,115 | 22,364 |
| 11 | Forestry, fishing hunting, ag. support services | 52 | 57 | 1,183 | 1,223 |
| 21 | Mining | 10 | D | 119 | D |
| 23 | Construction | 154 | 130 | 6,769 | 5,053 |
| 31-33 | Manufacturing | 22 | 21 | 580 | 460 |
| 42 | Wholesale trade | 13 | 14 | 688 | 605 |
| 44-45 | Retail trade | 89 | 118 | 3,542 | 4,251 |
| 48-49 | Transportation warehousing | 27 | 29 | 1,320 | 1,402 |
| 51 | Information | D | D | D | D |
| 52 | Finance and insurance | 15 | 15 | 309 | 519 |
| 53 | Real estate, rental, and leasing | 63 | 43 | 1,609 | 1,068 |
| 54 | Professional, scientific, and technical services | 93 | 99 | 2,428 | 2,589 |
| 56 | Administrative and support and waste management and remediation services | 20 | 21 | 344 | 155 |
| 61 | Educational services | D | D | D | D |
| 62 | Health care and social assistance | 30 | 22 | 248 | 263 |
| 71 | Arts, entertainment, and recreation | 49 | 51 | 1,507 | 2,074 |
| 72 | Accommodation and food services | 29 | 26 | 1,267 | 1,026 |
| 81 | Other services (except public administration) | 91 | 75 | 2,028 | 1,463 |

Source: Nonemployer Statistics, available at www.census.gov/epdc/nonemployer/1999/mt/MT001.HTM

D = Withheld to avoid disclosure.

10.3.2.5 Commuting

In Montana, approximately 74 percent of all workers drive alone in a truck, car, or van to work (Table 10-19). In Madison County, a smaller percent of workers drive alone in a truck, car, or van to work (62.7). Nine percent walk to work, and almost 12 percent work at home.

Table 10-19. Commuting to Work, 2000 Census

| Characteristic | Montana | Madison |
|---|---------|---------|
| Workers 16 year and over (No.) | 422,159 | 3,109 |
| Car, truck, or van-drove alone (%) | 73.9 | 62.7 |
| Car, truck, or Van – carpoled (%) | 11.1 | 15.1 |
| Public transportation (including taxicab) (%) | 0.7 | 0.1 |
| Walked (%) | 5.5 | 9 |
| Other means (%) | 1.7 | 1.1 |
| Worked at home (%) | 6.4 | 11.9 |
| Mean travel time to work (minutes) | 17.7 | 22.4 |

Sources U.S. Bureau of the Census, Census 2000, DP-3.

10.3.2.6 Top Employers

The top employers in Madison are listed in the following table as provided by the Montana Department of Commerce, Census and Economic Information Center. County officials provided additional information that expanded the list to include to more employers than are listed by the Department of Commerce.

Table 10-20. Top Twelve Private Employers in Madison County (in alphabetical order)

| |
|---------------------------|
| A M Welles Inc. |
| Big Sky Resort |
| Ennis Pharmacy |
| First Madison Valley Bank |
| J D L Construction |
| Luzenac |
| Madison Foods |
| Madison Valley Hospital |
| Ruby Valley Hospital |
| Ruby Valley National Bank |
| Winston Rod Company |
| Yellowstone Development |

Source: Montana Department of Commerce, Census and Economic Information Center. Available at <http://ceic.commerce.state.mt.us/>.

10.3.3 Income

Per capita personal income and household income are shown in the following tables and charts for Montana and Madison County. As defined by the Bureau of Business Economic Research, School of Business Administration, University of Montana:⁷²

Personal income is the income received by people from all sources—private sector and government wages, and salary disbursements, other labor income, farm and nonfarm, self employment income, rental income of people, personal dividend income, personal interest income, and transfer payments. Personal income does not have taxes subtracted from it.

Per capita personal income is the annual total personal income of residents divided by their resident population. Per capita personal income is a measure of economic well-being. The amount of goods and services that people can afford is directly related to their personal income.

10.3.3.1 Per Capita Personal Income

Table 10-21 shows average per capita personal income, personal income along with in-state rankings, and a breakdown of the sources of personal income for the State of Montana and Madison County. Montana has not been able to keep pace with the nation, and Madison County has not been able to keep pace with Montana. For 2000, Montana's per capita personal income was \$22,518, which places it 47th out of the 50 states. Madison County's per capita personal income was \$19,615 and it ranked 31st among the state's 56 counties and 5th among the 7 project counties.

Personal income has three components: earnings; dividends, interest and rent; and transfer payments. Montana ranks 46th among the 50 states in personal income and Madison County ranks 28th among the states 56 counties and 5th among all project counties. In the components of personal income, the county has a lower percentage of earnings than the state and it ranks sixth among all project counties. However, the county has 30.6 per cent of total personal income from dividends, interests, and rents, the highest among all project counties. This may reflect the presence of retirees in the county's population.

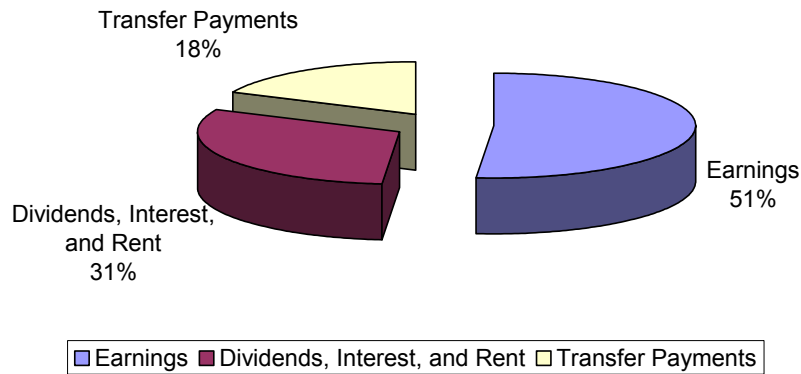
⁷² [Http://www.bber.mt.edu/economicanalysis/personalincome.htm](http://www.bber.mt.edu/economicanalysis/personalincome.htm) accessed April 22, 2002.

Table 10-21. Per Capita Personal Income, Total Personal Income, and Components for Montana and Madison County, 1999 and 2000

| County | Per Capita Personal Income | | Total Personal Income | | Components of Total Personal Income | | |
|----------------|----------------------------|---------|-----------------------|---------|-------------------------------------|-----------------------------------|-----------------------|
| | (\$) | Rank | (\$1,000s) | Rank | Earnings (%) | Dividends, Interest, and Rent (%) | Transfer Payments (%) |
| Montana | | | | | | | |
| 2000 | 22,518 | 47 (US) | 20,336,883 | 46 (US) | 61.2 | 22.7 | 16.1 |
| Madison | | | | | | | |
| 1999 | 18,399 | 37 | 127,450 | 28 | 50.1 | 31.8 | 18.1 |
| 2000 | 19,615 | 31 | 134,793 | 28 | 51.3 | 30.6 | 18.1 |

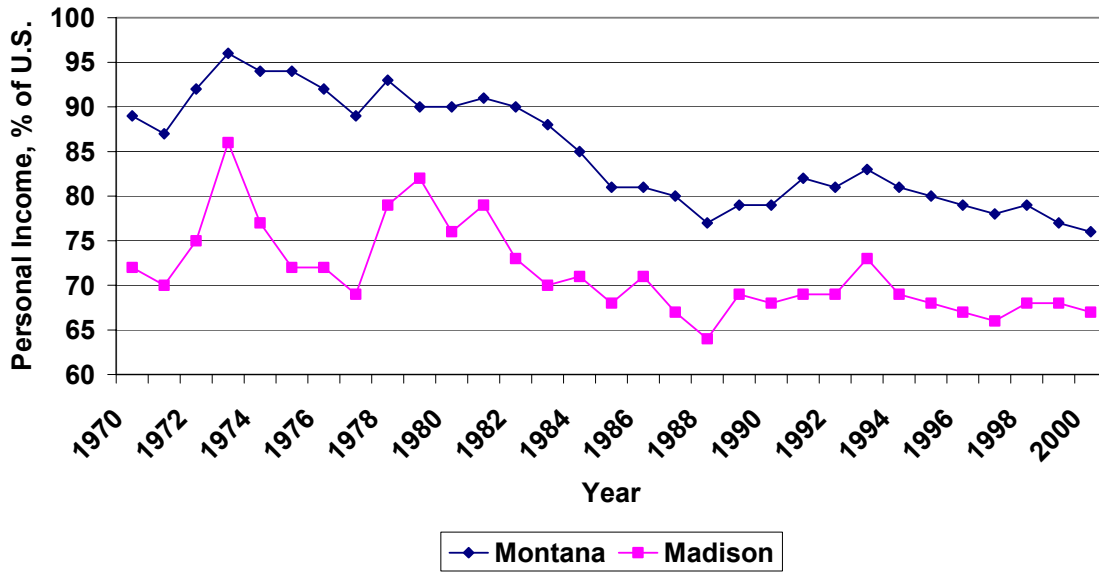
Source: Regional Economic Information System, Bureau of Economic Analysis, Bearfacts.
 Note: Montana contains 56 counties

Figure 10-7. Components of Total Personal Income for Madison County, 2000



Source: Regional Economic Information System, Bureau of Economic Analysis, Bearfacts.

Figure 10-8. Per Capita Personal Income as Percent of U.S. for Montana and Madison County, 1970-2000

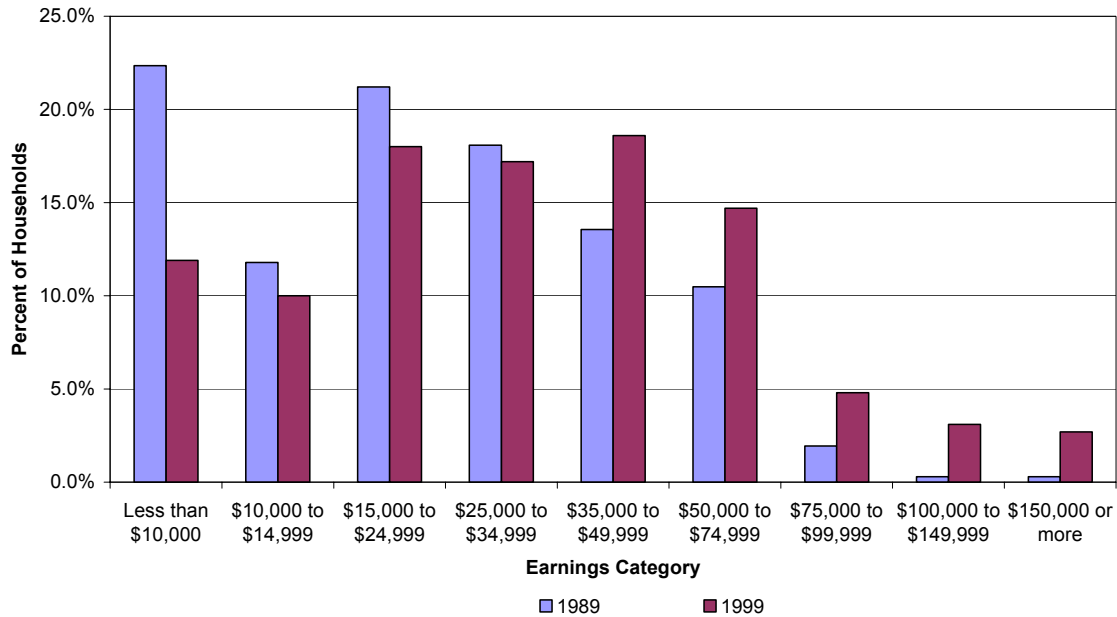


Source: Bureau of Economic Analysis Regional Accounts at <http://www.bea.doc.gov/bea/regional/reis/>.

10.3.3.2 Household Income

Figure 10-9 shows the changes in household income for the ten-year interval from 1989 through 1999. The chart shows a trend for a decrease in the percentage of households in the lower income categories and an increase in the percentage of households in the higher income categories. This may be affected by residents in communities such as Big Sky where incomes are higher than in other parts of the county.

Figure 10-9. Household Income for Madison County, 1989 and 1999



Source: U.S. Census Bureau, 1990 Census and Census 2000.

10.4 Community Resources

At this end of the valley, our neighbors are mostly people who come and go. They are newcomers, and mostly they are coming rather than going. They are moving into subdivisions and more and more ranchers are selling out and creating opportunities for speculators to buy up their property and develop it into the subdivisions. There are places here now that have houses on the ridge tops that I would have never thought would be there when we first moved here. It is a changing place.⁷³

The demography of Madison County suggests that it is in fact “a changing place.” Residents are keenly aware of the changes that can result from growth, and there is an ongoing effort to respond to the social and cultural demands that can occur with growth. How communities respond to these demands is affected by community resources, which are examined in this section, including

⁷³ Italics indicate a statement from project participants that were recorded on tape or written in field notes. Exact word for word transcription did not occur in all cases. However, these statements indicate the meaning of what was said. The process of writing field notes and making transcriptions from tapes often results in approximations of what was said that remain true to the meaning of the statement. Quotations from published or other sources are indicated by indentations but not italics.

infrastructure and services, community characteristics, mutual support and cooperative problem solving, and leadership.

10.4.1 Infrastructure and Community Services

Community infrastructure and services are summarized in this section. County infrastructure influences economic development as well as social well-being and community quality of life. Community services indicate the type of resources residents have available to meet basic and other human needs that contribute to personal well-being and community quality of life.

Interstate 90, on the far northern border of the county, provides access to the east and west. The north-south Interstate is accessible from I-90 or via Highway 41 through Dillon in Beaverhead County or other connector roads in the western portion of the county. In the Madison Valley, U.S. 287 connects the southern parts of the county through Ennis to I-90. Just past Harrison, Highway 359 branches northwest to intersect I-90 near Whitehall, but the traveler who stays on 287 goes on to I-90 near Three Forks. The east and west portions of the county are connection by State Route 287 which travels from Ennis to Virginia City and Twin Bridges. Highway 41 travels roughly north-to-south from Twin Bridges, with Highway 55 branching off in the northern portion just below the county boundary. Other key infrastructure elements are as follows:

- There are no trains in Madison County, although the north-south train routes through Dillon are accessible to those in the western portions of the county as well as the west to east route from Whitehall.
- Truck freight carriers access all portions of the county, as do parcel and package services.
- There are two county operated airports; one in Twin Bridges and the other in Ennis-Big Sky. Commercial air service is available through one of the regional hubs or at West Yellowstone. Charter service is also available through carriers in Butte or Belgrade/Bozeman.
- Northwestern Energy and the Vigilante Electric Cooperative supply natural gas and electricity to residents.
- Most county residents rely on wells for drinking water.
- The Beaverhead County landfill is used for solid waste disposal, and there are containers or haulers that are placed at strategic sites for waste collection in most parts of the county. The Logan landfill also serves the county.
- Qwest Communications provides the majority of telephone services, including the availability of T1 and T3 lines. Dialup internet access is available, but broadband services are limited.
- Ennis has the most retail services in the Madison valley and Twin Bridges and Sheridan the most services in the Ruby valley. Residents in the northern portion of the county access retail services in Whitehall. All county residents use retail services available in nearby regional urban centers such as Bozeman or Butte.

Madison County has three elected commissioners: one represents the Madison Valley Area, the other the Ruby Valley, and the third the northern portion of the county. Other Elected Officials are as follows:

- Justice of the Peace
- Public Administrator
- Sheriff

- Treasurer
- Clerk/Recorder
- Clerk of the District Court.

County administrative departments and services are: clerk and recorder, treasurer, justice and district courts, planning, weed control, solid waste, roads, sheriff's office, sanitation, and schools. The county seat is located in Virginia City.

The incorporated communities are Virginia City, Ennis, Twin Bridges, and Sheridan. The other county towns are Alder in the western portion of the county; Cameron in the south Madison Valley; and Harrison, McAllister, Norris, Pony, and Silver Star in the north county.

The Madison County School District operates nine schools that serve all parts of the county. In the Ruby Valley, there is a K-12 school at Twin Bridges, an elementary school and high school in Sheridan, and a K-6 elementary school in Alder. In Ennis, there is a county high school as well as an elementary and middle school. In the northern part of the county, there is an elementary school, middle school, and high school in Harrison. There are libraries in both Ennis and Sheridan.

The county health care services are summarized in Table 10-22.

Table 10-22. Health Resource Assessment for Madison County

| | | | | |
|---|--|-----|-------------------|--------|
| Local Hospitals or Medical Assistance Facilities (MAF) (Type of facility and number of beds) | 2 local hospital(s), 0 MAF(s); 29 beds | | | |
| Rural Health Clinics (RHC), Federally Qualified Health Centers (FQHC), IHS and Tribal Health Facilities (Number and type) | 2 RHCs, 0 FQHCs, 0 IHS/Tribal Health Facilities | | | |
| Availability of 911 and Advanced Life Support Services | 911 | | Adv. Life Support | |
| | Yes | | 1 Service: Ennis | |
| Nursing Homes (Number of facilities and beds) | 2 / 79 beds | | | |
| Aging Services Licensed (Number of Personal Care [PC], Adult Foster Care [AFC], and Retirement Home [RH] Licenses) | PC | AFC | RH | |
| | 0 | 0 | 0 | |
| Home Care Services Licensed (Number of Home Health Agency [HHA] and Hospice Licenses) | HHA | | Hospice | |
| | 1 | | 1 | |
| Public Health Resources (Number of Full-time Equivalent Public Health Nurses, Public Health Sanitarians [PHS], Registered Dietitians [RD], and Health Educators [HlthEd]) | Nurse | PHS | RD | HlthEd |
| | 0.5 | 1.0 | 0.0 | 0.0 |
| Primary Care Provider Resources (Number of doctors [MDs and DOs ⁷], Nurse Midwives [NMW], Nurse Practitioners [NP], and Physician's Assistants [PA]) | MD/DO | NMW | NP | PA |
| | 6 | 0 | 1 | 0 |
| Health Care Provider Shortage Status (Federal Health Professional Shortage Area [Fed. HPSA], State HPSA, Medically Underserved Area [MUA], or Medically Underserved Population [MUP]) | Federal HPSA - Harrison, Madison Valley and Virginia City CCDs; State HPSA - Yes; MUAs - Sheridan CCD; MUPs - None | | | |

Source: Montana State Department of Public Health and Human Services.

10.4.2 Community Characteristics

The Sheridan Bakery is a gathering place for morning coffee, conversation, and doing casual business. It is typical of “coffee clutch” gatherings in rural communities where people exchange news and comment on local happenings. On any day when the coffee is on, even the casual visitor will find his or her cup refreshed with hot coffee by whoever is filling their own cup from the pot that sits outside the counter for all patrons to use. In addition, in the process, the stranger may be asked his or her business and how long he or she is staying in town.

What might be interpreted as rude or even aberrant behavior in San Francisco is the norm of polite social behavior in the Sheridan Bakery. This is the culture of traditional rural America, where people are accustomed to knowing one another and strangers are treated politely, but with curiosity. This coffee shop behavior is itself an expression of the sense of community in Madison County: it indicates an assumption that people know or should know each other. Exchanging pleasantries and casual conversation is the norm of polite neighborliness. In Madison County, knowing your neighbor and being neighborly are essential values of this rural community culture.

The county's commissioner districts to some degree match geographic areas with social groupings. Project data suggests four major social or community groupings: The Madison Valley, the Ruby Valley, the Norris and north county area, and Big Sky. One resident described county social groupings as follows:

In the north part of the county, it is primarily agricultural based; mostly older families, and they are very oriented to Whitehall. In the Ruby and the Madison, those are also agriculture based, but both areas have seasonal residents who are newcomers. The Madison has more seasonal residents, but we are getting them over here (in the Ruby Valley) too, just not as many. Then there's Big Sky, big money, seasonal residents. Only a few of them stay year round.

This statement suggests several of the multiple elements of community identity: geography, tenure, and seasonality. The three most prominent geographic divisions (Madison, Ruby, and north county) also appear to represent the most established community areas. Big Sky, which is a specific geographic locale, is described more as indicating residents of different tenure and economic status. There is rivalry between the major areas, especially between communities in the Madison Valley and the north county and those in the Ruby Valley. As one observer of the county commented:

They even read different papers. The people in the Ruby and western areas read the Butte paper and the people in the Madison read the "Ennisonian" as they call it.

Within each of these geographic sub-areas there are also rivalries that emphasize the independent identity of each community. Sheridan and Twin Bridges in the Ruby Valley have an ongoing rivalry that is expressed in school athletics, religious organizations, and in other community activities. These types of rivalries reinforce the independent identity of each community. The sense of community is dispersed into individual locales that aggregate into sub-areas such as the western-most portions of the county between Twin Bridges, Melrose, and Glen and the Ruby, upper Ruby, lower Madison, Big Sky, and Norris-McAllister areas. This local yet sub-regional sense of identity is one of the characteristics of the sense of community in Madison County.

Tenure is another important element in the sense of community in Madison County. The "old family" residents of each geographic area represent the agricultural base and history of southwest Montana. Their tenure is the longest and their attachment and commitment to community is not questioned. As one observer of the county noted:

The ranchers are the spiritual core of this place; their families suffered through hard times. They have ties to the land. They are survivors.

If the ranchers are the core, based on their historical tenure and ties to the land, then newcomers are perceived to represent the social periphery of the county. Newcomers are both seasonal as well as full-time residents. Seasonal residents appear to be perceived as less integrated than a newcomer who lives in the county year round, which apparently indicates more commitment to the region, especially given the harshness of the winters.

Among the old family and long-term residents, face-to-face relationships and common values are important indicators of community membership. This describes what can be termed classic 'gemeinschaft' social bonds; that is, they are based on shared values, informality, face-to-face relationships, and common outlook based in history and shared experiences. The character of social bonds in Madison County communities is well expressed in the statement below in which a rancher describes, "How things get done":

There is a sub-culture in a valley like this. I mean there is a certain way we are used to doing things and getting things done. New people come in, lock their gates, lock their land up, and they may not know how things get done. If I am out moving cattle, some fellow may come up

and ask me, "What the hell is going on" with whatever he is concerned about. We will talk about it and sort things out one to one. Maybe sometimes it is a one to two basis, but we don't need those big town hall meetings where people are there for a shoot out. We get things done from the ground up. We do things from a grass-roots perspective, not a top-down way of doing things.

"How things get done" expresses the character and values about community social relationships. Newcomers and old family residents "get things done" differently. The traditional community way is across-the-fence or causal face-to-face interactions in which the social status and reputation of individuals is known to all parties. The "grass-roots" way of doing things "from the ground up" is based on knowing one's neighbors and having an existing social relationship that is a basis for problem solving. Newcomers are perceived to approach things "from the top down," and they are often social unknowns with limited tenure; in addition, they may not have a full-time commitment to community residence and participation. For example, a rancher consulted for this work described his interactions with a new resident who had concerns about water rights issues. Rather than the new resident calling or visiting the rancher to discuss the issue, he had an attorney call a meeting. The resident's attorney met with the rancher to discuss the problem. The rancher was both amused and dismayed by this "impersonal" approach to problem solving. This anecdote indicates different approaches to problem solving. The traditional approach is based in shared values, history, and social understanding. The other approach is based contractual relationships, the use of intermediaries in problem solving, and a first resort to legal norms rather than community norms for problem resolution.

Newcomers do not necessarily have the same history, nor do they necessarily have the same values and beliefs as longer term county residents. An observation about newcomers is that they bring with them "city values" that some old family residents perceive as puzzling. An excerpt from project field notes illustrates this point:

During the talk the rancher observed that newcomers might try to change things according to how they were done in the city (supposedly where most left to come to Montana). He continued by saying such behavior is both irritating and contradictory because first, he did not like people unfamiliar with local issues and processes posing solutions that worked where they came from, but that may not work here because things are different; and, second, newcomers left the cities and towns because they wanted a different way of life, so why transplant that way of life here? He suggested that PFP (people from pavement) should appreciate local values and ways of doing things before trying to change Montana to be the like the place they left (John Russell, field notes, August 2002).

Longer-term residents live within communities with a historical heritage and their particular social norms, values, and worldviews that link lifestyles, community, and place. Assessments of newcomers as willing to displace existing norms and ways of doing things with "how things are in the city" highlights the importance of local values and beliefs in how people view community.

Responses to newcomers express both real concerns about practical problems and also the values and sense of community of Madison County. The real concerns are based in the growth at Big Sky as well as new residents buying agricultural lands in most areas of the county, but especially in the Madison and Ruby Valleys where the agricultural/ ranching lifestyle is highly valued. Those concerns derive from experiences with new landowners. Long-term residents may complain that newcomers do not maintain good weed control and complain about cows on their lawns, or tractor noise at night during haying season. As ranches and farms are sold, either for subdivision or to absentee owners, ranchers may have fewer options to graze livestock, which may result in increased costs and decreased viability of either continuing their operations or passing them on to their children. The presence of newcomers

is influencing how long-term residents perceive their present and anticipate their future, as well as how they define their identity as community members. That is, their concerns are based in real experiences with newcomers, but also in fears that their lifestyle and values are at risk from sources other than the influx of newcomers.

Newcomers do integrate into local lifestyles and become community members. One newcomer family described their reasons for moving to Madison County:

We have always lived in the flat lands and visited the mountains, but we have always wanted to live in the mountains. We did not want to live in Wyoming or Colorado (because) those areas are over-run. We visited at Big Sky and we went to Yellowstone and just fell in love with it. We decided to look around here and it has many things we were looking for.

There are wide-open view of the mountains, there is lots of wildlife, and there is a just a majesty to the mountains that attracted us. The people here also attracted us: they are straightforward, "what you see is what you get" kind of folks. That appeals to us. And we liked being in a ranching and farming valley where people make a living off the land.

The environmental qualities of open-space, majestic mountains, wildlife, and ranching communities are qualities that attract visitors and migrants to Madison County. Another newcomer family described different reasons for their move to the county:

They describe their move to the county as based in a long-standing desire to live a ranching life style and to live in a community where their children would not have the pressures and temptations that are perceived to be more prevalent in the city than in rural communities. "Lifestyle" particularly the ranching lifestyle is their reason for locating here. But it is also that this lifestyle has an "authentic" character in the Ruby and Madison Valleys. The ability to live that authentic lifestyle also appears important for this family (John Russell field notes, August 2002).

The desire for a traditional place to raise families where people live a lifestyle that remains meaningful is an important draw for some newcomers, although the process for inclusion in local communities is sometimes unexpected. For example, another newcomer family commented:

When we first moved here people were polite, but there was an attitude that we were bringing change with us in our moving truck. People here would like to see these places never change, but without change, they will die out. It took a long time to feel a part of the community, but we do now. Initially, there were some of the people who were born and raised here that had a very smug attitude; they are the ones mostly who promoted that feeling.

The response to a follow up question about the process of becoming accepted as part of the community was as follows:

Our kids were in school, and we participated in school events. My husband was ranching and participating in ranching things and I started doing some volunteering in the school and participated in some fund raising drives and took on some other projects. People saw we were invested in the community and that we were trying to fit in....

Participation in the activities of community and expressing commitment through those actions is an important part of the process of creating community solidarity. Those newcomers who participate in community activities and who also express shared values about local lifestyles are more easily integrated. For example, a Madison Valley newcomer family made the following observation:

When we moved here we decided we did not want to lock up our land like we see some of our neighbors doing. Other people who have moved here don't let others have access across

their land and they don't let other ranchers graze on their property. Our choice was to keep this land in grazing, to keep it open to people who have always had access to it.

We want the valley to remain viable for ranching and we are part of that process. If we did not lease out our land for grazing and if we chased people off the river when they were fishing, well, we just would not be doing things the way they should be done to keep this place from changing so much that it just becomes another Jackson Hole where every one lives behind their locked gates.

These newcomers recognize and respect the values and lifestyles of their old-family ranching neighbors. They also recognize that the actions of other newcomers who “lock up” their lands are discomfoting to the longer-term residents and that this is perceived as inconsistent with the values of this community. Newcomers are clearly not a uniform group. Some are well accepted and they make significant contributions to the development of their communities. Others remain on the social periphery of county communities.

Newcomers have noteworthy social and cultural characteristics that influence the social landscape in Madison County. Newcomers are more likely to live in subdivisions than in the towns of Madison County. Subdivisions exist in each of the three major geographic divisions of the county. Many of the residential lots in these subdivisions remain undeveloped. In fact, about 81 percent of all residential lots are undeveloped in Madison County (Forward , 2002:11). Residents in these subdivisions are both year-round and seasonal or “part-time.” In these subdivisions, newcomers have the option to socialize with one another rather than their ranching or town neighbors. Newcomers who are year-round residents are motivated to socialize with longer-term residents if they desire to be included within the community. Seasonal residents may have less commitment to participation in local community events. The effect is that “subdivision” becomes a place in the social as well as the geographic landscape of the county. “Subdivision” distinguishes a social grouping that has the potential to integrate with other social groups or not. While not all subdivision residents are from out of the area, subdivision residence is often associated with newcomer status.

Newcomers also tend to have a different cultural view of the landscape than longer-term residents. One Ruby Valley rancher explained the difference this way:

There was this new fellow that came driving into town and he said something like, “This is great wilderness you have here.” I wanted to shake him into reality. He looks around and sees wilderness, and I look around and see trophy homes up on the ridge where before you only saw elk grazing. I see fences and gates where there used to be pasture and this fellow sees wilderness and open space. They are coming here to Montana from whatever town they left and they don't see that they are changing this place just by coming here. They are loving Montana to death.

There are two views of place and landscape expressed in this statement. The newcomers see open space and wilderness and a desirable landscape that is a contrast with more urban spaces. Forward quotes a Florida newcomer who expresses this view of the landscape:

This subdivision here was developed thirty years ago, and as you look at the rate of growth in it, there are many, many undeveloped lots. The way I look at it, at my age, there's no way in the world this valley could change fast enough to spoil it for my purposes; its just not going to happen, it doesn't grow that fast. I mean, three houses a year, still fifty percent undeveloped in this subdivision, you would almost say it is static! (Forward, 2002: 67).

The Ruby valley rancher would look at the same subdivision and see urban sprawl. There are different assumptions and views of landscape and place among newcomers and longer-term residents. These have implications for the assessment of planning and land management issues and also for the

potential of these social groups to interact and cooperate on natural resource issues. Without recognition of these cultural differences in views about place, space, and the values about landscape, these groups are likely to misunderstand each other.

Although newcomers and established residents are prominent social groupings, townspeople and agriculturalists/ranchers are also distinguished. This is a region-wide distinction that is present in Madison County, although the towns are of smaller size and the overall population is more dispersed. Madison has fewer population concentrations than nearby counties such as Beaverhead and Jefferson. The population of Ennis, the largest town in the county, is less than a thousand, and most other towns have relatively small populations and limited services. Among all project counties, Madison has the smallest town centers. Townspeople and ranchers/farmers are still valid distinctions, but there is more integration of these small towns with their agricultural neighbors than in most other counties.

The social spaces in the county are more complex than the major distinctions of townspeople, rancher/farmer, and newcomers. There are various interest groups ranging from environmentalists to Wise Use advocates. However, social cohesiveness within the county is fostered by shared cultural values about the nature of social relationships, the value of community participation, and mutual support when it is required. As one observer of the county noted:

What holds this place together is satisfaction with a rural way of life. It is a place where you know your neighbors. It is family and friends that hold us together.

The sense of shared values, shared history and the importance of face-to-face relationships are important cultural elements that make life in this place meaningful for its residents. These communities become less cohesive if residents do not share these values

10.4.3 Mutual Support and Cooperative Problem Solving

The adaptive potential of communities is influenced by the capacity to work together to solve common problems. Those communities that can organize and apply their social resources to respond to problems have a higher likelihood of making adaptations that enhance their future rather than limit it. For example, research about natural and technological disasters illustrates how communities that have a strong base of volunteerism, cooperative problem solving, leadership, and mutual support respond effectively to the stressors of a disruptive event in their social or natural environment (Kroll-Smith and Couch, 1990;). Communities are less disrupted when there is limited social conflict, effective appraisal of problems for resolution, working together to apply limited resources, mutual support, and sufficient leadership reserves to organize and apply resources and establish a vision of recovery and progress out of a crisis.

The issue addressed in this section is about the capacity of Madison County communities for mutual support, cooperation, and cooperative problem solving. Mutual support and volunteerism are important community values in Madison County. Knowledgeable persons consulted for this project cited the following examples of mutual support and volunteer efforts:

- The volunteer fire departments and community efforts to support those organizations, including the “Fireman’s ball” and other fund raising for training and operation for the fire departments.
- Fund raising efforts for persons in need, especially those with medical problems.
- Community efforts to support the County Fair.
- Support and fund raising for families who experience a death.
- Fund raising and volunteer efforts for school sports teams.

