

Social and Economic Impact Assessment

Of Oil and Gas Development

In Sublette and Sweetwater Counties

For Shell Exploration & Production Company

Audie Blevins

Katherine Jensen

Mike Coburn

Scotty Utz

University of Wyoming

Department of Sociology

September 2004

Table of Contents

	<u>page</u>
EXECUTIVE SUMMARY	1
Brief Historical Analysis of Sublette County and Its Principal Towns	4
Pinedale	6
Big Piney and Marbleton	6
A Brief History of Sweetwater County	7
Demographic and Economic Analysis of Sublette County and Its Principal Towns	10
<u>Sex Ratio</u>	12
<u>Race and Ethnicity</u>	13
<u>Education</u>	13
<u>Housing</u>	15
<u>Employment</u>	15
<u>Median Household Income</u>	16
<u>Cost of Living</u>	17
<u>Social Issues</u> (Department of Family Services, Crime)	18
<u>Recreation: Hunting and Fishing</u>	19
<u>Sales Tax</u>	19
<u>Property Taxes</u>	21
<u>Traffic Counts</u>	21
Demographic and Economic Profile of Sweetwater County and Rock Springs	22
<u>Shifts in Population for Sweetwater County and Rock Springs</u>	22
<u>Population by Age for Sweetwater County, Rock Springs and Wyoming</u>	23
<u>Sex-Age Distributions</u>	23
<u>Ethnic and Racial Composition for Sweetwater and Rock Springs</u>	24
<u>Economic Profile for Rock Springs and Sweetwater County</u>	24
<u>Housing</u>	26
<u>Ad Valorem Taxes</u>	26
<u>Social Issues</u> (Family Services, Shifts in Criminal Activity)	27
Interview Data from Sublette and Sweetwater Counties	28
Rock Springs Interviews	29
<u>Community</u>	29
<u>Issues</u>	30
<u>Community and Natural Resources</u>	30
<u>SEPCo</u>	31
<u>Resource Management Shifts</u>	31
<u>Winter Drilling</u>	32
<u>Trust</u>	32
<u>General Impact</u>	33
<u>Suggestions</u>	34

Interview Data from Pinedale	35
<u>Community</u>	35
<u>Issues</u>	35
<u>Community Links with Natural Resources</u>	36
<u>Resource Management Shifts</u>	36
<u>Interest Groups</u>	37
<u>Trust</u>	38
<u>Winter Drilling</u>	39
<u>General Impact</u>	39
South County	40
Sublette County Summary	40
<u>Current Issues</u>	40
<u>Oil and Gas Production</u>	41
<u>Winter Drilling</u>	41
Appendix A: Sublette and Sweetwater County Interviewees	42
Appendix B: Analysis of PAPA Draft Environmental Impact Statement	43
Appendix C: Wyoming Rural Development Council Analysis for Sublette County	47
Appendix D: Sublette and Sweetwater County Tables	49
List of Graphs in Text	
1. Population by Towns and Sublette County, 1950-2002	11
2. Race of Ethnicity Distribution by Towns, Sublette and Wyoming, 2000	13
3. Sublette County School District #9 Enrollment, 2003-2004	14
4. Enrollment for Sublette County School District #1, 2003-2004	14
5. Employment for Sublette County, 10995-2003	16
6. Median Household Income for Sublette County and Wyoming, 1970-2000	17
7. Cost of Living Index for Sublette County for Selected Years, 1981-2003	17
8. Arrests for Sublette County, Selected Years 1995-2003	19
9. Sales Tax Collections for Sublette County, 1996-2003	20
10. Use Tax Collections for Sublette County, 1998-2003	20
11. Ad Valorem Taxes for Sublette, 1997-2003	21
12. Population for Rock Springs, Sweetwater County, 1950-2003	22
13. Race, Ethnicity for Rock Springs, Sweetwater County and Wyoming, 2000	24
14. Employment for Sweetwater County, 1995-2003	25
15. Median Household Income for Sweetwater County & Wyoming, 1970-2000	25
16. Ad Valorem Taxes for Sweetwater County, 1997-2003	27
17. Reported Index Crimes for Rock Springs, 1985-2001	28

EXECUTIVE SUMMARY

Primary and secondary data were gathered for Sweetwater and Sublette Counties. The focus in Sweetwater County was Rock Springs; whereas in Sublette County, both county and town data were examined. We found differences, particularly in terms of historical background, but also commonalities, especially in terms of contemporary booms and busts and most recently in current issues related to oil and gas exploration and development.

Beginning in the second half of the nineteenth century, and in conjunction with the expansion of the Union Pacific Railroad, Rock Springs burgeoned as a source of coal to fuel the steam engines for the railroad. This early history is repeated as Rock Springs has continued as a center for mineral extraction to the present. To mine these resources, 56 nationalities were recruited, constituting a key component of community identity. Ironically, current residents take great pride in this mineral extraction heritage and ethnic heritage, yet they see their lifestyles intricately tied to the county's natural beauty and access to recreation, primarily in the form of hunting and fishing. Although their livelihood is inextricably tied to mineral extraction and its support industries, residents see their community as dependent upon wildlife preservation and its habitat.

One hundred miles to the north and almost fifty years later, the founding of the multiple communities of Big Piney, Marbleton, and Pinedale was associated with pristine water drainages from the Wyoming Range, and the Wind River Range. These early communities were built on the backbone of the cattle industry. In times of drought, some ranchers survived by substituting sheep herds. The ranching ethos persists, although the south county economics shifted toward oil drilling as early as 1920 and the primary base for Pinedale turned toward tourism after WW II.

Both Sweetwater and Rock Springs experienced rapid population growth in the 1970s and declines by the 1980s and another boom from 1984 to 1987, which was referred to by interviewees as a classical boom-bust, where crime is rampant and housing is scarce; and then, there is a surplus of law-enforcement and a glut on the housing market. Similar patterns were found in the southern part of Sublette County in the early 1980s with the construction of the Exxon sweetening plant and the "man camp" and the unusual demands on housing and the prospect of "Phase Two," which led to the construction of a high school with a surplus of 250 students (50 percent). Since Phase Two failed to materialize, School District #9 was stuck with a surplus capacity, wonderful amenities and high debt loads. Aware of the volatility of the mineral extraction industry, the communities of Big Piney and Marbleton remember the boom/bust of the 1980s, yet support the population boost of the Jonah Field and the development of the PAPA. Most revel in the prospect of another boom. Furthermore, given the collective memory of the oldtimers, they would like to see the resource developed.

Thirty miles north, those identifying themselves with the Pinedale community mostly recognize the need to develop oil and gas on the PAPA within constraints. Those favoring the developing the Pinedale Anticline savor the reality of increased revenues

from gas and oil development and production that have already funded numerous projects in Pinedale, Big Piney and Marbleton. Most recent projects in the north county include the county library, extension and renovation of the courthouse, and school district #1 remodeling while in the south county a new riding arena, baseball fields and skate board park were developed. Counterbalanced by those in favor of development are those who would like to “drag out” drilling in order to provide long-term economic sustainability, and by a few individuals who are adamantly opposed to the ongoing changes in the Record of Decision that restricted not only the number of drilling rigs but also mandated stringent winter restrictions on drilling.

A contentious issue for those identifying themselves within the Pinedale community is that of winter drilling, even for scientific investigation. Those supporting winter drilling anticipate stability in year around revenues and a more stable population. This optimism is based on the notion that oil and gas operators and their workers would bring their families to Pinedale, would support local businesses, and would place their children in the local school district. Those opposed to winter drilling suggest that additional year-round population would exacerbate the affordable housing shortage, documented by our secondary analysis, and would create a cash flow problem after the initial condensed drilling period. As one might surmise, these individuals favor a “drawn out” drilling period, represented by caution, thoughtfulness, and planning and integrating newcomers into the fabric of the community. Those opposed to the exemptions to the existing ROD note the lack of good scientific data on monitoring air, water, noise, as well as wildlife and their habitat. They are also concerned about intensified housing sprawl in the Upper Green River Valley as second homeowners and retirees, independent of oil and gas development, move into this area.

The recent boom linked with Jonah II and PAPA has been associated with substantial revenues to Sublette County, but also negative impacts on the delivery of social services in the communities within Sublette and Rock Springs, associated with a transient population. Current legislation mandates that most of the revenue from oil and gas is returned to the counties or retained by the state, while communities providing services are short-shifted. The question related to this project, winter drilling, on a trial basis, is whether or not operators and their employees will move to Sublette County on a long-term basis. Given the high cost of housing, scarcity of second job opportunities for spouses outside of the service sector, limited options for shopping, and abysmal winters, this is highly unlikely. Obviously, for winter drilling to have a sustainable impact on schools, retail, and community, there has to be some assurance of its continuance. Without that assurance, it is most likely that the summer boom and the winter dearth will continue for the next decade or more. Those favoring staged development and/or no winter drilling tend to cite long-term viability, diversity in economic development, and/or increased tourism founded on pristine mountain vistas and plentiful wildlife.

The above issues are explored in detail three following sections. Section one includes historical narratives of the two counties. Section two details analysis of existing longitudinal data, including forty-one tables (Appendix D). Section three discusses the interviews of stakeholders in the communities of Rock Springs and Sublette County. In support of these three sections are three appendices identifying stakeholders interviewed,

analyzing the Draft Environmental and Final Impact Statements for the PAPA, and summarizing the Wyoming Rural Economic Development Project in Sublette County.

Major Findings

- ❖ Rock Springs, Big Piney, Marbleton, and Pinedale are all communities a century or more old, each with a fierce pride of place and distinct identity.
- ❖ Sweetwater County and south Sublette County have experienced energy booms and busts, as early as the 1860s and as recently as the 1980s. Pinedale's challenges have been more recent and incremental.
- ❖ The current energy boom has already produced extensive publicly funded construction in Sublette County but additional pressures on city infrastructure expenditures, especially in Pinedale.
- ❖ All the permanent populations in both counties see their lifestyles tied tightly to the well-being of the surrounding land and natural resources, especially air and water quality.
- ❖ The cost of living has long been reasonably high, but the shortage and prices of housing, especially in Pinedale, will hamper additional permanent growth from oil and gas development.
- ❖ Currently most new housing is located outside existing city limits and there is concern regarding uncontrolled growth and continued sprawl.
- ❖ The present lack of dual earner household employment except in low paying service jobs and limited health care provisions discourages families from moving to Pinedale.
- ❖ Transient workers pose challenges for law enforcement, highway safety and increased substance abuse.
- ❖ Schools have plenty of capacity for expansion of enrollment.
- ❖ Winter drilling will likely have minimal impact on the PAPA on an experimental basis, a significant political impact in terms of precedent, and a potential major change if the mesa is opened up to widespread drilling during the winter months.
- ❖ Concern was voiced, particularly in Pinedale, for a greater commitment on the part of energy companies toward the community in terms of not only being in the community but also in being part of the community.

Brief Historical Analysis of Sublette County and Its Principal Towns¹

Sublette County, named for mountain man William L. Sublette, is the youngest county in Wyoming, established on January 2, 1923. Initially, mountain men were lured to the area by the high price of beaver pelts in the early nineteenth century, but it was ranching that persuaded immigrants to settle the inhospitable land. By and large cattle ranching dictated the localities of settlements within Sublette County; the early cattle ranchers were guided by the geography of the land, typically establishing their ranches along major waterways.

Ranching in Wyoming and Sublette County in the mid to late 1800s began using the open range system. Due to abundant streams and bountiful pastureland, cattle ranching dominated the economy of Sublette County during the last half of the nineteenth century. However, several severe winters in the late 1800s threatened the cattle industry and the economy of Sublette County.

Sheep saved the county from almost certain economic disaster during the blizzards of 1886-87 and 1888-89. Sheep require considerably less forage and water than cattle and are capable of grazing in semi-arid environments where forage can be scarce. Many cattle ranchers converted their stock to sheep during those years to save their ranches.

However, animosity existed between place-established cattlemen and the nomadic sheepherders. The cattle ranchers alleged that sheep were ruining the range, and violence erupted along the Rio Verde Valley, where thousands of sheep were slaughtered. In the early 1900s the United States Forest Service quelled the violent outbreaks by enacting stricter grazing policies. But the cattle industry never fully recovered from the devastating blizzards, for not long after the harsh winters, declining beef prices took their toll on Sublette County's cattle industry. Accordingly the sheep industry dominated the county from 1890 until the Second World War.

With falling beef prices, many ranchers turned to grazing sheep, others supplemented their income by opening their ranch to outsiders, or dudes. At the close of the nineteenth century the United States Census Bureau declared the end of the frontier. Many Easterners wanted to experience the West before it disappeared forever. Consequently tourism has played an important role in the local economy throughout the history of Sublette County. The Gros Ventre Dude Ranch opened its doors to outsiders in 1897, catering to big game hunters. Nearly all of the lodge's clientele were eastern businessmen and European sportsmen. These individuals spent a considerable amount of money in Sublette County, contributing greatly to the local economy. Along with money, some would argue that these aristocrats also brought culture and a touch of sophistication to Sublette County, broadening the horizons of the "insular" ranchers, contributing to its current cosmopolitan ethos.

With the Great Depression most dude ranches disappeared, although many still exist throughout Wyoming and Sublette County. Today the tourism industry in Sublette County is thriving once again. During the mid 1980s the peaceful valley was rediscovered by the rest of the country. Apart from being a rest stop on the way to two of

¹ Material for this section comes primarily from Robert G. Rosenberg's book Wyoming's Last Frontier: Sublette County, Wyoming, a Settlement History published by High Plains Press (Glendo, Wyoming) in 1998.

America's great national parks, Yellowstone and Teton, the area affords an abundance of outdoor opportunities including fishing, hunting, rock climbing, mountain biking, backpacking and snowmobiling. The lush valleys and spectacular snow capped mountains provide the ideal setting for outdoor pursuits. Moreover, summer/second homes in the county are on the rise with many private property owners' primary residences being outside of the county. Over the last twenty years, Sublette County has been transformed from a mere stopover to a destination all its own.

Oil was first discovered in Sublette in the extreme southwest corner of the county in the LaBarge Field near the settlement of Calpet. The Cretaceous Oil Company operated by Charles Lackey commenced drilling in the Dry Piney Field eight miles northwest of La Barge in 1917. In February of 1920 the U.S. Congress passed the Oil and Leasing Act, which allowed private companies to lease federal land for mineral development paying 1/8th royalty; the State of Wyoming received 37.5 percent of the Federal revenue. By 1929 the Texas Production Company owned nearly all of the interests in the Dry Piney and LaBarge fields. They operated between 80-100 wells that produced roughly 2,000 barrels a day. Just one year earlier, in 1928, the Midwest Pipeline Company built a line to deliver the crude product from the oil fields in LaBarge to the rail station in Opal.

During World War Two the demand for oil exploded; crude oil was required to mobilize the American military machine and production became urgent; oil was in peak demand until it stabilized in 1968. During the energy boom of the 1970s production once again swelled so that by 1978 Dry Piney and LaBarge Fields had produced about 22 million barrels of oil, and 537 million mcf of gas. In 1980, Sublette County Ranked thirteenth in oil production in the state, but third in natural gas production. More recently, exploration has spread to the central portion of the county with the opening of the Jonah and Pinedale Anticline fields.

The cultural identity of Sublette County is intimately linked with its cattle ranching and the frontier lifestyle. Residents feel a strong connection to their heritage; many residents are third, fourth, and fifth generation ranchers living on the original properties and in many cases living in the original houses. Most inhabitants still consider Sublette County to be a ranching county, even though oil and gas industries usurped ranching as the chief industry many years ago. In 1985 oil and gas became the preeminent industry in Sublette County when it paid for 80 percent of the county's taxes. In fact, much of the county and municipal promotional literature emphasizes how critical ranching is to the local economy while making no mention of oil and gas exploration, but emphasizing the protection of open space as vital to tourism, hunting and fishing.

The residents of Sublette County feel ambivalence towards the oil and gas industry and the growth it brings with it. The industry has made substantial contributions to the local economy, and many ranchers have benefited from royalties and fees paid for industry activity on private land; yet exploration disrupts the environment along with the peaceful lifestyle that the inhabitants cherish. Residents of Sublette County perceptively acknowledge that ranching and the tourist trade cannot adequately support the county's infrastructure, and that the oil and gas industries are the future of the county. The fundamental task will become striking a balance between mineral exploration, and maintaining a way of life practiced in the county for a hundred years.

Principal Towns in Sublette County

Pinedale:

Located at the foot of the Wind River Mountains, the Town of Pinedale, the largest community in Sublette County, was officially incorporated on February 12, 1912. However, Pinedale had long since been home to trappers and Native Americans who converged on the area in the 1830s and 1840s to participate in several rendezvous.