- Participation by citizens to develop local parks and recreation efforts.

There is some factionalism based on geography (e.g., Sheridan and Twin Bridges and the Madison Valley and the Ruby Valley) as well as social status (e.g., newcomers and old family), and some also related to differences between church groups.

Although there appears to be a strong sense of mutual support and cooperation as expressed in value statements and the cited examples of support, the examples of factionalism suggests that Madison County cohesion and cooperative efforts are based in local communities. This localized mutual support and cooperation appears consistent with how residents characterize social space in the county in geographic terms.

The dispersed sense of community and localized cohesiveness and mutual support might suggest that cooperative problem solving is influenced by these characteristics of community. This may be the case, but this was an issue that was not clarified in this work. However, Madison County appears to have strong resources for cooperative problem solving, as expressed in several types of community groups that formed in response to specific issues. For example, Ranchlands Groups exist in the Ruby and Madison Valleys, formed in response to specific problems associated with grazing and development pressures. One of these, the Warm Springs Grazing Association, is a group of family ranchers who acted collectively to address grazing issues on public lands. This group worked cooperatively with the USFS, the Rocky Mountain Elk Foundation, and other interest groups to identify and resolve grazing issues.

The Madison Valley Ranchlands group formed in response to ongoing subdivision of large ranches into 20 parcels that sold as ranchettes, often to out-of-state residents for seasonal or year-round residences. Problems associated with those ranchettes, including noxious weeds, fencing, and water rights motivated some local ranchers to seek a solution to existing and anticipated problems. Initially, the group comprised the traditional ranchers in the valley, but it has become more inclusive incorporating the ranchette owners also. This group exemplifies the creation of cross-cutting ties within the community to build new relationships for cooperative problem solving about issues associated with the ranching way of life in the valley.

Water issues in the Ruby Valley also exemplify formation of local groups for cooperative problem solving. In 1994-95, the Ruby River task force was formed to solve problems related to potentially conflicting uses for water from the Ruby Reservoir. Issues about in-stream flows and the allocation of water for irrigation, fish habitat, and wildlife arose in these years. The task force was formed to resolve allocation and resource use issues. As one participant in this process observed:

We realized that we had to get into the 21st century on water use and regulation. There was some suspicion at first, some mistrust, but we worked it out. In about 18 months we had a plan and we had things worked out. It showed that we could identify a problem and get together and work it out.

This type of action exemplifies the capacity of individuals to act cooperatively to solve problems that have multiple interests as part of their solution.

There are also other observations about groups that form on an “as-needed” basis to respond to particular issues. For example:

There are informal groups that form in all parts of the county that I know about. Some of them are with churches, some with schools, some with service groups. These groups seem to capture people who are like one another. People prefer that here; they are always slightly suspicious of participating in a public process with people they do not know, or any public process. People get together in these informal groups with people they know and that works for them.

This characteristic of the importance of face-to-face relationships in forming local groups and responding to social or other events is expressed in this statement. Also expressed is the importance of local approaches to responding to events rather than seeking assistance from outside the community.

Madison County communities are experiencing change and they also appear to be identifying key issues affecting communities and developing community-based solutions to respond to these perceived problems. Social groups with different interests and different points of view exist, but there is a localized sense of inclusiveness that contributes to community cohesion within specific geographic areas. This localized sense of community is a significant asset, but it also suggests that more area-wide issues may place new demands on community problem solving resources.

10.4.4 Leadership

Madison County appears to have a diversity of leadership resources, including newcomers, traditional ranchers, church groups, service clubs, and other formal organizations. For example, in the Madison Valley, some newcomers concerned with wildlife issues have formed groups and held educational programs to address wildlife issues of concern to traditional ranchers. In the Ruby Valley, traditional ranchers have formed groups or taken individual actions to address problems and concerns about natural resource issues. One rancher described actions in response to river access that demonstrate leadership actions:

There were some wealthy people who moved in and blocked access to the river and that created some pressure on access elsewhere. Fish and Game got involved and they were going to buy some acreage that would have created new access for fishermen. Some of us got together and came up with another solution, one that created more access points. At the same time more ranchers got revenue than if Fish and Game had bought one larger piece of land that would have benefited one person and put everyone fishing along the same part of the river.

This example illustrates how individuals can assess a local issue, develop an alternative solution, and act to implement that solution. This type of individual leadership provides the reserves communities need to adapt to changing conditions.

There are individuals in diverse areas of the county who are recognized as leaders. These tend to be traditional ranchers, but knowledgeable persons consulted for this work also suggest that newcomers, businesspersons, and other community members also perform leadership functions when they are needed. For example:

As long as there is a recognized problem, then people will step forward to do what needs to be done, not just ranchers but people from all segments (of the community). People are very busy with their individual and family lives, but when something needs to be done then it takes someone to step up, exercise some leadership, then people will get involved. That happens most of the time, but sometimes leadership is hard to find, but sometimes not.

Such statements suggest that leadership is an available resource for county residents. When problems arise, someone will usually come forward, even if some encouragement is required. In rural communities, it is not uncommon for leadership resources to be concentrated in a limited number of individuals who move in and out of leadership positions as necessary. This may also be the case for Madison County communities, although statements such as the one above suggest leadership may be more widely available in Madison County.

Local leadership may also require a “spark” from outside that can facilitate local involvement. An example of this is one of the county ranchlands groups. Formation of this group was facilitated by an

organization outside the county. This organization has an interest in the mutual benefit to ranchers and environmental interests of preserving open space and wildlife habitat. Specifically, their concern is with both the effects on wildlife and the effects on ranching culture as ranches are sold and then subdivided. The result is less open space and an overall decline in available grazing land. One rancher described his initial reaction to the proposed ranchlands group as follows:

They said at first the purpose was to work on more viable ranching, but I was not too interested. They seemed too much of an environmental group to me and I did not go to the first meetings they had. Then I went, and after talking with people I realized they cared for the land like I do.... The group became a forum for people with different interests to talk about issues like weed control and grazing.

This rancher, who subsequently assumed a leadership position in the organization, exemplifies how local leadership may be facilitated by the involvement of external resources. In this particular instance, the external resources were as necessary as the internal ones. It took the correct match of internal capacity with external “spark” or involvement to result in the emergence of a group with substantial local capacity to identify and resolve issues for a cross-section of residents.

10.5 Human Resources

Secondary source census and other data are typically used to describe human resources in communities. Education, income, and persons in poverty are usual measures of human resources. The consolidated table below shows recent census data concerning unemployment, educational attainment, income, and poverty. Regarding educational attainment, the county has a higher percentage of persons 25 and older with a high school diploma than Montana as a whole and the same with persons with a college degree. In comparison to other counties, Madison ranks third (Beaverhead first, Jefferson second) in persons with college degrees and second (Jefferson is first) in persons who are high school graduates. Madison does not appear to have any deficits in educational attainment, and in fact, the overall educational attainment of its population appears to be an asset when compared to other project counties.

Table 10-23. Measures of Human Resources for Madison County, 2000 Census

| | Percent Unemployment | Percent of High School Graduates >25 | Percent of College Graduates (BA+) >25 | Median Household Income (\$) | Per Capita Income (\$) | Percent of Individuals below Poverty | Percent of Related Children Under 18 below Poverty |
|------------------|----------------------|--------------------------------------|--|------------------------------|------------------------|--------------------------------------|--|
| United States | 3.7 | 80.4 | 24.4 | 41,994 | 21,587 | 12.4 | 16.1 |
| State of Montana | 4.1 | 87.2 | 24.4 | 33,024 | 17,151 | 14.6 | 18.4 |
| Madison | 3.2 | 89.8 | 25.5 | 30,233 | 16,944 | 12.1 | 14.2 |
| Data year | 2000 | 2000 | 2000 | 1999 | 1999 | 1999 | 1999 |

Source: U.S. Census Bureau, Census 2000, DP-2 and DP-3.

Similarly, Madison County shows a .9 percent lower rate of unemployment than Montana as a whole, and it ties with Granite County for the third lowest rate of unemployment (3.2 percent) among all project counties. Similarly, in terms of income, Madison has a lower median and per capita than the state as a whole; and, in comparison to other project counties, Madison ranks fourth in median household income and third in per capita income.

The percentage of households in selected income ranges shows no remarkable differences between the county and the state. In comparison to other project counties, Madison ranks in the upper half in most income categories. Madison County has 2.5 percent fewer persons below the poverty level (12.1 percent) than the Montana Average (14.6 percent). Madison County has 4.2 percent fewer persons under the age of 18 in poverty than the state average for the same age group.

Table 10-24. Percent of Households in Selected Income Ranges for Madison County and Montana, 1999

| Income in 1999 | Madison | Montana |
|-----------------------|---------|---------|
| Less than \$10,000 | 11.9 | 11.3 |
| \$10,000 - \$14,999 | 10.9 | 8.9 |
| \$15,000 - \$24,999 | 18.0 | 17.1 |
| \$25,000 - \$34,999 | 17.2 | 15.4 |
| \$35,000 - \$44,999 | 18.6 | 18.2 |
| \$50,000 - \$74,999 | 14.7 | 17.1 |
| \$75,000 - \$99,999 | 4.8 | 6.4 |
| \$100,000 - \$149,000 | 3.1 | 3.6 |
| \$150,000 - \$199,999 | 0.9 | 0.9 |
| \$200,000 or more | 0.8 | 1.0 |

Source: U.S. Census Bureau Census 2000.

10.6 Community Resiliency

Resiliency is a concept used to address the resources that exist for communities to adapt to changing conditions. This assessment of resiliency is presented in a “situational analysis” framework briefly discussed in Chapters 1 and 12. The indicators are land use, services and infrastructure, attitudes to change, community characteristics, mutual support, cooperative problem solving, leadership, human resources, and economics/economic diversity.

Land Use and Ownership. Madison County has rich natural and scenic resources. Wildlife is abundant and varied. Extensive recreational opportunities exist on the county’s public and private lands. Among all project counties, Madison County has the lowest percentage of federal lands under USFS management. Forty seven percent of county lands are in private ownership. Among all project counties, Madison County has the second highest total acreage in agricultural production and the highest percentage of lands in conservation easements and special use designations. Public lands and lands in conservation easements create open space that is a strength for county residents. Similarly, the high percentage of agricultural lands is also a strength because they, too, contribute to open space. An associated weakness is the potential sale of private agricultural lands for subdivision. Such sales are changing local evaluations of the quality of life in the county. Conservation easements are one strategy for keeping private ranchlands as open space. If this creates the desired outcome of open space and maintenance of traditional ranching lifestyles, then this is a strength for the county.

Services and Infrastructure. Madison County has services that meet the basic needs of county residents or those services are available nearby in urban centers. Local medical services are available in both Ennis and Sheridan. Residents in the north county must use medical services in Ennis or Sheridan or else travel to Whitehall, Butte, or Bozeman. The travel distance and time to the urban

centers is a weakness, but a wider range of services is accessible in the urban centers. The county has the second highest per capita expenditures on services (\$819.68) among all project counties.

Attitudes to Change. Madison County's population growth is an issue of concern to residents. There is a desire to retain the traditions and agricultural lifestyles that are a valued heritage. There is also a reality that newcomers are populating all areas of the county and creating changes in the physical and social landscape. Local government has recognized and responded to the potential for adverse effects from population growth, subdivision growth, and an increasing diversity in worldviews about rural lifestyles. This recognition of the potential for change and efforts to respond is a positive adaptation. This is a strength for the county. At the same time, the desire for stability and continuity among the traditional residents of the county may inhibit recognition of change agents. This may delay developing positive adaptations.

Community Characteristics. Communities are small, dispersed in a large land area, and relatively homogenous in terms of lifestyles. Rural ranching lifestyles are the most prominent, although rural town lifestyles characterize communities such as Ennis, Sheridan, Twin Bridges, and Harrison. Recreation is a significant component of these lifestyles. Additionally, there is commercial recreation for fly fishing, hunting and skiing. Difference in wealth between established residents and newcomers is an expressed concern, especially its implications for the values of egalitarianism residents hold. Newcomers are not a homogenous group. Residents evaluate the status of newcomers based on their residence pattern. Those who are seasonal residents are perceived as on the periphery of local communities. Those who are full-time residents and who participate in community events and projects are perceived as more integrated into local lifestyles.

Small and dispersed communities with similar lifestyles promote a localized sense of community identity. Community members highly value neighboring, egalitarianism, independence, and their western heritage. Within localized areas, this strong sense of community identity promotes cohesiveness, which is a basis for collective action when communities experience opportunities or threats. This is a strength for adaptations to events that have local importance. However, for threats or opportunities that require response from diverse parts of the county, these characteristics of community may be a weakness. Similarly, this localized sense of community can be exclusionary if individuals do not hold similar values and participate in lifestyle activities, or if they violate expectations about egalitarianism.

Mutual Support. Within county communities, independence is a valued characteristic of local lifestyles. At the same time, neighbors also value assisting one another when a tractor breaks down or a family member's sickness leaves a hay crew short handed. Independence and mutual assistance are complimentary and embedded in social networks that also function to communicate about needs for mutual support. In fact, volunteerism and mutual support are highly valued in local communities. Residents perceive that participating in mutual support activities is a contribution to community and an indicator of community membership. Mutual support activities are localized, but they are a clear strength of the social environment of the county. The only constraint on mutual support is the time and effort consumed by agricultural lifestyles. However, the expression of mutual support and volunteerism in County Fairs, neighboring, volunteer fire departments, volunteering for school athletics, and similar individual and community acts indicates the strength of this resource for individual communities.

Cooperative Problem Solving. The Madison Valley Ranchlands group, the Warm Springs Ranchlands Group, and various task forces to address water and riparian issues indicate cooperative problem-solving efforts. Groups form in response to specific issues, and they have been successful in achieving their missions. Recent efforts such as the Madison Valley Ranchlands group incorporate different social and lifestyle groups that create cross-cutting ties that are an important basis for cooperative

problem solving. Some of the efforts are reactions to impending crises, suggesting the capacity to anticipate and prevent problems from becoming more complex. Within geographic areas such as the Ruby Valley, Madison Valley, or the north county, localized problem-solving efforts have been successful. This capacity is a strength. The only potential weakness is limited countywide problem-solving efforts, although these appear to be developing.

Leadership. Leadership resources exist in each of the geographic sub-areas of the county in formal positions such as county and municipal government, but community members also exercise leadership when demands create the need. Newcomers have added new and different leadership resources in county communities. This combination of traditional community leadership supplemented by leadership from newcomers is strengthening the leadership capacity of the county. Observers of Madison County as well as residents note that community-based leadership may require some facilitation by sources within or external to the community. That is, to engage potential leaders who are busy with other life demands may require external resources to initiate or cooperate in initiating actions that then pull in community-based leaders. Leadership resources appear to be a strength for Madison County, with the caveat that these resources may need some assistance to mobilize.

Human Resources. Secondary data do not suggest any obvious human resources deficits for Madison County. The county shows below average unemployment, crime rates, and poverty levels. Educational attainment is above average, although as with most rural Montana Counties, household and per capita income is below the state average. Newcomers are a potential source of new human resources for the county, if these resources are accessible. The variety of existing talent, experience, and expertise in the county is a strength.

Economic Diversity. Economic diversity enhances community resiliency. Diversity is not the only component of economic resiliency, but it is a key indicator associated with overall community resiliency. IMPLAN valued added data (Table 10-12) are the primary indicators of economic diversity used here. Measures of “wildland dependency” (Table 10-11) are also used as indicators of the interaction of community economies with natural resources.

The IMPLAN data indicate the county has six sectors that are each more than 10 percent of the value-added output in comparison to five sectors for the aggregate of all project counties and six for the state. Mining data are not included in this IMPLAN output, but local sources suggest the Luzenac Mine is a major employer and contributor to the county economy. This information suggests that mining also is an important contributor to economic diversity. The largest sectors indicated by the IMPLAN data are agriculture and government, each with 16 percent of total value-added output. Tourism in the form of sight seeing, fishing, hunting, and skiing is a strength of this economy, and it contributes to overall economic diversity.

The wildland dependency data indicate that Madison County ranks fifth among all project counties in wildland-related industry output with \$18.9 million in 1999. Grazing accounts for \$15.7 million of the \$18.9 million total. The county ranks fifth among all project counties in the percentage of wildlands related employment (4.9 percent). Grazing accounts for 3.8 percent of the total 4.9 percent in wildlands related employment. Although these data indicate the importance of grazing within the county economy, they do not indicate any economic benefits that accrue from tourists and other visitors attracted by the county’s substantial natural resources.

Madison County has a modest economy that exhibits some diversity in comparison to other project counties. However, this apparent diversity can be undermined by interdependencies among agriculture and other sectors. If agriculture suffers, then interdependencies with other industries may result in down turns to those sectors also. In an economy of this size, relatively small changes in one

sector may have greater than expected consequences on other sectors and the whole economic structure.

11 Powell County

*This valley hasn't been discovered yet.*⁷⁴

We live in paradise.

We don't want to become a "United States National Park."

The Powell County Comprehensive Plan (1996) describes the county as an ecologically diverse land of rugged extremes from a low elevation of 4,075 feet on the Clark Fork River to a high elevation of 10,168 feet at the top of Mount Powell in the Flint Creek Range. Located in the central portion of southwest Montana, the county is shaped like stairsteps. Most of the higher mountains are located in the Bob Marshall Wilderness in the northern portion of the county. The Bob Marshall Wilderness is one of the most completely preserved mountain ecosystems remaining in the United States. The Flint Creek Range is west of the city of Deer Lodge—the largest community in the county. The Garnet Range is north and west of the unincorporated community of Garrison.

The river valleys in the county essentially divide the county into three separate areas. The three major rivers in the county are the Clark Fork, the Little Blackfoot, and the Blackfoot Rivers. The Clark Fork River, approximately 176 miles in length, runs north then west through the southern portion of the county, draining an area of approximately 1,005 square miles. The Clark Fork River is the easternmost tributary of the Columbia River, and is joined by the Little Blackfoot River near Garrison. The Blackfoot River joins the Clark Fork at the community of Bonner. The Clark Fork drainage area includes the communities of Deer Lodge, Garrison, and Gold Creek. Major land uses in this area include ranching and timber harvesting. The Clark Fork River Corridor has been designated an EPA Superfund site. The Little Blackfoot River valley is a narrow valley where ranching, a limited amount of timber harvesting, and mining take place. The North Powell area is identified in the *Comprehensive Plan* as one of the most rural and isolated areas of the county, where ranching dominates the economy.

According to the Montana Rivers Information System, Powell County contains 141 streams which flow approximately 1,673 miles, and are home to many fish species including mountain whitefish, coho salmon, cutthroat trout, rainbow trout, brown trout, brook trout, bull trout, northern squawfish, longnose dace, and shorthead sculpin (Brown, 1971; in *Powell County Comprehensive Plan*, 1996).

Wildlife found throughout the county include local deer and elk populations as well as Bighorn sheep, Rocky Mountain goats, and grizzly bears. In fact, a grizzly is suspected of killing a hunter in November of 2001 near the Blackfoot-Clearwater Wildlife Management Area between Ovanado and Clear-Water Junction.⁷⁵

11.1 Land Ownership and Use

Powell County, established in 1901, covers 2,325 square miles. This section on land ownership and type of land use describes the ownership patterns of county lands and types of land use found within the county. The subsection on land use includes a brief discussion of the copper mining and

⁷⁴ Italics indicate a statement from project participants that were recorded on tape or written in field notes. Exact word for word transcription did not occur in all cases. However, these statements indicate the meaning of what was said. The process of writing field notes and making transcriptions from tapes often results in approximations of what was said that remain true to the meaning of the statement. Quotations from published or other sources are indicated by indentations but not italics.

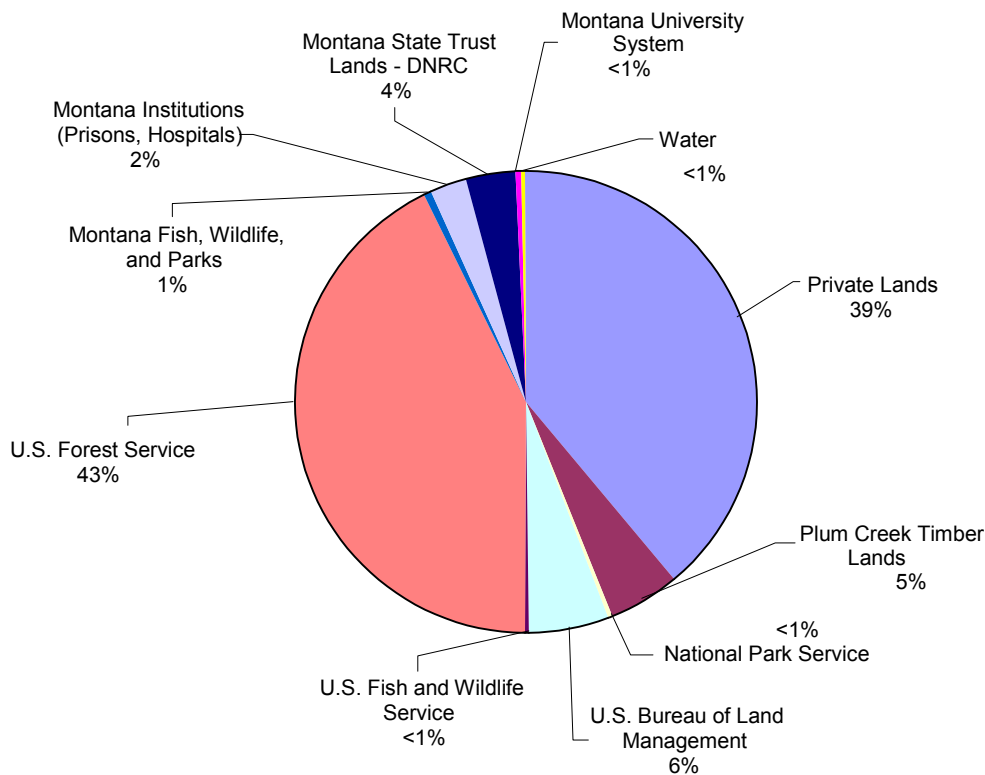
⁷⁵ <http://missoulian.com/archives>, Betsy Cohen. "Man Mauled While Hunting." November 1, 2001.

processing on land in the county, as well as the amount of land in conservation easements and with special use designations. A summary of agricultural land use is also included.

11.1.1 Land Ownership

Figure 11-1 shows a breakdown of land ownership in Powell County. The largest single landowner in the county is the USFS, which owns about 43 percent of the land. In contrast to the other counties in the study area, USFS land ownership in Powell County includes four national forests: Beaverhead-Deerlodge, Flathead, Helena, and Lolo National Forests. Private land owners own 39 percent of county lands.

Figure 11-1. Percentage of Land Ownership of Major Land Owners in Powell County



Source: Montana State Library (2001).

The pie chart is based on estimated land areas. The total area in Powell County is approximately 1.49 million acres.

11.1.2 Types of Land Use

Commerce on the Oregon Trail brought the first cattle into southwest Montana. Traders such as French Canadian Johnny Grant would barter one fit animal for two “travel weary ones.” Grant successfully wintered his stock in the Deer Lodge Valley in 1857. In 1859 he returned and built a home near the northern boundary of what is now the town of Deer Lodge. He persuaded other traders to settle in the new town. However, he sold his ranch to Conrad Kohrs in 1866, and returned with his family to Canada, as did most of the other French Canadians in the Deer Lodge Valley.⁷⁶

⁷⁶ <http://www.nps.gov/grko/grant.htm>.

What came to be called the Grant-Kohrs Ranch, is now a National Historic Site covering around 1,500 acres, but at one time it was the biggest ranch in Montana. Conrad Kohrs, in partnership with his half-brother, John Bielenberg either owned or controlled a million acres. Their cattle grazed over an open range covering 10 million acres. The site is now maintained as a working ranch by the National Park Service.

Powell County's landscape has been shaped by the effects of 100 years of both ranching and mining. For example, while the Grant-Kohrs Ranch is a permanent legacy of the days of the open range, areas within this National Park site adjacent to the Clark Fork River are denuded from acid conditions and high metals concentration.⁷⁷ These areas are part of the Clark Fork Superfund site.

11.1.2.1 Clark Fork Superfund Site

In 1980, the U.S. Congress enacted into law the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as the Superfund law. A tax on the chemical and petroleum industries was created. The act provides broad Federal authority to respond directly to releases or threatened release of hazardous substance that may endanger public health or the environment. Approximately \$1.6 billion was collected in taxes over a five-year period to create a trust fund for cleaning abandoned or uncontrolled hazardous waste sites.

The National Priorities List (NPL) is a published list of hazardous waste sites in the United States that are being cleaned up under CERCLA. There are approximately 1,235 sites on the NPL, located across the country and in several U.S. territories. Once a hazard has been identified, cleanup options are studied for effectiveness and feasibility. Then the EPA determines what it believes to be the appropriate cleanup process. In most cases, the party responsible for the contaminants at the site is responsible for paying cleanup costs.

Since most of the contamination in the Clark Fork area was caused by historic mining operations, Atlantic Richfield Company (ARCO) has been named as the potentially responsible party. According to U.S. law, the liability associated with hazardous waste travels with ownership of the holdings/facilities connected to the waste. ARCO bought the Anaconda Mining Company and its holdings in 1977, and although ARCO is not directly responsible for the contamination, ARCO's purchase of Anaconda Mining Company includes any pollution created by Anaconda Mining Company. EPA's costs and ARCO's liability is the subject of ongoing litigation in *U.S. v. ARCO*. While the State of Montana and ARCO have settled some natural resource damage lawsuit issues, the state is in a lawsuit with ARCO that seeks to assess and collect monetary damages for "injuries to natural resources" that have resulted from the release of hazardous substances into the Clark Fork River and its flood plain as well as other areas in the Upper Clark Fork Basin.

The Clark Fork is in some ways the economic, cultural, and biological backbone of western Montana, and an important part of the region's future rides with this river. The Upper River was designated as a Superfund site in 1985, and the Milltown Reservoir was designated a Superfund site in 1983. The EPA is currently accepting written comments on its proposed cleanup plan of the Upper River site, which stretches 120 miles from the Warm Spring Ponds in Anaconda-Deer Lodge County through Powell County, then Granite, to Turah just above Milltown and the Milltown Reservoir. The EPA-preferred remedy includes a combination of removal and in-place treatment of contaminated mining waste and soils and stream bank stabilization.

⁷⁷ http://www.aqd.nps.gov/pubs/yir/yir2001/07_collaboration/07_od6_GRKO.html.

If the site is large and complex, the EPA divides it into operable units. The Clark Fork Operable Unit, 120 river miles, is further divided into 3 sections:

- Reach A begins at the Warm Springs Ponds in Anaconda-Deer Lodge County and runs north through Powell County, ending where Montana Highway 12 intersects with I-90 south of Garrison.
- Reach B follows the river northwest into Granite County and ends just west of Drummond.
- Reach C ends at the Milltown Reservoir near Missoula.

Around 89 percent of the land within Reach A is in private ownership (100 landowners) while the remaining 11 percent is managed by the Federal government. The majority of cleanup under all scenarios except “no action” will occur in Reach A. Land owners will experience both short-term and long-term impacts because of modified uses. Public meetings were held in Deer Lodge on September 17, 2002 and Missoula on September 19, 2002 to discuss the various scenarios with landowners and the public.

11.1.2.2 Major Uses or Land Cover Type

The percentages of the major land uses or land cover type in Powell County are presented in Table 11-1. Approximately 60 percent of the county is covered in evergreen forest. Approximately 17 percent is in mixed rangeland. Brush rangeland and crop/pasture each account for about 8 percent, and grass rangeland and exposed rock are approximately two percent each. All other land uses or land cover types account for less than one percent each.

Table 11-1. Type of Land Use as Percent of Total Area for Selected Counties and Study Area

| Type | Powell | Study Area |
|------------------|--------|------------|
| Brush Rangeland | 8.20 | 17.55 |
| Evergreen Forest | 60.47 | 43.40 |
| Crop/Pasture | 8.33 | 7.46 |
| Grass Rangeland | 2.16 | 17.32 |
| Mixed Rangeland | 16.88 | 9.21 |
| Exposed Rock | 2.24 | 0.75 |
| Mixed Forest | 0.55 | 0.60 |

Source: Montana Natural Resource Information System On-Line Mapping, nris.state.mt.us/mapper/county/html, February 19,2002.

Note: Columns may not add up to 100 percent due to exclusion of land use categories accounting for less than one percent of total land area.

11.1.2.3 Conservation Easements and Special Use Designations

Table 11-2 shows the number of acres and the percent of county land with various types of conservation and special use designations. Overall, about four percent of Powell County is in conservation easements, while approximately 19 percent is designated for special uses.

Table 11-2. Conservation Easements and Special Use Designations in Powell County and the Project Area

| Land Use | Acres | Percent of Total County Lands | Project Area Total | Percent of Total Project Area |
|--|----------------|-------------------------------|--------------------|-------------------------------|
| Conservation Easements | | | | |
| Private Conservation Easement | 27,845 | 1.87 | 2,600,338 | 2.49 |
| USFWS | 24,757 | 1.66 | 27,173 | 0.26 |
| State Lands | 4,917 | 0.33 | 54,899 | 0.52 |
| Total | 57,519 | 3.86 | 2,682,410 | 3.27 |
| Special Use Designation | | | | |
| BLM Special | 0 | 0 | 30,953 | 0.30 |
| Research Natural Areas | 493 | 0.3 | 19,226 | 0.18 |
| Wilderness Area | 276,387 | 18.53 | 611,925 | 5.85 |
| Total | 276,880 | 18.83 | 662,104 | 6.33 |
| Total of Conservation Easements and Special Use | 334,399 | 22.69 | 3,344,514 | 9.60 |

Source: Montana Natural Resource Information System On-Line Mapping, Located online at <http://nris.state.mt.us/mapper/county.html>, February 19, 2002.

11.1.2.4 Agriculture Profile

Table 11-3 summarizes information from the Census of Agriculture for Powell County in 1987, 1992, and 1997. The number of farms has remained fairly stable in the county between the 1987 census and 1997 census. However, the number of full-time farms and the amount of acreage in farms has declined, although the total acreage and average acreage per farm increased in 1992. The market value of agricultural products sold has increased over time along with the average market value of agricultural products sold per farm. The 2002 Census of Agriculture will begin in December 2002.

Table 11-3. Census of Agriculture for Powell County, 1987, 1992, and 1997

| Characteristic | 1987 | 1992 | 1997 |
|--|---------|---------|---------|
| Number of Farms | 237 | 233 | 230 |
| Full-Time Agriculture | 164 | 142 | 137 |
| Acreage in Farms | 670,508 | 675,569 | 649,489 |
| Average Size of Farms | 2,829 | 2,899 | 2,824 |
| Market Value of Agricultural Products Sold (\$1,000) | 14,420 | 18,154 | 17,807 |
| Average Market Value of Agricultural Products per Farm Sold (\$) | 60,843 | 77,913 | 77,423 |

Source: Census of Agriculture. Located online at <http://govinfo.library.orst.edu/cgi-bin/ag-list>, accessed October 1, 2002.

11.2 Demographic Characteristics and Trends

Information about population helps describe the general nature of a community. An analysis of population trends can help determine if changes are occurring for specific groups defined by age, gender, education level, or ethnicity, thereby influencing the nature of social and economic relationships in the community. Population characteristics may influence resources available to respond to changing socioeconomic conditions. Population growth or decline has a greater relative impact in smaller, rural areas. For example, the smaller and less dense population base found in rural areas makes delivery of basic services more difficult. In urban areas, the logistics and mechanisms for providing public services produce economies of scale impossible for rural areas to duplicate. In addition, in single-sector, resource-dependent communities, the variables of population and employment tend to be highly related.

11.2.1 Rural-Urban Classification

Deer Lodge is the largest community in the county, with approximately 48 percent of the population (3,421). There are several small communities in the county including Avon, Elliston, Garrison, and Ovando (Table 11-4.)

Table 11-4. Population of Counties Compared to Incorporated Cities, Towns, and Designated Census Places, 2000

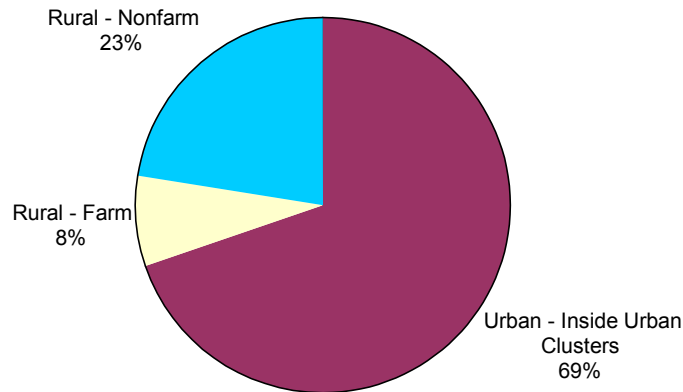
| Place | Population | Percent of County Population | Type |
|----------------------------------|--------------|------------------------------|---------------------------|
| Powell County^a | 7,180 | | |
| Avon | 124 | 1.7 | Census Designated Place |
| Deer Lodge | 3,421 | 47.6 | Incorporated Place (city) |
| Elliston | 225 | 3.1 | Census Designated Place |
| Garrison | 112 | 1.6 | Census Designated Place |
| Ovando | 71 | 1.0 | Census Designated Place |

Source: Source: U.S. Census Bureau, Census 2000

^a Other communities include Gold Creek, Helmsville, Racetrack, and Woodworth. The County also has 1,403 institutionalized persons living in group quarters.

The Census Bureau uses an urban-rural typology to classify land as rural-nonfarm, rural-farm, urban, or urban-cluster. Using this typology, approximately 8 percent of the county's population lives in an area classified as rural-farm, 23 percent in areas classified as rural-nonfarm, and 69 percent in areas classified as urban-inside urban clusters (Figure 11-2). However, in the case of Powell, this classification system does not reflect the rural nature of most of the county because of the concentration of population in the city of Deer Lodge. According to the U.S. Bureau of the Census, the overall density of the county is 3.1 persons per square mile.

Figure 11-2. Population in Urban and Rural Areas for Powell County



Sources: U.S. Census Bureau, Census 2000.

Note: The county has 1,403 institutionalized persons living in group quarters.

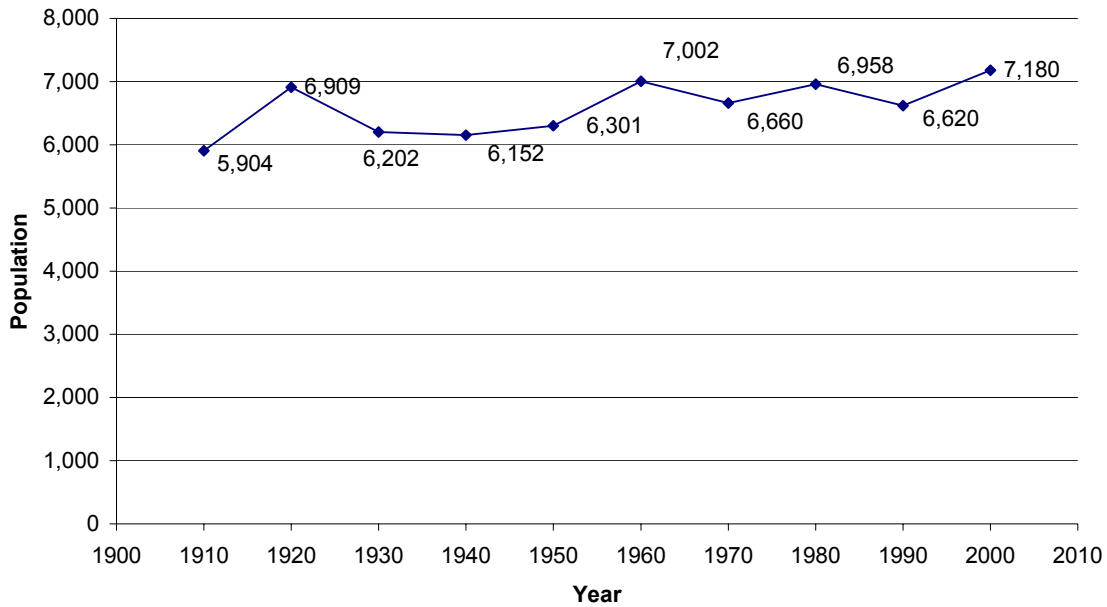
11.2.2 Population Trends

Historical and recent population trends are briefly described in this section. Figure 11-3 presents the population of Powell County at 10-year intervals beginning in 1900, and Figure 11-4 compares the population of the state with Powell for the past 30 years. Between 1920 and 1930, however, Montana lost population, dropping from 548,889 in 1920 to 537,606 in 1930. The population of Powell County also dropped during this period from 6,909 to 6,202. According to Malone and Roeder (1976, p. 241):

Following the collapse of Northern Plains agriculture during the depression of 1918-22, Montana's farmers and ranchers faced a dismal future. Low farm prices and recurring droughts drove many of them from the land and punished those who stayed through the twenties and the "dirty thirties."

The population dropped again between 1930 and 1940 to 6,152, and then increased slowly until 1960, when the population reached 7,002. The population has been up and down every decade since then, reaching a high of 7,180 in 2000. The population dropped slightly (1.4 percent) between April 1, 2000 and July 1, 2001 to 7,076.

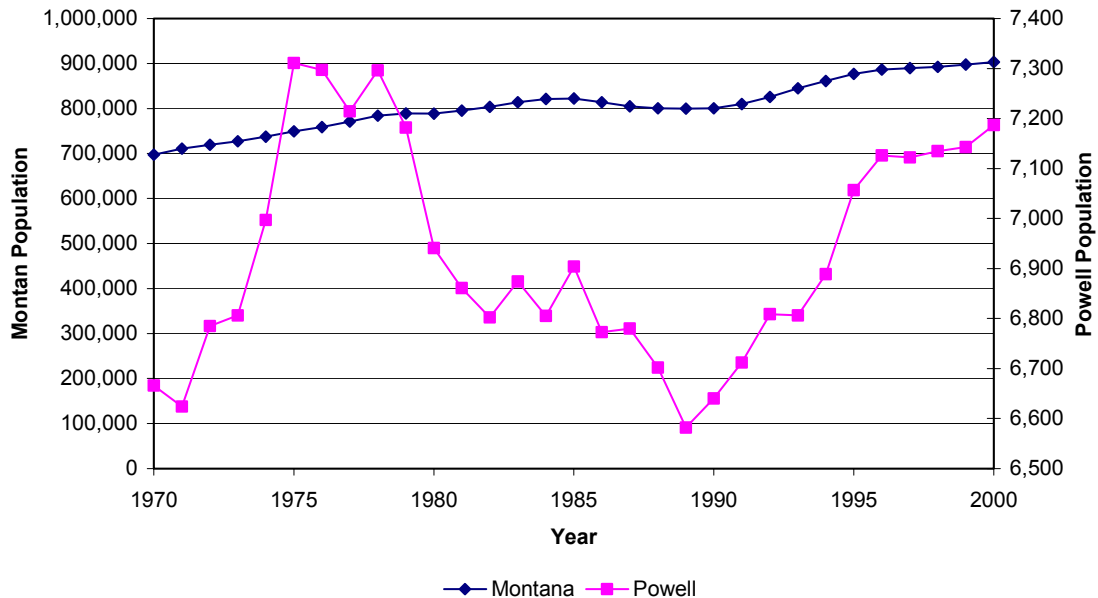
Figure 11-3. Population of Powell County, 1900-2000



Source: <http://ceic.commerce.state.mt.us/Demog/historic/Censuscty18902000.htm>.

Note: The county has 1,403 institutionalized persons living in group quarters.

Figure 11-4. Total Population for Montana and Powell County, 1970-2000



Source: Bureau of Economic Analysis, Regional Accounts Data, <http://www.bea.doc.gov/bea/regional/reis/>, accessed on September 19, 2002.

Note: The county has 1,403 institutionalized persons living in group quarters.

Table 11-5 shows recent sources of population growth resulting from births, deaths, and net-migration. Births outpaced deaths slightly in the county during this period, but out-migration appears to be the primary source of population changes during this period.

**Table 11-5. Components of Population Change for Montana and Powell County
April 1, 2000 to July 1, 2001**

| Place | Births | Deaths | Natural Increase (Births-Deaths) | Net International Migration | Net Internal Migration | Population Change | April 1, 2000 | July 1, 2001 |
|---------|--------|--------|----------------------------------|-----------------------------|------------------------|-------------------|---------------|--------------|
| | | | | | | | Population | Population |
| Montana | 13,320 | 10,165 | 3,155 | 470 | -1,377 | 2,238 | 902,195 | 904,433 |
| Powell | 85 | 71 | 14 | 5 | -123 | -104 | 7,180 | 7,076 |

Source: Population Division, U.S. Census Bureau Released April 29, 2002.

Notes: Net internal migration is the difference between in-migration and out-migration.

The county has 1,403 institutionalized persons living in group quarters.

11.2.3 Age and Gender

Age structure, gender, and ethnicity are three of the important components of population composition considered here. According to the Census 2000, Powell County has a very unusual gender ratio with 143.2 males per 100 females. The gender ratio in Powell County can be attributed the number of individuals counted in Census 2000 as living in institutionalized group quarters—in this case the Montana State Prison, which is designated to maintain a population of 1,300 adult males. The Census Bureau classifies all persons not living in households as living in group quarters (see Table 4-12).

For the 2000 census year, the county shows a higher median age (39.7) relative to the state (37.5).

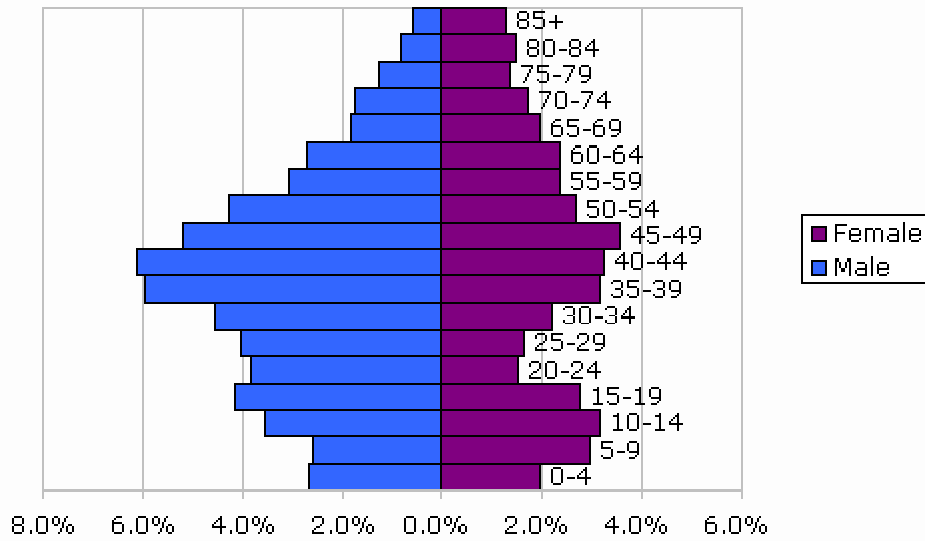
Table 11-6. Total Population, Median Age, and Gender, 2000

| Geographic Area | Total Population | Median Age (Years) | Males per 100 Females | |
|-----------------|------------------|--------------------|-----------------------|-------------------|
| | | | All Ages | 18 years and Over |
| State Total | 902,195 | 37.5 | 99.3 | 97.2 |
| Powell | 7,180 | 39.7 | 143.2 | 151.4 |

Source: U.S. Census Bureau Census 2000, Summary File 1, Matrices PCT12 and P13.

Note: The county has 1,403 institutionalized persons living in group quarters.

Figure 11-5. Age Distribution for Powell County, 2000



Source: [Census 2000](#) analyzed by the [Social Science Data Analysis Network \(SSDAN\)](#).

Note: The county has 1,403 institutionalized persons living in group quarters.

Table 11-7 shows the changes in the age structure for seven different age categories. Both the state and the county had a lower percent of persons under five in 2000 than they did in 1990. Powell County had a lower percent of children under five (4.6 percent) in 2000 than the state (6.0 percent). The percent of individuals in the 25 to 34 years of age category (18.5 percent) dropped over 6 percent in the county. The age distributions corroborate interview data that suggest that this age group leaves the county and/or the state for jobs elsewhere and then moves back to the area midlife. Of interest is that the percent of this age group was slightly higher in 2000 for the county than for the state. Both the state and the county showed an increase in the 45 to 64 years of age group between 1990 and 2000. The percent of individuals 65 years and older remained steady in both the county and the state, and there was little difference between the state and the county for this age cohort, which may indicate that a significant number of retirees are not moving into the county.

Table 11-7. Changes in Age Structure of Seven Cohort Groups, 1990-2000

| | Under 5 Years | 5 to 17 Years | 18 to 24 Years | 25 to 34 Years | 35 to 44 Years | 45 to 64 Years | 65 Years and Over |
|----------------|---------------|---------------|----------------|----------------|----------------|----------------|-------------------|
| Montana | | | | | | | |
| 1990 | 7.4 | 20.4 | 8.8 | 15.4 | 15.9 | 18.9 | 13.3 |
| 2000 | 6.1 | 19.4 | 9.6 | 11.4 | 15.7 | 24.4 | 13.4 |
| Powell | | | | | | | |
| 1990 | 6.0 | 16.4 | 7.4 | 18.5 | 17.3 | 20.3 | 14.1 |
| 2000 | 4.6 | 16.6 | 7.9 | 12.4 | 18.4 | 26.1 | 14.0 |

Source: U.S. Census Bureau 1990 and 2000.

Note: The county has 1,403 institutionalized persons living in group quarters.

11.2.4 Race

Powell County shows a relatively homogenous racial composition, with 96.2 percent of the population “white.” In 2000, 2 percent of the population was Hispanic and 3.4 percent was American Indian.

Table 11-8. Population Distribution by Race for Powell County, 1990 and 2000

| Race | 1980 | | 1990 | | 2000 | |
|--------------------------------|--------|---------|--------|---------|--------|---------|
| | Number | Percent | Number | Percent | Number | Percent |
| Total Population | 6,958 | 100 | 6,620 | 100 | 7,180 | 100 |
| Total Hispanics | 58 | 83.0 | 77 | 1.2 | 140 | 2.0 |
| White* | 6,694 | 96.2 | 6,239 | 94.2% | 6,568 | 91.5% |
| Black* | 12 | 17.0 | 22 | 0.3 | 35 | 0.5 |
| American Indian and AK Native* | 169 | 2.4 | 252 | 3.8 | 244 | 3.4 |
| Asian* | 15 | 0.2 | 25 | 0.4 | 31 | 0.4 |
| Hawaiian and Pacific Islander* | - | - | - | - | 0 | 0 |
| Other* | 10 | 0.1 | 5 | 8 | 10 | 0.1 |
| Two or More Races* | - | - | - | - | 152 | 2.1 |

Source: [Census 2000](#) analyzed by the [Social Science Data Analysis Network \(SSDAN\)](#).

* Non-Hispanic only; in 1980 and 1990 “Asians” includes Hawaiians and Pacific Islanders.

Note: The county has 1,403 institutionalized persons living in group quarters.

11.2.5 Housing and Households

Another important descriptive characteristic of Powell County’s demography is household composition (Table 11-9). Powell County has 2,422 occupied housing units and a density of 1.3 housing units per square mile. Powell County’s homeownership rate (71.3 percent) is slightly higher than the ownership for the state (69.1 percent). There are 2,422 households with an average household size of 2.4 persons per household and an average family size of 2.9. In Powell County, 33.3 percent of households have individuals under 18 years of age. Another 23.4 percent of households have individuals 65 years and over. This is five percent more than the state.

Table 11-10 shows the change in household types between 1990 and 2000. The percent of married couples in the county decreased from 59 percent in 1990 to 55.5 percent in 2000. The percent of married couples with children also decreased from 26.5 percent to 21.4 percent. The percent of married couples without children increased slightly from 32.6 percent to 34.1 percent. The number of female-headed households increased from 6.5 percent to 7.7 percent. The percent of male-headed households also increased slightly from 2.8 percent to 4.3 percent.

Table 11-9. Housing Units and Households for Powell County and Montana, 2000

| Characteristic | Powell | Montana |
|--|--------|---------|
| Population | 7,180 | 902,195 |
| Housing Units | 2,930 | 412,633 |
| Occupied Housing Units | 2,422 | 358,667 |
| Housing Units per Square Mile of Land Area | 1.3 | - |
| Homeownership Rate | 71.3% | 69.1% |
| Households | 2,422 | 358,667 |
| Nonfamily Households | 788 | 121,260 |
| Households with individuals 65 years and over | 697 | 83,982 |
| Percent of Households With Individuals 65 years and Over | 28.8% | 23.3% |
| Households With Persons Under 18 | 757 | 119,550 |
| Percent of Households With Person Under 18 | 31.3% | 33.3% |
| Average Persons per Household | 2.4 | 2.5 |
| Average Family Size | 2.9 | 3.0 |

Source: U.S. Census Bureau, Census 2000.

Note: The county has 1,403 institutionalized persons living in group quarters.

Table 11-10. Household Types for Powell County, 1990-2000

| Type of Household | 1990 | | 2000 | |
|--------------------------|--------------|--------------|--------------|--------------|
| | Number | Percent | Number | Percent |
| Total Households | 2,234 | 100.0 | 2,422 | 100.0 |
| Married Couple | 1,319 | 59.0 | 1,344 | 55.5 |
| With Children* | 591 | 26.5 | 518 | 21.4 |
| Without Children* | 728 | 32.6 | 826 | 34.1 |
| Female-Headed | 145 | 6.5 | 187 | 7.7 |
| With Children* | 82 | 3.7 | 134 | 5.5 |
| Without Children* | 63 | 2.8 | 53 | 2.2 |
| Male-Headed | 63 | 2.8 | 103 | 4.3 |
| With Children* | 44 | 2.0 | 62 | 2.6 |
| Without Children* | 19 | 0.9 | 41 | 1.7 |
| Non-Family | 707 | 31.6 | 788 | 32.5 |
| Householder Living Alone | 639 | 28.6 | 692 | 28.6 |
| Two or More Persons | 68 | 3.0 | 96 | 4.0 |

Source: [Census 2000](#) analyzed by the [Social Science Data Analysis Network \(SSDAN\)](#).

* For the purposes of this table, "children" are people under age 18.

Note: The county has 1,403 institutionalized persons living in group quarters.

11.2.6 Educational Attainment

Table 11-11 shows the educational attainment of the population 25 years and older for 1990 and 2000. The percent of high school graduates increased slightly between 1990 and 2000, while the percent of the population with a bachelor's degree decreased. In 2000, approximately 82 percent of the population 25 years and older had a high school diploma or equivalency while approximately 13 percent had a bachelor's degree or higher.

**Table 11-11. Educational Attainment in Population 25 Years and Older
Powell County, 1990 and 2000**

| Education Level | 1990 | | 2000 | |
|---------------------------------|--------|------------------|--------|------------------|
| | Number | Percent of Total | Number | Percent of Total |
| Less than 9th grade | 446 | 9.96 | 286 | 5.61 |
| Some high school, no diploma | 608 | 13.58 | 636 | 12.48 |
| High school graduate* | 1,655 | 36.97 | 1,981 | 38.86 |
| Some college, no degree | 862 | 19.26 | 1,288 | 25.26 |
| Associate degree | 161 | 3.60 | 241 | 4.73 |
| Bachelor's degree | 514 | 11.48 | 432 | 8.47 |
| Graduate or professional degree | 230 | 5.14 | 234 | 4.59 |
| Total Population Age 25+ | 4,476 | 100 | 5,098 | 100 |

Source: [Census 2000](#) analyzed by the [Social Science Data Analysis Network \(SSDAN\)](#).

Note: The county has 1,403 institutionalized persons living in group quarters.

11.3 Economic Conditions and Trends

People here are survivors.

Powell County's economy is principally resource-based, with an emphasis on agriculture, forest products, and government employment.

11.3.1 Economic Sectors and Diversity

This section provides information on the diversity of the economy of Powell County from two perspectives, both based on the 1999 IMPLAN⁷⁸ Model Year Data for Powell County. A more detailed description of input-output models and IMPLAN is located in Chapter 4 of this report. One perspective looks at the contributions of natural resources-based sectors to the total output and employment of all sectors of the county. The other perspective compares value-added estimates of the different sectors in the county.

Table 11-12 is an updated version of the model that appears in the USFS Region 1 Economic Library.⁷⁹ The same industry sectors were used in the update as found in the USFS 1996 model. "Wildland" related sectors appear to be a significant source of total industry output for Powell County, accounting for approximately 32 percent of total industry output and 13 percent of employment in Powell County. The most important industry in terms of total industry output for the county, is

⁷⁸ IMPLAN Pro™ is Social Accounting and Impact Analysis software; produced by MIG, Incorporated.

⁷⁹ <http://www.fs.fed.us/r1/planning/econ/easy/library/library.html>.

sawmills and planing mills, which account for 22.5 percent of industry output and 7.8 percent of employment. Logging and contracting account for 8.6 percent of total industry output and 1.3 percent of employment. Range fed cattle account for 5.4 percent of total industry output of the county and 1.4 percent of the industry employment. All other industries account for less than one percent of the total employment.

Table 11-12. Direct Effects of "Wildland" Related Sectors in Powell County, 1999

| Industry Description | | Industry Output (Millions of \$) | Industry Output as % of County Total | Employment | Industry Employment as % of County Total | Labor Income (Millions of \$) | Average Laborer Income (\$/Job) |
|---------------------------|--|----------------------------------|--------------------------------------|------------|--|-------------------------------|---------------------------------|
| Timber Industries | | | | | | | |
| 24 | Forestry Products | 0.7 | 0.3 | 13 | 0.4 | 0.1 | 7,552 |
| 26 | Agricultural, Forestry, Fishery Services | 0.2 | 0.1 | 14 | 0.4 | 0.1 | 6,379 |
| 133 | Logging Camps and Logging Contractors | 8.6 | 3.7 | 46 | 1.3 | 1.9 | 41,233 |
| 134 | Sawmills and Planing Mills, General | 51.7 | 22.5 | 269 | 7.8 | 10.7 | 39,598 |
| Total | | 61.2 | 26.6 | 342 | 9.9 | 12.8 | 37,342 |
| Grazing Industries | | | | | | | |
| 4 | Range Fed Cattle | 5.4 | 2.3 | 49 | 1.4 | 1.0 | 20,786 |
| 6 | Sheep, Lambs and Goats | 0.1 | 0.0 | 4 | 0.1 | 0.0 | 5,469 |
| 26 | Agricultural, Forestry, Fishery Services | 0.2 | 0.1 | 14 | 0.4 | 0.1 | 6,379 |
| Total | | 5.7 | 2.5 | 67 | 1.9 | 1.1 | 16,806 |
| Mineral Industries | | | | | | | |
| 41 | Sand and Gravel | 0.8 | 0.4 | 8 | 0.2 | 0.3 | 42,596 |
| 44 | Phosphate Rock | 6.4 | 2.8 | 18 | 0.5 | 0.9 | 48,040 |
| Total | | 7.3 | 3.2 | 26 | 0.8 | 1.2 | 46,577 |

Table Based on Powell County 1999 IMPLAN Model Year Data.

Note: NAIC code categories reporting no output were not included in the table.

The total value-added by basic industries in Powell County is shown in Table 11-13 and Figure 11-6. Value-added includes employee compensation, proprietor income, other property income, and indirect business taxes. It essentially measures the gross county product, similar to the gross state or domestic product. Powell County appears to be heavily dependent on the government sector. The Montana State Prison in Deer Lodge employs approximately 600 people. Government provided 31 percent of the value-added in Powell County in 1999 compared to 17 percent for all project counties and 17 percent for Montana. The next largest sector in Powell County is manufacturing, generating 17 percent of value-added in contrast to the 6 percent for all project counties, and 7 percent for Montana. The higher percentage for Powell County shows the contribution to the local economy of the Louisiana Pacific mill in Deer Lodge. The services sector is much smaller in Powell County (12 percent) relative to all project counties (18 percent) and Montana (21 percent). While the service sector appears to be growing in Montana, this may not be the case for Powell County.

Table 11-13. Value-Added by Basic Industries as Percentage of Total Value-Added, 1999

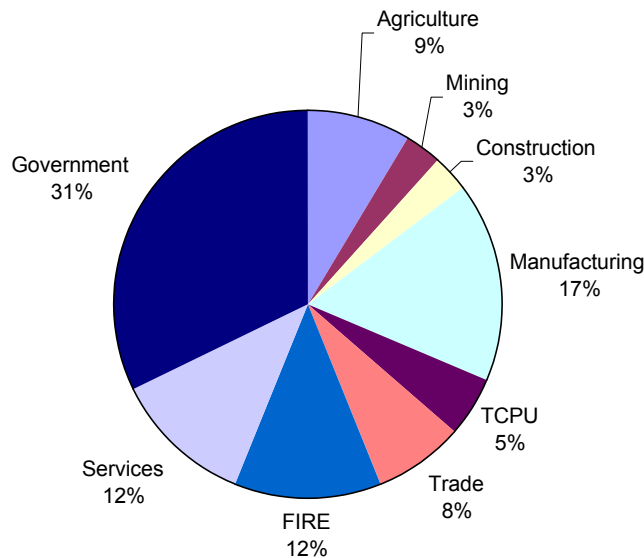
| Categories | Powell County | All Project Counties | Montana |
|---------------|---------------|----------------------|---------|
| Agriculture | 9 | 4 | 5 |
| Mining | 3 | 7 | 2 |
| Manufacturing | 17 | 6 | 7 |
| Government | 31 | 17 | 17 |
| Services | 12 | 18 | 21 |
| FIRE | 12 | 11 | 14 |
| TRADE | 8 | 14 | 18 |
| TCPU | 5 | 18 | 10 |
| Construction | 3 | 5 | 6 |

Source: MIG Group, Inc., IMPLAN Model Output, Based on 1999 IMPLAN Model for the seven counties.

Note: TCPU=transportation, communications, and public utilities

FIRE= Finance, Insurance, and Real Estate

Figure 11-6. Value-Added by Basic Industries in Powell County as Percentage of Total Value-Added, 1999



Source: MIG Group, Inc., IMPLAN Model Output, based on County 1999 IMPLAN Model.

11.3.2 Employment

The only high paying jobs are the sawmill and government jobs

The following advertisement appeared in the October 16, 2002 issue of the *The Silver State Post*, Deer Lodge's weekly newspaper:

CORRECTIONAL OFFICER, Montana State Prison. Starting salary: \$22,480 increasing yearly. Opportunity for advancement, various work assignments. Benefits: 20 year retirement, 15 days annual leave, 12 sick days annually, paid military leave, paid holidays. Detailed list of

qualifications at local Job Service Offices or www.discoveringmontana.com. Return application materials by October 31, 2002 to Montana State Prison, HR Dept., 600 Conley Lake Rd., Deer Lodge, MT 59722. AA/EEO/ADA employer

In this section we present information on the number and percent of individuals in the labor force, unemployment rates, employment by occupation and industry, the number of businesses, employees, and payroll by industry sector, and information on self-employed individuals and receipts. The information in this section has been gathered from the U.S. Census Bureau, the U.S. Bureau of Economic Analysis, the Montana Department of Labor and Industry, and the Bureau of Economic Analysis Regional Economic Information System.

11.3.2.1 Labor Force

Table 11-14 shows number of individuals 16 years and older, the number of individuals in this age category that participated in the civilian labor force, the number of employed, and the number of unemployed individuals. “Civilian labor force” is defined as the number of persons 16 years and older, employed or unemployed, excluding members of the armed forces. “Employed” includes those persons who work for pay or profit during a week or, as unpaid family workers, work 15 hours or more during a week. “Unemployed” are persons who, for an entire week, did not work at all but were able and available to work. Table 11-14 gives the population 16 years and older and the number and percent of those individuals that are in the work force and are employed for the state, the study area, and Powell County. Only 47.2 percent of the population 16 years and older in Powell County were in the labor force. This compares to 65.4 percent of the population 16 years and older in the state and 60.6 percent of those in the overall study area. There are many reasons why people may not be part of the labor force. For example they may be students, retired, or discouraged workers, or offenders—people not actively looking for work.

Table 11-14. Population 16 Years and Older in the Labor Force Census 2000

| Area | Population 16 Years and Older | Population in Labor force | % in Labor Force | Population Not in Labor Force | % Not in Labor Force |
|-------------|--|--|---------------------------------|--|-------------------------------------|
| Montana | 701,168 | 458,306 | 65.4 | 242,862 | 34.6 |
| Study Area | 63,566 | 38,516 | 60.6 | 25,050 | 39.4 |
| Powell | 5,832 | 2,776 | 47.2 | 3,056 | 52.4 |

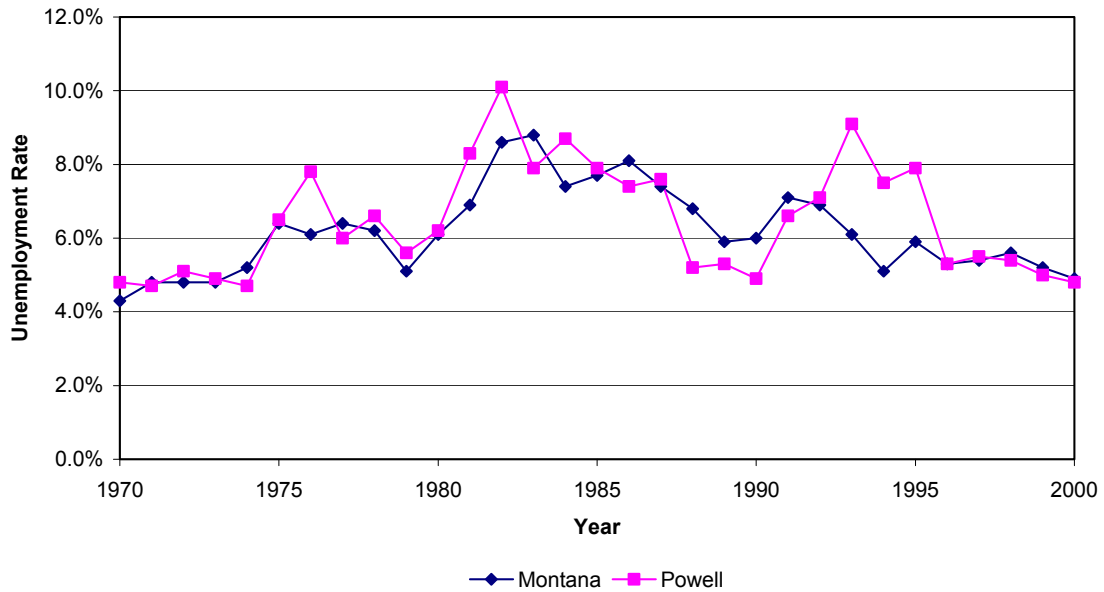
Source: U.S. Bureau of the Census, Census 2000, Tables DP-3.

Note: The county has 1,403 institutionalized persons living in group quarters.

11.3.2.2 Unemployment

Figure 11-7 shows the unemployment rate for Montana and Powell County for 1970 to 2000. The unemployment rate for Powell County has typically followed that of Montana, with a peak in unemployment in the early 1980s, probably related to the closure of the smelter in Anaconda. According to Montana Labor Force Statistics, the unemployment rate for August 2002, not seasonally adjusted, was 3.5 percent for Powell County and 3.7 percent for Montana.

Figure 11-7. Unemployment Rate for Montana and Powell County, 1970-2000



Source: Montana Department of Labor and Industry, Research and Analysis Bureau, Local Area Unemployment Statistics.

Note: The county has 1,403 institutionalized persons living in group quarters.

11.3.2.3 Class of Workers

Table 11-15 shows the percentage of four different classes of workers: private wage and salary workers, government workers, self-employed workers in their own business who are not incorporated, and unpaid family workers. According to Census 2000, approximately 69 percent of Montana workers are private wage and salary workers, 18.3 percent are government workers, 11.8 are self employed, and less than 1 percent are unpaid family workers. In contrast, in Powell County, 54.8 percent of workers are private wage and salary workers while almost 30 percent are government workers. In Powell County, 14.5 percent of workers are self-employed compared to 11.8 percent for the state as a whole.

Table 11-15. Percent of Class of Worker, 2000

| Class of Worker | Montana | Powell |
|--|----------------|---------------|
| Private Wage and Salary Workers | 69.2 | 54.8 |
| Government Workers | 18.3 | 29.7 |
| Self-employed Workers in Own Not Incorporated Business | 11.8 | 14.5 |
| Unpaid Family Workers | 0.7 | 0.9 |

Source: U.S. Census Bureau, Census 2000.