At the turn of the twentieth century settlers Bob Graham and Charlie Peterson each donated five acres of land for the town proper; in September of that same year C. Watt Brandon published the first issue of the Pinedale Roundup and by 1911 the town boasted 183 residents. From its infancy, Pinedale has promoted itself as a tourist destination; the Pinedale Roundup reported the first tourist in June of 1905 and that nearby Burnt Lake had been stocked with 10,000 trout.

Additionally, “boosterism” was critical to Pinedale’s early growth. During the turn of the century developers, in an effort to entice migration, placed extolling ads in the Pinedale Roundup, promoting Pinedale as an ideal community to outsiders. Developers urged prospective settlers to “buy now” and “get in on the ground floor” town lots were selling quickly for a now paltry 25 dollars.

Big Piney and Marbleton:

In 1879 Daniel B. Budd and partner Hugh McKay ran 1000 head of cattle from Nevada to Wyoming in hopes of shipping them from the rail station at Point of Rocks. They made it as far as the Green River Valley before being pinned down by the Wyoming winter. The men liked the valley so much that the following spring they sent for their families and formed the 67 Ranch along the banks of the Piney Creek.

The actual town site of Big Piney, named for the Piney Creeks that flow through the region, was laid out by Pete McGlashean, cashier of the State Bank of Big Piney. By 1892 the burgeoning frontier town boasted a general store, dance hall, blacksmith shop, and a saloon dubbed “Bucket of Blood.” Big Piney, one of the oldest settlements in Sublette County, was incorporated on July 5 of 1913. At the outset, the town site of Big Piney was plagued by drainage problems, consequently, Charles Budd, the eldest son of Dan Budd, established the Town of Marbleton in late 1913 on a bench overlooking Big Piney. Located only a mile apart, Big Piney and Marbleton initially began as rivals, each competing for the major town site in the region. The idea of replacing Big Piney was soon lost and the two communities have coexisted ever since. Marbleton and Big Piney maintain a joint fire department and school system, but support autonomous town governments. Remarkably over the last century, both towns have flourished; Marbleton has thrived in recent years thanks to commerce from the oil and gas industry. Marbleton had grown large enough to warrant its own post office since the 1980s.

In 1930, Big Piney was given the inauspicious title of “ice box” of the nation when a weather station was placed in the region and recorded the lowest average temperature annually of anywhere in the United States, as in December of 1990 when temperatures failed to breach -20 degrees for an entire month.

A Brief History of Sweetwater County²

In 1850 Captain Howard Stansbury, on return trip from a surveying expedition in the Utah Territory, discovered a seam of rich bituminous coal along the Bitter Creek Valley in a geologic formation that became known as the Rock Springs Dome Uplift. It was later determined that coal lay beneath nearly 96 percent of present day Sweetwater County, wedged between layers of shell and sandstone

Captain Stansbury's discovery, published in his official reports, was widely known, but attracted little attention until coal became valuable during the late 1860s when the Union Pacific began laying track for the transcontinental railroad. The new Iron Horses that would traverse these rails required massive amounts of coal fuel to complete their cross-country journey, and The Railway Act of 1864 gave the railroad exclusive rights to any coal that lay within Union Pacific's land grants. In 1868, while tracks were being laid across the Bitter Creek Valley, the railroad hired Thomas Wardell of the Wyoming Coal and Mining Company to survey the region for possible mine sites. Before long Wardell struck a rich coal seam, and coal mining in Rock Springs began in earnest in the newly christened No. 1 mine. After merely two years of operation the No. 1 mine of the Union Pacific had yielded 17,000 tons of coal.

The Bitter Creek Coal Camp, later renamed Rock Springs, sprung up along the banks of Bitter Creek. Rock Spring's 117 original inhabitants were almost exclusively male, most of whom were experienced coal miners who had emigrated from Northern England and Scotland. As the demand for coal grew, so did Rock Springs. Between 1880 and 1890 the population of the mining camp more than quadrupled to a size of 3406 inhabitants, 60 percent of whom were immigrants. For nearly ten years, until the town of Rock Springs was officially incorporated in the fall of 1888, the town developed haphazardly, guided only by the railroad tracks and Bitter Creek. Many residents, including town officials, were pessimistic about the future of Rock Springs; they were certain this mining camp wouldn't last and as a result city planning was given a low priority. This lack of vision led to the construction of uneven blocks and meandering streets that characterize Rock Springs today.

An important aspect of Rock Spring's identity stems from its rich cultural heritage and ethnic diversity dating back to its beginning as a coal camp. The railroad played a critical role in creating diverse multicultural city in the Bitter Creek Valley. While the first inhabitants of Rock Springs came from the British Isles. During a strike in 1871 many British miners were replaced by Scandinavians, who were willing to work for the Union Pacific wage. In 1875 in a subsequent strike the railroad company store, Beckwith and Quinn, brought in replacement Chinese laborers from California. However, this move by the Union Pacific caused social unrest among the White miners and would later lead to rioting in 1888 that burned down the Chinese district of Rock Springs dubbed "China Town" and led to the deaths of 28 Chinese miners. Nevertheless, after the massacre, the Chinese were brought back in greater numbers, protected by the United States Army, totaling 497, compared to 80 white miners.

Throughout the latter part of the nineteenth century and early part of the twentieth century, the Union Pacific, like many other American corporations, aggressively

² Material for this section comes primarily from Robert B. Rhode's book Booms and Busts on Bitter Creek: A History of Rock Springs Wyoming published by Pruett Publishing (Boulder, Colorado) in 1987.

recruited its labor force from Southern and Eastern Europe. The majority of the new miners emigrated from Italy, Austria, Tyrolean, Czechoslovakia, Romania, Hungary, Russia, Greece, and Yugoslavia. By the 1890 census there was a 5:1 ratio of foreign to native-born residents.

Rock Springs was, and still is, supportive of its ethnic and cultural diversity drawn by the railroad. The city still actively identifies itself as the melting pot of the West, home to some 56 nationalities. (In its glory days as a mining camp, Rock Springs recurrently played host to multicultural events within its town center. A town favorite was International Night; residents would congregate to standing room only crowds and sample international cuisine while treated to an array of cultural performances.) Rock Springs' conception of a melting pot was not one of homogeneity and assimilation dominating the early part of the twentieth century. Residents' of Rock Springs notion of a melting pot was of a pluralistic society where differences were celebrated. Decidedly most of these immigrants were white Europeans; the Chinese were less well received and sometimes seen as a menacing threat to the white women.

Over the next half century the town experienced a series of successive booms and busts, something that most residents had come accustomed to, a hazard of residing in a coal town. But during the 1950s when the railroad converted its fleet of locomotives from coal fired to diesel, coal production in Sweetwater County ground to a halt. By 1957 most of the men had been placed on waivers and were out of work and by 1962 the Coal Division of the Union Pacific was dissolved, and coal camps such as Dines and Reliance ceased to exist. Many inhabitants feared that Rock Springs would be next.

The county and town were kept afloat largely by agriculture; in the late 1950s and early 1960s Rock Springs boasted the third largest wool production in the state. Townspeople were also optimistic that uranium mining and the conversion of the rich coal deposits in Rock Springs into liquid fuel would resuscitate the city's devastated economy. However, neither of these schemes ever proved realistic or profitable and were soon abandoned.

In the late 1960s residents of Rock Springs and Sweetwater County were overjoyed as Pacific Power and Light Corporation in conjunction with the Idaho Power Corporation contracted Bechtel Corporation to build a coal fired power plant on a vast seam of coal 35 miles east of Rock Springs. Preliminary estimates envisaged that 1500 new jobs would be created by the Jim Bridger Power Plant, and within a year employment at the plant soared to 3000.

Concomitantly, the trona market rapidly expanded, doubling its production by the early 1970s; by 1977 the industry employed 3700 people. Roughly 25 years earlier, Mountain Fuel Supply Company, while drilling an exploratory well in search of gas along the banks of the Black Fork River accidentally discovered sodium sesquicarbonate, commonly known as trona. Although the Westvaco Corporation began mining trona in the early 1960s, it was not until the 1970s when favorable market conditions developed that this discovery would pay dividends.

In addition, the energy crises of the early 1970s, triggered by OPEC's decreased oil production, was the impetus for oil drilling on the Overthrust Belt near Evanston, Wyoming. While Evanston bore the brunt of the increased drilling, there was some spillover into the Rock Springs area. By the mid 1970s the population of Rock Springs soared to approximately 26,000, nearly 1.5 times the population registered for the 1970

census. Salaries skyrocketed and unemployment in the area plummeted to an all time low at one half of one percent.

The town's infrastructure was ill-equipped to handle the onslaught of workers, and was taxed to its limits by the early 1970s. In 1970 a mere 75 new sewer connections were needed; during the height of the boom 900 sewer connections per annum were required. The sewage treatment plant, considered state of the art in the 1950s, was now obsolete, and Bitter Creek once again became a sewage dump for many residents. The inadequate health care system also fell apart as the six general practitioners in town refused to see new patients; the only alternative for many residents was the emergency room at the Memorial Hospital, seeing an average of 45 persons per day. Mental health was also affected, as the boom took its toll on long-time residents, the Mental Health Center in Rock Springs saw a nine-fold increase in cases between 1970 and 1975.

Housing in Rock Springs during the boom years was deficient as well; the city eventually needed 2920 housing units, far beyond the original estimate of 900 dwellings. The lack of housing led to the revival of Rock Springs as a shantytown. Migrant laborers pitched tents wherever they could and some even set up home in abandoned cars; most new housing was mobile homes, and trailer parks began to dominate the desert landscape. In addition, local schools doubled their enrollment during the first half of the 1970s, existing school buildings were dangerously overcrowded.

Unfortunately, these problems were exacerbated early on by a Wyoming law that prohibits taxing an industry until it becomes operational. Jim Bridger Power Plant did not come online until 1973. This left insufficient funds within the town coffers to modernize and upgrade county services and infrastructure that had become obsolete overnight. By 1977 however the city began seeing increased revenue from the boom as the city budget ballooned to eight million dollars, more than eleven times that of its 1970 budget.

Along with the boom came increased rates of crime, prostitution, and gambling, vices that had always existed but grew exponentially with the in-migration of single young males, many living in "man camps." Police dispatches climbed from 9000 in 1970 to 100,000 in 1973. The police were accused of being indifferent towards the crime wave, as well as corrupt. In 1977 Rock Springs was cast in a sordid light by Dan Rather in his "60 Minutes" expose about its corrupt politics, lackluster police force, and villainous underworld. The unruly boom years of the 1970s culminated with the shooting of undercover narcotics agent Michael Rosa, killed by Sweetwater County undersheriff Ed Cantrell, who was later acquitted of all charges. During the energy boom, Rock Springs also earned the distinguished title of "America's meanest city" by *Oui Magazine*. Longtime residents of Rock Springs longed for a return to normalcy; they were tired of the boom and the negative impact it had on their close-knit desert community.

During the early 1980s, the bottom dropped out of the energy market. Natural gas and oil were in low demand and by 1983 the Jim Bridger Power Plant was at fifty percent production. Unemployment in the region soared to 11.6 percent. Housing that had been so hard to come by just a few years earlier now had thirty percent occupancy rates.

But in 1985 new construction helped ease the burden of the recession that Rock Springs along with the rest of the United States had entered. This included construction projects at the Jim Bridger Power Plant along with new construction at the community

college and hospital. Additionally, the Chevron Chemical Company built a new fertilizer plant south of town that became operational in 1986. Furthering employment, the Exxon Corporation built a “sweetening” plant in 1984 two hours north of Rock Springs that processed natural gas. (The plant extracted carbon dioxide, which accounts for 70 percent of the natural gas, and used it to force un-retrieved oil to the surface.)

During this time, in an attempt to live down its negative image as a corrupt and crime-ridden boom town, Rock Springs intensified its city beautification programs by cleaning up the city, by adding new grass, trees, and parks. The program reached a long time goal in 1986 when it built a ten million dollar recreation facility that houses a pool, weight room, running track, ice rink, and climbing wall.

Although the town was beginning to shed its negative image of the past, part of the past would not let itself be forgotten. Collapsing mines and subsidence had become a real problem by the 1980s. Over 900 acres of the city of Rock Springs is built over abandoned mine shafts. Many residences were sinking or lost completely to this phenomenon. In an effort to diminish the problem the city pumped a slurry mixture into many of the mines, meeting with minimal success. In fact the slurry was responsible for further land shifts as the slurry would dam up within the tunnels and would be forced up and cause new cracks in the homes. Where collapses had already occurred the city used grouting, a cement mixture used to shore up the collapsed area; although more effective, it was costly.

Today, despite experiencing negative growth over the last twenty years, Rock Springs maintains a healthy economy with an average personal income second only to that of Teton County in the State of Wyoming. In addition, the unemployment rate has fallen below the Wyoming average.

Oil and gas exploration north of Rock Springs has increased rapidly in recent times. Although most of the drilling does not take place within Sweetwater County, Rock Springs has seen an increase in jobs from companies that provide oil field service and support to neighboring drill regions. What's more, with the rise in energy demand, Black Buttes Coal mine and the Jim Bridger Power Plant have significantly increased their outputs.

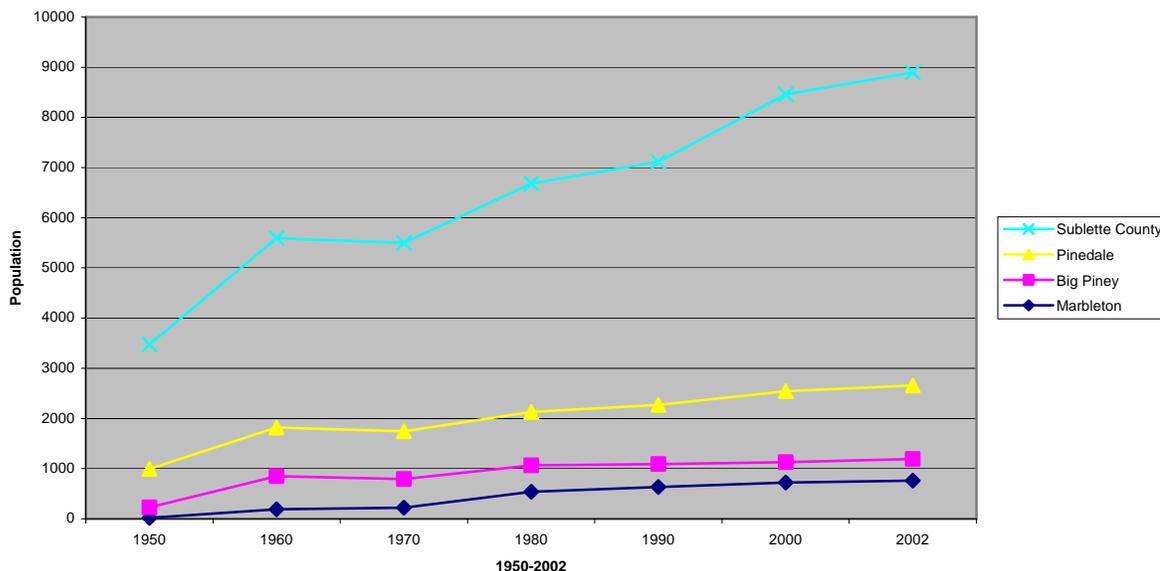
In the late 1990s and at the beginning of the new millennium, Rock Springs has become a cultural oasis amid the western desert. The city boasts a state of the art recreation center, a thriving community college, numerous museums and an art collection second to none of any school district in Wyoming, valued at well over a million dollars. Residents of Rock Springs still foster a rugged individualism born out of the fortunes and hardships of a coalmine legacy, and uphold a frontier spirit as they look towards the future.

Demographic and Economic Analysis of Sublette County and Its Principal Towns

For this section and the comparable section on Sweetwater County, we have used archival data from 1950 through the 2000 US Census and from State of Wyoming data up through 2003. Neither recognizes the increasing presence of transient workers who are hired elsewhere and who consider residences outside Sublette and Sweetwater Counties their primary homes. Secondly, these data cannot comprehend the changes that have taken place in the last two years or project the impacts of increased drilling activity into the future. Nevertheless, they document socioeconomic shifts over the past half-century.

Sublette County and its major towns of Pinedale and Marbleton have seen steady and in several cases significant growth while the other town, Big Piney, has experienced uneven population growth (See Table 1 and Graph 1). Sublette County, one of the state's more sparsely populated counties, grew by 151.1 percent (from 2481 to 6240) between 1950 and 2002. Growth spurts occurred between 1950 and 1960, 1970 and 1980 and 1990 and 2000 (see Table 2). The county actually experienced negative growth during the 1960 decade (-.6 percent). The Wyoming Division of Economic Analysis (WDEA) estimates that during the two years since the 2000 census Sublette County's population has increased by 320 or 5.4 percent.

Graph 1: Population by Towns and Sublette County, 1950-2002



Pinedale, the county seat, has experienced a population increase every decade since 1950 except for the period between 1960 and 1970 when its population declined from 965 to 948. Overall its population grew from 770 in 1950 to 1464 in 2002. Even though Pinedale has seen growth over the past fifty years, its proportion of the county's population has declined from 31.0 percent in 1950 to 23.5 percent in 2002. Although excluded from the population estimates for Pinedale, there has been significant population growth on the outskirts of Pinedale over the past couple of decades where most of the current housing is being built (interviews with Moore and Skinner 2004).

Within Sublette County, Marbleton has seen the most significant and rapid change in population since 1950 increasing from 20 to 762 in 2002. The jump from 20 in 1950 to 189 in 1960 was the largest percentage increase (840 percent). Numerically the decade of 1970 saw the greatest population gain with population growing from 223 in 1970 to 537 by 1980 (a 140.8 percent increase). Much of Marbleton's population increase is due to oil and gas development in the southern half of Sublette County.

The only other town with a population greater than 400, Big Piney, saw its population increase 221.8 percent between 1950 (206) and 1960 (663). Since 1960 Big Piney's population has steadily decreased from 663 to 408 according to the 2000 census.

However, WDEA estimates that between 2000 and 2002 Big Piney experienced a bump of twenty. Only a mile separate the city limits of Marbleton and Big Piney and much of that space has seen infill population growth so that it is difficult to distinguish the boundaries of population growth between the two communities.

With the exception of Marbleton, the towns in Sublette and the county itself have older populations than does the state (see Table 3). Median age in Wyoming is 36.2 compared to 39.8 for Sublette County, 39.2 for Pinedale, 37.1 for Big Piney and the substantially older populations in Bondurant (44.3), Daniel (44.1), Cora (48.0), Boulder (46.0) and Calpet (49.5). Marbleton's relatively young population (median age of 33.6) is due to a larger proportion of its population concentrated in the under 5 age group (9.0 percent compared to 5.9 percent for the county), and in the 20-34 age groups (20.3 percent compared to 14.3 percent for the county). Pinedale's population mirrors relatively closely the county's age distribution, except for a shortage in the 35 to 44 age group (13.8 percent compared 17.2 percent) and an over-representation in age groups 65 and over (16.2 percent compared to 12 percent). Big Piney has a larger share of its population in all age groups below 45 years of age compared to the county, but is significantly under-represented in the 45-54 age group (10.8 percent compared to 17.7 percent). The age groups 55+ are similar to the county's distribution. The only other community with more than 100 population, Bondurant, is significantly under-represented in the 14 and under age categories as compared to the county (8.4 percent compared to 20.9 percent) and its population is significantly over represented in the 35 to 54 age groups (43.9 percent compared to 34.9 percent). In general the smaller communities of Daniel, Cora, Boulder and Calpet populations tend to be under represented in the under 35 age groups and over represented in the 35 and over groups as compared to the county.

Sex Ratio

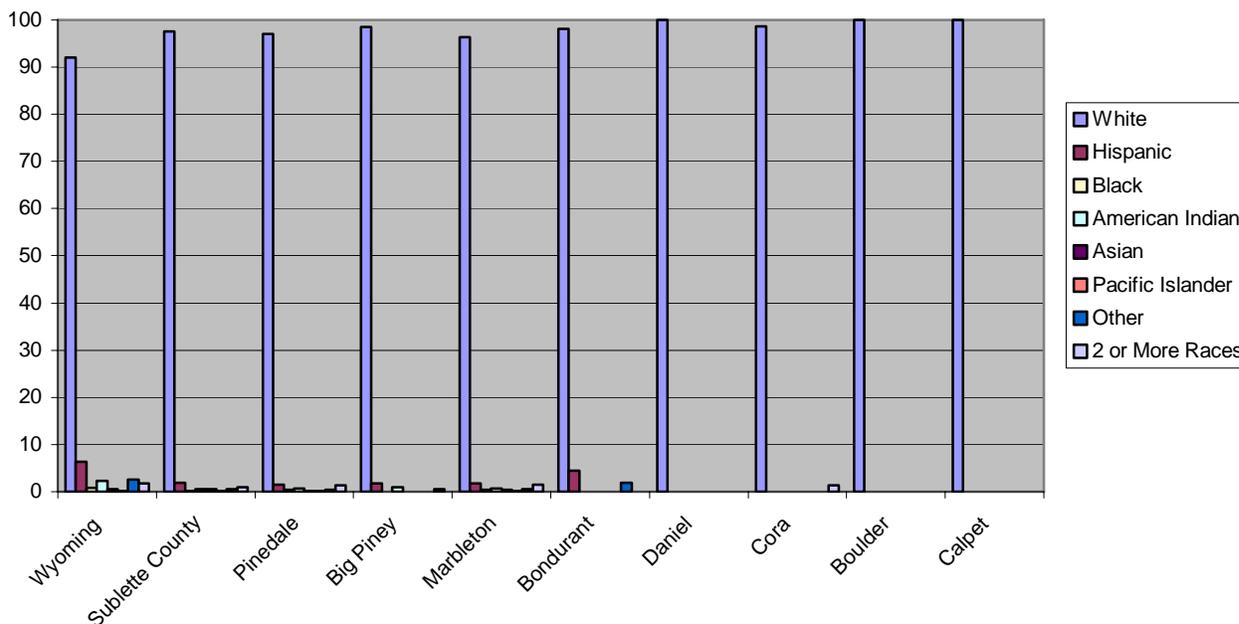
Age-sex distribution for Sublette County is presented in Table 4. (Similar data is found in Table 5 for the cities of Marbleton, Big Piney and Pinedale but that data is not presented in the narrative because of the relatively small population sizes of the 26 sex-age categories). Only the age categories that contain at least five percent differential between males and females are discussed. In 1970 a surplus of males occurred in the under 5, 35 to 44, 45 to 54, 55 to 59 and 65 to 74 age groups while females substantially outnumber males in the 75 and over categories. By 1980 the age-sex distribution shifted such that males outnumber females in the under 5, 15 to 19, 20 to 24, 25 to 34, 45 to 54, and 60 to 64 while females outnumbered males in the 55 to 59 and 75 and over categories. The surplus of males in the prime blue collar working ages might reflect the oil boom of the 1970s.

The 1990 census revealed five plus percent for males in the age categories of under ten, 15 to 24, and 55 to 59 while women were more prevalent for the age groups of 75 and over. By 2000 the age-sex distribution was relatively even with a surplus of males in the 15 to 19 and 60 to 69 age groups and a surplus of women only for the 85 and over. These data do not reveal any strong evidence of differential migration based on the jobs created by the oil and gas industry, at least through 2000. Also, it is likely that the 2000 census failed to record temporary workers so dominant in the oil and gas industry.

Race and Ethnicity

Sublette County is extremely homogeneous in regard to non-minority population with 95.65 percent of the population being non-Hispanic white as compared to 85.5 percent for the state (see Table 6 and Graph 2). Minorities represent less than three percent of population of the county if the Hispanic population is excluded. Likewise, none of the towns in Sublette County contain more than three percent minority population if Hispanics are excluded, and if Hispanics are included none of the towns have more than 7.5 percent minority population in 2000.

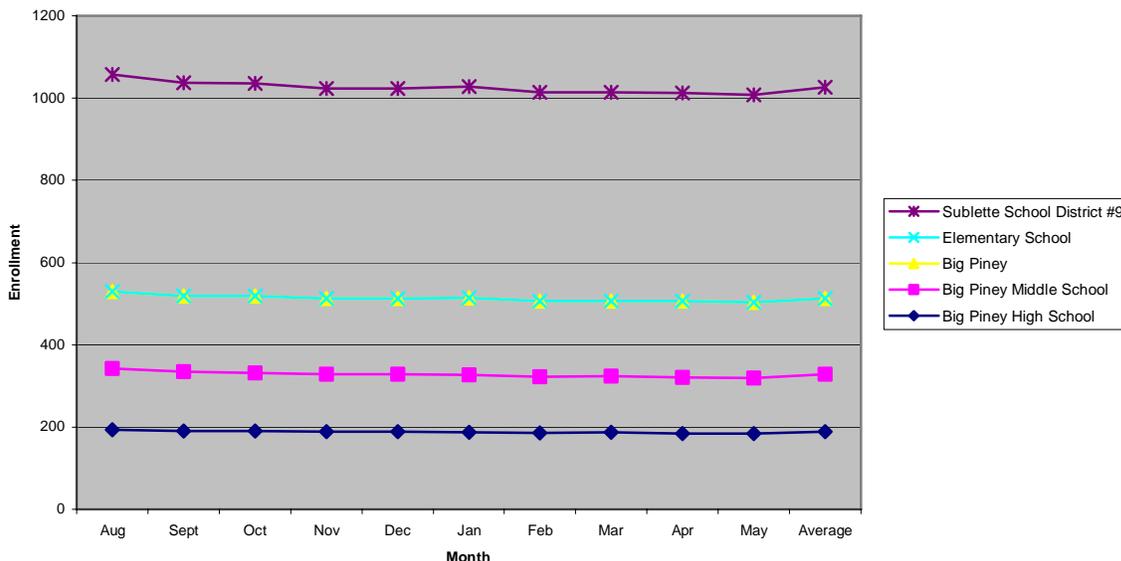
Graph 2 Race or Ethnicity Distribution by Towns, Sublette and Wyoming, 2000



Education

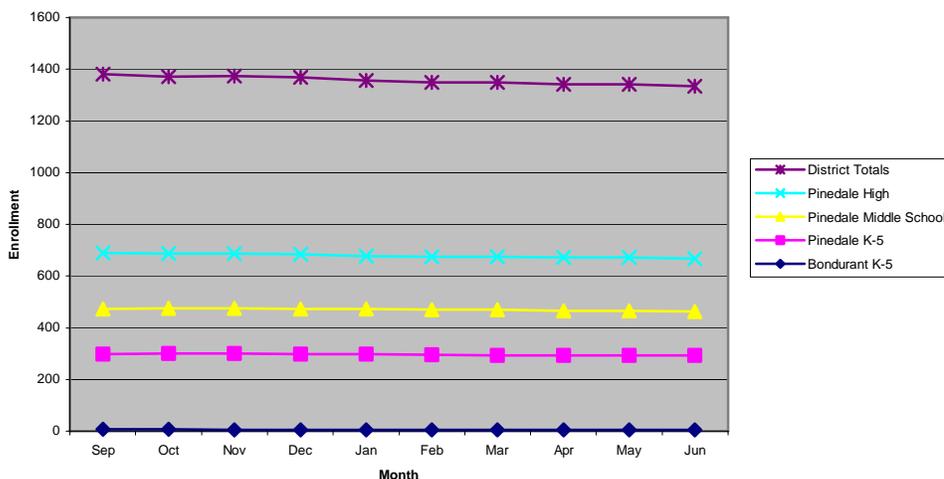
Students in Sublette County are served by two independent school districts. District #9 includes the Marbleton and Big Piney area (southern portion of the county-- see Table 7) and District #1 serves the northern portion of the county (see Table 8). Monthly enrollment figures for District 9 for the 2003/04 academic year reveal slight variations with enrollments for the Big Piney High School and Big Piney Middle School peaking in August (194 and 148, respectively) and bottoming out in May (185 and 134, respectively). The Big Piney Elementary School experienced less variation, with peaks of 187 in August and October and low enrollment of 183 in November. For the district as a whole, peak enrollment was 529 recorded in August and low enrollment for the spring months of February through May with the lowest enrollment occurring in May at 504. Thus, the district saw a decline of 25 students (or about five percent) from August to May for the academic year of 2003/04 (see Table 7 and Graph 3). Since school funding is based in-part of average daily attendance such variation could have a financial impact on school operations.

Graph 3: Sublette County School District #9 Enrollment, 2003-2004



District #1 has two K-5 schools (Bondurant and Pinedale), a middle school and a high school in Pinedale. Total enrollments varied from a high of 690 students in September to a low of 667 students in June, or a decline of 23 students (-3.3 percent) for the 2003/04 academic-year. The numbers for 2003/04 are ten to twenty students higher than enrollments for the previous school year. (Table available but not presented.) In general enrollments at the elementary, middle, and high schools tend to peak in September and decline to their lowest point by June (see Table 8 and Graph 4). For example student enrollment at the Pinedale High School was 218 in September 2003 and 206 by May 2004. Again variations are not large, but do tend to follow a trend and most certainly have an impact on school funding and operations.

Graph 4: Enrollment for Sublette County School District #1, 2003-2004



Housing

Table 9 presents housing data for Sublette County from 1980 to 2000. Over the twenty-year span homeownership has remained relatively constant, fluctuating from 1121 in 1980 to 1281 and dropping to 1181 by 2000. The homeowner vacancy rate indicates a very tight market with rates of 1.7 percent, 3.6 percent and 1.1 percent for 1980, 1990 and 2000 respectively. On the other hand there has been substantial increase in the number of renter occupied units, increasing from 470 in 1980, to 553 in 1990 and to 930 by 2000. The rental vacancy rate has likewise seen large variations with a rate of 10.5 percent in 1980 that increased to 12.9 percent in 1990 and with a vacancy rate of only 4.7 percent in 2000. The data from 2000 both in terms of homeowner and rental vacancy rates reflect a very tight housing market. According to recent interview data (Moore, 2004) this scarcity has been mitigated by a number of new housing developments adjacent to Pinedale. With future projects in the planning stage the housing shortage may be eased over the next several years if enough of it falls into the "affordable" range.

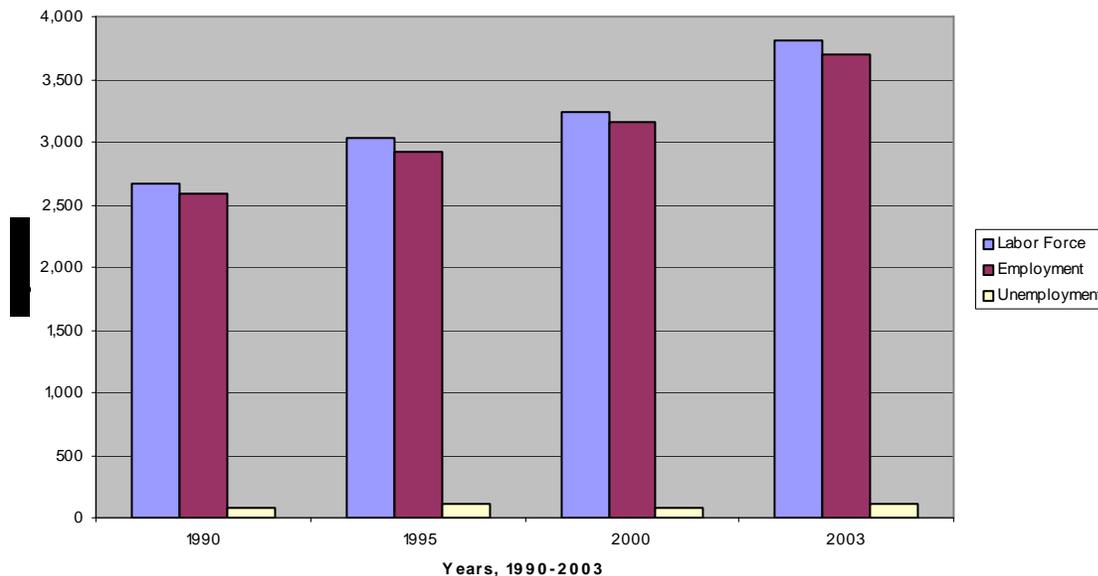
In addition to rentals and homeownership, Sublette County has seen some variation in its housing used for seasonal use. In 1980 597 units were seasonal use only, increasing to 735 units by 1990 and declining slightly to 634 by 2000. As pressures continue to build in Teton County, it is expected that Sublette County will continue to see demand for seasonal (second) homes, and that demand will result in seasonal housing representing between twenty to thirty percent of all housing in the county. The tight homeownership market is generally felt throughout Sublette County's communities; vacancy rates vary around 5 percent or less for all communities and vacancy rates hover around 1 percent for Pinedale, Marbleton, Bondurant, Boulder, and Calpet (see Table 10). With the exception of Bondurant (3.6 percent), Cora (4.9 percent) and Pinedale (8.8 percent) rental vacancy rates exceeded 10 percent in 2000. Also, of interest was the fact that seasonal housing units for all the communities was only 81 units (44 located in Bondurant) or only 12.8 percent of all seasonal housing units--these others therefore must lie outside of city limits.