11.3.2.4 Employment by Occupation and Industry

Table 11-16 shows the percent of employment by occupation and by industry for Montana and Powell County as reported in Census 2000. Figure 11-8 and Figure 11-9 show the same information presented in Table 11-16. In terms of occupation, approximately the same percentage of Montana residents and Powell County residents reported management, professional, and related occupations—33.1 percent and 32.5 percent respectively. In Powell County, 21.9 percent report service occupations versus 17.2 percent for Montana. Only 18.4 percent of Powell County workers report sales and office occupations compared to 25.5 percent for the state.

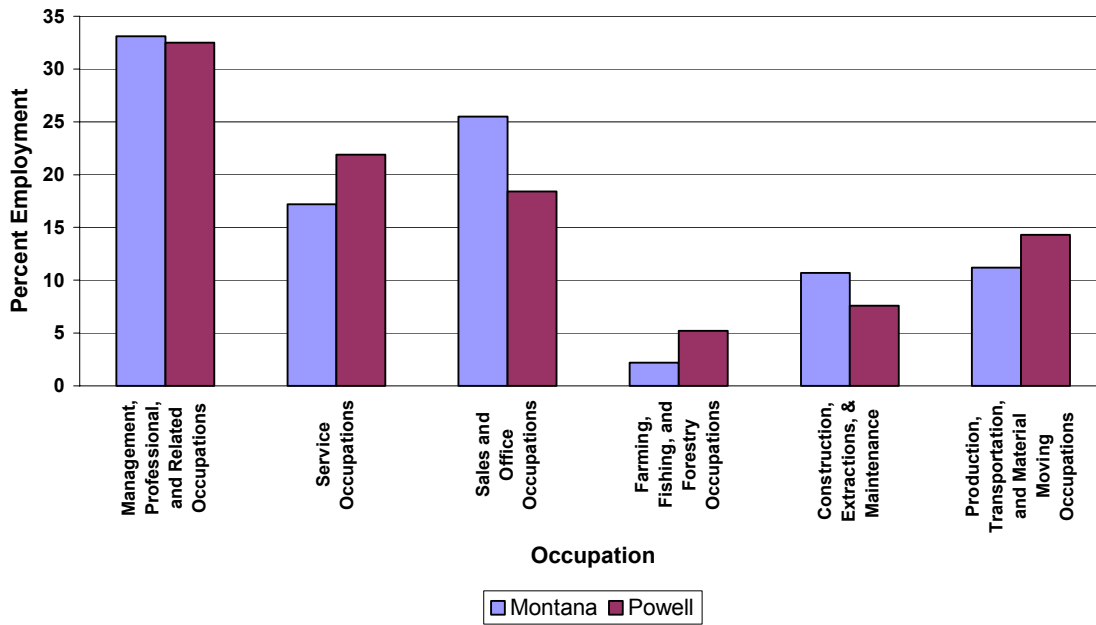
In terms of employment by industry, what stands out is that 15.8 percent of Powell County workers reported working in agriculture, forestry, fishing, hunting, and mining industry sectors compared to 7.9 percent of Montana workers as a whole. In addition the public administration sector accounts for 17.6 percent of employment in the county compared to only 5.9 percent in the state. The percent of workers reporting employment in educational, health, and social services industry sectors is almost the same for both the county and the state—21.2 and 21.7 respectively.

**Table 11-16. Percent of Employment by Occupation and Industry
for Montana and Powell County, Census 2000**

| | Montana | Powell |
|---|---------|--------|
| Occupation | | |
| Management, Professional, and Related Occupations | 33.1 | 32.5 |
| Service Occupations | 17.2 | 21.9 |
| Sales and Office Occupations | 25.5 | 18.4 |
| Farming, Fishing, and Forestry Occupations | 2.2 | 5.2 |
| Construction, Extractions, and Maintenance Occupations | 10.7 | 7.6 |
| Production, Transportation, and Material Moving Occupations | 11.2 | 14.3 |
| Industry | | |
| Agriculture, Forestry, Fishing and Hunting, and Mining | 7.9 | 15.8 |
| Construction, Extractions, and Maintenance Occupations | 7.4 | 5.5 |
| Manufacturing | 6.0 | 9.2 |
| Wholesale Trade | 3.0 | 2.0 |
| Retail Trade | 12.8 | 8.6 |
| Transportation and Warehousing, and Utilities | 5.4 | 2.8 |
| Information | 2.2 | 1.0 |
| Finance, Insurance, Real Estate, and Rental and Leasing | 5.5 | 2.6 |
| Professional, Scientific, Management, Administrative, and Waste Management Services | 6.5 | 3.2 |
| Educational, Health and Social Services | 21.7 | 21.2 |
| Arts, Entertainment, Recreation, Accommodation and Food Services | 10.4 | 8.2 |
| Other Services (except Public Administration) | 5.3 | 2.3 |
| Public Administration | 5.9 | 17.6 |

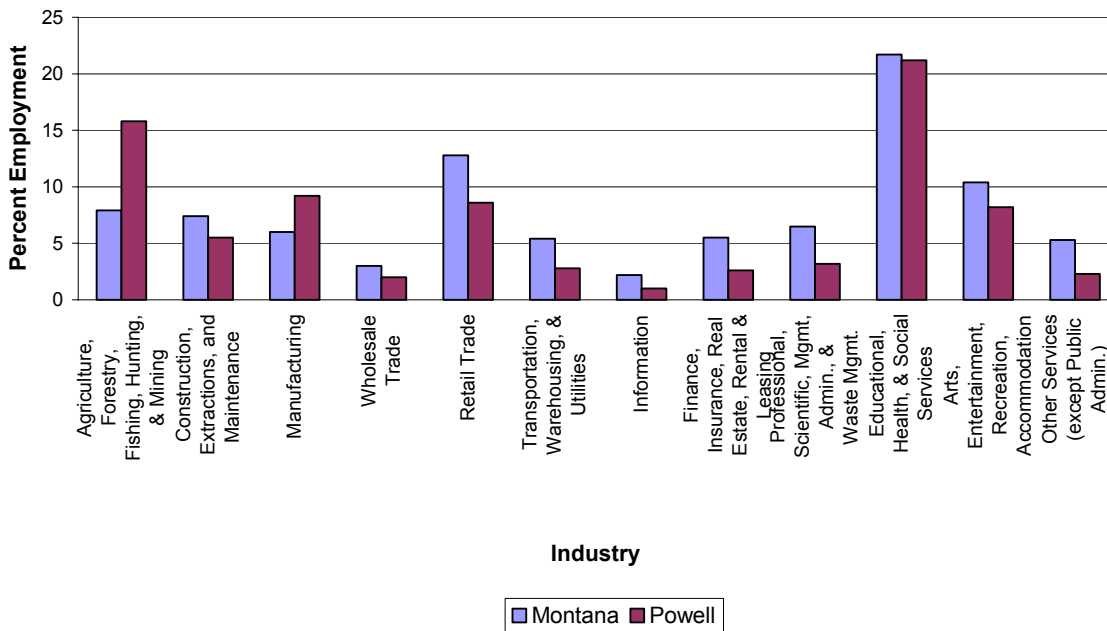
Source: U.S. Census Bureau, Census 2000, Tables DP3.

**Figure 11-8. Percent Employment by Occupation
Montana and Powell County, 2000**



Source: U.S. Bureau of the Census, Census 2000, DP-3 tables.

Figure 11-9. Percent of Employment by Industry for Montana and Powell County, 2000



Source: U.S. Bureau of the Census, Census 2000, DP-3 tables.

Table 11-17 shows the employment and payroll data for Powell County in 1999, by industry. During the week including March 12 of that year, 1,160 people were employed by 142 establishments. Over \$23 million was paid out during 1999, and the health care and social assistance industry had the largest payroll of \$4.8 million for 262 employees. Manufacturing had the highest number of employees, with 250-499 employees during that week.

Table 11-17. Powell County, Number of Employees, Payroll, and Total Number of Establishments by Industry Sector, 1999

| NAICS Code | Descriptions | Number of Employees for week including March 12 | Payroll (\$1,000) | | Total Establishments |
|------------|---|---|-------------------|--------|----------------------|
| | | | 1st Quarter | Annual | |
| | Total | 1,160 | 5,024 | 23,076 | 142 |
| 11 | Forestry, fishing, hunting, and agriculture support | 49 | 390 | 1,545 | 7 |
| 22 | Utilities | 0-19 | 0 | 0 | 1 |
| 23 | Construction | 37 | 143 | 702 | 17 |
| 31 | Manufacturing | 250-499 | 0 | 0 | 5 |
| 42 | Wholesale trade | 48 | 151 | 624 | 5 |
| 44 | Retail trade | 130 | 444 | 2,030 | 20 |
| 48 | Transportation and warehousing | 16 | 30 | 157 | 4 |
| 51 | Information | 42 | 171 | 755 | 6 |
| 52 | Finance and insurance | 38 | 207 | 1,061 | 6 |
| 53 | Real estate and rental and leasing | 6 | 8 | 26 | 4 |
| 54 | Professional, scientific and technical services | 15 | 36 | 206 | 6 |
| 56 | Admin, support, waste mgt, remediation services | 20-99 | 0 | 0 | 2 |
| 61 | Educational services | 0-19 | 0 | 0 | 2 |
| 62 | Health care and social assistance | 262 | 1,121 | 4,816 | 18 |
| 71 | Arts, entertainment and recreation | 26 | 52 | 315 | 5 |
| 72 | Accommodation and food services | 177 | 300 | 1,473 | 21 |
| 81 | Other services (except public administration) | 20 | 47 | 149 | 11 |
| 99 | Unclassified establishments | 0-19 | 0 | 0 | 2 |

Source: U.S. Census Bureau, County Business Patterns, 1999 County Business Patterns, CenStats, Major Industry Group.

Powell County had 142 business establishments in 1999. The largest business was a manufacturing company with between 100 to 249 employees. Nearly 90 percent of establishments had fewer than 20 employees, and nearly 62 percent of establishments had only one to four employees. The sizes of establishments are shown in Table 11-18. It is evident that the county is home to many small businesses, with only a handful of larger companies.

Table 11-18. Powell County, Number of Establishments by Employee Size Class for Selected Industries, 1999

| NAICS Code | Description | Total Establishments | Number of Establishments by Employment-size class | | | | | | | | |
|------------|---|----------------------|---|-----|-------|-------|-------|---------|---------|---------|--------------|
| | | | 1-4 | 5-9 | 10-19 | 20-49 | 50-99 | 100-249 | 250-499 | 500-999 | 1000 or more |
| | Total | 142 | 88 | 24 | 17 | 10 | 2 | 1 | 0 | 0 | 0 |
| 11 | Forestry, fishing, hunting, and agriculture support | 7 | 5 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 22 | Utilities | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23 | Construction | 17 | 15 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | Manufacturing | 5 | 3 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| 42 | Wholesale trade | 5 | 2 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 44 | Retail trade | 20 | 12 | 3 | 3 | 2 | 0 | 0 | 0 | 0 | 0 |
| 48 | Transportation and warehousing | 4 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 51 | Information | 6 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 52 | Finance and insurance | 6 | 3 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 53 | Real estate and rental and leasing | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 54 | Professional, scientific and technical services | 6 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 56 | Admin, support, waste mgt, remediation services | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 61 | Educational services | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 62 | Health care and social assistance | 18 | 8 | 4 | 3 | 1 | 2 | 0 | 0 | 0 | 0 |
| 71 | Arts, entertainment and recreation | 5 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72 | Accommodation and food services | 21 | 8 | 6 | 4 | 3 | 0 | 0 | 0 | 0 | 0 |
| 81 | Other services (except public administration) | 11 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 99 | Unclassified establishments | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Source: U.S. Census Bureau, County Business Patterns, 1999 County Business Patterns, CenStats, Major Industry Group.

Table 11-19 shows nonemployment statistics for Powell County. Nonemployer Statistics summarize the number of establishments and sales or receipts of companies with no paid employees. These nonemployers are typically self-employed individuals or partnerships operating businesses that they have not chosen to incorporate. Self-employed owners of incorporated businesses typically pay themselves wages or salary, so that the business is an employer. In 1999, there were 495 such establishments in Powell County, with total receipts in excess of \$15.7 million. The number of establishments, as well as the total receipts, has increased significantly since 1997. In 1997, there were 463 establishments, and total receipts were \$12.8 million. In terms of sales or receipts, nonemployers usually account for roughly three percent of business activity and account for nearly

three fourths of all businesses. Most nonemployer businesses are very small, and many are not the primary source of income for their owners.

Table 11-19. Nonemployment Statistics for Powell County, 1999 and 1997

| NAICS Code | Description | Establishments | | Receipts (\$1,000) | |
|------------|--|----------------|------|--------------------|--------|
| | | 1999 | 1997 | 1999 | 1997 |
| 0 | All Industries | 495 | 463 | 15,675 | 12,815 |
| 11 | Forestry, fishing and hunting, and ag support services | 55 | 55 | 2,674 | 2,297 |
| 21 | Mining | D | | D | |
| 22 | Utilities | D | | | D |
| 23 | Construction | 88 | 74 | 3,106 | 3,223 |
| 31-33 | Manufacturing | 22 | 20 | 266 | 213 |
| 42 | Wholesale trade | 10 | D | 877 | D |
| 44-45 | Retail trade | 58 | 61 | 1,956 | 1,242 |
| 48-49 | Transportation and warehousing | 31 | 29 | 2,198 | 1,900 |
| 51 | Information | D | D | D | D |
| 52 | Finance and insurance | 15 | 18 | 520 | 408 |
| 53 | Real estate, rental, and leasing | 33 | 24 | 1,275 | 291 |
| 54 | Professional, scientific, and technical services | 35 | 44 | 556 | 683 |
| 56 | Administrative and support and waste management and remediation services | 17 | 11 | 111 | 87 |
| 61 | Educational services | D | D | D | D |
| 62 | Health care and social assistance | 34 | 28 | 330 | 419 |
| 71 | Arts, entertainment, and recreation | 17 | 19 | 210 | 212 |
| 72 | Accommodation and food services | 13 | D | 647 | D |
| 81 | Other services (except public administration) | 59 | 56 | 906 | 1,014 |

Source: Nonemployer Statistics, available at www.census.gov/epdc/nonemployer/1999/mt/MT001.HTM
 D = Withheld to avoid disclosure.

11.3.2.5 Top Employers

We are very dependent on the mill.

It's a tough place for little businesses.

According to Headwaters Resource Conservation and Development Area, Inc. (2002), four of the top six employers in the county are governmental agencies including the City of Deer Lodge, Powell County, the State of Montana Registrar of Motor Vehicles, and Montana State Prison. In terms of private employers, Powell County Memorial Hospital and Louisiana Pacific are the top two. However, Louisiana-Pacific Corporation was hoping to sell 30 of its 60 mills including the sawmill located in the community of Deer Lodge.⁸⁰ The sawmill has approximately 250 employees (August 2001) and

⁸⁰ Missoulian.com, news online, archives, May 10, 2002, accessed October 1, 2002.

produces about 240 million board feet of lumber annually, with about half of that production being finger joint lumber, which are studs manufactured by gluing smaller pieces together.⁸¹ An article in *The Montana Standard* on Wednesday, October 23, 2002 reported that Louisiana-Pacific Corporation has decided not to sell its lumber mills in Deer Lodge and Belgrade, Montana.⁸²

11.3.2.6 Commuting

In Montana, approximately 74 percent of all workers drive alone in a truck, car, or van to work (Table 11-20) with an average commute of 17.7 minutes. In Powell County, 66.9 percent commute alone via car, truck, or van with an average commuting time of 22.3 minutes.

Table 11-20. Commuting to Work, 2000 Census

| Characteristic | Montana | Powell |
|---|---------|--------|
| Workers 16 year and over (No.) | 422,159 | 2,553 |
| Car, truck, or van-drove alone (%) | 73.9 | 66.9 |
| Car, truck, or Van – carpoled (%) | 11.1 | 13.1 |
| Public transportation (including taxicab) (%) | 0.7 | 0.1 |
| Walked (%) | 5.5 | 9.3 |
| Other means (%) | 1.7 | 0.6 |
| Worked at home (%) | 6.4 | 9.9 |
| Mean travel time to work (minutes) | 17.7 | 22.3 |

Sources U.S. Bureau of the Census, Census 2000, Table DP-3.

11.3.3 Income

11.3.3.1 Per Capita Personal Income

Per capita personal income and household income are shown in the following tables and charts for Montana and Powell County. As defined by the Bureau of Business and Economic Research, School of Business Administration, University of Montana:⁸³

Personal income is the income received by people from all sources—private sector and government wages, and salary disbursements, other labor income, farm and nonfarm self-employment income, rental income of people, personal dividend income, personal interest income, and transfer payments. Personal income does not have taxes subtracted from it.

Per capita personal income is the annual total personal income of residents divided by their resident population. Per capita personal income is a measure of economic well-being. The amount of goods and services that people can afford is directly related to their personal income.

⁸¹ Missoulain.com, news online, archives, October 20, 2001, accessed October 1, 2002.

⁸² [Http://mtstandard.com/breakingnews/break.html](http://mtstandard.com/breakingnews/break.html).

⁸³ [Http://www.bber.mt.edu/economicanalysis/personalincome.htm](http://www.bber.mt.edu/economicanalysis/personalincome.htm) accessed April 22, 2002.

Per capita personal income for Powell County was \$18,159 in 2000, compared with \$22,518 for Montana as a whole (Table 11-21). Montana ranks 47th out of the 50 states in per capita personal income. Of the 56 counties in Montana, Powell County ranks number 29 in per capita personal income. In Montana, earnings accounted for 61.2 of per capita personal income, followed by 22.7 for dividends, interest, and rent, and 16.1 percent from transfer payments. In the county, earnings made up 58.9 percent of total personal income, while dividends, interest, and rent accounted for 22.3 percent. Transfer payments made up 18.8 percent of total personal income. Figure 11-10 shows a picture of the components of total personal income.

Table 11-21. Per Capita Personal Income, Total Personal Income, and Components for Powell County and Montana, 1999 and 2000

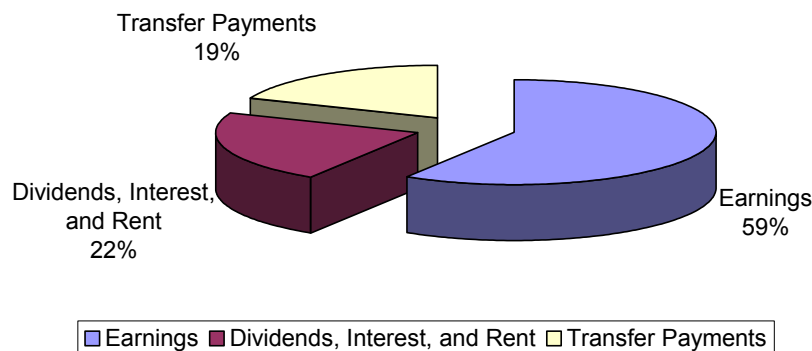
| County | Per Capita Personal Income | | Total Personal Income | | Components of Total Personal Income | | |
|----------------|----------------------------|-----------------|-----------------------|---------|-------------------------------------|-----------------------------------|-----------------------|
| | (\$) | Rank | (\$1,000s) | Rank | Earnings (%) | Dividends, Interest, and Rent (%) | Transfer Payments (%) |
| Montana | | | | | | | |
| 2000 | 22,518 | 47 (US) | 20,336,883 | 46 (US) | 61.2 | 22.7 | 16.1 |
| Powell | | | | | | | |
| 2000 | 18,159 | 38 ^a | 130,512 | 29 | 58.9 | 22.3 | 18.8 |

Source: Regional Economic Information System, Bureau of Economic Analysis, Bearfacts.

Notes: The county has 1,403 institutionalized persons living in group quarters.

Montana contains 56 counties.

Figure 11-10. Components of Total Personal Income for Powell County, 2000

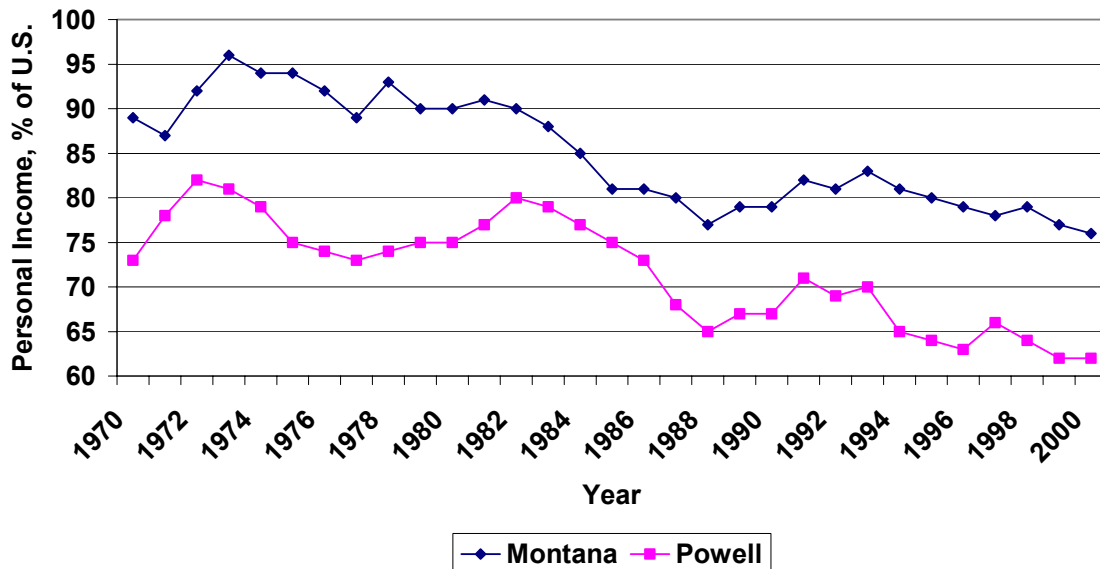


Source: Regional Economic Information System, Bureau of Economic Analysis, Bearfacts.

Note: The county has 1,403 institutionalized persons living in group quarters.

Figure 11-11 shows the per capita personal incomes for Powell County and Montana as a percentage of the United States as a whole. At both the state and county levels, residents are losing ground relative to the United States. In 1970, Montanans were earning just under 90 percent of the per capita personal income earned by all of the United States, whereas Powell County residents came in at about 73 percent. By 2000, those ratios had declined to just over 75 percent and about 62 percent, respectively.

Figure 11-11. Per Capita Personal Income as Percent of U.S. Montana and Powell County, 1970-2000



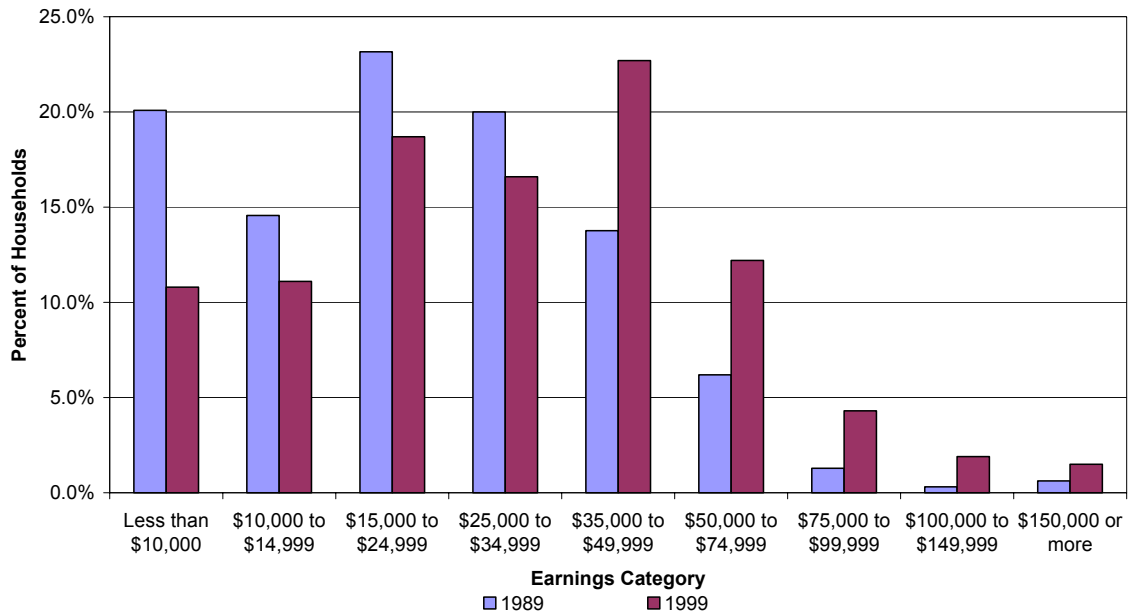
Source: Bureau of Economic Analysis Regional Accounts at <http://www.bea.doc.gov/bea/regional/reis/>.

Note: The county has 1,403 institutionalized persons living in group quarters.

11.3.3.2 Household Income

Figure 11-12 shows the household income for Powell County for 1989 and 1999, based on the U.S. Census for 1990 and 2000. It is important to take into account inflation and growth in the cost of living. Some of the shift from lower to higher income categories is due to a change in the cost of living, and adjustments to pay rates for the cost of living. Inflation also has an effect on household income. Income in 1999 is valued less than income in 1989, due to inflation. As seen in the figure, the largest income category was \$15,000 to \$24,000 in 1989. By 1999, the largest income group had shifted to the \$35,000 to \$49,000 category.

Figure 11-12. Household Income for Powell County, 1989 and 1999



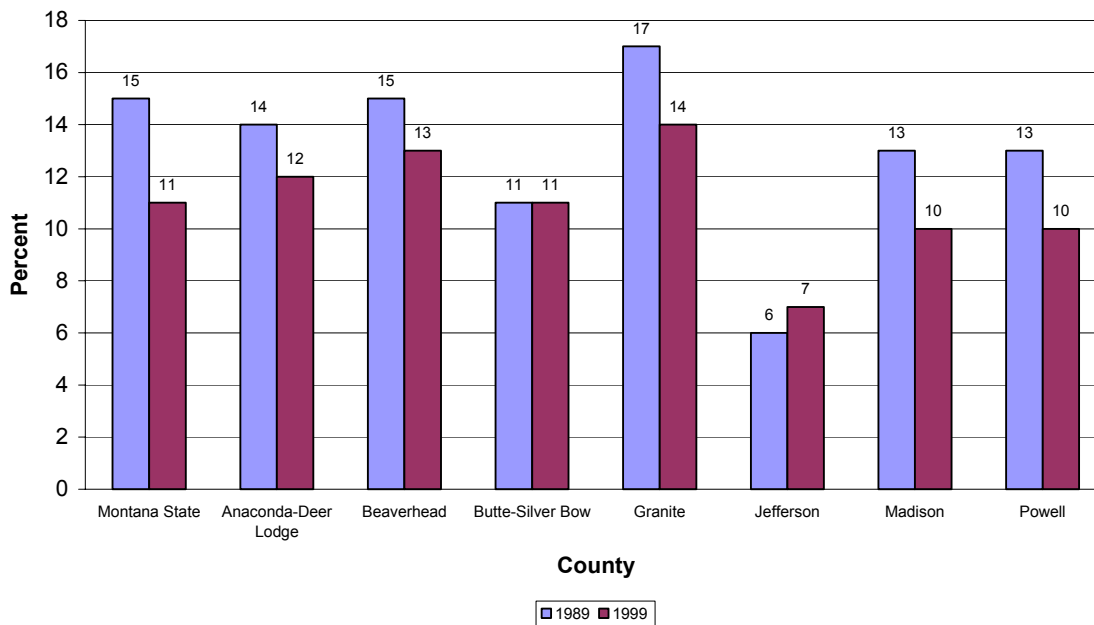
Source: U.S. Census Bureau, Census 1990 and Census 2000

Note: The county has 1,403 institutionalized persons living in group quarters.

11.3.4 Poverty Status

The Census Bureau uses a set of income thresholds that vary by family size and composition to determine who is poor. If a family's total income is less than that family's threshold, then that family, and every individual in it, is considered poor. The poverty thresholds do not vary geographically, but they are updated annually for inflation using the Consumer Price Index (CPI-U). The poverty rate for families in Powell County was about 10 percent in 2000. The rate for families with related children under 18 years was almost 16 percent, and the rate for families with related children under 5 years was 20 percent.

Figure 11-13. Percent Poverty Status of Families, 1989 and 1999



Source: U.S. Census Bureau, Census 2000 and 1990 Census.

Note: The county has 1,403 institutionalized persons living in group quarters.

11.4 Community Resources

Powell County is an unusual rural county in that almost half of the county is concentrated in the southern portion of the county in the county seat, Deer Lodge. In addition, Montana State Prison is located in the county, which adds approximately 1,300 adult males to the population of the county. However, the rural nature of the county and its long history of ranching and logging influence the nature and type of community resources. An important social division in Powell County and similar rural counties is the distinction between “rural” and town.” Rural residents are primarily agriculturalists (ranchers or farmers) while town residents provide services to the agricultural industry and to other business. Rural residents have their own sense of community, as do town residents. Events such as the annual Tri-County Fair provide an important occasion for rural and town residents to socialize and consolidate a sense of community.

11.4.1 Infrastructure and Services

Community infrastructure and services are summarized in this section. County infrastructure influences economic development as well as social well-being and community quality of life. Community services indicate the type of resources residents have available to meet basic and other human needs that contribute to personal well-being and community quality of life.

There is a lot of turnover in medical staff.

We have a shortage of dentists and no specialists like orthodontics.

Deer Lodge, the county seat, is the only incorporated community in Powell County, and is located on I-90 between Butte and Missoula. The transportation infrastructure of Powell County links local

communities with the urban services and resources of larger southwest Montana not available in Powell County. I-90 traverses Powell County from the northwest to the southeast portion of the county. The county seat is located in the southern portion of the county. Deer Lodge, Garrison and Gold Creek are all on Interstate 90 with Butte to the south and Missoula to the northwest. Garrison is on U.S. Highway 12 along with Avon and Elliston. Powell County is also served by U.S. Highway 12, five state highways, and 680 miles of county roads. In addition, there are 238 miles of USFS and BLM seasonal roads. While there is no passenger service, two railroads operate in Powell County: the Montana Rail Link and the Montana Western Railway Company. A basic general aviation airport, jointly operated by the city and the county, is located two miles west of Deer Lodge.

One of the runways is 4,400 feet in length and is paved and lighted. The closest commercial passenger and airfreight services are located in Butte. The Missoula Electric Cooperative supplies electricity to the northern part of the county. The Montana Power Company supplies electricity to the City of Deer Lodge and north into Garrison and south to Galen. Natural gas is available in Deer Lodge. Deer Lodge has a public water system utilizing wells west of the city. Wastewater in Deer Lodge is processed in a series of lagoons located north of the city. Outside of the City of Deer Lodge, all water and wastewater facilities are privately owned.

County administrative departments and services include the following elected officials: sheriff, assessor, treasurer, clerk and recorder, justice of the peace, attorney, coroner, superintendent of schools, clerk of the court, public administrator, and three county commissioners. The county has the following departments: ambulance, courthouse, sheriff's office, planning, tri-county sanitation, Chamber of Commerce, County Health, and the County School systems. The State of Montana has Extension, Appraisal, and Public Assistance offices in the County Court House. Other services provided by the county include:

- **Public Safety.** According to the Powell County Comprehensive Plan (1996), police protection is provided for the county and the City of Deer Lodge by the Powell County Sheriff, the Undersheriff, eight deputies, and eight dispatchers. The comprehensive plan states that because of the location of Montana State Prison in Deer Lodge in the southern portion of the county and because of the concentration of the county's population there, most of the sheriff's office workload is concentrated in the southern portion of the county. The County is divided into five rural fire districts: Elliston, Garrison, Helmville, Ovando, and Racetrack. Fire companies are located in Avon and Elliston. The City of Deer Lodge has a volunteer fire department. The Valley Fire Department at Drummond serves a portion of the Gold Creek area. Through a series of interlocal agreements, all the districts have agreed to help one another. Montana State Prison also has a volunteer department that focuses on prison lands and property.
- **Schools.** Powell County contains one high school district and six elementary school districts. Powell County High School is located in Deer Lodge and serves approximately 340 students. The elementary school district in Deer Lodge includes two elementary schools and one junior high school. The other rural elementary schools are located in Avon, Elliston, Garrison, Gold Creek, Helmville, and Ovando. Interview data suggest that rural schools may have to consolidate.
- **Solid Waste.** The County operates a Class II landfill east of Deer Lodge and container collection sites at Avon, Elliston, Garrison, Gold Creek, Helmville, and Ovando.
- **Water and Waste Water.** The City of Deer Lodge has a public water system supplied by wells west of the City. Five rural schools are located in the county at Avon, Elliston, Garrison, Gold Creek, Helmville, and Ovando.