Employment

Sublette County has experienced both ups and downs in regard to employment by industrial sector over the past 23 years. For example, 2248 jobs were reported in 1980 but dropped to 1763 jobs by 1990, a 21.6 percent decline in employment. Since 1990 employment numbers have steadily improved until 2000 when 2181 jobs were reported in the county (see Table 11 and Graph 5). A word of caution: these data compiled from unemployment insurance records omit the self-employed in the county. Since 2000, employment has varied from 2372 in 2001 to 2286 in 2002 and 2446 in 2003 (see Tables 12-13). As expected, employment trends in Sublette to some extent follow those of the state and United States with substantial growth occurring in "total government" (shifting from 518 in 1990 to 696 by 2003) and in "Services" (shifting from 290 in 1990 to 607 by 2003), while employment in "Agriculture, Forestry and Fishing" declined (see Tables 12 and 13). Sublette County has seen employment boom bust cycles in the "Mining" sector. In 1980 there were 189 jobs in mining, which increased to 260 by 1990 when the sector experienced a slow decline to 206 jobs. 2002 saw a big jump in employment to 253 and then another sizeable increase to 393 in 2003 or about 16 percent of the total labor force.

Unemployment has remained very low in the county with rates varying from a high in 1995 of 3.7 percent to a low of 2.5 percent in 2000. Unfortunately these data do not reflect monthly variations that shift with both tourism and oil and gas activity, nor the presence of workers hired outside the county.

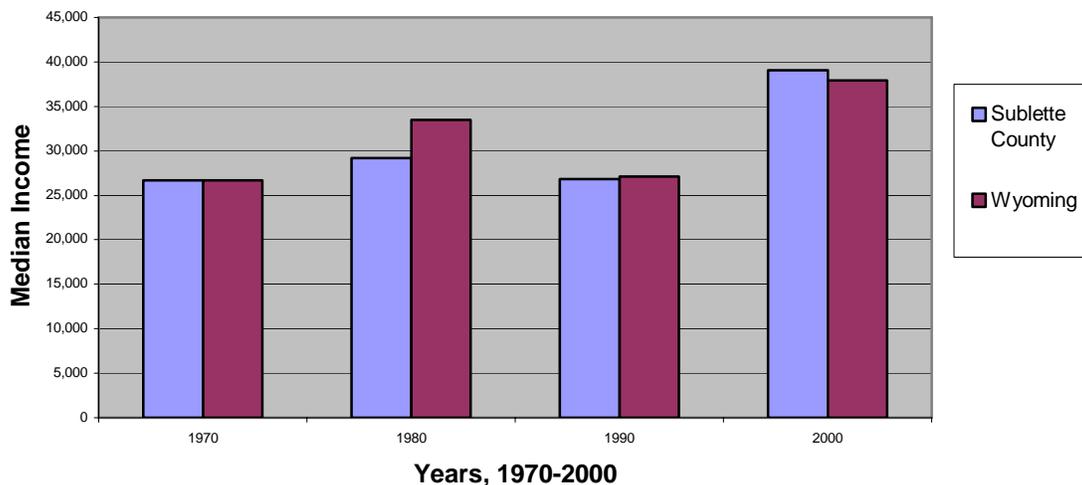
Graph 5: Employment for Sublette County, 1995-2003



Median Household Income

From 1970 to 1990 median household income in Sublette County fell below the average for Wyoming (varied from \$26,657 in 1970 to \$29,207 in 1980). Similar data for Wyoming was \$26,707 and \$33,503 (medians adjusted to 2000 dollars) (see Table 14 and Graph 6). In 1990 the county still lagged behind the state in median income (\$26,825 compared to \$27,096); however by 2000 Sublette County median household income surpassed the state average (\$39,044 compared to \$37,892 or about three percent above the state average). Interview data obtained during the summer of 2004 suggests that this increase in median household income is due primarily to higher paying jobs located in the gas and oil industry.

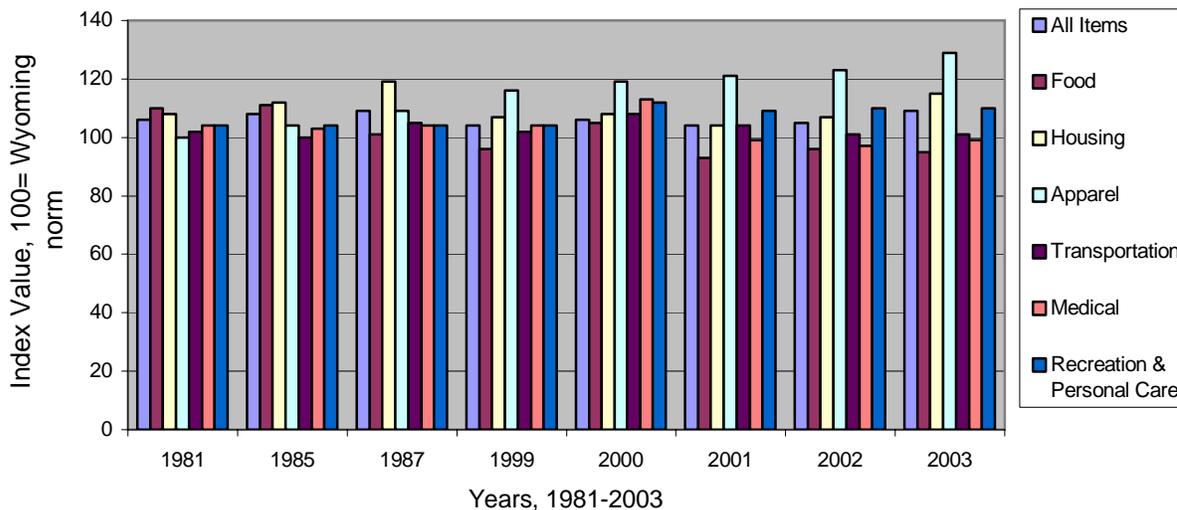
Graph 6: Median Household Income for Sublette County and Wyoming, 1970-2000



Cost of Living

For the past two decades Sublette County residents have lived with above average cost of living. The index is standardized on a basis of 100 for average cost of living within the state and provides cost of living for food, housing, apparel, transportation, medical, recreation and personal care as well as a combined total index value. Although variations occur, Sublette County has consistently been above average on housing, apparel, transportation, recreation and personal care and has only in the last three years posted below average costs for food and medical. Overall in 2003 Sublette cost of living index was 109, due to exceptionally high housing (115) and apparel expenses (129) (see Table 15 and Graph 7). In 2003 only food (95) and medical expenses (99) were below the state index of 100.

Graph 7: Cost of Living Index for Sublette County for Selected Years, 1981-2003



Social Issues

Department of Family Services:

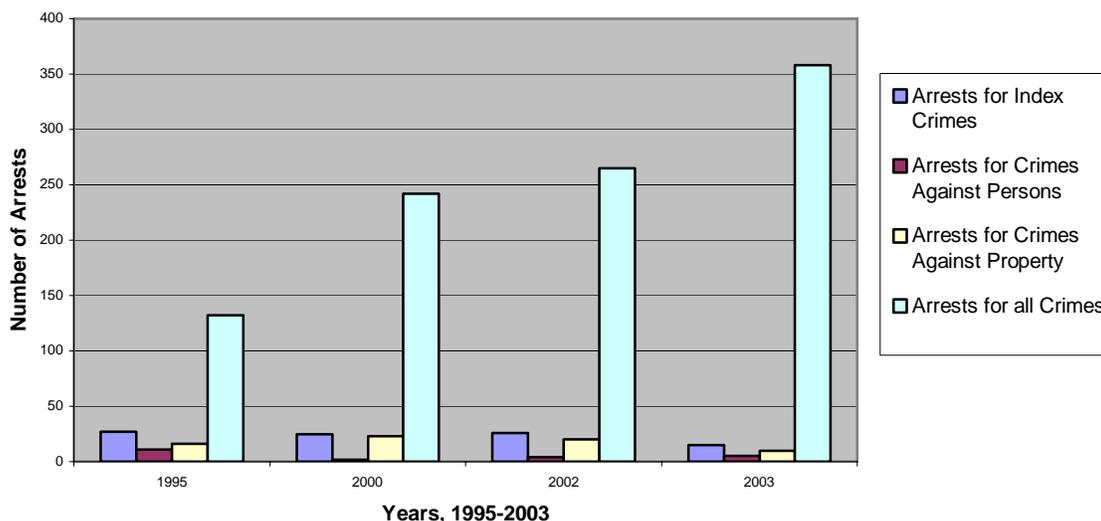
Between 1970 and 1995 there was an eight-fold increase in Aid to Families with Dependent Children (AFDC) expenditures with average AFDC benefits per household shifting from \$995 in 1970 to \$7,250 (22 household receiving benefits). Also the number of recipients rose from ten in 1970 to 61 in 1995. Similarly the number of food stamp recipients and dollar value of coupons increased from 1970 to 1995. The number of food stamp recipients went from 25 in 1970 to 176 by 1995 with dollar value of food coupons going from \$79 to \$11,266 (see Table 16).

Beginning in 1998 after the Welfare Reform Act was passed there was a shift away from AFDC to Temporary Assistance to Needy Families (TANF, a focus on moving people off the welfare list and into the work force through temporary assistance (maximum of five years) and job training). In Sublette for July 2003 there was only one person receiving assistance through TANF. Likewise there was very little use of public assistance in the form of food stamp dollars. For example, in Sublette County only \$7832 was issued in food stamps for July 2001 and this had declined to \$6,197 by June of 2002 (latest data available--table not presented).

Crime:

Number of arrests for selected years since 1995 to 2003 for Sublette County shows considerable variation. For example, Total Index Crimes shifted from 27 (including seven juveniles) in 1995 to fifteen with no juveniles by 2003 (see Table 17 and Graph 8). Crimes against persons peaked in 1995 at eleven, including two juveniles and dropped to only two by 2000 (including one juvenile). There were no juveniles involved in the five arrests for crimes against persons in 2003. From 1995 to 2003 total arrests made by the sheriff's office (all law enforcement is handled by that office in Sublette County) has steadily increased from 132, including thirteen juveniles in 1995, to 242 (twelve juveniles) in 2000, to 265 (fourteen juveniles) in 2002. By 2003 total arrests peaked at 358 including fourteen juveniles. Obviously there has been very little change in juvenile arrests while arrests of adults jumped significantly between 1995 and 2000 and then again between 2002 and 2003. At least for 2003, total arrests figures are impacted by public nuisance offenses such as drug possession (36), Driving Under the Influence (DUI) (84), liquor law violations (21), drunkenness (eight), and other assaults (thirty). These offenses accounted for more than half of all arrests in 2003.

Graph 8: Arrests for Sublette County, Selected Years 1995-2003



Recreation: Hunting and Fishing

Interview data revealed that many residents in Sublette utilized public lands for recreational purposes including hiking, picnicking, and wildlife viewing. We do not have secondary data on these activities; however, we do have information on hunting and fishing in Sublette County (of course, some residents from other counties as well as out-of-state individuals hunted and fished in Sublette County). In 2001 and 2002 the largest number of animals harvested was antelope (3435 and 4156 respectively) followed by deer with 3223 harvested in 2001 and 3630 in 2002 (see Table 18). The elk harvest was 1847 in 2001 and 1727 in 2002, while fewer than 400 moose, black bear and big horn sheep were harvested.

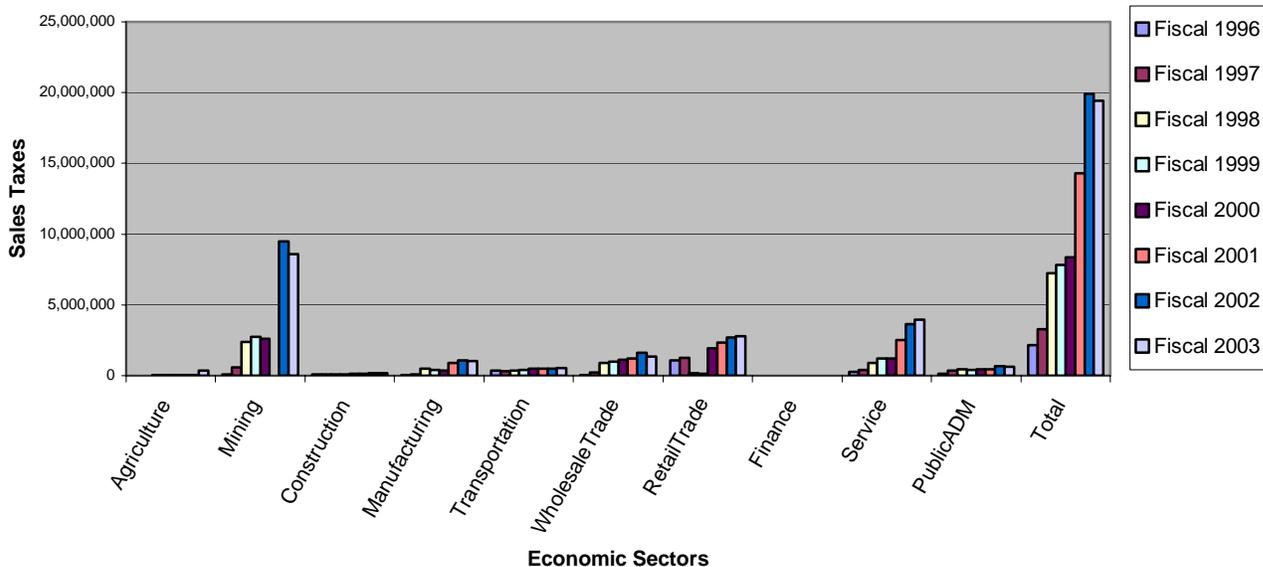
Tables 19-21 reveal that fishing and hunting in Sublette County garnered substantial revenue for Wyoming Game and Fish with state and non-state license fees generating \$469,558. The 17,491 fishing licenses/conservation stamps accounted for the largest proportion of revenue (\$318,745). Big game licenses (1,863) generated \$73,560 in revenues while bird, small game and archery licenses (406) accounted for the remainder of license fees. Of course, these data are not a complete snapshot of fishing and hunting activities since, at least for in-state residents, licenses can be purchased in any county within the state. This is also true of out-of-state licenses but it seems logical that they would purchase their licenses at point of destination.

Sales Tax

Table 22 Graph 9 provide sales tax information by industrial and retail sector from 1996 through 2003. Over these eight years, sales tax collections for Sublette County have increased dramatically. For example, in 1996 sale tax collections were \$2,160,175 with retail accounting for 50.3 percent (\$1,086,223) of all collections. By 2003 the county collected \$19,431,841 in sales taxes of which mining accounted for \$8,585,423 or 44.2 percent and was up from a mere \$109,025 from mining in 1996. Likewise the service sector showed a dramatic increase in sale tax collections jumping

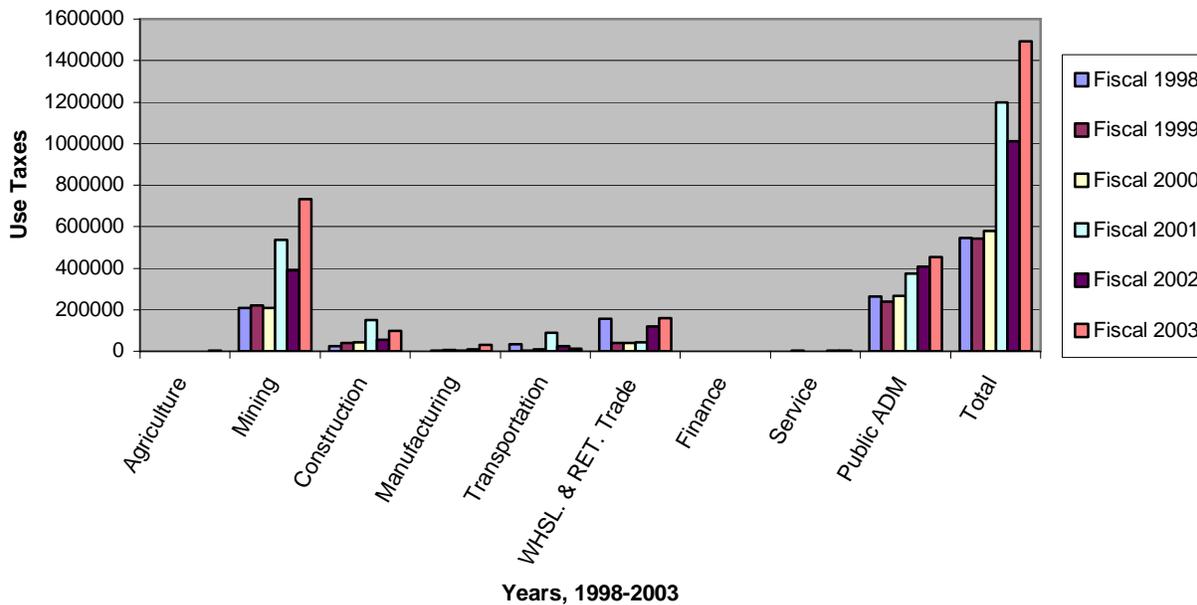
from \$277,104 in 1996 to \$3,963,270. It is likely that this increase is due in part to the influx of workers associated with the mining industry.