The Powell County Memorial, Hospital, which has a 35-bed capacity, is the primary health care facility in Powell County. Deer Lodge has a private, 60-person capacity, long-term care facility, Colonial Manor. Regional medical facilities are about an hour away in Butte, Helena, and Missoula.

Powell County Progress Economic Development Corporation, a non-profit corporation located in Deer Lodge was established to advance economic planning and development in Powell County.

Data from the Montana Department of Public Health and Human Services summarize the status of all health services in Montana by county as indicated in Table 11-22.

Table 11-22. Health Resource Assessment for Powell County

| | | | | |
|---|---|-----|-----------------------|--------|
| Local Hospitals or Medical Assistance Facilities (MAF) (Type of facility and number of beds) | 1 local hospital(s), 0 MAF(s); 19 beds | | | |
| Rural Health Clinics (RHC), Federally Qualified Health Centers (FQHC), IHS and Tribal Health Facilities (Number and type) | 0 RHCs, 0 FQHCs, 0 IHS/Tribal Health Facilities | | | |
| Availability of 911 and Advanced Life Support Services | 911 | | Adv. Life Support | |
| | Yes | | 1 Service: Deer Lodge | |
| Nursing Homes (Number of facilities and beds) | 2 / 76 beds | | | |
| Aging Services Licensed (Number of Personal Care [PC], Adult Foster Care [AFC], and Retirement Home [RH] Licenses) | PC | AFC | RH | |
| | 0 | 0 | 0 | |
| Home Care Services Licensed (Number of Home Health Agency [HHA] and Hospice Licenses) | HHA | | Hospice | |
| | 1 | | 1 | |
| Public Health Resources (Number of Full-time Equivalent Public Health Nurses, Public Health Sanitarians [PHS], Registered Dietitians [RD], and Health Educators [HlthEd]) | Nurse | PHS | RD | HlthEd |
| | 1.0 | 0.2 | 0.0 | 0.0 |
| Primary Care Provider Resources (Number of doctors [MDs and DOs ⁷], Nurse Midwives [NMW], Nurse Practitioners [NP], and Physician's Assistants [PA]) | MD/DO | NMW | NP | PA |
| | 6 | 0 | 1 | 1 |
| Health Care Provider Shortage Status (Federal Health Professional Shortage Area [Fed. HPSA], State HPSA, Medically Underserved Area [MUA], or Medically Underserved Population [MUP]) | Federal HPSA - All and MT State Prison (facility); State HPSA - Yes; MUAs - None; MUPs - None | | | |

Source: Montana State Department of Public Health and Human Services.

There are limited retail services available in Powell County. Residents can shop for groceries at Valley Foods, IGA, and Safeway. There is a pharmacy in the Safeway and one independent drug store. There is one hardware store, a western clothing store, and a furniture store. During the “boom years” Deer Lodge had as many as six hardware stores, a J.C. Penney, a Western Auto, and several clothing stores. With the decreased tax base, it now difficult to attract and retain new businesses to the county. The Rialto Community Theatre in Deer Lodge is used for movies, school events, concerts, and stage productions. The theater is representative of the “movie palace architecture” of the early 20th century, and many of the original decorative features have been preserved. Although people desire more diverse retail and cultural options, there is a strong appreciation for the amenities provided by the physical setting and the small town and rural character of the county. There appears to be a strong sense that any deficits are compensated for in part by the social and physical characteristics of the county and the presence of these amenities in nearby urban areas such as Missoula, Butte, and Helena. A lot of the money earned by residents in Powell County leaks out of the county because it is spent in other counties.

11.4.2 Community Characteristics

The community characteristics addressed in this discussion are values, self-images, and selected components of county-level social organization. Collective values and self-image describe aspects of community that influence residents to reside there and participate in community processes. The discussion of social organization describes county-level social groupings that affect how individuals and groups associate with one another.

Some of the different images or aspects of community identity and values are expressed in the following statements by residents:

The community (Deer Lodge) is 100 percent behind football and basketball—even our judge and the correctional staff people travel to the games. It’s a good town for kids—it’s safe and the kids don’t have to be driven places.

There is little diversification around Deer Lodge. The agricultural areas are just not interested in growth.

Ranching is a struggle. You’re just not sure if you want to see your kids become ranchers.

Very few ranchers in Powell County support the local community and they don’t get involved in politics.

There are different images or aspects of community identity expressed in the statements of residents interviewed for this work. One community image is the tightly knit rural area that values face-to-face relationships and “knowing one’s neighbors.” As one resident observed: *People know who you are and who your children are. You know your neighbors even if sometimes you wish you didn’t.*

Powell County differs from some of the other agricultural rural counties in the study area, because approximately 47 percent of its population live in the city of Deer Lodge while the rest of the population is dispersed throughout the rest of the county. On the drive into Deer Lodge from the south, one of the first things that catches the eye is the Old Prison Museum, a sprawling edifice of red brick. Approaching the town from the other direction, travelers pass the Grant-Korhs Ranch. In contrast Elliston has become a bedroom community for Helena.

In many ways Deer Lodge is quintessential small town America. It is a traditional place to raise families where people feel they can live a lifestyle that is meaningful. Deer Lodge has a main street with one stop light and tree-shaded neighborhoods. Children bike everywhere and parents do not have to worry about their safety. Everyone in town knows who you are and they know your children. The major employers in the town and the county are the Montana State Prison and the Louisiana Pacific Mill, and residents are very dependent on that employment. In contrast to some of the other rural towns in the study area, there is limited retail in Deer Lodge, though there are several restaurants and motels to serve the growing tourism industry. Powell County residents appear to appreciate their year-round recreational opportunities. Many people come from other parts of the state to snow mobile in the winter, but it was pointed out that there is no snowmobile dealership in Deer Lodge.

While Deer Lodge has the amenities of a small rural town, everywhere you look around the town you see open space and majestic mountains. A few ranches were reported to have been bought by out-of-state residents or companies. However, newcomers have not been a particular issue in Deer Lodge except in relationship to the prison. Interview data suggests that some residents feel that the presence of the prison in their community affects their community’s self-identity and holds back economic development of the community. They reported that in the past families and friends of inmates, referred to as “con families” moved into the community to be close by while their family members were incarcerated and put a drain on local resources.

It appears that the divide between ranching families and townspeople found in other project counties also exists in Powell County. The “old ranching” families make up one social grouping, the townspeople and people associated with the logging industry another group.

According to interview data, the county economy used to be dependent on the mining of talc, gold, silver, and phosphate and the Milwaukee Railroad. The Milwaukee Railroad had their roundhouse where they turned the trains around and their repair shops in Deer Lodge. Many residents of the county commuted to Anaconda or Butte to work in the mines and the smelters. Salaries for these jobs were much higher than the beginning salaries currently available at the prison or the sawmill. Logging is reported to be *the last remaining source of jobs dependent on natural resources*. As in many other communities in southwest Montana, residents frequently have to hold two part-time jobs instead of one full-time job so that they can continue to live in the county. It was reported that while residents of Anaconda and Butte commute to Deer Lodge to work at the prison, residents of Powell County commute to Anaconda to work at Montana State Hospital and into Butte for other employment. Unlike other counties in the study area, Powell County has not experienced a large growth in services sector jobs. However, there are several restaurants and hotels in the county to serve the increasing number of tourists.

Ranching still dominates in the northern portion of the county, and there are many third- and fourth-generation ranching families in the county. However, around Helmsville and Ovando, some ranchers are reported to be selling off 20- to 120-acre portions of their ranches in order to survive and continue ranching. Interview data suggest that ranchers are having to diversify. Some ranchers also have jobs in Deer Lodge, which is reported to lessen the divide between ranching and townspeople. An informed resident noted that the ranching community in Powell County is not the political force that it is in some other southwest Montana counties, and that the ranchers are not particularly supportive of local communities and businesses. Some ranches have been bought by out-of-state residents and others have become corporate ranches. Locals refer to one of the corporate ranchers as “Hamburger Harry,” which reflects in part their attitude to the changes in their community.

Another social grouping identified by one knowledgeable observer in the business community in Deer Lodge, is the educational community in the county. This observer felt that this social group does not support local businesses. He also pointed out that Powell County is quite large and that it takes longer to drive from Deer Lodge to Ovando than it does to drive from Deer Lodge to Missoula. As a result there is not a lot interaction between residents of small communities in the northern portion of the county with Deer Lodge. It is closer for residents of Ovando and Helmsville to drive into Missoula with more shopping options than to drive to Deer Lodge.

The timber industry “lifestyle” is still present in Powell County. The Louisiana Pacific Mill employs a varying number of people with estimates ranging from 115 to over 200. According to Headwaters RC&D, the mill also supports about 100 forest workers. One company in Deer Lodge interviewed for this report stated that they employ almost half of that number. They report that in the past they obtained about 90 percent of their wood from federal lands and 10 percent from state and private lands. Today that is reversed with approximately 90 percent coming from private and state lands and 10 percent from federal lands.

While Powell County is a rural county, it is home to the Montana State Prison. The prison is located about four miles west of Deer Lodge. The prison is designated to maintain a population of 1,300 adult males and is a major employer for residents not only of Powell County and but also residents of Anaconda and Butte. In 1867, the U.S. congress appropriated “no more than \$40,000” to build a prison in Montana.⁸⁴ The first wing of the territorial prison was completed in 1870. The history of the

⁸⁴ Montana State Prison at <http://www.cor.state.mt.us/css/divisions/MontanaStatePrison.asp>.

prison includes riots, abductions of local citizens, murder of a Deputy Warden, calling in of the National Guard, and formation of citizen protection groups by the residents of Deer Lodge.

11.4.3 Mutual Support and Cooperative Problem Solving

Everyone works together to make the town grow and stay. If they come across a wall they find a way around it. The community depends on its volunteers—neighbors helping neighbors.

The adaptive potential of communities is influenced by the capacity to work together to solve common problems. Those communities that can organize and apply their social resources to respond to problems have a higher likelihood of making adaptations that enhance their future rather than limit it. For example, research about natural and technological disasters illustrates how communities that have a strong base of volunteerism, cooperative problem solving, leadership, and mutual support respond effectively to the stressors of a disruptive event in their social or natural environment (Kroll-Smith and Couch 1990). Communities are less disrupted when there is limited social conflict, effective appraisal of problems for resolution, working together to apply limited resources, mutual support, and sufficient leadership reserves to organize and apply resources and establish a vision of recovery and progress out of a crisis.

The issue addressed in this section is the capacity of Powell County communities for mutual support, cooperation, and cooperative problem solving. County residents interviewed for this project describe mutual assistance and volunteerism as important community values. Volunteerism is exemplified in the organizations such as the volunteer fire departments and the interlocal agreements of the fire districts to help each other out, as well as in fund-raising efforts for persons in need, especially those with medical problems. Examples include:

- Community efforts to support events like the Tri-County Fair.
- Support and fund-raising for families in need who experience a death or medical emergency.
- Fund raising and volunteer efforts for school sports teams.
- March of Dimes and local events such as Bikeathon, Relay for Life, and support of the Rialto Theatre.

4-H was mentioned as an important multi-age group in Powell County that brings together children from the ranching community and the city and towns in the county. Boy Scouts was also mentioned as an important local group. Service clubs such as the Elks, Rotary, Moose, and Lions are found in Powell County. Local fund raising efforts are frequently held to help people with specific needs.

There are several major events each year that bring together different groups in the county. The Tri-County Fair (Powell, Anaconda-Deer Lodge, and Granite Counties) in the Powell County Fairgrounds in August is a very popular event bringing together residents from across the county. Other important county events include Territorial Days in June, Grant-Kohrs Ranch Western Heritage Days, turkey shoots and the Labor Day Rodeo held in Helmsville.

Churches in Powell County were also identified as providing support to residents. According to interview data, the new Mayor of Deer Lodge sponsored the first community clean up which was deemed a success by those residents interviewed.

11.4.4 Leadership

Leadership is an important community resource. Leadership is straightforward: it addresses the range and diversity of persons in formal and informal leadership positions in local government, community,

special interest, or volunteer organizations. If communities have a diversity of leaders who can both lead and manage, then they have substantial resources to adapt to changing conditions. Leaders contribute to identifying, organizing, and responding to problems or potential opportunities. Communities with strong leadership resources have an advantage in responding to change.

Knowledgeable local observers reported that leaders in Powell County tend to emerge in response to particular local needs. Several members of the business community were identified as *making huge contributions in time and money to the community—always there when needed*. Leadership in Powell also resides in institutional positions such as the Mayor of Deer Lodge and the County Commissioners. Of note is that while some ranching families have been in the county for a long time, interview data suggest that most no longer take a leadership role in community activities.

11.5 Human Resources

Secondary source census and other data are typically used to describe human resources in communities. Education, income, and persons in poverty are usual measures of human resources. Table 5-25 shows recent census data concerning unemployment, educational attainment, income, and poverty. Regarding educational attainment, the percent of persons 25 and older with a high school diploma in Powell County is approximately five percent lower than Montana as a whole, although it is higher than the United States. The percent of individuals 25 years and older in the county with a bachelor’s degree or higher is 11 percent lower than Montana and the United States.

Powell County’s unemployment rate was lower than both the state and the nation. However, both the county’s median household income and per capita income were below the state and the United States. The percent of individuals in poverty is two percent less than the state, while the percent of related children under 18 in poverty is 2.2 percent less than the state.

Table 11-23. Quantitative Measures of Human Resources for Powell County, 2000 Census

| | Percent of Unemploy- ment | Percent of High School Graduates >25 | Percent of College Graduates (BA+) >25 | Median Household Income (\$) | Per Capita Income (\$) | Percent of Individuals in Poverty | Percent of Related Children Under 18 in Poverty |
|------------------|---------------------------------|--|---|------------------------------------|---------------------------|---|---|
| United States | 3.7 | 80.4 | 24.4 | 41,994 | 21,587 | 12.4 | 16.1 |
| State of Montana | 4.1 | 87.2 | 24.4 | 33,024 | 17,151 | 14.6 | 18.4 |
| Powell | 2.6 | 81.9 | 13.1 | 30,625 | 13,816 | 12.6 | 16.2 |

Source: U.S. Census Bureau, Census 2000.

Note: The county has 1,403 institutionalized persons living in group quarters.

11.6 Community Resiliency

Resiliency is a concept used to address the resources that exist for communities to adapt to changing conditions. This assessment of resiliency is presented in a “situational analysis” framework briefly discussed in Chapters 1 and 12. The community indicators are land use, attitudes to change, services and infrastructure, community characteristics, mutual support, cooperative problem solving, leadership, human resources, and economics/economic diversity.

Land Use and Ownership. About 43 percent of the county is USFS lands. The B-DNF is only one of four Forests located in the county. The strength of this pattern of ownership is that it offers desirable

open space; recreational opportunities; grazing for livestock, and other resources for potential commercial use. A weakness of this ownership pattern is the limits on the availability of private lands. Almost 60 percent of the county lands are forested.

The Upper River of the Clark Fork was designated a Superfund site in 1985. The EPA is currently accepting written comments on its proposed cleanup plan of the Upper River site which runs through Powell County. The proposed cleanup alternatives are currently a source of division for the county because many private landowners own land along the river. The river has been the economic, cultural, and biological backbone of western Montana. The average size of farms and ranches in the county did not decrease between the 1987 and 1997 Agriculture Censuses, but the number of farms has decreased. There is concern in the county over the sale of long-time family ranches both to corporate buyers and for subdivision.

The combination of forested mountains, rivers and broad open valleys create dramatic viewsheds that are scenic assets. The county's wildlands contain a variety of wildlife that add to its western character and also provide recreational resources for area residents as well as visitors. These are strengths that contribute to the county's quality of life and the attractiveness of the area for tourists and recreationists. The remoteness of some of the county limits development opportunities, but may help in some ways preserve the rural character of the county.

Services and Infrastructure. The provision of services and infrastructure is difficult with the declining tax base in the county and Deer Lodge. The limited availability of retail and medical services is perceived as a county weakness, both in terms of availability to residents and as a source for keeping dollars from leaking out of the county. County residents spend their money in Helena, Missoula, or Butte. Services are available for the tourists that visit Deer Lodge and tourism is a growing industry in Deer Lodge.

Attitudes to Change. The local cultures of both the townspeople and the ranchers values stability, but it is the remembered stability of yesteryear—residents would like things to be as they were in the past, when residents could have well paying jobs at Anaconda Mining Company in Anaconda or Butte, or the Milwaukee Railroad operations in Deer Lodge, or at Cominco. The economic situation of both residents of Deer Lodge and the ranchers in the county is different than it was in the past, and change was brought by outside events. The positive value of this attitude to change is that it focuses attention on conditions that can reinforce the valued attributes and characteristics of local communities. The weakness of this view is that it may inhibit thinking about adaptation to new circumstances and new solutions to old problems.

Community Characteristics. One of the characteristics that influences Powell County is the unusual distribution of the population, with almost half of the county population located in southern portion of the county in Deer Lodge. Deer Lodge is adjacent to I-90 while the northern portions of the county are much more isolated, which results in a mix of lifestyles. There is limited interaction between the southern and northern portions of the county. It is closer for residents of northern communities such as Ovando and Helmsville to travel to Missoula for their purchases than to travel to Deer Lodge. However, the communities do come together for the fair and such as events as turkey shoots. Government jobs at the prison in Deer Lodge, the State Registrar of Motor Vehicles, and the State Mental Hospital near Anaconda provide some economic stability to the county. However, the jobs do not pay salaries equivalent to the jobs that were once available for residents. The only manufacturing jobs in the county are at the sawmill and as described in the section of this chapter on employment, the community is very dependent on those jobs.

Mutual Support. Mutual support and volunteering are important local values among both townspeople, people in the timber industry, and ranchers. The community works cooperatively within Deer Lodge, but information about county-wide cooperation is limited. How residents come together

and respond to current issues such as the remediation efforts on the Clark Fork will in a large part demonstrate not only the ability of residents to come together to work to solve a common problem but also demonstrate what leadership is available in the county.

Cooperative Problem Solving. What is unknown is the depth and breadth of cooperative solving resources in the county; and, more about the history of natural resource problem solving. Residents from different social groupings across the county believe that many of their current problems are beyond their control and are the result of outside market forces, changes in federal management practices, or the result of state policies that limit economic development. Additional information about each of these topics may offer more clarity about the strengths and weaknesses associated with how residents work together to identify and resolve potential conflicts.

Leadership. Individuals were identified in the county who are recognized as leaders in terms of always “being willing to help others out.” Other leaders appear to be tied to particular issues or needs of the community or are “institutional” leaders. Several of those identified were members of the business community. While there are strengths in the county’s leadership resources, there are also weaknesses in the potential for those resources to be over-used and burn out.

Human Resources. The indicators of the human resources available to the county show a mixed picture. The census data regarding educational attainment shows that Powell County has adequate educational resources with the percent of individuals with a high school diploma or higher close to those of the state as a whole. However, the percent of individuals with a bachelor’s degree or higher is far lower than the state and lower than any of the other counties in the study area. Interview data suggest that this due in part to the phenomenon that is reported to be occurring all over Montana— young adults are moving out of the state for better employment opportunities. Powell County has a low unemployment rate, but the largest percent for all the counties in the study area of individuals 16 years and over not in the labor force. However, this high percentage may be accounted for by individuals living in group housing, in the Montana State Prison. Residents of the county have the lowest per capita personal income of the all the counties in the study area.

Economic Diversity. According to the most recent IMPLAN data (1999), the county is very dependent on “Wildland” related industrial sectors of the economy. These sectors account for 32 percent of total output and 13 percent of the employment in the county. The most important industry in the county is “sawmills and planing mills,” which accounts for almost 23 percent of total industry output and 8 percent of employment in the county.

Employment data and value-added information from IMPLAN, show that Powell is dependent on employment in the government and the manufacturing sectors. Government accounts for 31 percent of the value-added in Powell County. The next largest value-added sector is manufacturing which accounts for 17 percent of the value-added in the county. In Powell County, the manufacturing sector consists of one establishment, the Louisiana Pacific Mill. The importance of these sectors is supported by interview data and information from the 2000 Census. In the census, 16 percent of employment by industry is accounted for by employment in agriculture, forestry, fishing and hunting, and mining in the county. Manufacturing accounts for around nine percent of the employment by industry.

12 Forest Management Concerns

Residents of the seven project counties were eager to discuss their concerns about forest management. In fact, management concerns were among the top topics that residents volunteered in almost every discussion. This chapter takes two approaches to describing some of these concerns. The first is a review of documents from Phase I as well as a Phase II review of public input about specific forest projects. The second is a summary of information from interviews about forest management issues.

12.1 Document Review

Phase I reviewed available published documents of varying age about the project area. Some documents were published within the past two years, while others were published 15 or more years ago. Review of these documents identified forest management issues of concern to individuals or groups. These issues were collated into themes that express a central idea about forest management. These themes are summarized in the bullet points below. Many of these themes are also expressed in a review of documents from the past five years, discussed in Section 12.2.1, and in a review of discussions with residents, presented in Section 12.3.

The predominance of federal land ownership.

Federal and state agencies dominate land ownership in project counties. The documents contain statements that express concern about the limits federal ownership places on land use as well as its benefits for recreation and open space.

Local and national input.

Statements in the documents express concern that national interests are perceived to have more political influence and the ability to exercise that influence to sway forest management decisions to their position. The power of national interests results in less local influence in management decisions.

Science-based forest management.

There is concern that science-based forest and land management is being superceded by political and other interests. Science-based management is perceived as preferable to politically influenced land management decisions.

Concentration of development.

Limited private lands along with changing economic and population characteristics are resulting in sprawling development. Statements suggest sentiments that development should occur in areas already containing residences rather than consume open space for new development.

The importance of landscape and natural resources as assets for local residents.

Whether it is the elk in the Gravellys, the views of the Flint Creek Range, or riding the ridges in the Big Hole Valley, the landscape and natural resources of this region are important cultural values.

Loss of agricultural land to (1) subdivision and (2) non-agricultural use.

Some farming and ranching operations are not economically viable, or ranchers retire, or other circumstances motivate the sale of ranchlands. Developers are buying ranches and sub-dividing them

for residential development. This results in a decrease in agricultural land use. In other instances, newer residents are purchasing agricultural land and not using it for agricultural purposes or restricting others from leasing it for pasture or other agricultural use.

Increased use of public lands for recreational purposes.

As more people move to Montana, there are increasing pressures for recreational use of public lands. The quality of recreational experiences and the potential for negative impacts to environmental quality are identified as a land use issue.

Conflicts among users of public lands.

As the numbers of users on public lands increases, conflicts are emerging, often around the use of off-road-vehicles. Additionally, there is a more general concern expressed about the potential for conflicts among different types of users, such as snowmobile riders and skiers.

Off Road Vehicle (ORV) activity on public lands.

One of the most prominent and current issues is concern about the effects of ORV activity on the quality of the experiences of non-ORV forest recreationists. There are also expressed concerns about adverse effects to environmental quality, especially air quality and noise pollution.

Roads and access to public lands.

Public lands, in general, are identified as an important recreational resource. Access to these lands, and especially efforts to limit access along USFS roads, is a contentious issue with proponents and opponents. ORV users voice strong opinions about continued access to public lands.

Wilderness and roadless areas.

Wilderness areas in Montana, in general, have been an area of conflict, often resulting in national and special interest organizations advocating for or against the designation of lands as “wilderness areas.” There are those who argue that wilderness designations “lock up” these lands for special interest groups and preclude use of natural resources on these lands. Proponents argue that wilderness is a small part of most public lands, and that it has value within the mandates for multiple use of national forest lands

Changes in timber sales.

A national and regional trend is the reduction in natural resources extraction. Locally this is expressed as a concern for loss of timber sales on National Forest lands. However, there are opposing positions that advocate for selective harvesting or other “sustainable” forestry practices.

These were the major themes identified in the literature reviewed during Phase I of this project.

12.2 Patterns of Public Comment

During Phase II a selection of B-DNF Environmental Assessments, Environmental Impact Statements, and other planning documents were reviewed to identify categories of management concerns and the sources of public input. An initial review of these documents indicated substantially different degrees of comment detail. Some comments were completely reproduced and others were summarized in a sentence or a short phrase. This variability limited the options for the synthesis of public comment in these documents. Using sources with such different degrees of detail to perform a systematic synthesis

might over-represent one point of view or misidentify the intensity of public concern about another. Rather than potentially misrepresent public input as expressed in these documents, we chose to describe the patterns of comment by category and document types. This offers a perspective on topic categories that concern different groups, but not the content of those concerns. Summarizing those concerns across topics and groups is beyond what could be accomplished with the limitations of the documents in-hand. Instead, we focused on connecting and analyzing sources and topics.

To accomplish this task, we made a selection of documents from the last five years available in the Forest Supervisor’s Office in Dillon. Documents were sorted into types of issues addressed, such as vegetation management, riparian, scenic and historic, wilderness, and roads. The documents were organized by date, and documents were then selected to represent different issue types. We then reviewed this selection with several USFS staff for their assessment of the range of issue-types covered. Some additional documents were added, then the public comment sections of each of these documents were copied for later examination. The list of documents selected for examination is Table 12-1.

Table 12-1. Documents Reviewed for Public Comment

| Year | Document Title |
|-------------|---|
| 1996 | Pioneer Mountains Scenic Byway |
| 1999 | Swamp Creek Road Environmental Assessment |
| 1999 | Anaconda Pintler Wilderness Forest Plan Direction |
| 1999 | North Gravelly/Snowcrest Allotment Management Plan Update |
| 1999 | Thunderbolt Windthrow Salvage Decision Notice |
| 2001 | Discovery Ski Area Expansion |
| 2001 | Big Sheep Grazing Allotment |
| 2001 | Tobacco Root Vegetation Management Plan |
| 2001 | Keystone-Quartz Ecosystem Management |
| 2002 | Antelope Basin Elk Lake Allotment Management Plan Update |
| 2002 | East Face Ecosystem Management |
| 2002 | Lemhi Pass National Historical Landmark Management Plan |
| 2002 | B-DNF Noxious Weed Control |

Subsequent review of the copied sections indicated variation in how public comments are presented and organized. Some are organized by topic (e.g., wildlife, fisheries, etc.), and connect the comment to a source (individuals or organizations). Other documents are organized by source without categorizing the comments by topic, or identify the topics without connecting them to sources. As noted above, we decided to focus the review on the documents that contain a reference to the source of the comment and the comment categories. Documents that contain a reference source without a comment category were categorized using a process described in Section 12.2.2.

12.2.1 Public Comment Sources

A review of these 13 documents indicates public input from a combination of individuals, public agencies, and private organizations. Three of the thirteen documents were excluded because they did not identify any sources. Those documents contained only comments by topic. The excluded documents are: *North Gravelly/Snowcrest Allotment Management Plan Update*, the *Tobacco Root*

Vegetation Management Plan, and the *Antelope Basin Elk Lake Allotment Management Plan Update*. Table 12-2 indicates the sources in the ten documents, categorized by type: government entities, environmental advocacy, recreational, commercial, weed control, others, and individuals. Sources were collated for each document. Instances of comments by individuals rather than organizations were identified for each document. For example, if three different persons commented in document "A," these were counted as three instances, and if five persons commented in document "B," this was counted as five instances. However, we did not account for those instances where the same individual made comments about document "A" and "B." The total of 265 individual instances in the documents may double count some individuals, but the purpose of the review is to document instances per document. Table 12-2 indicates the comment sources by category in the 10 documents. These sources include: 13 different government agencies, 17 environmental advocacy groups, 12 recreational interests, 9 commercial interests, 3 weed control interests, and 6 entities grouped as "other."

Table 12-2. Sources of Public Comment

| Government Sources (14) | Environmental Advocacy/Interest Groups (17) |
|--|---|
| Idaho Department of Environmental Quality | Alliance for the Wild Rockies |
| Idaho State Historic Preservation Office | American Wildlands |
| MT Department of Environmental Quality | Audubon Society |
| MT Department of Fish, Wildlife and Parks | Big Hole River Foundation |
| MT DNRC Trust Land Management Division | Forest Futures |
| MT Natural Heritage Program | Friends of the Bitterroot |
| MT State Historic Preservation Office | Gallitan Wildlife Association |
| U.S. Army Corps of Engineers | Greater Yellowstone Coalition |
| U.S. Bureau of Land Management | Montana River Action Network |
| U.S. Department of the Interior, Fish and Wildlife | Montana Wilderness Assn. |
| U.S. Environmental Protection Agency | Native Ecosystem Council |
| U.S. Geological Service | Native Forest Network |
| U.S. National Park Service | Sierra Club |
| Beaverhead County Commissioners | Southwest Montana Wildlands Alliance |
| Recreational Interests (12) | The Ecology Center |
| Anaconda Sportsmen Association | Wilderness Society |
| Backcountry Horsemen of Missoula | Wilderness Watch |
| Backcountry Horsemen of MT | Commercial Interests (9) |
| Blue Ribbon Coalition, Inc. | Beck Consulting |
| Continental Divide Trail Society | East Fork Outfitters |
| Jackpine Savages Snowmobile Club | Lolo Creek Llamas |
| Mission Valley Backcountry Horsemen | Smith 6-S Livestock |
| Montana 4X4 Assn. | Stanchfield Cattle Company |
| Public Lands Access Association | SW MT Stockman's Association |
| Rimrock 4X4, Inc. | The Complete Fly Fisher |
| Salmon Backcountry Horsemen | Under Wild Skies Outfitters |
| Trout Unlimited | Wild Wind Records |
| Weed Control Interests (3) | Other Interests (6) |
| Beaverhead County Weed Control | East Pioneer Stewardship |
| Headwaters Range Weed Committee | Friends of the West |
| Powell County Weed Board | Kentucky Wolf Information Center |
| Individuals (265) | Lemhi County Lewis and Clark Bicentennial Committee |
| | Lewis and Clark Heritage Foundation |
| | D.G. (Unidentified) |

12.2.2 Topic Categories

The comment categories in the 13 documents were collated and examined for similarity. Many of the categories were consistent across documents, but some were not. Some categories were also document specific. To facilitate linking comment topics to sources, categories from all documents were compiled. The result was 125 unique categories. We then examined the list for redundancies or similarities and a new category list was constructed. The original categories were mapped to the new categories where the original category was merged or otherwise altered.

The new list was reduced from 125 to 25 topic categories in order to associate comments with sources. Many of these categories are unaltered from the original documents, but some are new categories that most often combined several related topics into a single category. For example, the categories “roadless,” “roadless and wilderness,” “roadless areas,” “roadless lands,” “horse trail,” and “trail use and construction,” are distinct categories that appear in different documents. These were combined into a single new category “roadless/wilderness/trails.” Similarly, the categories “family recreation,” “recreation,” “recreation/visual quality,” “recreation experience,” and “snowmaking” were collapsed into “recreation.” The final 25 categories are as follows:

- *Cumulative Effects.* Where “cumulative effects” was the focus of comments, this category was applied.
- *Ecosystems Management.* Specific comments about the concept or practice of ecosystem management, biodiversity, watershed management, and related ideas were placed in this category.
- *Environmental Quality.* Issues regarding air quality, pollution, and other environmental degradation (except water quality) were labeled with this category.
- *Fire Issues.* Controlled burns, fire response techniques, concerns about fire potential, and other topics that directly mentioned fires on public lands were labeled with this category.
- *Fisheries.* Several documents mentioned concerns about management practices affecting western slope cutthroat trout as well as potential effects on other fish populations. All comments about particular fisheries were labeled with this category.
- *General.* This appeared as a category for labeling comments in several documents. We incorporate it in this list since it appeared in the identification of comment categories in the documents reviewed.
- *Grazing.* Topics related to allotments for grazing cattle or sheep on public lands or issues related to the effects of grazing were labeled with this category.
- *Historic and Cultural Resources.* This category combines comments about historical values and cultural resources.
- *Landscape/Scenic.* Comments regarding viewsheds, scenic resources or landscape features were included in this category.
- *Management and Alternatives.* This category combined comments about the alternatives associated with particular management issues and comments about the management process in general.
- *Miscellaneous.* This category appeared in the documents and was retained to indicate comments assigned to this category.
- *Noxious Weeds.* Comments related to noxious weed issues and control measures were labeled with this category.
- *Off Road Vehicles.* This category was in the original document and applied to comments about topics concerning ORV use of public lands.
- *Planning.* This category was used in the original documents to indicate comments about planning processes or the need for planning.
- *Recreation.* Comments concerning different types of recreational use (other than ORV use) or desired use were identified with this category.