Graph 9: Sales Tax Collections for Sublette County, 1996-2003



Similarly there has been an increase in use tax collections for Sublette County. Use tax collections increased from just over a half million in 1998 to just under one and a half million in 2003 with large increases occurring in 2001 and again in 2003. The largest increases occurred in the mining industry, where use tax collections went from \$206,903 in 1998 to \$732,984 in 2003 (see Table 23 and Graph 10).

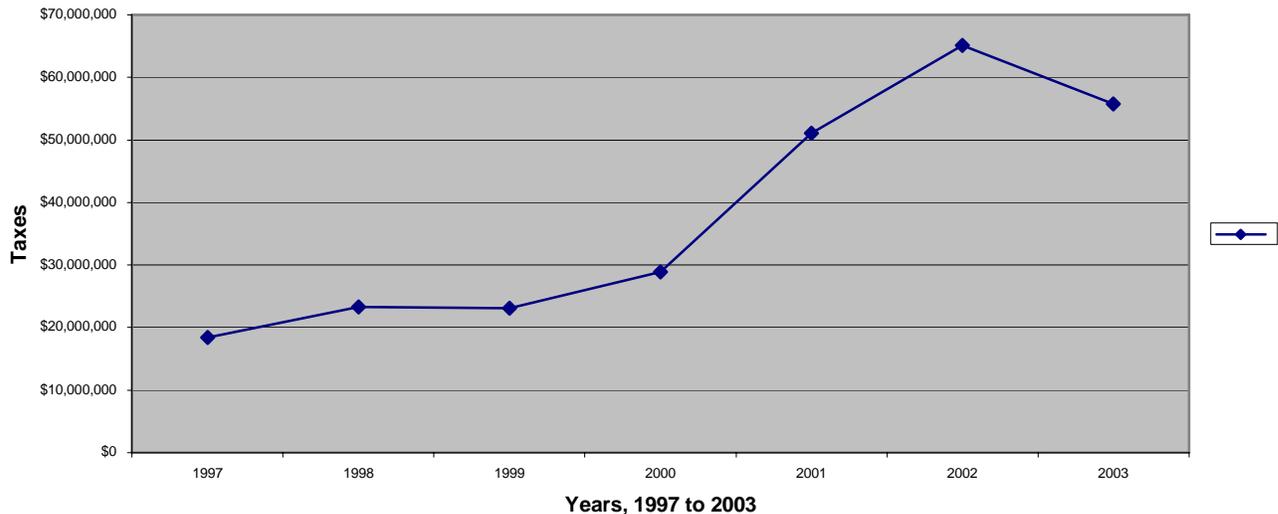
Graph 10: Use Tax Collections for Sublette County, 1998-2003



Property Taxes

From 1997 to 1992 Sublette County experienced a steady increase in ad valorem taxes, which increased from \$18,455,633 to \$65,085,305 (see Graph 11). The biggest shift occurred between 2000 and 2001 when taxes levied increased or a 76.8 percent increased. However, between 2002 and 2003 there was a decline in ad valorem taxes of just over nine million dollars, or a decline of 14.3 percent. Sublette County tax levies were third highest in the state (Sweetwater was second while Campbell was first). On a per capita basis Sublette County was first with just over \$10,000 per person levied in taxes.

Graph 11: Ad Valorem Taxes for Sublette, 1997 to 2003



Traffic Counts

One issue or problem area that was voiced in the Draft Environmental Impact Statement (DEIS) was a concern with possible increased traffic as a result of drilling on the Pinedale Anticline. Although we do not have specific data on this concern we do have data that documents rather substantial changes in traffic patterns over time. Data are from the Wyoming Department of Transportation and are based on two collection points (see Tables 24-26). These tables present average daily traffic counts as well specific daily traffic counts by selected years from 1980 through 2002. First of all, there are few variations on week days over the time period and second, traffic counts have just about doubled over the 23 year time period going from 917 in 1980 vehicles to 1884 in 2002 for the monitor located at milepost 110.47 Daniel junction. Likewise traffic counts increased substantially at the traffic monitor located at Daniel junction at milepost 131.45 with average day traffic counts moving from 749 in 1980 to 1250 in 2003. At this milepost daily variations occurred with traffic higher on Monday through Friday with traffic peaking on Fridays (1,399 in 2003).

Monthly variations in traffic counts were available at three monitoring stations for 1997 through 2003. All three stations were located east, south and north of Daniel Junction (see Tables 27-29). Seasonal variations are apparent in all three tables with high traffic counts (percentage high 100) for June through October and below average traffic

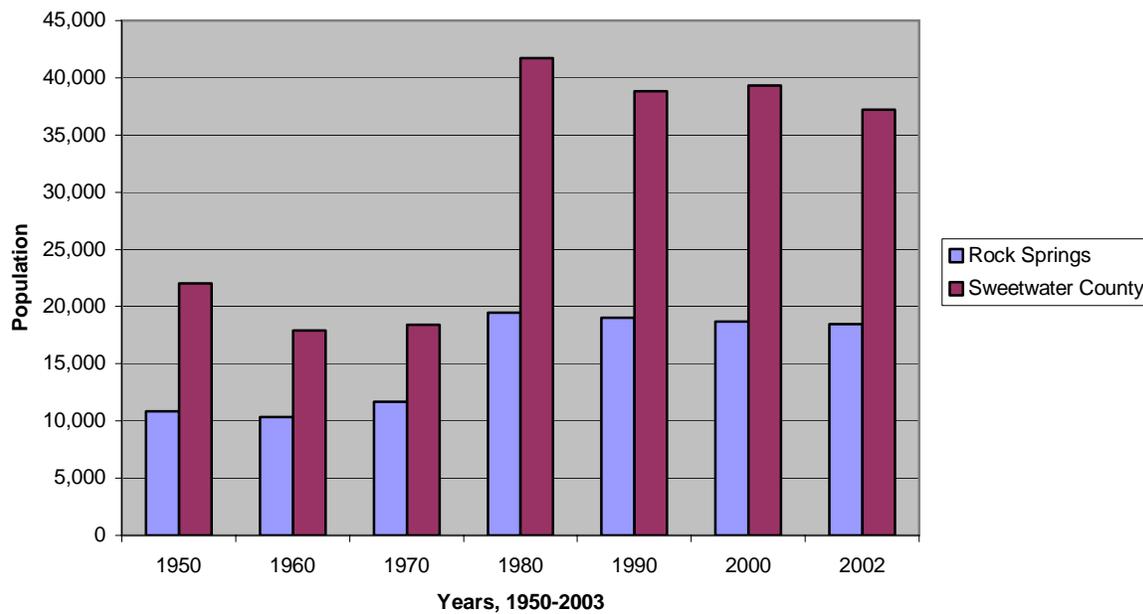
counts for November through May. These highs and lows in traffic counts co-inside with both seasonal variations in the mining industry and with seasonal variations in tourism. Currently the data are not available to determine the causal factor.

Demographic and Economic Profile of Sweetwater County and Rock Springs

Shifts in Population for Sweetwater County and Rock Springs.

Over the past fifty years Sweetwater County has experienced volatile population changes, much of which is attributable to changes in Rock Springs' population. The population of Sweetwater County declined by 18.6 percent between 1950 and 1960 when its population fell from 22,017 to 17,920 (see Tables 30, 31 and Graph12). Then the county rebounded slightly between 1960 and 1970 to 18,391. These early shifts were due almost entirely to changes in the minerals industry (primarily based on changes in the trona industry). Then with energy crisis of the early 1970s Sweetwater County saw dramatic changes in coal mining, the construction of the Jim Bridger Power Plant and some oil and gas development. Along with the energy industry development came a sudden surge in population with the county's population more than doubling between 1970 (18,391) and 1980 (41,723). Since 1980 the county has lost population and current census estimates place the county's population at 37,194 in 2002.

Graph 12: Population for Rock Springs, Sweetwater County, 1950-2003



The population changes for Rock Springs, the county seat, mirror those of the county. In 1950 its population was 10,857 or about half of the county's population. By 1960 Rock Springs' population increased to 11,657, or 61.8 percent of the county's population. And like the county, Rock Springs' population soared in the 1970s increasing to 19,458 in 1980. Even with that growth, its proportion of the county's population

declined to 46.6 percent. Since 1980 Rock Springs had seen a slight, but steady, decline in population to 18,464 by 2002.

Obviously, Sweetwater County and Rock Springs have experienced both boom and bust over the past fifty years. The recent downward slide in population is opposite of the population trends for the state which has seen steady growth since 1990, but it does not reflect the presence of population whose "usual residence" is elsewhere.

Population by Age for Sweetwater County, Rock Springs, and Wyoming.

For the age groups of under 5, 5-9, 10-14 and 15-19 Rock Springs and Sweetwater have a larger proportion than did the state in 2000 (see Table 32); whereas the state had a larger proportion of its population in the age groups of 55-59, 60-64, 65-69, 70-74, 75-84 and 85+ as compared to both Rock Springs and Sweetwater County. Given the heavy dependence on the minerals industry for its economy, it is interesting that there were few differences in population distribution for Wyoming, Sweetwater County and Rock Springs for those in the age brackets of 20-54. Overall, Sweetwater County at 34.2 median age and Rock Springs at 34.5 median age have younger median aged populations than did the state of Wyoming (36.2) in 2000. These differences in median ages were most likely due to differential fertility with women in Rock Springs and Sweetwater County having more children than women in other Wyoming counties.

Sex-Age Distributions.

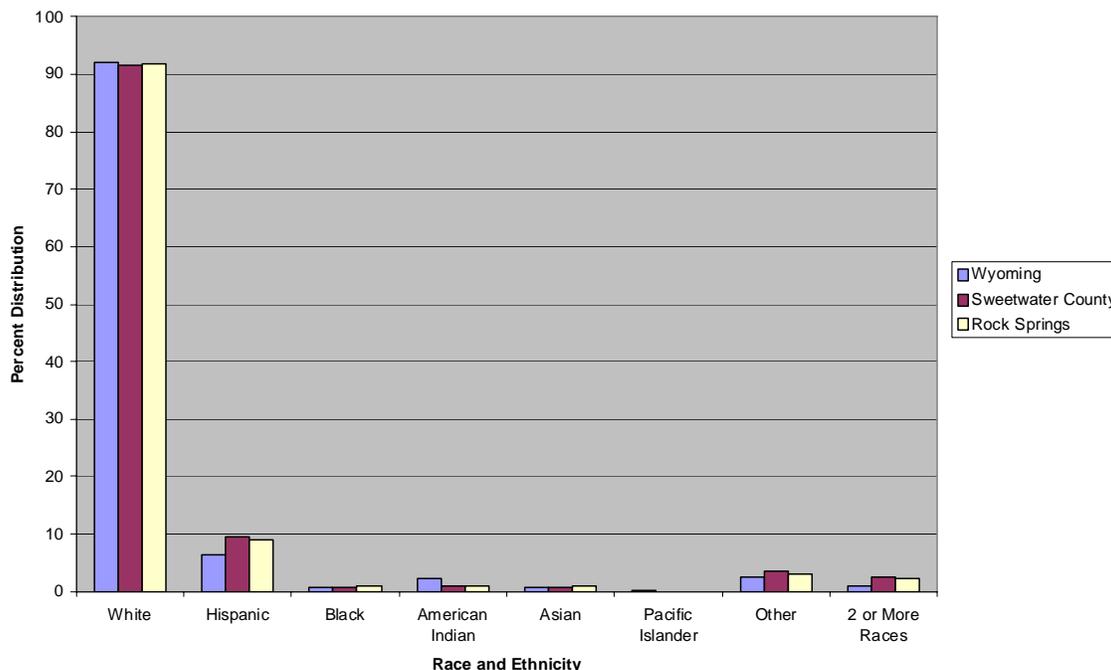
Distribution of population by age-sex categories are presented in Table 33 for the decades from 1970 to 2000. For the purpose of this analysis, only categories with a five percent differential are singled out for discussion. In 1970 there are few surprises with a surplus of males in the 5 to 9 age category (53.8 percent male compared to 46.2 percent female) and a surplus of females in the 20 to 24 age group (44.7 percent male compared to 55.3 percent female), and the 75 to 84 age group (47.4 percent male compared to 52.6 percent female). The 1980 census revealed some interesting migration and aging differences. The five percent differential favored males for the age categories of 10 to 14 (52.9 percent compared to 47.1 percent), 20 to 24 (55.3 percent compared to 44.7 percent), 25 to 34 (55.6 percent compared to 44.4 percent) and 35 to 44 (56.0 percent compared to 44.0 percent). The surplus of males for the age groups 20 through 44 most likely reflects the in-migration of male construction workers in building of the Jim Bridger Power Plant--it was during this time that at least one large "man" camp was constructed north of Rock Springs. Less surprising was the surplus of females in the age categories of 65 to 74 (46.0 percent male compared to 54.0 percent female), 75 to 84 (41.6 percent compared to 58.4 percent) and 85+ (38.9 percent compared 61.1 percent). The surplus of females in the older age groups matches a trend seen at the state and U.S. populations and reflects the longer median life expectancy of females.

In 1990 there was a five percent differential favoring females for the age groups of under 5, 15 to 19, and 65 and over. While there were no age groups where the differential was greater for males. The 2000 Census revealed that males outnumbered females in the 55 to 59 age group but that female numbers exceeded that of males once again in the 65 and over age group. Interestingly by 2000 the ratio of males to females with the exception of the older age groups was pretty balanced revealing no unusual migration streams by sex and age.

Ethnic and Racial Composition for Sweetwater and Rock Springs.

Historically and currently Wyoming is a state that contains few minorities (see Table 34 and Graph 13). Only three in twenty Wyoming residents (14.3 percent) are Hispanic, Black American Indian, Asian, Pacific Islander, multiple races, or other.

Graph 13: Race, Ethnicity for Rock Springs, Sweetwater County and Wyoming, 2000



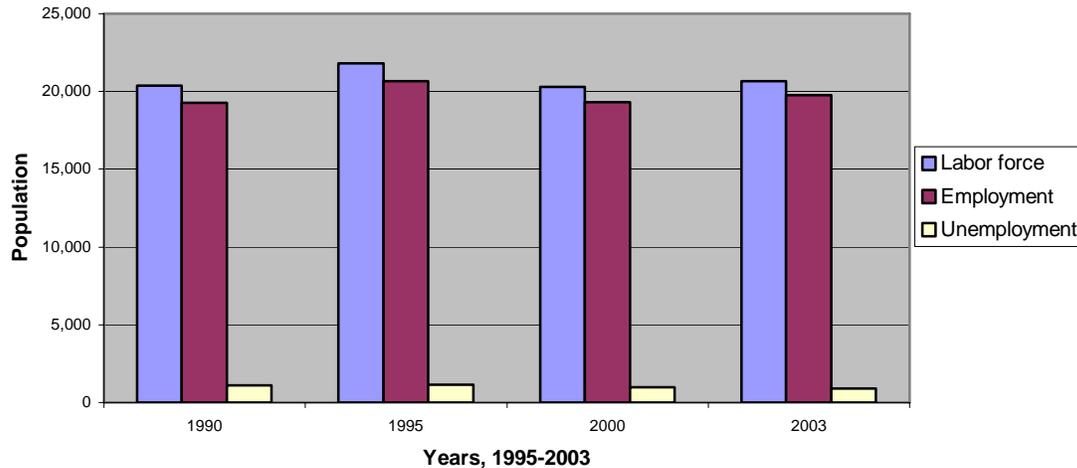
Although somewhat more diverse than the state, minorities in Sweetwater County (17.8 percent) and Rock Springs (17.3 percent) are home to fewer than four in twenty of their respective populations (although the county prides itself on its population being composed of 56 different nationalities). Race and ethnic distribution for Rock Springs and Sweetwater County are very similar and the only significant difference between Rock Springs and Sweetwater County and the State of Wyoming is in the relatively high proportion of Hispanics residing in Rock Springs (9.0 percent) and Sweetwater County (9.4 percent).

Economic Profile for Rock Springs and Sweetwater County

Historically both Rock Springs and Sweetwater County have been dependent on the primary sector (mining, timber, and agriculture), which is still true in 2003. As noted in Table 35, FMC Wyoming Corporation that is involved in trona mining and processing is the largest employer in Sweetwater County with 849 employees. In fact six of the ten largest employers in the county are directly involved in mining while a seventh company, PacificCorp is engaged in power generation. Only Sweetwater County School District # 1 and District # 2 along with the Memorial Hospital of Sweetwater County were among the top ten employers. The six corporation involved in mining account for 3225 employees or roughly one in six workers (16.3 percent) in 2003 (see Table 35).