- *Riparian Concerns.* A category in the original documents used to identify comments regarding the effects of different agents on resources adjacent to streams and other water bodies.
- *Road Issues.* This category address topics such as road construction and maintenance, the need for roads, and opinions regarding road standards.
- *Roadless/Wilderness/Trails.* This category aggregated comments about roadless areas, wilderness areas, and the use of trails in these types of areas.
- *Socio-economic.* This category aggregated comments about lifestyle and other social and economic issues associated with forest management issues.
- *Soil Issues.* Comments about soil quality or composition or the effects of management on any aspect of soils were labeled with this category.
- *Timber / Old Growth.* This category combined comments about timber harvesting, the need for timber harvesting, opposition to timber harvesting, and issues related to old growth.
- *Travel Management.* This category was in the original documents and was used to label comments about the need for travel planning or travel planning issues.
- *Vegetation.* This category was applied to comments about any vegetation issues other than those relating to trees.
- *Water/Water Quality.* Issues relating to water supply, water quality, and other water related concerns were labeled with this category.
- *Wildlife.* Concerns about particular species of wildlife or issues related to wildlife management were placed in this category.

12.2.3 Linking Sources and Topics

Once a topic category set was established, the documents were reviewed and topic categories applied to comments. The variability in document style and comment detail made this an “approximate” process. That is, it is a fair representation of the association of organizations with comment categories, but variations in document style resulted in some variability in category attribution. For the purposes of describing patterns in relationships between categories and organizations, this attribution process does not significantly affect the results. Tables in Appendix “A” identify each document, the commenting organizations, and the categories of comment. As these tables indicate, 3 of the 13 documents did not link sources with comments. The categories of comment were identified and the numbers of comments listed, but these were not associated with particular groups or individuals. The 10 documents for which sources and comments were linked are identified in Table 12-3, and assigned a three-letter code. Those codes are then used to identify documents discussed in Table 12-4 and Table 12-5.

Table 12-4 and Table 12-5 are variations of the same information. Table 12-4 is sorted by the number of documents receiving comments by sources. Only those sources commenting on more than two documents are included in the table. Several characteristics of public comment are indicated by this table:

- Individuals commented on all documents and all categories. The tables in Appendix A indicate the categories of comment for each specific document.
- Of the 62 sources, 14 commented in more than one document. The other 48 sources commented in only one document, suggesting a specific management issue of concern to that group.

- Of the entities that commented in more than one document, the Montana Department of Fish, Wildlife, and Parks commented in the most, with 7 of the 10 documents.
- Those entities commenting in more than two documents are as follows: Montana Department of Fish, Wildlife and Parks (7); The Ecology Center (6); Alliance for the Wild Rockies (6); American Wildlands (6); USEPA (5); Native Ecosystems Council (4); Friends of the Bitterroot (3); Continental Trail Divide Society (3), and the U.S. Army Corps of Engineers (3).
- This information suggests a small number of sources are commenting on more than one document. Other than individuals, state and federal government and environmental interests are commenting in the most documents.

Table 12-3. Document Code Key

| Document Name | Code |
|---|-------------|
| Pioneer Mountains Scenic Byway | PMS |
| Swamp Creek Road Environmental Assessment | SCR |
| Anaconda Pintler Wilderness Forest Plan Direction | APW |
| Thunderbolt Windthrow Salvage Decision Notice | TWS |
| Discovery Ski Area Expansion | DSA |
| Big Sheep Grazing Allotment | BSG |
| Keystone-Quartz Ecosystem Mgmt | KQE |
| East Face Ecosystem Management | EFE |
| Lemhi Pass National Historical Landmark Management Plan | LPN |
| B-DNF Noxious Weed Control | BNW |

Table 12-4. Number of Documents Receiving Comments by Source

| Sources | # of DOCs (out of 10) | # of TOPICS | Documents by Code |
|---|----------------------------------|------------------------|--|
| Individuals – 265 | 10 | 25 | PMS, SCR, APW, TWS, DSA, BSG, KQE, EFE, LPN, BNW |
| MT Department of Fish, Wildlife and Parks | 7 | 9 | SCR, APW, TWS, DSA, KQE, EFE, LPN |
| The Ecology Center | 6 | 20 | APW, TWS, BSG, KQE, EFE, LPN |
| Alliance for the Wild Rockies | 6 | 18 | APW, TWS, DSA, KQE, EFE, BNW |
| American Wildlands | 6 | 14 | SCR, APW, TWS, DSA, EFE, LPN |
| U.S. Environmental Protection Agency | 5 | 16 | PMS, DSA, KQE, LPN, BNW |
| Native Ecosystem Council | 4 | 15 | SCR, BSG, KQE, EFE |
| Friends of the Bitterroot | 3 | 14 | BSG, LPN, BNW |
| Continental Divide Trail Society | 3 | 4 | APW, TWS, LPN |
| U.S. Army Corps of Engineers | 3 | 2 | PMS, DSA, EFE |
| Montana Wilderness Assn. | 2 | 10 | APW, TWS |
| MT State Historic Preservation Office | 2 | 3 | PMS, LPN |
| Beaverhead County Commissioners | 2 | 2 | LPN, BNW |
| MT Department of Environmental Quality | 2 | 2 | PMS, APW |

Table 12-5 shows the same categories of information as Table 12-4, but they are sorted by the number of topics receiving comments by sources. The documents receiving comment are identified in the last column by the document key code (listed in Table 12-3). The patterns apparent in this table include:

- Individuals commented on all 25 topics. The tables in Appendix A show the categories of comment by document for individuals and other sources.
- The Ecology Center commented on 20 of the 25 topics and the Alliance for the Wild Rockies 18 of 25 topics.
- Those organizations commenting on 9 or more of the 25 topics are as follows: The Ecology Center (20); Alliance for the Wild Rockies (18); USEPA (16); Native Ecosystems Council (15); American Wildlands (14); Friends of the Bitterroot (14); Montana Wilderness Association (10); and, the Montana Department of Fish, Wildlife and Parks (9).
- The remaining 53 sources commented about six or fewer topics.
- For three sources—Idaho Dept. of Environmental Quality, U.S. Dept. of Interior, Fish and Wildlife and U.S. Geological Service—we were unable make any linkages with comments.

Table 12-5. Topic and Document Counts by Source

| Sources | # of TOPICS | # of DOCs (out of 10) | Documents by Code |
|---|--------------------|------------------------------|--|
| Individuals – 265 | 25 | 10 | PMS, SCR, APW, TWS, DSA, BSG, KQE, EFE, LPN, BNW |
| The Ecology Center | 20 | 6 | APW, TWS, BSG, KQE, EFE, LPN |
| Alliance for the Wild Rockies | 18 | 6 | APW, TWS, DSA, KQE, EFE, BNW |
| U.S. Environmental Protection Agency | 16 | 5 | PMS, DSA, KQE, LPN, BNW |
| Native Ecosystem Council | 15 | 4 | SCR, BSG, KQE, EFE |
| American Wildlands | 14 | 6 | SCR, APW, TWS, DSA, EFE, LPN |
| Friends of the Bitterroot | 14 | 3 | BSG, LPN, BNW |
| Montana Wilderness Assn. | 10 | 2 | APW, TWS |
| MT Department of Fish, Wildlife and Parks | 9 | 7 | SCR, APW, TWS, DSA, KQE, EFE, LPN |
| Southwest Montana Wildlands Alliance | 6 | 1 | APW |
| Wilderness Watch | 6 | 1 | APW |
| East Pioneer Stewardship | 5 | 1 | BNW |
| Friends of the West | 5 | 1 | APW |
| Gallitan Wildlife Association | 5 | 1 | EFE |
| Greater Yellowstone Coalition | 5 | 1 | SCR |
| Jackpine Savages Snowmobile Club | 5 | 1 | SCR |
| Continental Divide Trail Society | 4 | 3 | APW, TWS, LPN |
| Backcountry Horsemen of MT | 4 | 1 | APW |
| Salmon Backcountry Horsemen | 4 | 1 | LPN |
| U.S. National Park Service | 4 | 1 | LPN |
| Wilderness Society | 4 | 1 | APW |
| MT State Historic Preservation Office | 3 | 2 | PMS, LPN |
| Backcountry Horsemen of Missoula | 3 | 1 | APW |

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| Sources | # of TOPICS | # of DOCs (out of 10) | Documents by Code |
|---|--------------------|------------------------------|--------------------------|
| Beck Consulting | 3 | 1 | APW |
| Big Hole River Foundation | 3 | 1 | SCR |
| Lemhi County Lewis and Clark Bicentennial Committee | 3 | 1 | LPN |
| Mission Valley Backcountry Horsemen | 3 | 1 | APW |
| Native Forest Network | 3 | 1 | TWS |
| Sierra Club | 3 | 1 | APW |
| Smith 6-S Livestock | 3 | 1 | BNW |
| SW MT Stockman's Association | 3 | 1 | BNW |
| The Complete Fly Fisher | 3 | 1 | SCR |
| Wild Wind Records | 3 | 1 | TWS |
| U.S. Army Corps of Engineers | 2 | 3 | PMS, DSA, EFE |
| Beaverhead County Commissioners | 2 | 2 | LPN, BNW |
| MT Department of Environmental Quality | 2 | 2 | PMS, APW |
| Anaconda Sportsmen Association | 2 | 1 | SCR |
| Blue Ribbon Coalition, Inc. | 2 | 1 | TWS |
| Forest Futures | 2 | 1 | APW |
| Idaho State Historic Preservation Office | 2 | 1 | LPN |
| Powell County Weed Board | 2 | 1 | BNW |
| Public Lands Access Association | 2 | 1 | SCR |
| Stanchfield Cattle Company | 2 | 1 | BNW |
| Trout Unlimited | 2 | 1 | SCR |
| U.S. Bureau of Land Management | 2 | 1 | EFE |
| Audubon Society | 1 | 1 | APW |
| Beaverhead County Weed Control | 1 | 1 | BNW |
| D.G. (Unidentified) | 1 | 1 | DSA |
| East Fork Outfitters | 1 | 1 | APW |
| Headwaters Range Weed Committee | 1 | 1 | BNW |
| Kentucky Wolf Information Center | 1 | 1 | BSG |
| Lewis and Clark Heritage Foundation | 1 | 1 | LPN |
| Lolo Creek Llamas | 1 | 1 | APW |
| Montana 4X4 Assn. | 1 | 1 | TWS |
| Montana River Action Network | 1 | 1 | TWS |
| MT DNRC Trust Land Management Division | 1 | 1 | LPN |
| MT Natural Heritage Program | 1 | 1 | PMS |
| Rimrock 4X4, Inc. | 1 | 1 | TWS |
| Under Wild Skies Outfitters | 1 | 1 | APW |
| Idaho Department of Environmental Quality | 0 | 1 | DSA |
| U.S. Department of the Interior, Fish and Wildlife | 0 | 1 | LPN |
| U.S. Geological Service | 0 | 1 | LPN |

Table 12-7 examines the topics of comment by interests groups as they were categorized in Table 12-2. This indicates topics of concern to different interest groups. The organization groupings are as follows: individuals, state and local government, federal government, recreation, ORV, environmental, weed control, commercial, and other. A key to topic category codes is provided in Table 12-6. The patterns in Table 12-7 can be summarized as follows:

- Environmental interests and individuals commented on all topic categories.
- State and local governments commented on 16 of the 25 topics. They did not comment on fire, general, grazing, miscellaneous, planning, and roadless wilderness and trails.
- Federal government sources commented on 19 of the 25 topic categories. They did not comment on cumulative effects, ecosystems management, fisheries, general, miscellaneous, and socioeconomic issues.
- Recreational Interests (excluding motorized users described in the next bullet) commented on nine topic categories: fisheries, fire, management and alternatives, noxious weeds, ORV use, recreation, roads, roadless wilderness and trails, and travel management.
- ORV interests commented about seven topics: management and alternatives, miscellaneous, recreation, roads, socioeconomic issues, soils, and travel management.
- Weed control interests commented about two topics: management and alternatives, and noxious weeds.
- Commercial interests, including ranches, commented about nine topics: grazing, management and alternatives, noxious weeds, ORV use, planning, recreation, roadless wilderness and trails, water and water quality, and wildlife.
- Those interests in the “other” category (Table 12-2) commented on nine topic areas: fisheries, historic and cultural resources, management and alternatives, miscellaneous, noxious weeds, recreation, roadless wilderness and trails, and wildlife.

Table 12-7 also suggests an interpretation of the topics receiving the most attention by commenting interest groups and individuals. Topics that received comments by more than five or more interest groups are:

- Management process and management alternatives (all).
- Noxious Weeds (8)
- Recreation (8)
- Travel Management (7)
- Roads (6)
- Roadless, wilderness and trail issues (6)
- Off Road Vehicle Use (6)
- Fisheries (5)
- Historic and Cultural Resources (5)
- Soil issues (5)
- Wildlife (5)

Overall, this review suggests that the topics of interest to commenting groups are:

- The process of forest management and the particular issues associated with different management alternatives.
- Noxious weeds are topic of comment across documents and across interest groups, including issues related to how weeds spread, the most effective methods of weed control, and how noxious weed issues interact with other topics of concern such as grazing, ORV use, and wildlife habitat.
- Collectively, issues related to roads, ORV use, travel management, and roadless areas are frequent topics, with commenters expressing opinions for more road access as well as road closures. ORV interests want to promote access, while other user groups are interested in addressing motorized access to different areas of the forest.
- Fisheries issues concern diverse interest groups, especially topics related to the western cutthroat trout. However, other fisheries issues related to water levels and riparian effects on fisheries are also topics of comment in the documents reviewed.

Table 12-6. Topic Category Code Key

| Code | Topic Category | Code | Topic Category |
|-------------|---------------------------------|-------------|----------------------------|
| CE | Cumulative Effects | PLN | Planning |
| EM | Ecosystems Management | REC | Recreation |
| EQ | Environmental Quality | RIP | Riparian Concerns |
| FR | Fire Issues | RD | Road Issues |
| FS | Fisheries | RWT | Roadless/Wilderness/Trails |
| GEN | General | S-E | Socio-Economic |
| GRZ | Grazing | SOIL | Soil Issues |
| HCR | Historic and Cultural Resources | TOG | Timber/Old Growth |
| L/S | Landscape / Scenic | TRV | Travel Management |
| M and A | Management and Alternatives | VEG | Vegetation |
| MSC | Miscellaneous | WTR | Water/Water Quality |
| NW | Noxious Weed | WLD | Wildlife |
| ORV | ORVs | | |

Table 12-7. Interest Group Comments by Topic Category

| Group | Code | | | | | | | | | | | | | | | | | | | | | | | | Topic Total | |
|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|-----|
| | CE | EM | EQ | FR | FS | GEN | GRZ | HCR | L/S | MA | MC | NW | ORV | PLN | REC | RIP | RD | RWT | SE | S | TOG | TV | VEG | WTR | | WLD |
| Individuals | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | 25 |
| State and Local Government | x | x | x | | x | | | x | | x | | x | x | | x | | x | | | x | x | x | x | x | x | 16 |
| U.S. Govt. | | | x | x | | | x | x | x | x | | x | x | x | x | x | x | x | | x | x | x | x | x | x | 19 |
| Recreation | | | | | x | x | | | | x | | x | x | | x | | x | x | | | | x | | | | 9 |
| Off Road Vehicles | | | | | | | | | | x | x | | | | x | | x | | x | x | | x | | | | 7 |
| Environment | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | 25 |
| Weed | | | | | | | | | | x | | x | | | | | | | | | | | | | | 2 |
| Commercial | | | | | | | x | | | x | | x | x | x | x | | | x | | | | | | x | x | 9 |
| Other | | | | | x | | | x | | x | x | x | | | x | | | x | | | | x | | x | | 9 |
| Number of Groups to Comment on Topic | 3 | 3 | 4 | 3 | 5 | 3 | 4 | 5 | 3 | 9 | 4 | 8 | 6 | 4 | 8 | 3 | 6 | 6 | 3 | 5 | 4 | 7 | 4 | 6 | 5 | |

12.2.4 Next Steps in Document Review

This review focused on working within the limits of the public comments as expressed in documents selected to represent a range of forest management issues. Variability in document style and the treatment of public comments resulted in concentrating on identifying sources and topics of public comment and connecting topics with sources. This review does indicate the types of issues within topics that are the substance of discussion with the B-DNF management team.

There are time and cost constraints that affect how the B-DNF records and works with public comment. If these constraints did not exist, the following process might provide a means for tracking public comment in the future:

- Establish a comment set of coding categories with definitions. These categories can be applied to recording and tracking topics of comment.
- Record the source of particular comments so sources can be linked with topic comments within and across documents.
- Construct “content” codes for topics that describe the substance of a concern. For example, “impacts,” “support,” “opposition,” or other descriptors of the content that can be used to attach content with topics and sources.
- Use a database to record and track the information.

If constraints did not exist, this process could provide consistency in how public comments are reviewed and represented in B-DNF documents.

With the documents in hand now, a further synthesis is possible if a set of consistent coding categories is applied to documents with comparable topic comment detail. This could yield more specific detail about the substance of public comment about particular topics.

12.3 Discussions about Forest Management Concerns

Information about forest-management issues was collected as part of discussions with key persons in the project counties. These discussions were open-ended and structured to allow for conversation about particular topics without directing the discussion. This allowed for topics and issues of concern to the participants to emerge. This technique yielded information about the content of public concerns in several areas. These issues may not be representative of the larger set of public concerns, but this information provides details about the content of particular management issues. It is noteworthy that this information resulted in different topics and issues than is observable in the public comment documents. This is not surprising, but it does suggest public comment on particular management issues may not tap the full range of community concerns about forest management issues.

The discussion information was written in field notes and in some instances recorded. Notes and recordings were reviewed and information categorized into groups according to the similarity of the topic or issues. Each grouping was then given a theme name or phrase. The results of these groupings are presented in the following sub-section. It is important to emphasize that presentation of this information is intended to convey the points of view among those who participated in this project. Some of the perceptions and opinions may not be correct. However, the purpose here is to offer another perspective about public concerns regarding forest management, even if some of those concerns are based on incorrect facts or assumptions.

12.3.1 USFS and Forest Management Practices and Processes

Forest management practices and forest managers were a topic for comment in almost all interviews. The major themes about forest management are listed below along with a brief description of theme content. It should be noted that this list is composed primarily of what might be interpreted as complaints. However, there is also strong positive sentiment about the USFS that ran through most discussions with project participants. There is good will between communities and particular individuals and particular District Rangers or other USFS staff. There is a strong base of good will and trust for the B-DNF to build upon in relationships with local communities. As one County Commissioner observed, *Everyone has a few gripes about one thing or another, but as a whole they have been excellent to work with. From a county stand point, it couldn't be much better.* This good will should not be overlooked in this listing of concerns expressed about forest managers and management practices.

Trust in local managers.

A dominant theme in comments about District Rangers and other staff is “trust” in their ability to manage public lands. Although there was what can be termed a “minority” opinion of overall distrust of the USFS, the more prominent sentiment is that local managers can be trusted to manage B-DNF lands for the best interests of all concerned parties. Although the below comment is about one particular Ranger, it also applies to a wider range of participant comments.

I trust our local manager to know what is best for the forest. He is a strong leader. I trust his decisions. They just need to let him do the right thing. People respect him on both sides of the fence because he is honest and he makes an attempt to bring things out that are uncomfortable. He has logical and good reasons for his decisions and people respect the decision he makes. He may not think that, but people I talk to trust him even when they don't agree with him. I don't know of anyone who thinks they got an unfair deal from him. I think he has passionate leadership and that makes a difference. He has been here awhile and that also makes a difference.

This trust is not generalized to the USFS as a whole. Rather it is confined to local managers known to community members. For example,

I trust them. I trust that they will do well by the valley (Ruby valley). I don't have any anxiety about the way (local Ranger) deals with the issues here. I know (local Ranger) has the good wishes of the valley in most decisions made. Now, that is not the case for Washington. I don't trust them to do what is right, but I do trust the people here.

This sense of trust seems an invaluable asset that the B-DNF has in its relationship with local communities.

Rotation of managers in and out undermines working relationships with the community.

Strong sentiment exists that Rangers and other managers “rotate out” after community members have invested time in building working relationships. As one resident noted:

It used to be they (Rangers) worked and lived here. Now just about the time we get a good working relationship, they leave or they get transferred.

The quality of the working relationship with local managers is an issue of concern to a wide range of interest groups. One county commissioner stated:

One problem with the Forest Service is they keep transferring people. It is hard to establish a relationship when they keep scooting people in and out of here.

Tenure is a component of the quality of these working relationships. Participants expressed concern that transfers of forest managers frequently disrupt established working relationships; and, the anticipation of short tenure may inhibit forming strong working relationships. One worker in the forest products industry commented:

Some people in the Forest Service have basically killed their careers in order to stay in the same place.

The ability of local managers to effectively manage the forest is undermined by “outside” interests.

This theme has several components. One component is the perception that Interest groups from outside the project area have more influence on management decisions than local interests do. As one member of the forest products industry expressed it:

Special interests have made their stand in Montana and have effectively destroyed the industry. It's too easy to stop the process. The system allows them to do that. The system needs to be refined.

A related perception is that the threat of appeals stifles decision-making or the initiative to construct programs that might address local management issues. As one timber industry person observed:

They are careful not to say anything that will rock the boat. Their hands are tied.

A third component of this theme is that local decision making is undermined by the regional office or sometimes by “political” interests that over-ride local decision making. Collectively, these sub-themes suggest an assessment of local decision-making as potentially compromised. However, there is also a perception that if these outside interests were less influential, local forest managers would be successful if they were just allowed to do their job without all the interference, things would improve.

The (management) process doesn't work.

This is an elaboration of the point above, but it expresses a theme about management plans in different statements by recreationists, timber interests, ranchers, and environmentalists. An environmental advocate, rancher/outfitter, and timber industry operator made the following observations:

The process we are supposed to believe in and take part in isn't allowed to work. When the process is completed and all the public comment is analyzed, then the politicians step in and take over the land manager's decision making. They influence that decision and turn everything upside down. So, the process is at a stalemate right now (environmental advocate).

They are making a joke of the process. Everyone participated in the process and then if someone doesn't like the outcome, then they scream to whoever is politically in control and that is a problem. As an American, that is what I find upsetting about this. Despite any efforts or science or anything, the land managers are allowed to be bullied around by the politicians who are supported by (special interests). It does not seem to make the process fair (rancher/outfitter).

The public does not always know best. When you get the Sierra Clubs of the world making unfounded accusations, then they get 200,000 of those people to send in misinformed comments. That is not good policy. The (USFS personnel) are trained to know what to do and the public is often misinformed and we need to let them (USFS) do what needs to be done without that outside influence. They know what should be done; they are just scared to do it. I guess I have just seen how public comment can paralyze them. How do you analyze 200,000 letters? It is just a bureaucratic mess. They just need to have more local control. The Forest

Supervisor should have more control to make decisions. It doesn't get managed worth a damn from Washington D.C. (timber industry)

These statements express a sense of distrust in the process used to gather input, assess issues, and make decisions. The expertise of forest managers is trusted. The sincerity of diverse special interests is acknowledged. However, political or other circumvention of the management process is undermining trust in the process. In short, publics perceive, "The process doesn't work" and a solution is to rely on local managers to make decisions based on their knowledge and expertise.

USFS staff are not in the field enough.

This theme is described by contrasting "how things were" with "how things are now." That is, in the past USFS staff was perceived to be smaller and more aware of the "on the ground" management issues because they were often in the field. This is contrasted with "now" with more staff, but less time in the field: they always seem to be behind a desk and not in the field. The implication is that Rangers and other staff do not have essential knowledge about field conditions because they are desk-bound. There is also a community relations component to this perception. That is, community members desire to have more face-to-face interaction with forest managers. This is especially the case among those with commercial interests connected to the forest such as outfitters, miners, ranchers, and timber interests. For example, a person from a small timber industry company commented:

It used to be they (Rangers) would come out and shoot the bull with you. You know, sit down and have a cup of coffee and just talk things over. That hardly happens now. There was one Ranger that came out here not long ago to see what we do. I almost fell to the ground I was so surprised to see him here. So, I showed him how the machinery operates and we talked about the logs and what we do with them. They need to do that kind of thing more so they know that what they do affects us.

Forest management policies are not consistently interpreted across districts.

This specific topic was raised about travel management and grazing on B-DNF lands. Residents expressed a perception that Rangers in different districts did not consistently interpret what should be forest-wide policies. The more generalized sentiment appears to be a need for coordinated interpretation of forest management policies in all Ranger Districts. For example:

There needs to be more District to District consistency. Each Ranger District operates so independently that you don't know the rules from place to place. Each District is like its own kingdom and they lose sight of the big picture issues."

Recreation planning is behind.

There is sentiment among outfitters and some ranchers that recreation planning is not keeping pace with recreation demand on B-DNF lands. An outfitter had the following observation about this issue:

On the recreation side, especially on the motorized side, it seems like a new arena. For example, the travel plan we are working on now, we have a process for what is going on with logging and grazing, but when you get into recreation the processes is not set up to deal with it. They say this is a forest where grazing issues get first priority, but no one is planning for the future; everybody knows recreation is going to increase.... How are you going to manage the future? How are you going to deal with recreation issues when it is the biggest growing thing on the forest? Allotments are not increasing. Timber sales are not increasing, but recreation is growing by leaps and bounds. But the budget of the forest is not prepared for that. They aren't dealing with it.

The perception expressed in this statement is that forest managers are not acknowledging recreation pressures and their associated planning needs. Instead, budget and time are devoted to more traditional issues such as timber and grazing.

Local governments need to have a stake as collaborators in resource planning.

Both Beaverhead and Granite Counties have Resource Use Plans. Each of these counties perceives they should have a greater stake in the management of natural resources within their county boundaries, including those on public lands. They argue for greater county involvement in the planning process and a more rational process for providing input to the USFS and other public agencies. There is also sentiment that the BLM is more amenable to such involvement than the USFS.

More outreach for public input than public meetings.

The sentiment of this theme is a desire for forums for public input that go beyond public meetings. Public meetings are characterized as forums for argument and “shouting matches” that do not always allow for the expression of all opinions and concerns. Similarly, such meetings are criticized as not easily attended by individuals with busy schedules. As one rancher commented: *They always seem to have them when we are at our busiest time.* One suggested alternative is to have face-to-face meetings or small group meetings that have less potential for conflict and public. One community member also made the following comment about law enforcement at meetings:

We went to a meeting about roadless areas and there were five forest cops there. What kind of message is that? They said that it was to keep things from getting out of hand, but I didn't feel welcome there with a bunch of cops with guns.

USFS role in resource conflicts.

A timber industry participant expressed an opinion that the B-DNF should have some role in mediating disputes among interests groups with conflicting uses or points of view about forest resources. This perspective was stated as:

This is where the Forest Service comes in. One side wants it one way and the other side wants it their way. The other side can only see it their way. The Forest Service needs to mediate in those kinds of situations. I know they don't do it now, but they need to be empowered to do it so we can get past the stalemates that exist now.

However practical or impractical the sentiment, there is some expectation or perhaps desire for the resolution of resource use conflicts by a party, in this case the USFS, that can resolve stalemates. However, this is also a statement about overall frustration with what is perceived to be a stalemate in polarized conflict about resource management issues.

Enforcement is an issue that needs attention.

A perception exists that the activity level on forest lands and the geographic dispersion of the B-DNF in 11 different areas is not sufficiently covered by current enforcement staff. With what is perceived as insufficient staffing, enforcement of management policy and law is not adequate for the size of the B-DNF. Publics acknowledge that Rangers and other staff receive enforcement training, but this is interpreted as not effective for responding to the perceived enforcement needs:

You take a recreation guy or a Head Ranger or anyone. They spend all this time and money sending them to law enforcement school and they spend one percent of their actual working time enforcing the law. They could take all that money and hire two guys that want to be cops.

Someone like (District Ranger) did not go into the Forest Service because he wants to bust people....The money needs to go to people who can deal with this full time and not part time.

Without sufficient enforcement, planning efforts that need enforcement may be undermined. The root of this concern is for sufficient enforcement of existing policies and future policies that result from LRMP efforts.

A pretty decent job with an over-abundance of manpower.

This backhanded compliment about B-DNF management is also a statement of concern about USFS staffing. Although there is an overall positive evaluation of forest management, there is also an evaluation of Districts and the Forest Supervisor's Office as over-staffed. This implies that some publics may not be aware of the roles and responsibilities of staff in these offices.

They need to give a barbecue.

This comment expresses a larger theme about the interaction of the B-DNF with local communities. It is a more general perception that community members desire more interaction with the agency and in different forums. In this instance, the "barbecue" is a metaphor for more informal interactions than public meetings. Another newcomer resident expressed the same theme content with different language:

They (USFS) were really active when the Rainbows were here and it was helpful to me. They need to do more outreach and talk to us in different ways other than just these public meetings.

Although the content of this sentiment is primarily socializing, it is also perceived as a means to inform residents about the "hows" and "whys" of forest management. For example, an outfitter commented:

We need to educate them more about the value of what we bring to the forest, but we also need to know why they do what they do in policy making and if they understand its effects on us. They are often top-down in their decision making style and if we had another way to interact, maybe there could be more mutual understanding and cooperative decision making.

12.3.2 Noxious Weeds

Noxious weeds emerged as a prominent concern in almost every discussion. Noxious weeds were also connected to other topics, especially ORV use, grazing, and fire concerns. All types of interest groups—ranchers, environmentalists, local government, outfitters, etc.—as well as local residents recognized noxious weeds as a serious problem with consequences for all users or parties with interests in public lands.

Biggest management problem we have.

Ranchers and some environmental interests expressed sentiments that noxious weeds are a significant local problem that requires attention by public land managers as well as local government and private citizens.

Forest lands need better weed control.

Some sentiment exists that the B-DNF is not "healthy" because there is an abundance of weeds, especially knapweed, on forest lands. The expressed concern is that forest managers are not aggressively managing weed control because of the concerns of environmental interests about the possible effects of chemical weed control measures. A related theme is frustration and resentment that

federal lands are not held accountable to the same standards that are enforced on private lands. For example, a resident commented, A private land owner may spend thousands of dollars on noxious weed control efforts when next door there are noxious weeds on federal lands. Residents are suggest that the B-DNF should increase educational efforts about the adverse consequences of weeds on public and private land.

Roads and weeds go together.

Ranchers are especially attuned to how weeds spread on public and private lands. However, ranchers have some ambivalence about the relationship between roads and weeds. On the one hand roads are a known vector for spreading weeds from public access. On the other hand, they are access points for checking on livestock. Recreation interests are also concerned that roads are a vector for weeds, although there are diverse opinions within the group, especially among ORV users. Environmental interests perceive roads as a major source of weed spread.

Newcomers don't get it.

As more newcomers move into the project area and live adjacent to public lands, the problems with noxious weeds increase. Newcomers are assessed as not appreciating the significance of noxious weeds as threats to local ways of life. There is a perceived need for education of newcomers about the importance of weed control by local governments and neighbors, as well as the USFS.

12.3.3 Local Ecological Knowledge

Discussions with ranchers, farmers, and loggers indicate a sentiment that forest managers do not effectively use local ecological knowledge. They argue that they have daily interactions with the forests, streams, fields, and wildlife that results in valuable ecological understandings grounded in their own experience.

Tenure on the land contributes to knowledge about local ecology.

Some ranching and farming families have lived in this region since the 1860s. Knowledge about their own lands as well as adjacent public lands is rooted in the family history and experience on the land. This is especially important when USFS and BLM land managers have much shorter tenure on the land and less knowledge about local ecology than ranchers and farmers.

Traditional ecological knowledge compliments "scientific" knowledge.

Agriculturalists perceive there is value in the forest managers' scientific knowledge. Ranchers and farmers have placed-based traditional ecological knowledge that can supplement the approaches of forest managers.

Forest managers under-appreciate traditional ecological knowledge.

Agriculturalists perceive their local knowledge is not valued. There is also a sentiment that such knowledge is sometimes dismissed because it is experienced-based. The belief is that if forest managers considered local knowledge, then the result would be improved health for forest lands.

12.3.4 ORV Use and Travel Planning

Off road vehicles (ORV) refers to a wide range of vehicles, including snowmobiles, motor bikes, "four wheelers," four wheel drive trucks, jeeps, and sport utility vehicles that drive off highway or off road.

There are multiple and conflicting sentiments about this issue and how it is being managed by the USFS on B-DNF lands.

It is a National Forest not a national highway.

Outfitters, ranchers, environmentalists, newcomers, and long-term town residents expressed the sentiment that roads are overbuilt and overused in the forest, resulting in conflicts among users, weed spread, and problems for livestock.

Travel planning is so backed up.

There are two perspectives on this issue as indicated by discussions with project participants. One view is travel management issues are among the most important facing forest users, but inadequate travel plans exist. Furthermore, incorporating travel management into Forest Plan Revisions may further contribute to the escalation of travel management problems. For example:

There is no way Forest Plan revision can deal with all the issues that need to be addressed. Things just drag on and on and any one issue gets more attention than it deserves. One issue at a time becomes a killer because then that issue becomes a lightning rod for all the issues. Things don't get the right amount of attention. There needs to be a forest travel plan now to address the issues.

The other perspective about travel planning should be addressed primarily by Forest Plan revision because travel planning is interconnected with other planning issues such as grazing, timber, and recreation.

The public has a right to use public ground.

A strongly felt sentiment is that citizens should not be “locked out” from access to public lands. This major theme is that ORV use can be limited in some instances. For example,

They have a travel management plan in our area here where they restrict four wheelers and I have mixed feelings about it. You can't lock people out. You gotta let people in there. I don't think people should just be able to go anywhere, not up the sides of these nice grassy slopes, that is not right, but I don't think they should take some of these old jeep trails and close them either. They have closed a lot of them. The biggest problem is that they contribute to invasive weeds, it isn't wildlife, wildlife adapts pretty well. But you just can't lock everybody out of everywhere. It is not fair, it is not right.

One component of this sentiment appears to be a perception that other recreation users have adequate space for their activities. For example,

There is plenty of existing space for hikers and horseback riders. Right now in Montana, I don't know how many wilderness areas you have, but you have places for all the horsemen and all the hikers. Why do we need more of that?

I like to go to those places, but I will never be able to go to all those place in my lifetime. I won't ever see the whole dang thing. I guess you are lucky if you have the time to do that, but I think if you are going to restrict travel for 4 wheelers and motorcycles and stuff, you better come up with some big block of ground. (Restricting access) that is not the definition of multiple use by any means, that is why people like it here because there is multiple use on the national forest. Multiple use means you should be able to do any form of recreation, it means mining, timber harvesting, and grazing, that it what it really means.

These statements express the belief that there is sufficient opportunity for non-motorized recreation. This statement also includes the idea that multiple use means different recreational uses can coexist in the same locale. The critics of this point of view argue that some ORV user's demands for complete access are unreasonable. For example:

Nobody looks at how much area is open to them. All they look at is what is closed and if it is closed then they want to have access to it. Is that reasonable?

A variation on this observation is expressed in the next theme.

Multiple use does not mean every activity in every place.

This perspective argues that ORV activity should not be possible in all areas. The content of the concern is that non-motorized recreational users should have areas where the opportunity exists to experience their activity without intrusion from motorized vehicles or the products of the use of those vehicles, especially noise. This notion of multiple use implies designation of different types of use areas, but those uses should not overlap if one activity adversely affects another. An assessment of how ORV activity is perceived as influencing other recreational users is expressed in the next bullet paragraph about quiet and solitude.

Quiet is a resource that needs to be managed.

There is sentiment that ORVs and especially snowmobiles generate noise levels that disturb other forest users who, among other things, are seeking quiet and solitude in their forest experience. These forest users suggest the noise of these vehicles travels long distances and can disturb users who are not even in the same drainage as the snowmobile or ORV. The observation is that non-motorized users should have the opportunity to experience the "quiet" they seek as part of their forest experience; and, "quiet" is a resource that needs to be managed.

The technology of ORVs has outpaced the agency's awareness of the problems related to ORV use.

Critics of ORV use on public lands suggest that the horsepower and other technology of ORVs has developed so that these vehicles can travel to places that they could not access before. These critics suggest that the USFS is not aware of the implications of this technology, especially in snowmobiles, for how these vehicles access forest managed lands. The implication is that planning efforts should consider the full implications of how the noise and horsepower generated by these vehicles affects other users.

ORV use is given priority by forest managers.

ORV users argue they are unfairly criticized and over-regulated, but critics of ORV use on forest managed lands suggest that ORV use is given priority. This sentiment is expressed in the following statement:

Motorized users need to have a place to do what they want to do. But when 90 percent of the forest is open to cross-country snowmobile travel, something is wrong. Whenever any little drainage comes up for consideration, if the Forest Service tries to close it, people just come unglued. They want everything everywhere open, without even considering the merits of use in a particular drainage.

That is not ... reasonable. They are like gold miners making a claim. They don't have the rights to use it anyway, but they want it their way no matter what. That is because the forest plans are too old. They have not kept up with what has happened with recreation use and they are giving them priority right now because they don't understand the problem.

ORV use is damaging hunting ethics.

The expressed concern about this issue is that hunters are using ATV's and other vehicles to chase and shoot game. This is perceived as one of the abuses fostered by the prevalence of ORVs on forest lands. For example:

A couple of days before the season opens, here comes the traffic. Every pickup has a trailer with between two and four ATV's on it. Used to be you would see people coming in with horse trailers, but not now. Now they have winches and ATVs and then there are snowmachines. When I see that, then I get concerned because they are going to use them to chase down the elk.

Motorized vehicles disrupt hunting ethics. People have forgot about what hunting is about. They are out in their vehicles with their guns out the window flock shooting herds of elk. These guys have walkie talkies and they call back and forth and they drive like hell to get to the next drainage and shoot from their trucks or ATV. The roads create the access that undermined it. Unless we can get hunting ethics back under control, I am going to hope that the wolves get (the elk).

This participant went on to express the opinion that ORV users are concentrating on their experience with the machine and not the experience of hunting. The technology is perceived to undermine the ethic of "fair chase" because ORV use is prevalent among hunters and abuse of fair chase is too easy.

Access across Private Land to Public Lands.

Strong sentiments exist about access to public lands. These sentiments become of particular concern for B-DNF lands that are often adjacent to private lands that in the past may have allowed access to reach public lands. However, as more ranch lands are sold, some of this access is being denied by new owners. The perception is that access to public lands is decreasing. Residents commented on the need for the B-DNF to create more access points given the trend for private land owners to close their lands for travel to public lands.

12.3.5 Timber Issues

Timber cutting emerged primarily in discussion with timber and logging interests as well as some community members in towns that have or previously had lumber mills. However, timber sentiments are strongly held and rooted in the history of natural resource use in these communities. What may appear to be economic issues are also cultural issues related to the preservation of timber-related lifestyles. The themes below express the link between timber harvesting, community economies, and lifestyle values:

It is a renewable resource.

Loggers and others who visit the woods perceive an abundance of "timber supply" on public lands and advocate for "sustainable harvests". Timber is perceived as a renewable resource that can be cut and it will grow again for future generations to use. There is a sentiment that,

If we (the timber industry) don't take care of the resource, then it will not be there for the future.

It is a way of life.

The timber industry has been part of the history of southwest Montana since gold was discovered in the 1860s. Mills, large and small, have existed in all project counties and the timber industry has been

part of the mix of the region's resource-dependent lifestyles. There is sentiment that the B-DNF should be:

a good neighbor and support the local communities. That used to be true here. The forest supported the community. Now they have taken on an elitist attitude and they don't support us. Why did that change? There is a sentiment that good forest management creates jobs in the community.

This sentiment links forest management, lifestyles, and community support.

They need a timber program.

Timber interests perceive a need for a timber program to promote forest health and keep an infrastructure that is disappearing. Forest health is perceived to benefit by thinning and cutting dead or dying timber that can create fire danger. Overall, forest health is perceived as declining because beetle infested timber and burned trees from past fires are not being cut. For example:

A healthy forest is a growing forest, one that is producing fiber and creating oxygen and not building up this great biomass that is just going to burn. No one is going to get any benefit from it. Timber is one of our greatest wastes here. I feel that the B-DNF is really neglecting its forests. The past ten years especially, forest health has really gone down. In the 60s and 70s maybe there was too much cutting, but now people are looking at the forests differently. Montanans are looking at forests differently. I would like to see a well-managed forest. Take out some of the diseased trees and open the forest up so there is no multi story timber canopy. Then if a fire comes through it wouldn't be catastrophic. You can't do it everywhere, but in some locations you can do that. With new logging techniques and machinery it is very low impact. It would improve the forest and they need to get their heads out and get a timber program going to do something about the overall health of the forest.

The infrastructure to log and process timber is declining without a supply of wood to harvest. For example:

Right now there is just a rag tag group of local people who don't have the skills we need. We have people from Deer Lodge coming in to harvest our wood. They use our roads and haul off our wood, and we get nothing out of it. We need to have the infrastructure here and to do that we need a timber program. We are a resource-based county and we have to graze cattle and cut timber; that is who we are.

Another knowledgeable person observed that the skills of logging and millwork are based in a way of life:

You just don't go find any person and make a logger or rancher out of them. You have to grow up in it. You just can't put the industry together from nothing.

Timber programs are perceived to support local economies as well as local lifestyles. One solution offered is continued support for Stewardship projects that provide some supply of timber and support for local economies. Another proposed solution is the revival of the "green slip" program that once authorized small scale sales that were perceived to support local communities.

Science and rationality have gone out the window.

This is a corollary to a point developed in discussions above regarding distrust about the process of forest management. This theme is from a logging perspective and expresses some despair about the rationality of the timber management. The perception is that "preservationist" interests have successfully advocated for a "no cut" timber policy that is locally assessed as "irrational." As one mill

owner observed, “Things have gone amok.” The language is important because it expresses despair about the ability to resolve a difficult problem. This “irrationality” is expressed in opposition to any cutting when it appears local forests can support timber harvesting that would benefit forest health. Another logger made the following observation about opposition to timber cutting:

At first we couldn't cut any old growth. Then we could not cut any green timber. Then we could not cut any burned or downed timber. And now we just can't cut any timber. There is plenty of good wood that can be harvested responsibly. I don't understand the problem and I don't know how to solve it. They just need to let the forest service manage it how they think it should be. And if they go against what I want, well that is okay, but at least it will be based on something I can understand.

The perception of the “other side” as irrational but prevailing in decisions about timber harvesting may lead to more than despair. The result may be further erosion of trust in the management process. However, other timber interests see a solution in a return to small-scale local sales that benefit local communities.

We need categorical exclusions so they can cut through the red tape and put sales up: 'Here is your green ticket, this is the area we want done this is how we want it done.' Maybe there was some abuse there in the past, but if you can't learn something from making a mistake in the past ...

The timber industry has learned that the physical appearance of a timber sale is important. Timber has learned that after a sale you have to make things more environmentally friendly with roads and slash plies. And with the new forwarders it is very low impact.

But in the past, I could go get a green slip and go out, cut a little piece and it was good for everyone. A guy with a chain saw could make a living doing that. You go look at that those sales now and those areas are like parks. That is where you see the wildlife because where they have not managed the forest, the trees are down and there is no place for them to graze. They need to go back to that. It would be good for everyone.

Timber interests perceive an irrational process with a rational solution that includes a return to small-scale sales and more “science based” management.

Just a small mill.

Community and timber interest suggest that where local mills once used to support a local mill that contributed to local economies and lifestyles, such mills no longer exist. For example, one mill owner commented:

Fifteen or so years ago there were little mills all over the place like the one I have but they are mostly gone now. Lots of things have contributed to that, but we could support a small mill. We need to get it going while we still have some mills and loggers who know what to do. We need to get a system in place that can use the wood that is available and it is out there.

The perception is that there is sufficient supply to support small local mills that would benefit community economies as well as forest health. Another timber supporter expressed this same sentiment:

We are not asking for a mill like the Stoltze mill. I want them to make a commitment to have just a small mill. If they could commit to say just 10 million board feet, then someone could start a small business and make a commitment to help the local economy. Sure, our wood is undersized, but we are finding ways to use it and if they commit to making the wood available, then we will find a way to use it.

The content of this sentiment is a perceived past commitment by the USFS to support local economies through timber sales. However, that commitment does not exist today and the absence of local mills is inhibiting local economies.

Forest health: periodic disturbance.

The resource user perspective on forest health deserves brief attention, since this topic emerged as a theme about forest management. This perspective may differ from that of other interest groups, but this is a thought model held by some interests group about the process for maintaining forest health. This perspective includes the idea that forest health depends on “periodic disturbance”. This perspective is succinctly summarized in the following statement:

Forest health is a mixture of timber, brush, and grass. It is a mosaic of landscape and animals. It is diverse. It is not all green trees or all of any one thing. Some of the trees are burnt, some are snags, and there is a diversity of age classes. What you need to create this mosaic is periodic disturbance and some of that comes from timber harvesting. I think timber harvesting promotes forest health because it creates that mosaic in the landscape.

In this perspective, periodic disturbance through timber harvesting or grazing creates forest health. Forest health is expressed in a diversity or “mosaic” of species and conditions. This is a different construction of forest health than some environmental interests that perceive forest health is created by non-intervention and non-disturbance, other than “natural” disturbance.

Burned timber needs to be harvested.

Another theme that emerged in several counties is related to the salvage of burned timber. Residents, members of the forest products industry, and local government officials alike expressed frustration about the perceived inability of the Forest Service to salvage burned areas.

12.3.6 Grazing

“Grazing” and “riparian” become linked in the management history of the B-DNF with the 1994 lawsuit by the National Wildlife Foundation against the B-DNF. The lawsuit alleged that grazing permits for the B-DNF were allotted without assessing their impacts on riparian areas. A 1997 riparian amendment for the forest plan addressed issues raised by the lawsuit.

Grazing has been an important historical use of B-DNF lands. And, some ranchers assert that without the use of these public lands, the viability of ranching would be in doubt. From the ranching perspective, if grazing permits are lost or restricted, then the forest ecosystem will suffer. The substance of the major themes about grazing issues is summarized below.

Don't treat us like tenants.

As noted in Chapter 3, ranchers perceive a strong attachment to their lands as well as to the public lands where their cows graze. Ranchers suggest they are stewards of the public and private lands they use. They also suggest their expertise as land managers is applied to the public lands they use for grazing. They believe the public benefits from both their sense of stewardship and their land management experience. However, there is also sentiment that this expertise and stewardship is not valued. There is also sentiment that permittees are “treated like tenants” who need to be policed and this undermines stewardship and the working relationship with the forest. As one rancher observed:

They track my every move so the effect is that permittees have the responsibility removed. The responsibility and flexibility to do the right thing is removed. We have grazed cows on our

permitted land for more than 40 years. I have an intimate familiarity with that land, more so than the Ranger or the Range Con (Range Conservationist) who moved here “x” years ago and may leave next year. I bring value to my permit, but the perception is that we are just tenants and we don’t feel that way. It undermines our responsibility for the land to be treated that way.

A similar sentiment was expressed by another rancher:

The grazers are the best resource these land managers have. You have that sense of ownership for the land. We are responsible for it. On my ranch I don’t want just a worker. I want someone with a sense of ownership about what they are doing. The Forest Service should realize we have that sense of ownership.

These are statements about the attachment of ranchers to their lands and their sense of responsibility for good stewardship. These statements also indicate a perception that the rancher’s sense of stewardship is devalued in the “policing” relationship with forest managers.

Sure there have been abuses.

Ranchers acknowledge there have been past abuses of grazing that have sometime resulted in damage to public lands. They also observe these abuses are recognized and their importance acknowledged. However, they also perceive a willingness of grazing critics to *throw out grazing on public lands* when there are viable solutions. The sentiment is, *just work with us* and there are solutions to grazing problems. The concern is that land managers may yield to pressure not to engage in productive problem solving, when ranchers are willing to make adjustments to grazing practices where required.

Cattle and recreation can coexist. Ranchers interviewed noted the perceived conflict about recreation uses and grazing on public lands. They suggest:

*It is both possible to have both types of uses, and agriculture believes it is **necessary** to have both. We are in a bind because the other side does not believe it is necessary to have both and they don’t want to engage in problem solving about this. They want it their way only.*

Grazing permits cost too little and have too many unmitigated effects.

There are interests who argue that grazing permits are a subsidy for ranchers that have too many unmitigated consequences. The solution is either to make permit costs cover the damage or reduce permitted grazing on public lands. The ranching perspective acknowledges this perception:

They think we are getting something for nothing. People think that ranchers are getting rich and cows are grazing the land flat. People here know that is not true, but it is the people from outside that don’t know what local conditions are that causes the problem.

Grazing connects public and private lands with benefits to both.

This specific grazing issue expresses a more general point about the interconnections of public and private lands. Many ranch lands are adjacent to public lands where cattle are grazed. Wildlife, including elk and deer, migrate to private land during winter months where they graze. This is a benefit to wildlife that is perceived as under-acknowledged. Ranchers also argue that their ability to graze on public lands keeps them in business with direct benefits for open spaces that residents and outside interests value about Montana. For example:

If they (environmental interests) want to keep it open and wild and everything that Montana is supposed to be, then the (ranchers) need an environment they can live and work in. People

seem to resent us making a profit. Every time a rancher goes out of business a subdivision will take his place. Ranching and farming keep the land open and wild.

Grazing can damage riparian areas and it is not monitored.

Another local perspective concerns the potential damage to riparian areas from grazing on public lands. The perception is that forest managers are not attentive to grazing issues until a problem emerges. For example:

They don't manage it until it is a problem. I took this picture of a cowpie in the water where they said there was no grazing. It took that to get them to acknowledge there was a problem. Unless it is brought to their attention, they don't do anything about it. The riparian areas are being destroyed and they are not monitoring it. They say that unless it is being used incorrectly, then it can't be addressed. Someone has to write a letter or take a picture or complain to get them to do something about it. They say it is not a priority or they don't have the people power. It is not monitored.

Ranchers argue that riparian health and grazing can coexist:

Cows and riparian areas can coexist, it just takes proper management. Eliminating grazing is not the solution to riparian problems. There is a feasible solution with proper management such as fencing riders and other techniques.

12.3.7 Wolves

Wolves emerged as an issue for outfitters, ranchers, and wolf advocates. These interests acknowledge that wolves are not managed by the USFS, but wolves are on USFS lands and interact with the interests of other users. Both outfitters and grazing interests perceive that wolves are a threat to their economic well-being. Outfitters argue that wolves kill elk or they move into an area where outfitters have permits then the elk move out. Since the outfitter cannot guide in areas where they do not have a permit, the wolves threaten their business.

Grazing interests argue that wolves are attacking cattle and sheep, but it is often difficult to prove that wolves have killed livestock. Without that proof, owners cannot be compensated for the lost livestock. Ranching interests are not completely unsympathetic to wolves. Although they acknowledge that they would prefer that wolves were not in the ecosystem now, they realize they are not going away. They suggest their needs might be met if wolves are de-listed and then managed by state fish and game laws. Others suggest that wolves have accommodated to the presence of humans and their attacks on livestock represent a difficult problem. For example,

It was a mistake to reintroduce them. I think it is unfair to the wolf in particular. The best thing they could do for the wolf is to let them be shot at. We had wolves around here before they did the reintroduction in Yellowstone. You hardly ever saw them, but they were here. They never bothered us, they did not get into my cattle at all, but I saw their tracks and I heard them howl sometimes. Then when the wolves came out of the Park, it started to be a problem. I would see them in the meadows lying down and they would look at me and not be bothered. They have lost their fear of man and that is a problem.

Other forest users and residents perceive wolves as part of the natural environment. From this perspective, wolves have a place in the ecosystem that should be acknowledged. These interests—some of whom are ranchers—suggest that it is possible to coexist with wolves without a threat to ranching ways of life or to the economic well-being of outfitters. This may require adaptations by ranchers and others, but the perception is that all interested parties can make such adaptations with

education about wolves. These interests acknowledge that in some instances wolves may need to be shot if there are “incorrigibles” that kill livestock.

12.3.8 Fire Issues

The Montana fires of 2000 are on the minds of project area residents. These fires raised public awareness and concern about the potential for catastrophic fires. The core of these perceptions is that forests are in an “unnatural” state with fuel loads that create more than the usual fire risk. High under-story and timber that is “too thick” are each assessed as a threat that increases fire danger. The sub themes expressed about fire include the following points:

Fuel loads are too high.

Residents in all project counties expressed concerns about high grass and dense timber on B-DNF lands. The high undergrowth is perceived to be a hazard for spreading fires while the dense timber is perceived as the fuel for fires to grow “unnaturally intense and large.” Residents described fire as a usual part of the lodgepole pine ecosystem, but they suggest that how the forest is now managed is creating unnatural conditions—high under-story and dense timber—that create the conditions for catastrophic fires rather than fires that would be less intense and damaging under “natural” conditions. As one resident noted:

We need to return the forest to more historic conditions in terms of fuel.

We want to live in the woods, not a brick oven.

This is a similar sentiment to the above point and it expresses the perceived threat of current forest conditions. The resident who made the “brick oven” comment went on to say:

There is a real fire danger right now, especially in Wise River and over the Elkhorns. There is a real danger to the subdivisions. There is a real potential for a catastrophic fire right now because the fires can get so hot. The conditions are just unnatural now that the danger is a lot higher than people appreciate.

Pine bark beetles and fire.

Residents in Jefferson and Butte-Silver Bow Counties expressed concern about the fire danger from pine bark beetle damage on B-DNF lands. For example, an outfitter in Jefferson County commented:

It really bothers me that all these trees are being eaten up by those bugs. They are going to be a fire danger. People who visit here, they come and ask me what is wrong with the trees? Why are they dying? And, why isn't the forest service doing something about it? All those trees are dying because of bugs. When I look at them (the damaged trees) all I see is kindling.

Local government officials in Butte-Silver Bow County expressed concerns about the beetle infestation in the Basin Creek watershed and the potential impacts of a fire on Butte’s drinking water. A resident commented:

Their water source is threatened and needs to be taken care of. We have been preaching this a long time.

Officials and residents fear that a wildfire in the area could force Butte to build a very expensive water filtration plant at the reservoir—something they don’t need now because it is a pristine watershed.

USFS Response to Fire.

The 2000 fires also resulted in some general observations about agency response to fire. The following statement expresses the dominant theme in these discussions:

USFS has had excellent response to fires here in our county. When we call in, they locate the fire and if it is on private land, then they are really good at helping. They have never not responded if we ask them.

A minor theme that emerged in one county is the desire of residents for the USFS to rely more on local labor and knowledge, particularly in terms of fire response. Another theme is the danger related to new construction at the urban-forest interface. New residents are not always aware of the danger posed by living in close proximity to forest lands.

Opposition to controlled burns is increasing fire danger.

Residents perceive a need for controlled burns to reduce fire danger. As one resident noted:

We don't want a Los Alamos here, but we need to have some burns so that the overall risk is reduced.

Residents suggest that such burns, if conducted properly, will benefit everyone concerned about the environment. However, there is strong criticism of “environmental groups” that oppose these burns. The perception is that these groups are slowing B-DNF implementation of controlled burns. As another resident observed:

By the time they get through with their paper work, it will be too late. The danger is there, it needs to be taken care of. But their hands are tied by these appeals.

12.4 Management Concerns Summary

As previously noted, these issues emerged in discussions with residents about forest management concerns. However, these discussions were often in the context of many other topics and it is likely that more focused conversations would have yielded a wider range of topics and concerns. As all statements were analyzed to form the themes for this work, one issue was present in most topics discussed: concern about the viability of the management process. Residents perceive that B-DNF managers have their “hands tied” and that “outside interests” are overly influential in decision making. Residents are concerned about specific management issues such as noxious weeds, roads, or fire management, but they are more concerned about the process involved in making any particular decision. In general, there is a sense of lost faith in the management process. There is trust in and respect for the skills of forest managers, if they make decisions based on good science using a rational process. However, this trust is undermined by sentiments about a loss of faith in a compromised process. This issue is the dominant theme across topics about forest management concerns.

13 Trends, Issues, and Implications

To preserve community well-being, communities need a strong and diversified economy, one that is relatively recession proof a strong local tax base, and one that can provide family-wage employment opportunities and discretionary income, foster sponsors for worthy causes, and allow the community to preserve its culture and valued lifestyles. Regional socioeconomic and cultural trends have local expressions that affect community resiliency and in turn, the interaction of communities with the B-DNF. The socioeconomic characteristics of counties surrounding the B-DNF are far from being one-dimensional. While there are similarities between the counties, each one has a unique combination of characteristics.

This chapter describes some of the regional and local trends and issues identified by this work. This discussion is organized by the same categories used to present information about each county: land use, demography, economy, and community culture and lifestyles. Several social, demographic, economic, and cultural issues for communities adjacent to the Forest also have implications for the interaction of B-DNF managers and staff with members of those communities. Section 13.1 identifies community trends and issues. Section 13.2 suggests some implications of these issues, and is a starting point for consideration of them. B-DNF staff and community members should add their local knowledge and experiences to both the community profiles and these suggestions.

13.1 Trends and Issues

Regional and local socioeconomic trends have direct and indirect influences on communities, and, in turn, to community-Forest relationships. For example, population growth directly increases demand for recreational or other uses of public lands. Then in turn, increased demand for recreational use of public lands can generate conflicts with other uses of those lands. Trends with indirect impacts include conflicts that can result from changes in lifestyle values in a community. Conflicts over lifestyles have the potential to migrate to disagreements about uses of public lands resulting in contradictory public responses to proposed forest management plans. There are also interactions among these trends and issues. A decrease in population due to lifestyle choices can result in decreased economic opportunities. A decrease in economic opportunities can result in a decrease in population. In resource dependent counties, lifestyle is frequently tied to employment and economics. Being a rancher or a miner can be as much about lifestyle as economics. Being a rancher is often more than just holding a job, it is a way of life. Some of the issues we have identified as having an important influence on community-Forest relationships are described below. A full analysis of these interactions is a topic for future work.

Some trends are beyond the control of either local communities or the Forest Service. The profiles in this report should assist communities in identifying factors within their control and mobilize their community resources to adapt to change when subject to changes beyond their control.

13.1.1 Land Use

- Census of Agriculture data show an overall decline in farm/ranch lands, although a slight increase in the total number of farms. This increase is interpreted by some as reflecting the subdivision of

agricultural lands into “hobby farms” and niche production.⁸⁵ This is a move away from the large style ranch and farming operations that have characterized western and especially southwestern Montana.

- The overall growth of western states and the specific growth in western Montana has increased demand for residential land at a time when ranchers and farmers are either retiring or facing financial difficulties that make the sale of their properties attractive. Some prime agricultural land is taken out of production as it is sold for subdivision into 20-acre “ranchettes” or other types of development. One strategy for mitigating the effects of subdivision of land is the creation of conservation easements, which are attractive to some ranchers and promoted by entities such as the Montana Land Reliance and other organizations. This strategy is especially attractive as ranchers observe how the subdivision of agricultural land has affected ranchers in the Bitterroot Valley and in the Bozeman area.

13.1.2 Demography

Southwest Montana has some distinct demographic characteristics and trends that influence its social and cultural character. Population size is a significant issue for communities in southwest Montana. The growth or decline of population has a greater relative impact in smaller, rural areas. Delivery of basic services in smaller and less dense areas is more difficult and expensive. Declining populations, with a reduction in tax base, can exacerbate those difficulties. Growth has both positive and negative effects. On the positive side are the benefits to the local area, including increased jobs and income, growth of services, and developed areas. On the negative side are the costs and inconveniences that accompany growth, such as loss of open space, changing lifestyles, congestion, pollution, and increased demands on public lands.

Population Trends.

- Population growth in the 1990s was uneven across Montana. Western Montana is experiencing a relatively rapid rate of population growth. Twenty-three counties in western Montana account for a significant amount of this growth, with an average growth rate of almost 20 percent. Eight of these counties have experienced a 30 percent growth rate. Population growth appears to be a result of in-migration to western counties from eastern counties as well as from out-of-state residents relocating for work, retirement, or seasonal residence. Quality of life is an essential component in many people’s choice to live in western Montana.
- Populations of the project counties have always been unstable due in part to their ties to natural resources. Population increased in six of the seven project counties during the 1990s. Only Anaconda-Deer Lodge County experienced a loss of population between the 1990 and 2000. Jefferson County experienced the highest growth rate. However, between April 1, 2000 and July 1, 2001, the populations of Anaconda-Deer Lodge, Beaverhead, Butte-Silver Bow, and Powell counties decreased.
- The project counties are among the least densely populated areas of the United States. Low density and a limited amount of land available for private ownership and taxation make it more

⁸⁵ Becky Bohrer, “Montana adds more people – and farms,” March 26, 2001. Population Index/Missoulian Index at <http://www.missoulian.com/specials/population/326-01.html>.

difficult for communities to provide their own basic infrastructure, and concentrates population and development.

- Population growth in urban areas such as Helena, Bozeman, Hamilton, and elsewhere in Broadwater, Gallatin, and Ravalli Counties is a notable demographic change in the region. This urban growth is also transforming once-rural communities into suburban residences for commuters to these urban areas. For example, Montana City in Jefferson County is becoming a bedroom community for Helena. For the seven study counties, these increasing urban and suburban populations mean increasing demands on nearby recreation resources as well as increasing demands for land to be subdivided and developed.
- Farm population is decreasing, but paradoxically the number of farms is increasing, a trend that is no doubt accounted for by the subdivision of large agricultural lands noted previously.

Age

- Montana’s population is aging. The median age in the state is now 37.5 years compared to the national average of 35.3 years. In the project counties, median age ranges from a low of 37.6 years in Beaverhead County to a high of 43.4 years in Madison County. The older age cohorts are increasing, while younger ones are decreasing: the under age ten age cohort decreased some 6.5 percent since the last census.

Education

- All of the project counties have a higher proportion of population 25 years and older with a high school diploma or equivalency than the United States as a whole. However, as a percentage of total population, Anaconda-Deer Lodge and Powell Counties have only about half as many college educated people with bachelor’s degrees or higher as the national average, the state average, and several of the project area counties.

**Table 13-1. Educational Attainment of Population 25 Years and Over
U.S., Montana, and Project Counties, 2000**

| Location | Educational Attainment | |
|---------------------|---|--|
| | Percent High School Graduate or Higher | Percent Bachelor’s Degree or Higher |
| U.S. | 80.4 | 24.4 |
| Montana | 87.2 | 24.4 |
| Anaconda-Deer Lodge | 84.5 | 14.7 |
| Beaverhead | 89.3 | 26.4 |
| Butte-Silver Bow | 85.1 | 21.7 |
| Granite | 87.8 | 22.1 |
| Jefferson | 90.2 | 27.7 |
| Madison | 89.8 | 25.5 |
| Powell | 81.9 | 13.1 |

Source: U.S. Census Bureau, 2000 Census, DP-2.

13.1.3 Economy

- Employment in extractive industries such as mining and timber is declining throughout the west. Historically mining, timber, and agriculture have made important contributions to local economies and lifestyles in the project area counties. However, according to 1999 IMPLAN data, industry employment in “Wildland” related sectors as a percent of total county employment ranged from a low of around 1 percent in Butte-Silver Bow County to a high of almost 17 percent in Granite County. “Wildland” related sectors include timber, grazing, and mineral industries. In terms of employment by industry (Census 2000), employment in agriculture, forestry, fishing, hunting, and mining ranged from a low of 4.1 percent in Butte-Silver Bow County to a high of 21.1 percent in Granite County.
- Economic diversity aside, local economies in southwest Montana are small and subject to potentially large impacts from what might be evaluated as relatively small events. For example, in Granite County, according to 1999 REIS data, there were 89 businesses listed with 489 employees. Adding or subtracting 10 or 15 jobs can have a significant impact in a community this size. Not even the economy of Butte-Silver Bow is very large with 1,151 establishments and 12,470 employees.
- Interview data suggest that in southwest Montana communities there is a perception that public lands should support local economies: that is what a “friendly” forest does for its neighbor.
- The government sector is a significant source of employment in all of the project counties accounting for approximately 16 percent of the employment in Butte-Silver Bow County and more than 31 percent of the employment in Jefferson County. Government employment does provide some stability to a local economy. The high percent of government workers in Jefferson County may be due to the number of residents who commute to Helena, the state capital.
- Relative to the United States, the state’s per capita income performance has deteriorated since the mid 1970s. Contrary to popular wisdom, southwest Montana is not home to a large proportion of wealthy households. In all of the project counties except for Jefferson County, the proportion of households with a household income less than \$10,000 a year is greater than the proportion of households with a household incomes of \$75,000 or higher. In 1999, median household income for Montana was almost \$9,000 less than the U.S. median income. Median household incomes in the project area counties, except for Jefferson, are lower than the U.S. median household income by at least \$11,000.