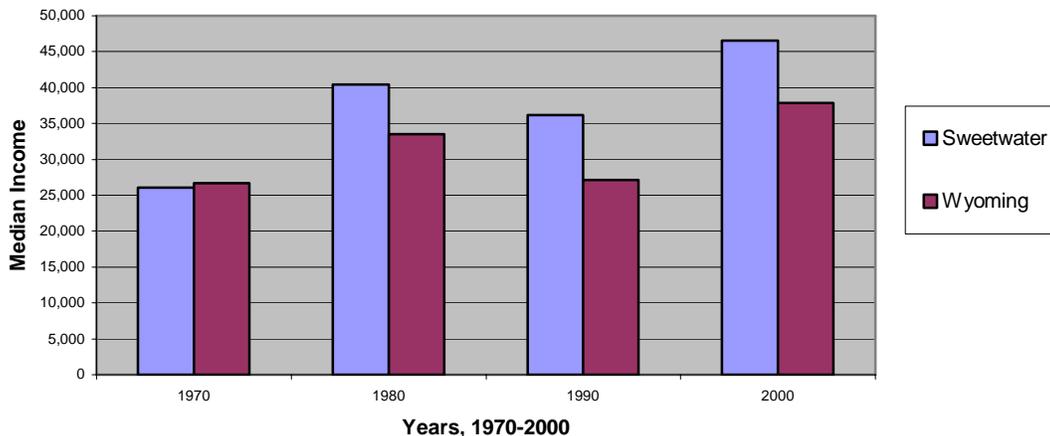
Over the past decade the unemployment rate has seen a steady decline dropping from 5.5 percent in 1990 to 4.3 percent in 2003. Although the labor force peaked at 21,802 in 1995 it saw a shift from 20,379 in 1990 to 20,667 in 2003 (see Table 36 and Graph 14).

Graph 14: Employment for Sweetwater County, 1995-2003



With the energy boom in the 1970s Sweetwater County experienced a rapid shift in median household income. For example, in 1970 median income in Sweetwater was \$26,071, which was slightly lower (-2.4 percent) than the median household income for Wyoming (\$26,707). By 1980 median income in Sweetwater County far exceeded that of the state (\$40,407 compared to \$33,503 or 20.6 percent higher). Similar income differentials continued in 1990 (33.6 percent higher than the State) and 2000 when Sweetwater County median household income peaked at \$46,537 or 22.8 percent higher than the state. The income differential for the past two decades is mostly likely due to the increased activity in the minerals industry that generally pays higher wages/salaries than other sectors of the economy (see Table 37 and Graph 15).

Graph 15: Median Household Income for Sweetwater County and Wyoming, 1970-2000



Housing

During the energy boom of the 1970s and the rapid increase in both Rock Springs' and Sweetwater County's populations there has been a shortage of housing stock particularly in regard to homeownership. For example, in 1980 there were 14,052 occupied housing units in Sweetwater County of which 67.4 percent were owner occupied (see Table 38). Probably more telling was a homeowner vacancy rate of only 1.6 percent. The housing market was less tight for rental units where the rental vacancy rate was 7.8 percent. By 2000 the number of occupied housing units had increased slightly to 14,105, but homeownership had increased significantly to 75.1 percent of all housing units. Also there had been a slight increase in the homeowner vacancy rate that climbed to 2.6 percent (still indicating a somewhat tight ownership availability). However, while the number of renter occupied units dropped from 4582 in 1980 to 3519 (a drop of 23.2 percent), the rental vacancy rate almost doubled to 16.2 percent.

Housing availability in Rock Springs mirrors changes that occurred in Sweetwater County. In 1980 the 4475 owner occupied units represented 63.6 percent of the total occupied housing stock and the homeowner vacancy rate was 1.7 percent (see Table 39). Again the data reveal a very tight homeownership market. The rental vacancy rate was 7.1 percent. By 2000 homeownership had increase to 5724 and represented 77.9 percent of the occupied housing stock. The homeowner vacancy rate almost doubled to 3.1 percent indicating a slight easing of the housing market. From 1980 to 2000 the number of occupied rental units had declined from 2556 to 2074 and the rental vacancy rate had increased rather dramatically from 7.1 percent to 18.2 percent.

These data suggest that over the past 20 years there has been a substantial shift towards homeownership both in Rock Springs and Sweetwater County. Also, there has been a movement towards the construction of housing units designed for ownership while there has been an actual decline in the number rental units. Finally, from 1980 to 2000 there was an easing of the housing market both for homeownership and rentals. Data from the 2004 interviews suggests that during the past twelve months the housing market for homeownership and rentals has tightened significantly with the rapid expansion of the gas industry in Sweetwater and Sublette Counties. The Sweetwater County Economic Development Corporation data notes a .7 percent housing vacancy rate.

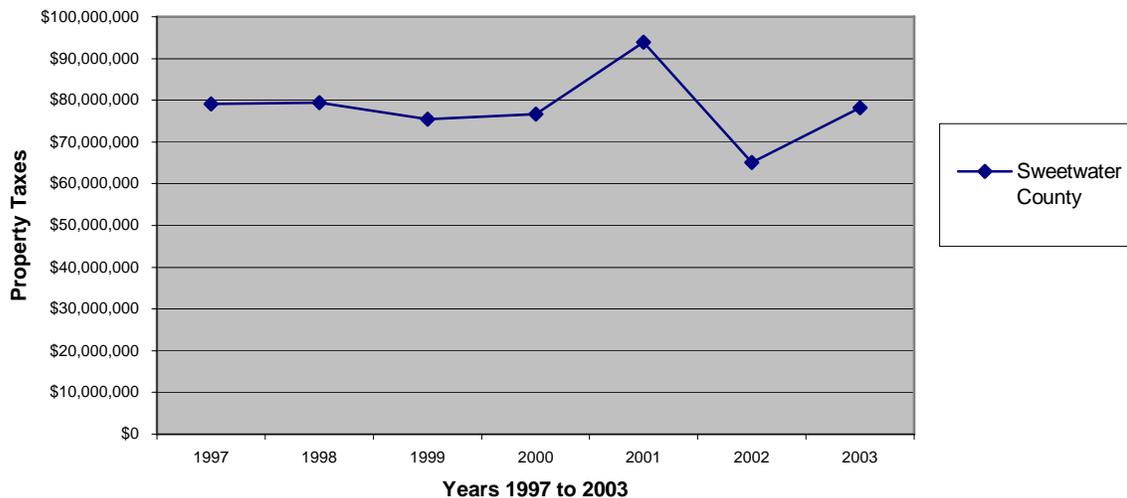
Recent data from the Sweetwater Economic Development Association reveals that the housing market has seen flux over the past seven years. Number of housing transactions varied from 344 in 1997 to 315 in 1998 to 340 in 1999 and 320 in 2000. Since 2000 home sales have increase with 422 sold in 2001, 411 sold in 2002 and for the most recent year, 2003, 496 homes traded hands. There was an increase in building permits issued for Rock Springs/Green River. Thirty-four building permits were issued in 2002, 65 in 2003, and for the first five months of 2004 there were 35 building permits issued.

Ad Valorem Taxes

Sweetwater County continues to maintain its second place (to Campbell) among all Wyoming counties in property taxes levied, and it has seen some variations in its revenue. Ad valorem taxes remained relatively stable from 1997 through 2000 at around 78 million. Then between 2000 and 2001 the county's property tax revenue increased by more than seventeen million (\$17,258,634) or a gain of 18.4 percent. Since 2001 property tax revenues have continue to show instability with a decline of 28.8 million between

2001 and 2002 (30.7%), but then between 2002 and 2003 the county's property tax revenue increased just over thirteen million or an increase of 20.1 percent. Such substantial swings in tax revenues inevitably pose problems in long term planning, at the same time revenue for 2003 are on a par with the relatively stable revenue period from 1997 to 2000 (see Graph 16).

Graph 16: Ad Valorem Taxes for Sweetwater County, 1997 to 2003



Social Issues

Family Services:

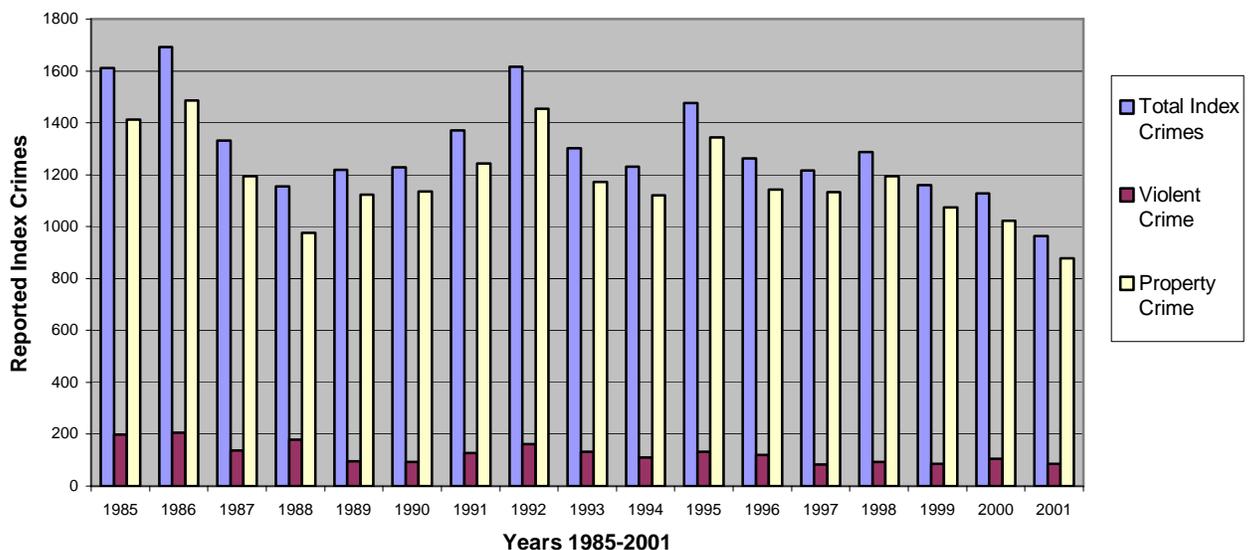
Data for 1970 through 1995 are presented in Table 40 for the Rock Springs Field Office (latest data available in print form, electronic web link is not operational). These data reveal that AFDC costs almost doubled between 1970 and 1980 (shift from \$18,729 to \$35,981) and more than tripled between 1980 and 1990 (shift from \$35,981 to \$112,641). After 1990 the rise in AFDC costs tapered off to \$122,032. Likewise the number of AFDC recipients rose from 219 in 1970 to 1,029 by 1995 with the greatest jump occurring between 1980 and 1990 (a shift from 357 to 994). Since the late 1990s The Department of Family Services focus has shifted from AFDC to a program based on "welfare to work" policy.

Likewise, utilization of Food Stamps both in dollar amount and number of participants increased dramatically from 1970 to 1995. The value of food stamp coupons went from \$2578 (596 recipients) in 1970 to \$151,794 (2,129 recipients) in 1995 with the greatest increase occurring between 1980 and 1990 (\$21,600 and 585 recipient to \$107,675 and 1,750 recipients). AFDC and Food Stamp data reflect the bust in Sweetwater/Rock Springs economy during the 1980s with the downturn in the minerals industry.

Shifts in Criminal Activity:

Table 41 and Graph 17 present data on crime in Rock Springs as reported in the Uniform Crime Reports from 1985 through 2001. These data are presented as rates and are based on crimes per 100,000 persons. For purposes of discussion the narrative will be limited to Index Offenses a composite of Violent Crime Index and Property Crime Index. The three indexes show a tremendous amount of up and down over the sixteen-year time period, but in general all three indicators are higher in 1985 and 1986 and have mostly declined since 1995. For example the Index Offense rate goes from a high of 1692 in 1986 to a low of 963 for 2001. A similar variation occurs for both the Violent Crime Index and the Property Crime Index. Based on our in-depth interviews, there is substantial support for the possibility of a major increase in Index Offenses occurring after 2001. Interviewees, in particularly, noted a substantial increase of crime occurring with the latest boom (2003-2004).

Graph 17: Reported Index Crimes for Rock Springs, 1985 to 2001



Interview Data from Sublette and Sweetwater Counties

During the summer of 2004, after a Shell sponsored field trip, and in three subsequent stays in Pinedale, Audie Blevins and Katherine Jensen conducted twenty-one extensive interviews including twenty-four community leaders, government officials, activists, and business people who identified Pinedale as their primary community. Ten of these were people who had lived in the town or Sublette County for thirteen to 56 years (“oldtimers”), and fourteen had lived in Pinedale for less than ten years, but six of those were professionals with long-term experience in the state. One of those was from one of the premier oil and gas and philanthropic families in Wyoming. Four other interviews, with six people were conducted in the south end of the county, and fourteen more investigated related issues in Sweetwater County, summarized in this section.

All interviews used an open-ended semi-structured format, adapted from an instrument used by Jensen and Blevins in the Plan Revisions of the Medicine Bow and

Bighorn National Forests, with approval of the county commissioners of Albany, Carbon, and Converse Counties, and the Big Horn Country Coalition. Interviews included both audio tapes and on-site notes by both principal researchers or, in the case of Sweetwater County, graduate student Scotty Utz. The names, occupations, and residence information of the interviewees are included in Appendix A.

Rock Springs Interviews

The fifteen people included in fourteen interviews in Sweetwater County included the mayor, four city council members, representatives of both the school system and Western Wyoming Community College, the police chief and a former police chief, representatives from the Chamber of Commerce, Economic Development Association, the newspaper, the county treasurer, a county commissioner, a Sweetwater Events Center administrator, and two Bureau of Land Management (BLM) representatives. With the exception of the BLM Public Affairs director, who had been there for two years, and the bank president who had been there ten years, virtually all had been born and raised in the county and had returned five to eight years ago or had been in their current position more than 25 years.

Community

Rock Springs is unique in that it is primarily a blue-collar, industrial, unionized, Democratic region in a conservative Republican state. One person put it this way, "[Rock Springs] is the hub for everything in the area, both good and bad. This is the biggest town in the region so when people get time off or want something they get dropped off here. Also, we are heavily unionized and the only part of the state that is solidly Democrats." Many people in Rock Springs do "shift-work" so "there are people who get off work at 6:00AM are ready to go out and party." Also characteristic of Rock Springs is the pride of cultural diversity in the city. The vast majority of people interviewed boasted of the city's traceable heritage to 56 different (mainly European) countries. One of the main corridors through Rock Springs is lined with the 56 national flags representing the countries to which this city can trace their heritage. The Union Pacific Railroad developed Rock Springs around the coalmines that they operated. The management brought in and housed people who spoke different languages near one another so that they would not organize against the company. Ironically this is one of a few heavily unionized places in the state.

This area continues to attract a diverse population (notably a rising permanent Mexican population and a transient population from oil and gas), which is generally accepted by the community. The police chief described the transient population as "mostly young single men with a lot of cash; drugs are up, prostitution is up, and assaults are up." He also said that he could not give an approximate number of transients but that "the hotels are filled with them." The majority of people in this community move here for work with a mineral extraction company or for one of the companies that service mineral extraction. People stay because of the high quality of life, which primarily consists of good paying blue-collar jobs and quick access to vast amounts of prime public land that offers a variety of outdoor activities. The central role of hunting and fishing for this community was mentioned by virtually everyone.

Issues

Almost unanimously, people mentioned the need for infrastructure improvements and the rising demand of social services. Of particular note for Rock Springs infrastructure is their sewer system, which is running at near capacity. Road repair and construction is another concern for Sweetwater County as Rock Springs serves as the industrial hub for the whole southwest corner of Wyoming. Concerning social services, crime is the chief anxiety, as it has spiked in the last eighteen months. The increased use and availability of "meth" was mentioned by virtually everyone interviewed. There has also been an increase in assaults, domestic violence, and other alcohol related criminal offences. This community also faces a housing shortage with a particular need for affordable housing.

Rock Springs went two million dollars into their municipal reserves to meet the rising social needs in their community. The city council has approved the hiring of seven additional police officers in addition to two hired within the last couple of years. Additional support staff and vehicles have also been approved. New housing starts are up and permit providers as well as inspectors are swamped with work. One person summed up the problems facing Rock Springs as thus: "The development of gas has led to more crime and drugs so we have just approved getting nine new police officers and thirteen new police cars. We did not have money to do this and had to dig into our reserves. We do not get any impact assistance money from federal government, like we would if we put in a power plant. People come to do a job for six to eight months and don't bring their families; we have to give them all the services. We bear all the burden of the development but the state gets the money.... Our jails are over crowded, streets need repairs, and our sewer is running at about 95 percent. The city infrastructure is maxed out. We have a housing shortage; people are living in motels waiting for rental places to open up. We just approved 24 new subdivisions this year; some are small only four houses, but that is a lot of growth in six months."

Schools are expecting a slight increase this year after closing five schools in the district because of falling numbers over the last several years. The number of children in the school system is significant, as they receive \$9,300 per student per year from the state. People would like to see more families move to town: they bemoan the large number of transient workers who generally "do things here they would never do in their own home town." One person reported that there were 4000 new workers in the area.