Table 13-2. Household Income for U.S., Montana, and Project Counties

| | U.S. | Montana | Anaconda Deer Lodge | Beaver -head | Butte- Silver Bow | Granite | Jefferson | Madison | Powell |
|---------------------------------|--------|---------|---------------------------|-----------------|----------------------|---------|-----------|---------|--------|
| Less than \$10,000 | 9.5 | 11.3 | 15.0 | 13.1 | 12.0 | 12.9 | 8.6 | 11.9 | 10.8 |
| \$10,000 to \$14,999 | 6.3 | 8.9 | 9.6 | 11.6 | 11.0 | 10.1 | 6.8 | 10.0 | 11.1 |
| \$15,000 to \$24,999 | 12.8 | 17.1 | 22.8 | 18.7 | 18.2 | 19.4 | 13.7 | 18.0 | 18.7 |
| \$25,000 to \$34,999 | 12.8 | 15.4 | 13.1 | 13.5 | 15.5 | 18.0 | 12.1 | 17.2 | 16.6 |
| \$35,000 to \$49,999 | 16.5 | 18.2 | 18.7 | 16.9 | 15.8 | 16.5 | 18.8 | 18.6 | 22.7 |
| \$50,000 to \$74,999 | 19.5 | 17.1 | 14.4 | 17.2 | 17.1 | 12.6 | 22.6 | 14.7 | 12.2 |
| \$75,000 to \$99,999 | 10.2 | 6.4 | 4.1 | 5.1 | 5.4 | 5.7 | 10.4 | 4.8 | 4.3 |
| \$100,000 to \$149,999 | 7.7 | 3.6 | 1.1 | 3.2 | 3.2 | 2.4 | 5.2 | 3.1 | 1.9 |
| \$150,000 or more | 4.6 | 1.9 | 1.2 | 0.8 | 1.7 | 2.5 | 1.8 | 2.7 | 1.5 |
| Median Household Income (\$) | 41,994 | 33,024 | 26,305 | 28,962 | 30,402 | 27,813 | 41,506 | 30,233 | 30,625 |

Source: U.S. Census Bureau, Census 2000, DP-3.

- Farming and ranching are as much a part of the history and culture of western Montana as are mining and logging. As these other industries and lifestyles have declined, so have agriculture and ranching. Both wage jobs and self-employment in ranching and agriculture have shown an overall decline since 1986, and projections are for continued declines in employment in these occupations.⁸⁶ Retirement, succession, and other factors are resulting in the sale of ranches and farms that go into corporate ownership. The Census of Agriculture data for Montana show an increase in corporate ownership, although there is also an increase in total number of individual owners, but a corresponding decrease in the persons with full-time commitments to farming and ranching (Census of Agriculture, 1997). This is a corollary to the above trend regarding the decline of agriculture, but this trend also illustrates a shift in the structure of ownership and patterns of operation, and the potential loss of local traditional ecological knowledge.
- Federal ownership of land limits the amount of land available for development, limits a county's tax base, limits control residents have over the types of land use on these lands, and concentrates population in particular locations. USFS lands account for approximately 42 percent of the lands within the study area. BLM lands account for another 11 percent. USFS lands range from a low of 35 percent of Madison County to a high of 60 percent of Granite County.

13.1.4 Culture and Lifestyles

Community culture and lifestyles show both variation and consistency within the project area. Butte is an urban and industrial city within a region of rural agriculturalists. Butte's industrial economy, ethnic diversity, and union-labor social history contrast with the family ranch economy and the social and population homogeneity of nearby rural areas. Yet, these communities also share values about the importance of face-to-face relationships, community tenure, mutual support, and neighboring. Although lifestyles in urban Butte are different from those in rural Wisdom, there are points of intersection.

⁸⁶ <http://rad.dli.state.mt.us/project/project6/pjt6indd.asp>.

For example, one of these points of intersection might be on the Big Hole River in the summer as a Butte laborer may fish next to a Wisdom rancher. Each fisherman values the experience and qualities of the natural surroundings. However, these two fishermen are also likely to look at the same resource and see different issues. The fishing rancher may see a river for fishing as well as water for the hay fields that feed his cows and support his family. The Butte fisherman experiences the river as a relief from the pressures and routines of work life, a necessary part of his or her lifestyle. Both share the river, and parts of their experience of it are shared, but there are also differences in meaning and value. The differences are real and substantial, but so are the similarities. These similarities create a social, historical, economic, and cultural connection for Butte, Anaconda, Wisdom, Ennis, and the other communities of this region. The four issues discussed below are shared among the urban, suburban, and rural communities of the region.

Community, lifestyle, and sense of place are connected.

Ranchers, miners, and suburban residents all place a high value on the qualities of place in their communities. This value is incorporated into community lifestyles in particular activities, such as moving cattle from valley pastures to high mountain grazing, trail riding in the Elkhorn Range, or cutting firewood in the forest. Lifestyle activities that take place in the physical environment of the B-DNF or other public or private lands establish a connection between lifestyles and a place with high quality scenic, commercial, and spiritual values.

Values about egalitarianism and emerging social differences are in conflict.

Stability in social groupings is a characteristic of most project area communities. Butte and Anaconda have more social differences than rural counties such as Powell or Madison. However, in comparison to other regions of the inter-mountain west, social groupings in southwest Montana have been stable. Egalitarianism within and between groups is a value characterizing both urban and rural communities in the project area.

Recent population growth from in-migration is changing the social composition in many communities, especially rural communities. New residents may have more urban culture and values and different views about public and private lands. They may also have more wealth. There is both a reality and a perception of increasing social differentiation in project area communities.

One expression of this differentiation is in rural communities where new residents buy property and “lock up” their land so that others do not have access to it for passage to public lands, fishing, hunting, or other recreation. The result is a perception that such residents have the wealth to purchase large tracts of land and create what several observers termed “The King’s Land.” In communities that value egalitarianism in social relationships, the expression of “The King’s Land” suggests concern about increasing social differences based on values and wealth. These issues of social status and values about social egalitarianism contribute to the intensity of public concern about access to public and private lands.

Lifestyles affect views about nature and forest management

Forest managers are familiar with the diversity in definitions about concepts such as forest health and multiple use. This work suggests these differences are also connected to more fundamental views about the relationship of humans to the natural world. Differences in these worldviews affect how forest management issues and solutions are formulated by individuals or groups.

Residents with lifestyles that directly engage natural resources (e.g., loggers, ranchers, farmers) often have “utilitarian” views about the relationship of humans with the natural world. From the perspective of this worldview, humans have dominion over the natural world, these resources exist to be used, and there is often a moral imperative about the use of these resources for man’s benefit. Many of these resources are perceived as “renewable,” whether it is timber to cut or grass to graze. In this worldview, part of the process of the natural world is man’s role in “disturbance” (e.g., grazing or timber cutting) that promotes regeneration and forest health.

These “utilitarian” views coexist with other cultural views. For example, what might be termed the “naturalist” view perceives nature as existing in a pristine state and humans should not intervene or disturb it. This view may be associated with lifestyles that engage natural resources in recreation or other non-consumptive uses. The “naturalist” worldview evaluates timber harvesting as “timber cutting” and “grazing” as appropriate for game but not necessarily livestock. Disturbance of the natural world should be minimized in this worldview.

Such views about the relationship of humans with the natural world are usually beliefs held to be “truths” that are validated in personal experience. The utilitarian world view may be validated in cutting timber that regenerates, provides new forage for game, and supports a valued lifestyle close to the land. The naturalist worldview is validated in interactions with resources that result in experiences that connect the individual with a place or resource. Disturbing the resource disturbs the relationship with the resource. A result of these different experiences is that worldviews about nature are often strongly held. Different worldviews are also interpreted in “right” and “wrong” terms. Since these views include values about what is important and “natural,” they also motivate people to actions to support or defend their positions.

These values and beliefs directly influence assessments of and actions concerning forest management. For example, a resident with a utilitarian worldview suggests that current forest management is oriented to *Protecting the forest from us and not protecting it for us*. A resident with the “naturalist” point of view suggests forest management is: *All about protecting habitat and minimizing damage to the resource*. These views express different values and perceptions about what a forest is and how it should be managed.

The relationship is changing between community culture and economies.

From Butte to Cameron community members value stability and lifestyle continuity. However, change is occurring between lifestyles and values and community economies and social structure. An example of this change is observable in resource-dependent lifestyles. Since the early 1990s extractive industries such as timber and mining have had a shrinking role in the region’s economy. Values and beliefs about the importance of these industries have not changed at the same pace. Individuals experience a discontinuity between their lifestyles and values and the social organization and social institutions of their communities. An important contribution to this experience of discontinuity is culture changing at a different pace than social organization

Residents also express a desire to reconstruct the role of extractive industries in local economies and the lifestyles associated with these industries (cf. Wright 1998). Concerns about the loss of a valued lifestyle become expressed as economic or other issues. For example, current dialogue about the role of the service sector in local economies is partially an issue about one lifestyle replacing another. There are economic realities in community concerns about the quality and contribution of service sector jobs and businesses to local economies. There are also cultural issues that concern preservation of local lifestyles that do not have the same place in local economies and social structure as they did previously.

Another example of values and lifestyles changing at a different pace concerns beliefs and values about open space. Urban and rural residents value the open spaces and scenic views of the region. However, these values are increasingly in conflict with the realities of subdivisions and trophy homes on ridge tops. The effect of these changes between values and social realities is a desire for a return to the past continuity of values and social realities. The experience of the discontinuity of lifestyles and social realities can result in social disruptions or tensions about new residents, new economic activities, or changes in forest management policies. This social disruption can also amplify disagreements within communities or groups or it can migrate to conflicts about forest management issues.

13.2 Implications of the Social Assessment for Forest–Community Relationships

Prior chapters describe current social, economic, and cultural conditions as a reference for planning and assessments of community sustainability. There are also implications of this information for working relationships with communities in the project counties. This final section discusses these implications. Suggestions are offered regarding how particular issues may be addressed. However, our working assumption is that forest managers are more familiar with the fiscal, legal, administrative, and practical constraints that affect possible responses to these issues. The examples suggested are starting points for future discussions about the effects of social, economic, and cultural conditions on community-Forest interactions.

13.2.1 Social Awareness

A social assessment is one source of information about the socioeconomic and cultural conditions in communities that are neighbors with the B-DNF. However, a social assessment every 10 or 20 years has limitations, since it presents a “slice in time” view of communities. Ongoing attention to socioeconomic and cultural issues can lead to a more broad-based understanding of the interaction of forest managers with community individuals and groups. Social awareness begins with information. Some categories of information that might be useful for forest managers follow:

- Develop awareness about social networks and groupings. Information is exchanged through social networks. Social networks also usually indicate patterns of association of people with similar interests and points of view. Opinion leaders and other locally knowledgeable persons are usually nodes or connecting points in social networks. Identifying these nodes is a starting point for understanding the patterns of association within communities. This task is more manageable in communities such as Wisdom or Sheridan. The nodes will be more numerous in Butte or Anaconda, but leaders and opinion leaders in larger communities often have high social visibility. Knowledge of local opinion leaders and respected persons is useful for disseminating information and developing awareness about local issues.
- Identify similar concerns about management issues held by individuals in the same network. These might be termed “community-based” issues since they are associated with the networks that comprise the social groupings in communities. Identifying these community-based issues provides a broader view about public concerns than one based only on public comment about specific projects
- Interact with community members and groups outside of the office. Residents who participated in this project consistently expressed a desire to have B-DNF staff interact with them “in the field.” For outfitters this may on a horseback ride into the backcountry or for wood products workers it

may be in a post and pole yard. A cup of coffee at the Town Pump or at the local coffee clutch may also be another setting to provide opportunities for interaction that enhances professional relationships with community members. Knowledge of local networks and groupings is a basis to identify opportunities to interact with different community segments.

- Recognize that problem identification and resolution in communities is often accomplished “over the fence” or through some other informal process. This is more the case in rural communities than urban areas such as Butte or Anaconda. These informal processes are a means to communicate about a problem before it becomes a conflict. On the other hand, newcomers to communities are often oriented to more formal problem solving processes such as public meetings. This may occur because they do not have access to the social networks and the problem solving processes of longer-term residents. Awareness of different modes of local problem solving can provide forest managers with a means to work with different community members in locally meaningful ways to identify and address forest management issues.

13.2.2 Reinforce Existing Trust

An important finding of this work is the quality of trust community members express about their relationships with forest managers. Although this trust is not shared by all segments of project communities, residents with different views about forest management volunteered statements expressing trust in local managers. The expressed reasons for this trust include perceptions of “fairness” in working with groups with different view points and stakes in forest management, and clear reasons for decisions made about management issues. In a national and regional environment in which trust is a scarce quality in community relationships with land management agencies, the value of the trust expressed about B-DNF managers cannot be overstated. This type of trust is not a given. It requires ongoing nurturing and reinforcement. It is similar to the basis for trust in the interpersonal relationships residents develop through social interactions in rural communities.

Actions that reinforce the expressed basis for trust (fairness and rational decision making) are likely to enhance a manager’s relationship with community members. Actions that appear to undermine trust include perceived personal bias about management approaches that take priority over rational decision making, disregard for public input, lack of familiarity with stakeholders and their concerns, favoritism for one stakeholder group over another, and yielding to stakeholder pressure when science-based management suggests other alternatives.

There are no formulas for how to build trust other than to identify and respond to the factors that reinforce or undermine trust at a Forest and District level. These factors can be identified through discussion of case examples of successful community-Forest interactions. These examples might include successful instances of decision-making or consideration of examples where community publics have expressed disappointment in the decision-making process.

13.2.3 Expand the Opportunity for Public Input

Three sources of public input were examined for this work: reports and documents about the B-DNF, public comments about specific forest management projects, and discussions with community members about forest management concerns. Each of these sources provides a different perspective regarding public assessment of forest management issues. No one source is sufficient for understanding stakeholders’ desires and needs about forest management.

Community members have a need for information about agency staffing, projects, and activities. This need is expressed in sentiments about agency overstaffing and concern about desk-bound forest

mangers. For example, one project participant previously quoted made the comment, *They do a pretty decent job with an over abundance of manpower; and, another suggested, I don't know what they do down at that office, but there are a lot of trucks and a lot of people driving around all the time.* These types of comments can be dismissed as general concerns about government and taxes. However, they also suggest publics may not be aware of the scope and diversity of B-DNF missions and responsibilities. There is an opportunity to address this information deficit through existing means of public information efforts.

Project participants commented that current public information activities are useful and valued. These participants also suggest that recent efforts to expand information available through the B-DNF web site are valued as a means to keep informed about management issues. The Forest web site, radio spots, press releases and other public information efforts are useful information channels for a population that relies on local sources for most news and information. An opportunity exists to use these existing information channels to provide community members with additional information about agency staffing, projects, and activities.

There is also a more general issue of alternative forums for public input about forest management issues and community-Forest relationships. This work suggests that project-specific public comment does not tap the full range of community concerns and issues. It does elicit concerns from groups and individuals regarding a specific timber sale or grazing allotment. This is important. However, there is also a need to gather input through other processes, formal or informal, that identify issues that are not project specific. This can be accomplished by holding an open-house, a barbecue, or some other gathering consistent with local customs. This should be complimented with outreach efforts that meet people on their own social turf. These types of outreach efforts can give forest managers access to a broader range of information about management concerns.

13.2.4 Tenure Affects Working Relationships

Tenure or length of residence is an important value in how residents interpret the social identity of others in their community. Tenure confers status, and it is also an indicator of commitment to community. Tenure is an important value that also affects the quality of Forest-community working relationships.

The B-DNF as an organization has tenure in the project communities. However, an ongoing concern of residents is the tenure of Forest Supervisors, District Rangers, and other staff. Turn-over is perceived to disrupt existing working relationships and the anticipation of turn-over may also inhibit forming strong working relationships at the Forest and District levels. This may be an intractable problem. However, two suggestions are a starting point for further consideration of addressing community concerns about tenure.

One suggestion is to develop organizational celebrations of arrival, anniversaries, and departure that include community members. Such celebrations are an organizational expression that tenure is acknowledged as an important consideration in working relationships with community members. A second suggestion is to emphasize that Forest management processes have some independence of individual staff. That is, the Forest Plan and other planning documents and processes are intended to offer publics, local and national, consistency and continuity regarding management issues. This may only offer minor relief from the effects of tenure, because of the importance of face-to-face relationships and the role of tenure in those relationships within project communities. However, the issue of tenure and its influence on community-Forest working relationships is one that requires further consideration.

13.2.5 Mitigate Process Despair

Diverse stakeholders express some hopelessness about the process for forest management. This despair is not about the ability or expertise of B-DNF staff. Rather the despair is related to perceptions that:

- Some stakeholders have excessive influence over the outcome of management decisions
- The management process excludes the expertise and scientific knowledge of local forest managers.

Project participants express this despair in comments such as, *Their hands are tied!* This despair and frustration is concerned with the perceived inability of forest managers to do their job. The reality of this perception is a variable. However, the perception appears to undermine faith in the process and create uncertainty about the potential to identify and resolve conflicting issues and positions.

This is a complex issue that exists at a national as well as a local level. At a local level, there are at least three actions that may mitigate some of the effects of process despair. The first is communication with constituents about the management process and the limitations of what is possible at a local level. This can decrease the uncertainty that cripples participation in the process. A second action is to communicate with publics more about the successes and limitations of local forest management. This provides communities with specific examples of the process at work. The third action is to foster a sense of fairness in working relationships with community members. Perceived unfairness needs to be countered with focused attention on how fairness is exercised in responding to public input and pressures regarding management issues. This may require extra communication efforts by local managers and staff to describe how decisions are made and why an interest group's desires may not be met.

13.2.6 Neighboring

Neighboring and mutual support are values that community members expect of each other. These are signs of shared values and indicators of community membership. As a federal entity, no one expects the agency to bake a pie for a new neighbor or volunteer to help an injured rancher hay his fields. However, as managers of lands that are a large portion of most counties, there are expectations about mutual support from the agency as a land-owning neighbor. For example, one resident observed that the Forest could be a good neighbor by acting as a federal sponsor for local conservation easement programs. Another resident suggested green slip or small scale timber sales and continuing the existing stewardship program. Another suggested working with local communities to create a timber supply that would support small local mills. This would contribute to a sustainable timber industry consistent with local values and economies. These types of suggestions may be or may not be practical, but they express a desire by B-DNF neighbors for the agency to be supportive in meaningful ways. What needs to be determined is how to express those neighborly obligations within the constraints that influence B-DNF actions with local neighbors.

As previously noted, local economies are small and subject to potentially large impacts from what might be evaluated as relatively small events. These economies also exhibit what might be termed a "fragile toughness." That is, although they are vulnerable to impacts, they also have been resilient. Being "tough" to survive difficult economic conditions is another lifestyle value in southwest Montana. An implication of this value is that supporting local economies can have important practical outcomes. Working with local development corporations or similar entities to identify opportunities for mutual benefit can make a useful contribution to community sustainability.

13.2.7 The Desire for Cooperative Stewardship

Residents in urban and rural areas of the project counties have an extraordinary sense of belonging and attachment to place and the lands around them. For some, this attachment is based in a history of ranching or farming. For others, it is based in recreational experiences and amenity values. The sense of place among residents fosters values about stewardship. Ranchers, recreationists, loggers, farmers, and fishermen have different ideas about what constitutes stewardship. However, the value is present among these groups and this presents an opportunity to work with community members on issues of mutual interest.

There may be programmatic approaches to incorporate these opportunities, but at least two ideas are present in the information collected for this work. One is to develop “local ecological knowledge” that ranchers, farmers, and others have about the B-DNF and surrounding lands. This is a means to share information as well as acquire a different view about land management issues and processes. Another approach is to develop cooperative programs similar to the Gravelly Watershed effort, but at a smaller scale. Some participants in that effort suggested that its scope was too large. Smaller scale projects that provide an opportunity to incorporate local knowledge can foster the stewardship values that exist within local communities. There are other ways to tap this value for mutual benefit. Local managers and staff are in the best position to identify opportunities to involve community publics to create stewardship partners.

14 References

- A&A Research. Communications Planning Work Book. Deerlodge National Forest. 1991.
- A&A Research. Communications Planning Workbook, Deerlodge National Forest Media Information. 1991.
- Anaconda-Deer Lodge County Planning Commission. Anaconda-Deer Lodge County Comprehensive Plan. Anaconda County. 2000.
- Beaverhead County Community Forum. Pioneer Vision Statement. Beaverhead County. 1995.
- Beaverhead County Community Forum. Working Document For Proposed Improvements for Land and Resource Management and Planning in the Pioneer Mountains Region. Beaverhead County 1997.
- Beaverhead County Community Planning and Development Services. Beaverhead County Comprehensive Plan. Beaverhead County 2000.
- Beaverhead County Resource Use Group. Beaverhead County Resource Use Plan. July 2001.
- Beaverhead-Deerlodge National Forest. Antelope Basin Elk Lake Allotment Management Plan Update. 2002.
- Beaverhead-Deerlodge National Forest. Draft Environmental Impact Statement: Tobacco Root Vegetation Management Plan. Dillon, Montana. 2001.
- Beaverhead-Deerlodge National Forest. Environmental Assessment: Anaconda Pintler Wilderness Forest Plan Direction. Dillon, Montana. 1999.
- Beaverhead-Deerlodge National Forest. Environmental Assessment: Big Sheep Grazing Allotment. Dillon, Montana. 2001.
- Beaverhead-Deerlodge National Forest. Environmental Assessment: East Face Ecosystem Management. Dillon, Montana. 2002.
- Beaverhead-Deerlodge National Forest. Environmental Assessment: Pioneer Mountains Scenic Byway. Dillon, Montana. 1996
- Beaverhead-Deerlodge National Forest. Environmental Assessment: Swamp Creek Road Environmental Assessment. Dillon, Montana. 1999.
- Beaverhead-Deerlodge National Forest. Environmental Assessment: Thunderbolt Windthrow Salvage Timber Sale Decision Notice. Dillon, Montana. 1999.
- Beaverhead-Deerlodge National Forest. Final Environmental Impact Statement: Discovery Ski Area Expansion. Dillon, Montana. 2001.
- Beaverhead-Deerlodge National Forest. Final Environmental Impact Statement: Lemhi Pass National Historical Landmark Management Plan. Dillon, Montana. 2002.
- Beaverhead-Deerlodge National Forest. North Gravelly/Snowcrest Allotment Management Plan Update. Dillon, Montana. 1999.
- Beaverhead-Deerlodge National Forest. Record of Decision and Final Environmental Impact Statement: Keystone-Quartz Ecosystem Management. Dillon, Montana. 2001.

- Beaverhead-Deerlodge National Forest. Record of Decision for the Noxious Weed Control Program: Environmental Impact Statement. Dillon, Montana. 2002. Beaverhead County. Beaverhead County Resource Use Plan. 2001.
- Beaverhead-Deerlodge National Forest. West Face Forest Management Environmental Impact Statement. Dillon, Montana. 1998.
- Beckley, T. M. Community stability and the relationship between economic and social well-being in forest dependent communities. *Society and Natural Resources* 8(3):261- 266. 1995.
- Bright, Alan D., H. K. Cordell, Anne P. Hoover, and Michael A. Tarrant. Guidelines for Conducting Social Assessments within a Human Dimensions Framework. Prepared for Ecosystem Management Coordination Staff, USDA Forest Service, Washington, D.C. (n.d.)
- Butte-Silver Bow Planning Commission. Butte-Silver Bow Master Plan. Butte-Silver Bow County. 1995.
- Calvert, Jerry, W. The Gibraltar: Socialism and Labor in Butte, Montana, 1895-1920. Helena, Montana: Montana Historical Society Press. 1988.
- Canton-Thompson, Jane C. Public Perception Analysis, Beaverhead National Forest. 1990.
- Canton-Thompson, Jane C. Public Perception Analysis, Lewis and Clark National Forest. 1990.
- Canton-Thompson, Jane C. Social Assessment of the Bitterroot Valley, Montana, with Special Emphasis on National Forest Management. 1994.
- Carroll, Matthew. Community and the Northwestern Logger. Boulder, CO: Westview Press. 1995.
- Columbia Basin Consultants, Barney & Worth, Inc., and E.D. Hovee & Company. Summary Report: Columbia Basin Socio-Economic Assessment. 2000.
- DeBlander, Larry T. Forest Resources of the Beaverhead-Deerlodge National Forest. U.S.D.A. Forest Service, Rocky Mountain Research Station, August 2001.
- Doak, S. and J. Kusel. "Well-being in Forest Dependent Communities, Part II. A Social Assessment Focus." in Vol. II: Assessments and Scientific Basis for Management Options, Sierra Nevada Ecosystem Project, Final Report to Congress. Centers for Water and Wildland Resources, University of California, Davis, CA. 1996. pp. 375-402.
- Economic Strategies Northwest, Inc. Socioeconomic Analysis for the Lewis and Clark National Forest Oil and Gas Leasing Environmental Impact Statement. 1994.
- Eiselein, E.B. Beaverhead National Forest Communications Planning Workbook. A&A Research. (n.d.)
- Eiselein, E.B. Beaverhead National Forest Perception Analysis. A&A Research. 1992.
- Eiselein, E.B. Deerlodge National Forest Perception Analysis. A&A Research. 1993.
- Ellen, Roy and Fukui Katsuyoshi (eds). Redefining Nature: Ecology, Culture, and Domestication. Washington, D.C.: Berg press. 1996.
- Emmons, D.M. The Butte Irish: Class and Ethnicity in an American Mining Town, 1875-1925. Chicago: University of Illinois Press. 1989.
- Fletcher, Robert H. Free Grass to Fences: The Montana Cattle Range Story. New York: University Publishers Incorporated. 1960.

- Forwand, Elizabeth. Home on the Range. The Role of Personal Demographic in Residents' Conservation and Development Values in Rural Montana. Unpublished Honors Thesis. Palo Alto, CA: Stanford University. 2002.
- Frontier Education Center. "The Geography of Frontier America: the View at the Turn of the Century." Ojo Sarco, NM: Frontier Education Center. 2000.
- Giannettino, Susan and Geoff Middaugh. Project Managers, Interior Columbia Basin Ecosystem Management Project. Economic and Social Conditions of Communities. Prepared for USFS. 1998.
- GEO Research. An Analysis of Social and Economic Values, Beaverhead National Forest. 1994.
- GEO Research. An Analysis of Social and Economic Values, Helena National Forest and a Portion of the Deerlodge National Forest. 1993.
- GEO Research. Final Report, An Analysis of Social and Economic Values for an Oil & Gas Lease Environmental Impact Statement, Beaverhead National Forest. 1994.
- Gold, Raymond. Ranching, Mining, and the Human Impact of Natural Resource Development. New Brunswick, NJ: Transaction Books. 1985.
- Hamilton, James M. From Wilderness to Statehood. Portland, OR: Binfords and Mort. 1957.
- Harris, Chuck. "An Assessment of the Social and Economic Characteristics of Communities in the Interior and Upper Columbia River Basins." Unpublished paper, University of Idaho. 1995.
- Headwaters Resource Conservation and Development Area, Inc. Area Plan/Comprehensive Economic Development Strategy 2002.
- Jackson, D., D. Doyle, E. Schuster, and B. Stelzenmuller. Sources of Community Well-Being in Montana Resource-Dependent Communities. Unpublished document USFS Intermountain Research Station. 1996.
- Jefferson County Planning Department. Jefferson County Montana Comprehensive Plan. Jefferson County. 1993.
- Kaufman, H. and L. Kaufman. Toward the Stabilization and Enrichment of a Forest Community: The Montana Study. Missoula: USFS Region 1. (n.d.)
- Kaufman, Herbert. "Forest Use and Community Stability." in Research in the Economics of Forestry. W.A. Duerr and H.J. Vaux (eds). Washington, D.C.: Pack Foundation. 1953. pp. 113-119
- Kiker, B. F. The Concept of Human Capital. Columbia: University of South Carolina, Bureau of Business and Economic Research. 1966.
- Kroll-Smith, J and S. Couch. The Real Disaster is Above Ground. A Mine fire and Social Conflict. Lexington: University of Kentucky Press. 1990.
- Kusel, J. "Well-Being in Forest Dependent Communities, Part I: A New Approach." in Vol. II: Assessments and Scientific Basis for Management Options, Sierra Nevada Ecosystem Project, Final Report to Congress. Centers for Water and Wildland Resources, University of California, Davis, CA. 1996. pp. 361-374
- Lee, R.G., D.R. Field, and W.R. Burch, Jr. (eds.). Community And Forestry: Continuities in the Sociology of Natural Resources. Boulder: Westview Press. 1990.
- Lewis, Henry T. "Traditional Uses of Fire in Northern Alberta." Current Anthropology, Vol. 19: 401-402. 1978.

- Madison County Planning Department. Madison County Comprehensive Plan 1999 Update. Madison County. 1999.
- Madison County. Code of the New West: Madison County Montana. n.d.
- Malone, M, and R. Roeder. Montana: A History of Two Centuries. Seattle: University of Washington Press. 1976.
- Malone, M, R. Roeder, and W. Land. Montana: A History of Two Centuries. Seattle: University of Washington Press. 1991.
- Marston, Ed. (ed.) Reopening the Western Frontier. Island Press: Washington, D.C.
- Mercier, Laurie. "Instead of Fighting the Common Enemy': Mine Mill Versus the Steelworkers in Montana, 1950-1967". Labor History, 0023656X, Vol. 40, Issue 4. November 1999.
- Mercier, L. Anaconda. Labor, Community, and Culture in Montana's Smelter City. Urbana: University of Illinois Press. 2001.
- McCumber, D. The Cowboy Way: Seasons on a Montana Ranch. New York: Avon Books. 2000.
- Montana Consensus Council. Public Participation in Resource Management Planning. Asking the Public to Help Design a Public Participation Process. Prepared for the U.S. BLM Dillon Field Office RMP. 2001.
- Munday, Pat. Montana's Last Best River: The Big Hole and its People. Guilford, Conn.: Lyons Press. 2001.
- Murphy, Mary. Mining Cultures: Men, Women, and Leisure in Butte, 1914-41. Urbana: University of Illinois Press. 1997.
- Powell County Planning Department. Powell County Comprehensive Plan. Powell County. 1996.
- Power, Thomas Michael. "The Economic Importance of Federal Grazing to the Economies of the West." Missoula: University of Montana. 2002.
- Power, Thomas Michael. Lost Landscapes and Failed Economies: The Search for the Value of Place. Washington, D.C.: Island Press. 1996.
- Power, Thomas Michael and Richard Barrett. Post Cowboy Economics: Pay and Prosperity in the New American West. Washington, D.C.: Island Press. 2001.
- Pyne, Stephen J. Fire in America: A Cultural History of Wildland and Rural Fire. Princeton, NJ: Princeton University Press. 1982.
- Ripple Marketing, L.L.P. "National Forests in Montana. Focus Groups 1999." 2000.
- Smith, Phyllis. Bozemand and the Gallatin Valley. Helena, MT: TWODOT Press. 1996.
- The Rural Policy Studies Project. An Assessment of the Social and Economic Characteristics of Communities in the Interior and Upper River Columbia River Basins. 1995.
- Thomas, Jack Ward. "Gridlock on the National Forests." FDCH Congressional Testimony. Item Number 32Y3992114223. EMediaMillWorks, Inc. 2001.
- Toward Restoration and Recovery. An Assessment of the 2000 Fire Session in the Northern and Intermountain Regions. 2001.
- USFS. Rock Creek Subbasin Review. December 1998. Granite and Missoula Counties. Beaverhead-Deerlodge and Lolo National Forests. Garnet Resource Area BLM. 1998.

USFS. Boulder River Landscape Analysis. 1998a.

USFS. Summary of Public Comments. Goals and Overall Strategies for the Gravelly Landscape Area. 1998b.

USFS. Landscape Analysis Excerpt, Clark Fork Flints Social Assessment. n.d.1.

USFS. Social Economic Considerations, Tobacco Root Landscape Analysis. n.d.2.

USFS. Summary of Community Meetings: Twin Bridges, Divide, Wise River, Wisdom, and Jackson (February-April 2000). n.d.

Vesterby, Marlow and Kenneth S. Krupa. Major Uses of Land in the United States, 1997. Washington, D.C.: Resource Economics Division, Economic Research Service, USDA. 2001.

Vincent, Carol Hardy et al. Federal Land Management Agencies: Background on Land and Resource Management. CRS Report for Congress. Washington D.C.: Congressional Research Service. 2001.

Williams, Gerald. Forest Service Organization and Reorganization: Past to Present. Washington D.C.: U.S. Forest Service, USDA. June 30, 1999.

Wright, John. Montana Ghost Dance: Essays on Land and Life. Austin, TX: University of Texas Press. 1998.

Appendix A