Community and Natural Resources

All the interviewed city council members, the police chief, and the mayor mentioned the need for cities such as Rock Springs to receive a larger portion of the state monies generated from mineral extraction companies. Such communities, they convincingly argue, bear the social and infrastructure burden of increased mineral production and exploration, yet do not get adequate funds to cover their increased expenses: "not enough state monies come to the municipalities. We need funds and legislation to improve our water, sewers, streets, police and telecommunications." These people see the need for well thought out zoning laws and guided development for the long run.

Another often-mentioned concern was what would happen to Sweetwater County when the oil and gas companies leave. People here want to make sure that while the minerals are being extracted the land and wildlife are left intact to a large extent for the

development of tourism and for "our way of life." Most people mentioned the need for diversity of economic development. Usually the next word out of people's mouths was "tourism." Numerous people mentioned the need to develop more white-collar jobs to keep the motivated youth in the region. Inevitably people commented on the "boom and bust cycle" of this region; there is an institutional memory of the huge boom of the 1970's. One person remembers, "It seemed like there was money falling out of everyone's pockets." Then as oil prices fell, the "man camps" were vacated and eventually torn down. The bust cycle exhausted Rock Springs for years. Many noted positively the technological advantages of directional drilling and of boring pipelines, which could play a significant role in developing oil and gas alongside tourism. There is optimism that this boom will be better managed and sustained. People here understand the need to drill, but want to keep their uninterrupted landscape and wildlife for themselves and so that they can build a vibrant tourism industry for the southwest corner of the state. The only other concrete example of economic development, which only one person mentioned, was that of investing in a four-year university to be set in Rock Springs.

SEPCo

Shell Exploration and Production Company has no recognizable presence in Rock Springs. People who were tuned into the business community noted the lack of visible presence by Shell: "I would think that the majority of people know who Shell is, but don't know where they are in Sweetwater County. Shell has not had a real visible presence in this county. I don't think it is a negative or a positive, I think it is probably neutral... SEPCo is kind of under the radar screen." They suggested becoming more of a partner in the community, holding meetings letting people know who they are and what they are doing, taking public comments, working with local groups, sponsoring events, etc. Numerous people pointed to Encana as a company that was a good social partner to this community.

Resource Management Shifts

A slight majority of people interviewed would not be opposed to SEPCo having one test location on otherwise winter restricted rangeland to drill as well as to research, monitor and document the effects on pronghorn, with the resounding caveat that they would not do this in a critical area (near bottleneck, or in the center of critical winter habitat) and that Shell would be held accountable to the data from the study. So, if independent biologists found a decline in antelope or other wildlife that they would work to bring those numbers back up, by stopping drilling mid-way through the project if need be or, improving surrounding habitat, or buying private land and giving it over to the public domain etc. One person convincingly argued for a "zero net loss of wildlife." Several people said that whether or not to let SEPCo do winter drilling was too vague, that they would need to see the details of such a proposal before they could pass judgment on something this important. It is generally believed that the large oil and gas companies will make enormous profits for their executives and shareholders from Wyoming resources and that they can afford mitigation measures to protect the land and wildlife. Several people noted the need for good science which we currently do not have; "most people base whatever judgments they have on anecdotal evidence, we need more good science."

Winter Drilling

When asked how they would feel about expanding to year-round drilling, most people thought that this would have a positive effect in stabilizing the economy. However, several people noted that there is already year-round drilling, these people (who tended to be more well informed and in tune with the industry and BLM) typically thought that it would not make much of a difference to the economy. Some agreed, "it would never happen." All of those interviewed emphasized the importance of protecting the wildlife, "The wildlife must be protected; all the possible contingencies must be considered." Another person noted, "I am not a wildlife specialist, but if they did it without affecting the wildlife, I would really be in favor of it. Those animals out there are pretty important to everyone who lives here, hunters... If they can do it environmentally responsibly then I think it would be good for us. There are certain things you can't do-- take the sage grouse-- there are lots of seasonal protections for them, and if we don't maintain the sage grouse herd [sic] and it becomes an endangered species, then we can kiss goodbye to all kinds of activity that they are doing now because there will be all kinds of additional controls and concerns. And so if they are going to go year round they got to make sure they keep up that sage grouse herd, or the party is over in my opinion."

Trust

The majority of the people interviewed indicated that they thought the local BLM office was a good community partner, yet they remained apprehensive of people from Washington D.C. and the outsider dictates: "This is Wyoming, don't trust any feds; now people pretty much like our local people, but not the Washington people who hand down the decisions and tell us what to do in our back yard." When asked how locals felt about federal land managers, comments ranged from positive ones like: "In my opinion, I think they do a good job. It is tough balancing the multi-use of the public lands, but we are fortunate in this area. We have access to the Flaming Gorge, the Wyoming Range Mountains, we have tremendous access." Then there were less favorable ones such as: "With suspicion. Most of these people are transitory, they are making decisions with their own career in mind. These people are unpredictable; what is important to them changes with personnel and time." Many people noted the willingness of the BLM to take public comments and work with the local communities. The local BLM managers are seen as "less adversarial" than other BLM offices. Numerous people also noted that their BLM office was currently understaffed. Several people mentioned that the BLM needed more people specifically to handle all the applications for drilling. People in Rock Springs do feel vulnerable to policy shifts from Washington. Two people noted that the mandates to the BLM office come from congress and not the executive branch of the government, however more people mentioned that they thought the upcoming elections could change the local atmosphere, "The community is vulnerable-- politicians in Washington make a big difference right now they are friendly to business, if Kerry gets elected things will slow down, and if Nader were to get elected the whole place would be shut down."

People's view of the mineral extraction companies was also mixed. One person thought that the mineral extraction companies were all great and that they would never do anything to compromise the integrity of the land or wildlife. One person's ingratiating answer reads, "[mineral extraction companies] are our friends and neighbors. And if you

are in Rock Springs you have to be excited about these companies because they are making huge capital investments in the community. Have you seen Halliburton's new building? It's a thirty million dollar investment. These companies are spending serious money in taxes. This is an industrial county and people here see the value of those companies." Another person's report on oil and gas companies was less enthusiastic, "The companies come in and they destroy the place and we get nothing." A voice of moderation explained, "It is two extremes, I am not sure there is any middle ground, you either love'em or you hate'em. Some people see them as people who come in and rape the landscape and take a mineral that we are never going to be able to have again. And then you have the people who work in the industry who see it as a huge benefit. There should be more middle ground where people compare the cost versus the benefits."

Most often people responded that extraction companies were an essential part of the community, but that they need to be regulated and watched in order to protect the land and wildlife: "Positively. Because of what it does for the economy, but at the same time I think locals believe that extraction companies need to be controlled so that they (industry) don't just tear up everything and leave town. They don't trust um, if you know what I mean.... Most people feel like that if we did not force them to be responsible they would not be responsible; we got to have some system of controls. But then it is funny because the BLM who creates the systems of control is also the enemy." People are generally excited about the amenities that come with economic prosperity brought on by this latest surge in oil and gas development; the majority of people mentioned the new Applebee's, Sonic, Wal-Mart and the proposed Home Depot. Others noted the increased traffic, drugs and crime that came with the development.

General Impact

Every person interviewed noted the vital importance of mineral extraction development for Sweetwater County; they also all also mentioned the essential role wildlife and access to public lands play in shaping the character of this community. When asked, "What role do the public lands and natural resources of the region play in shaping the character of the community?" The most common answer revolved around the word "huge." One person responded: "I think it is totally intertwined. All my friends are dependent on the public lands, we all hunt or fish, outdoor enthusiasts, that's why people live here, if you were to interview everyone in Green River and Rock Springs that would be it. I think it is just critical." Practically everyone mentioned trona, coal, gas, and oil when asked what resources were important for the community, others mentioned the Red Desert, national forests, Flaming George, diversity of people, and the youth. Within the totality of individuals interviewed there was a spectrum of people, some were more "business friendly" and leaned toward hastened development of mineral extraction, while others were more "green" and leaned toward the need to slow down the rate of exploration and production in order to ensure the protection of the land and wildlife. People who have been in this area since the boom in the 70s tended to want a manageable pace of development that will be sustainable for ten or more years. In their minds, this will help to lessen the negative impact on the community and help stabilize the economy. Hunting and fishing, among other outdoor activities, play a key role in shaping the ethos of this community; they are an enormous factor in rating the quality of life in Sweetwater County.

One cannot overstate the significance of public lands and wildlife in Sweetwater County. Access to public land is taken as a birthright by all Americans, and in Sweetwater County, this right taken more seriously than any other place with which Utz was familiar. Sweetwater County is in the "checkerboard:" 76 percent of the county is on public land and the majority of the extracting is done on public land. Anadarco, formally Union Pacific Railroad land, is the other primary landholder: "We are in the checkerboard pattern here. The majority of oil and gas exploration is on the public lands. Even when the development is on private land (once owned by the Union Pacific Railroad now Anadarco) you have to cross public land to get there. So multiple-use is a very popular sentiment here. "Mineral extraction (trona, coal, oil, and gas) is the primary economic driver for this community: "If the federal government decided that we were not going to drill for gas, then this community would go into a depression. It is more than a cornerstone; we are very concentrated in that."

"Multiple-use" is a buzzword for this community. Though multiple-use means different things to different people, in Rock Springs all agree that their needs to be a balance between development and conservation. Even the most hard-line, "business friendly" people thought that there were "some places that simply should not be drilled." The "greenest" person likewise thought that drilling needed to happen, albeit at a "more measured pace." Finding that balance between development and conservation will be a difficult task, and yet funding independent biological studies and making public their findings along with taking measured steps to protect the wildlife will go a long way with these communities in Sweetwater County.

Suggestions for Shell Exploration & Production Company in Sweetwater County:

- Protect wildlife populations and their habitat; this is the number one concern across the spectrum of people interviewed. Have a "zero net loss" policy toward wildlife numbers and habitat acreage.
- Sponsor independent wildlife studies and make their findings available to public.
- Be a good neighbor: listen to concerns of citizens, be active in the community.
- Lobby for the cap on funds that go to municipalities to be reversed so that cities, which are directly affected by the impact of the oil and gas development, can get the needed funds for infrastructure and social services.
- Drug Test- work with other companies and the police to weed out drug offenders or place them in rehabilitation centers.
- Project a positive image, let people know what you are doing to reduce the impact on the land and how you are working to maintain wildlife populations. Currently in Rock Springs Shell is "under the radar screen."
- Lobby for more BLM employees to handle applications and study wildlife, or work with other companies to fund additional employees.

Interview Data from Pinedale

For the Pinedale interviews a matrix of responses was constructed from the interview schedules with an initial sort of “newcomers” (less than ten years’ residence) and “oldtimers.” They were sorted on the general subjects of their community description, the most important issues facing the community, natural resource issues relating to the community, effects of possible resource management shifts, differences among interest groups, within the community and from the outside, level of trust of federal land managers and energy exploration companies, SEPCo’s presence specifically and a proposal for limited winter drilling, and finally the general impact of oil and gas development and particular interests of the interviewees.

Community

Pinedale residents have a justifiable fierce pride in its identity, starting with its “remote and beautiful location.” Most people also recognize that it is shifting from a predominant identification with “cow culture” to a “gas patch.” They recognize some shifts from a younger to an older population, from relatively poor to very wealthy, but still laud its safety in being on a U.S. highway, but not on a heavily trafficked interstate. Nevertheless, there continue to be constituencies that represent original ranching, longstanding oil and gas interests, newcomer wealthy retirees, and substantial numbers of state and federal government employees, with the recognition that the latter two receive their direction, income, and identity from elsewhere.

In describing the community, people talk about its remoteness, producing a recognition that they “depend on each other.” And recent changes are reflected in regret that a long-time resident “didn’t recognize anyone in the bank on Friday” to a newcomer professional saying that “change is good; growth is good.” While some fourth and fifth generation residents are adamant about continuing community values, other newcomers argue for the pristine values of small size and pure environment because they chose Pinedale. When asked what defines the community, most say, “the people,” with some recognizing that “anybody would say that.”

Issues

Most people are in agreement over the most important issues facing the community, summarized with the perception of a “huge structural change.” This translates into handling economic growth, increased population, housing subdivisions, and the speed of growth. More specifically, people talked about the need for more social services and law enforcement as well as medical care for an aging population. Others discussed infrastructure for water and sewer and overall planning and zoning to deal with the wells and septic tanks outside the city limits. The most frequently expressed concern was for affordable housing, often described as “cost of living.” But there are other socio-economic issues as well, including what one longstanding resident described as the growing dichotomy of wealth, with a recognition of an increasing gap between wealthy part-time residents and a new ethnic population doing service jobs that youth once did. Some bemoaned the lack of community commitment of both the “Houston people who fly in for seven days” and the “summer people who appear for a couple of months.” In addition, the rising cost of living increases the pressure for second jobs in each household that are not easily available and therefore contributes to a transient, commuting

population. In addition, there are few affordable places for single women to live, which increases the perception of a sex imbalance of young adults in the community and concomitant social problems. (It should be noted that census data does not pick up this demographic outcome.) These issues add up to a generalized worry about a “loss of character” in the community, which one person typified by the use of cell phones, so that people with big SUVs stuck in the snow don’t want help from local rescuers as they wait for AAA arrive.

Nevertheless, many people suggested that these problems are solvable with enough discussion and planning. Most expressed the hope and belief that people would come together to plan the pace and direction of growth.

Community Links with Natural Resources

The populace recognizes the “almost exclusive” links of the town to natural resources, whether it be through tourism, the “romantic but declining” history of ranching, oil and gas, or government work through two federal agencies and at least one state agency concerned with natural resources. One person put them in slightly different order: “100 percent, related to clean air, jobs, and beauty. Another reminded us that open space was largely due to the presence of cattle and that it was ironic that ranchers might be run off public land with subsequent forced sales of land to subdivisions or gentleman ranchers who cut off public access. Some asserted that eighty percent of the current workforce depended on oil and gas and provided ninety percent of the property tax, and representatives of oil and gas argued that it was “great that they were required to use low profile tanks and made to clean up the sites.” Another argued that the oil workers here were “some of the best, very professional.” Overall, people summed up the situation by saying that natural resources affect everything, even the grocery store, and that people needed to recognize the importance of “multiple use.” One person said natural resources “almost [are] the community. But some also ended with the caveat that they “don’t want the area harmed,” emphasizing sustainability and orderly development.

Resource Management Shifts

While comments about possible management shifts in public lands and natural resources sometimes mentioned the listing of sage grouse as an endangered species, limiting grazing permits, or spacing of drill rigs, the most likely topic addressed was BLM’s allowing exceptions to the stipulations against drilling in critical winter habitat. The most common assumption and the one promulgated by both the oil companies and the mayor is that winter drilling would “bring in families.” This change is thought to be positive, for a number of reasons. Even though the county is running headlong into authorizing a 1000 person “man-camp” in the old Exxon/Mobile site south of Big Piney, people in Pinedale express considerable worry that itinerant workers “have no community base.” Indeed, the sheriff talks about having to socialize workers into the expectations of the community, which might be easier if there was less turnover. Some argue that motels and restaurants would be full year round, that workers would spend money in Pinedale even if they didn’t live there, that the lack of experienced help would be improved, and that there would be a “better business inventory.”

If it were true that more families would move to Pinedale, it would affect schools, housing, and law enforcement. School administrators suggest that a hundred students could be absorbed in the system without a problem. Indeed, we were told that all

students from the fifth grade on have their own laptops and although there is already a swimming pool, the school is contemplating a new “aquatic center” next year. The sheriff’s office has doubled the number of deputies in the last ten years, has a new jail, and new offices in the county courthouse, and, except for a generalized worry about increased methamphetamine use, does not object to year round drilling - “It might keep the deputies out of trouble in the winter.” The really big unanswered question is housing. Housing is expensive now, even more than it has been for two decades, and most of the housing plans appearing before Planning and Zoning in the county do not fall in the range of “affordability,” but are rather dispersed housing on two to five acre lots. The few rental houses within the city limits were consistently described as “rented before they were finished.” In addition, the population of the town of Pinedale is well aware that its sewer and water system needs to be improved, raising the issue of the imbalance between city and county revenues.

Pinedale residents are hungry for “facts rather than PR” about the pace and extent of development, from both the energy companies and BLM. Many want to err on the side of caution in terms of energy development, and especially those with a memory of the Exxon boom in the early 1980s think that energy booms and busts are moderated when there is a diversity of investments. Many are concerned that there is so little effort to work on alternative energy, recognizing that there has been little incentive to do so since the Reagan administration. But others simply emphasize that there needs to be the “will to make this a showcase,” and to “drill in the most friendly way.”

Interest Groups

We asked both about conflicts among interest groups within the community and differences between local and non-local groups about development issues. Within the community people were somewhat reluctant to draw any clear lines, although there were differences in how people hoped the pace of development would play out. Early we had heard that a speed up in the rate of drilling might have a less longstanding impact, especially on wildlife populations. But many people, both those who favored drilling and development and those who had broader environmental concerns, talked about “dragging it out,” that is stretching out both the impact and the returns from gas development. They also often surmised that energy companies would prefer to move quickly while prices were high.

Overall pro-development citizens are reluctant to demonize environmentalists. Sometimes people contrasted those who would “not drill at all” to those who wanted to “rape and pillage,” but there was little indication that they thought either of those groups existed. Perhaps the biggest differences surround the well-being of wildlife. Everyone is aware that they live in a big game migration route. Everyone wants to protect wildlife. Some think wildlife cohabit quite comfortably with roads, tanks, trucks, and ATVs. Others think research must be long-term and precise to measure wildlife impact. Many think that it is possible to “come together” over these issues, and that the Trapper’s Point group produced some positive and unexpected outcomes. Most acknowledged one way or another that fenced subdivisions are probably much more harmful to wildlife migration than drilling pads, but we detected little resistance to the expansion of housing stock either from our interviews or the Planning and Zoning meeting in August.

Differences between local and non-local groups are less clear, starting with the question about who is “non-local?” They are not mostly identified as national

environmental groups, but more likely the Wyoming Outdoor Council, Wildlife Society, Greater Yellowstone Coalition, and maybe people from Salt Lake, or Rock Springs? More than one interviewee, both newcomers and oldtimers, mentioned that the Conservation Congress in May included a high proportion of non-Sublette license plates on large SUVs in the parking lot. And some people feel that non-local groups and rhetoric influence local activist groups, but others think the conservationist groups are about ten years too late. There is, however, a sentiment that “everybody cares,” even if they are temporary workers. Few think the populace is oblivious to the fact that Pinedale is “a jewel.” But being “local” is an important credential. One person who had lived in Pinedale for less than four years said that you see the issues differently when you are living in the situation.

Trust

We asked a series of questions around the general level of trust community people had about federal and state land managers, oil and gas companies, and SEPCo in particular. Interviewees had relatively little to say about federal land managers, and most of that focused on BLM. The Bureau of Land Management, the Forest Service and Game and Fish are all really a fact of life in Pinedale and “always” have been. If there was a common view it is that 1) people distrust federal policy makers, 2) local officials' hands are essentially tied in terms of policy decisions, and 3) most people like the local government people a lot more than people in Denver or Washington.

In terms of energy companies, some commented that it depended on whether or not you were making money from the energy development. But many shared a general distrust because they, like the government, are “big.” More surprising was the way interviewees turned the question to a self-reflective one. Although our last questions were about impacts of oil and gas development, it was as if people couldn't wait. They turned the question about energy companies into a discussion about themselves, some complaining that ranchers were all sent “stinky lease” proposals, some talking about “enjoying the prosperity” or the advantages of the Houston plane traffic. But a surprising number also reflected a real discomfort with their new wealth. Some made statements such as “the industry has made us painfully rich,” and found it “repulsive,” that “we need to spread the wealth around” for instance with the children on the reservation just over the mountains, that the “legislature knows we are filthy rich,” and that “when we were poor, people used to just do things; now they expect to be paid for everything.” These comments are really not about the energy extraction industry; they are instead a reflection of concern about community. And perhaps that is an accurate indication of the industry's presence. One person said that the standard was set for the gas industry a dozen years ago, and Pinedale has a very professional representation of people working in oil and gas. Nevertheless, townspeople worry about how they will wisely invest their newfound wealth so that they can sustain their well-being after the boom.

We always identified ourselves as under contract to SEPCo, without restraints on our work, so some people might have been graciously positive about Shell. On the other hand, no one took it as an opportunity to “vent.” More people were aware of the SEPCo building than of the number of employees in it, either relocated or hired locally. Beyond that, people tended to enumerate contributions to their particular causes, whether catering, the airport, recycling, teaching units, scholarships, the 4-H livestock sale, or supporting non-profits generally, not always being completely sure about which company should be

credited. There were a few cynical comments about “throwing money around,” but one of the most concerned old timers asserted a “skeptical optimism about SPECo.” Some people felt that SEPCo had made a “huge effort to do better,” and that “they appreciate that they are making a lot of money here.”

Winter Drilling

The question about winter drilling, sometimes obliquely addressed under “management shifts” but directly at the end of the interview, drew three kinds of answers. A majority (ten) favored it, thought it was “just fine,” “helpful,” “no problem” for various reasons of stability, little impact, confidence that Shell would protect the wildlife, “as long as it was up on the mesa.” Another seven were much more cautious, giving a mixture of caveats that there should be monitoring of emissions, that the public should know more about the fracturing products being used, that we must be responsible to the sage grouse and migrating herds, and that the parameters would have to be very specific. At the same time several of these people said the wildlife issue had been studied to death, that the research is self-serving and resented that they should be thrilled that it was being offered. Only four people clearly did not support it, but two of them thought it was inevitable that BLM would grant it, given the Questar precedent. Only two people said that it was “horrible,” “hypocritical,” and “illegal.” There was almost an equal number of “oldtimers” and “newcomers” in each of those categories.

The question about winter drilling, however, did elicit a number of concerns about “the products used in the field,” about air emissions, especially nitrous oxide, suggesting that flareless technology and directional drilling should be as normal as lead-free gasoline, and wondering whether the evaporation ponds might be creating a micro-climate. Several people offered that they expected SPECo to be responsible to the wildlife, the terrain, and the air quality.

General Impact

The last page of our interview asked open-ended questions about overall impact of oil and gas development. Most people used words like “tremendous,” or “huge,” and often mentioned the increased funding for the schools, the library, or the courthouse. And some allowed that “growth can’t be stopped anyway” or less positively that [a particular company, not SEPCo] was “slathering money out to everyone, and that obligates passivity down the road.” Several people recognized real dangers in being wealthy” in terms of maintenance costs down the road. And for that reason, some talked of the need for a more diversified economy, and making royalties support the county for forty years, while others said “the bust” is a fact of life in Wyoming. One person said that “an awful lot is being blamed on the oil industry, but that’s not fair if you drive a Yukon XL.”

In terms of particular concerns, Pinedale people reiterated the need for more affordable housing, perhaps rerouting some truck traffic, increasing concerns about methamphetamine use, and the need for better cooperation and planning between the city and the county, perhaps with a joint powers board or low cost loans to the city to upgrade its infrastructure.

South County

The six people we talked to in the southern part of Sublette County were all long-term public figures from city government, the school system, a businessperson, and a former county commissioner. All had been in their occupational positions for about thirty years and had lived in Marbleton or Big Piney for forty or more years. These citizens made it clear that while only thirty miles from Pinedale, these communities are different, as denoted by the vernacular “South County, desert people.” And although Marbleton and Big Piney are nearly adjacent and now connected by a bike path, some think these two communities are different from each other, mainly defined (proudly) by who is more “working class,” “younger and more active.”

The most important issues mentioned in the communities, not unlike in Pinedale, are issues of housing and infrastructure, particularly water, and telephone service, but also health care, since there is no hospital. But one way or another, whether in talking about development generally or oil companies in particular, there is an indelible memory of previous energy booms and busts. Most particularly is the Exxon boom of the 1980s, having built a school system to accommodate 500 students, and then being left to refinance it several times when Exxon’s “Phase Two” never materialized. But there is also the legacy of the Enron (now EOG) crash, leaving many retirees financially devastated. So the concern about the pace and duration of development effects is both public and individual.

While people think BLM, the most conspicuous public land agency, is slow and difficult to work with, most hope they will approve year round drilling to encourage more people to stay in town. There is worry about drugs coming in to the communities, but most people think that the general impact of Jonah and now PAPA is “a lot more people with a lot more income” and more money for public facilities as well. But to a far greater extent than in Pinedale, with its tourists, ranches and more developed arts community, the South County worries about “making it last.” And also, perhaps because of its closer proximity to the field, we heard concerns about air quality and toxic waste, although no one could think of (environmental) conflicts in the community, except for hoping they would “keep spraying the mosquitoes.” Concern about antelope habitat was almost considered a joke, a “waste of research money,” but the lower profile tanks at the well sites were thought to give the eagles less of an advantage in killing sage chickens.

Sublette County Summary

Current Issues

The communities of the Upper Green River Valley face a number of daunting current problems that will take concerted efforts by their citizens to resolve. Perhaps the largest is a legislative one in relation to financing the necessary infrastructure for a growing and changing population, so that there is less of an imbalance between wealth of the county and the resources and responsibilities of the communities. Secondly, stable, growing communities depend on the availability of affordable housing, which is in especially short supply in Pinedale. Related to that is greater planning and control on sprawl, both in terms of available water, sewer and roads, but more importantly for the continued sense of community as Pinedale shifts from a ranching identity to one associated with both oil and gas and retiree/second home residents while maintaining amenities for tourism. Finally, if the communities want to attract families, they will not

only have to be pro-active about housing, but also about “second job” opportunities beyond the seasonal service jobs going unfilled, so that spouses and children can afford to leave good jobs elsewhere in order to move to Pinedale.

Oil and Gas Production

Those issues associated specifically with the tremendous growth of oil and gas production are first, the wise investment of increasing tax revenue so that they can secure the future rather than burden the future. This may mean that citizens should think about investment in human and social capital and not predominantly about physical capital construction. No less important is a concerted insistence on the monitoring of environmental effects on air, water, wildlife, and migration habitat. Clear air and visibility of the surrounding mountain ranges and safe and plentiful water are defining characteristics of the Upper Green River Valley. No amount of built cultural amenities will substitute for the pristine beauty of the county. Communities and energy companies should give more attention to a large and growing transient population of males without families, and imminent increases in both nuisance crimes and drug induced violence that comes with workers without a commitment to community. The prospect of a 1000 space “man camp” with only a basketball hoop and a horseshoe pit for recreation should cause more concern than was expressed at the August Planning and Zoning meeting. Housing also has implications for tourism. When motel parking lots are filled with pick-ups that have obviously come off the mesa and energy companies hold blocks of rooms for their mobile employees, not only the availability of lodging for tourists but the atmosphere of the town for tourism is affected.

Winter Drilling

Winter drilling would very likely increase local revenues, retail sales, motel occupancy, sales, tax, and county royalties. With a plausible scenario of drilling over five to ten years (the estimates vary wildly, and the energy companies may not themselves know) projected relocation of families and impacts on the school system seems eminently absorbable. More stable employment would likely have other positive social effects on the communities but, once again, that would come with increased demands on affordable housing, and likely increased medical and social services. And we reiterate that affirmative measures will probably have to be taken to increase opportunities for spousal hires if winter drilling on more than an experimental basis is to have any impact, positive or negative, on the community.

We have not addressed the issues of winter drilling on hunting, fishing, sage grouse populations and herd migration, because other researchers are better equipped to do that and are in the process of contributing that research. We think, however, that it is important to end with a reminder about why people live in Pinedale and Sublette County: because it is a precious place and nearly everyone would agree that it must be preserved. Whether they look to the mountains, look to the meadows, or look to the mesa, those who profit from its vast and varied resources must take great care not to destroy a spectacular crossroads of nature and community.

Appendix A

Sublette and Sweetwater County Interviewees

Ray Adame, Public Affairs Officer, BLM Rock Springs Office
 Roger Bankert, Associate Field Manager, Pinedale BLM Field Office
 Chad Banks, Marketing Director, Sweetwater Events Complex
 Vicki Brown, Big Piney Town Clerk and Treasurer
 Emma Bromley, Big Piney High School Secretary
 Hank Castilla, Assistant Field Manager, BLM Rock Springs Office
 Kathy Gilbert, Rock Spring City Council member, regional editor, newspaper
 Alice Griggs, Marbleton Town Clerk and Treasurer
 Charles Grove, Superintendent, Sublette County School District #1
 David Hank, Director, Sweetwater County Chamber of Commerce
 Laurie Hartwig, Director, Sublette County Historical Society and Museum of the
 Mountain Man
 Gordon Johnston, Sublette County Commissioner
 Bob Jones, Operations Manager, SEPCo, Pinedale
 Carmel Kail, Archeologist, Environmental Consultant
 Timothy Kaumo, Mayor of Rock Springs
 Gale Kinnison, Owner, Bottoms Up Brew Pub, Pinedale
 Neil Kourbelas, Rock Springs City Council, retired Police Chief
 Susan Kramer, Pinedale Recycling Coordinator
 Carole Kruse, Planner, Pinedale BLM Field Office
 Chris and Julie Land, building contractor, Pinedale residents
 Mike Lopiccolo, Rock Spring Public Schools Human Resources Director
 Mike Lowell, Rock Springs Chief of Police
 Prill Mecham, Field Manager, Pinedale BLM Field Office
 Jocelyn Moore, Sublette County Director of Planning and Zoning
 Janice Nelson, Administrative Assistant, SEPCo, Pinedale
 Ann Noble, Historian and Rancher, Cora
 Monte Olsen, Wyoming House of Representatives, Professional Skier
 Patricia Robbins, Director, Sweetwater Economic Development Association
 Hank Ruland, Sublette County Sheriff
 Kathy and Eric Sechrist, Sublette County Chamber of Commerce
 Steve Shea, Rock Springs City Council, Wyoming House of Representatives
 Rose Skinner, Mayor of Pinedale
 Robb Slaughter, Sweetwater County Treasurer
 Albert Sommers, Rancher, Pinedale
 Dan Stroud, Habitat Biologist, Wyoming Game and Fish, Pinedale Office
 Helen and Bob Tanner, business people, former county commissioner, Marbleton
 David Tate, Rock Springs City Council, Manager, Trona Valley Community Federal
 Credit Union
 Craig Thompson, Professor, Western Wyoming Community College
 Ted Ware, President, American National Bank, Sweetwater County Commissioner
 Sharron Ziegler, Administrative Assistant, Sublette County School District #1

Appendix B

Analysis of the PAPA Draft Environment Impact Statement

The Draft Environmental Impact Statement (DEIS), Final Environmental Impact Statement (FEIS) and the Record of Decision (ROD) for the Pinedale Anticline Oil and Gas Exploration and Development Project all grapple with the issue of multiple use within the context of extracting the natural resource while maintaining the environmental and biological integrity of the area. Since the ROD was issued in 2000 much of the DEIS and FEIS have been modified through the process of Adaptive Resource Management therefore this discussion addresses broad socioeconomic issues that are still relevant.

Much of the DEIS is devoted to documenting the extensiveness of the oil and gas resources within the lease holdings, some of which were let in the 1950s. Space is also devoted to discussing the varied wildlife and their habitat, with special attention given to critical range, migration routes and mating behavior. Also as required by law there is some discussion of economic and social effects of Federal actions. These latter effects are discussed in the following paragraphs.

According to the DEIS "there are no minority populations, low-income populations, or Indian tribes in the area affected by any of the alternatives (i.e., Sublette County)" (BLM, p. 4-13). This conclusion is based on 1990 census data that showed that the county was predominately white. True. Yet, the document fails to address the issue of low-income populations.

Based on comments received during scoping for socioeconomic resources the BLM concluded that there would be substantial positive economic impacts along with additional costs associated with services and potential decline in tourism. Ten potential socioeconomic factors were identified including job creation and higher tax revenue, possible costs of development to local government, reduction of tourism, recreation impacts, necessity of expanded medical facilities, impact on wildlife resources and the necessity of making the impact steady versus boom growth. Much of the actual data presented in the DEIS documents positive impacts of job creation and increased tax revenues (see Tables 4-4, 4-5, 4-6, 4-7 and 4-8 in the DEIS). One of the most interesting socioeconomic points was item 6 (p. 4-14) that would "require operators to provide funds to be used for community and state investment against social impacts caused by the boom, including the impact of the bust after the construction phase." Also noted was the possible increased demand for housing; yet, the document also states that there should be no significant impact on employment since most hires will be non-locals (based on Jonah II field experience). The DEIS concludes that the PAPA development would not be like the "projects that resulted in the 'boom and bust' economies that southwest Wyoming experienced in the 1980s" (DEIS 4-15). That conclusion was based on the lack of numerous projects occurring at the same time and the lack of a need of large man camps or temporary population increases.

The extensive positive economic benefits to Sublette, Wyoming and the U.S. were based on \$1.70/thousand cubic feet of gas and \$10 per barrel of condensate. With soaring gas prices these data underestimate the economic benefits of oil and gas development.

The DEIS also notes the possible impact on schools (excess capacity of 100 to 150), fire districts (that would benefit from tax revenues), medical services (current demand due to increase recreational users as well as increased revenue to the Rural Health Care District from taxes). The report discusses the possibility a reduction the value of property adjacent to wells, which could be mitigated by distance and restriction of drilling in sensitive resource management zones including residential areas (Sensitive Resource Management Zone).

Increased transportation problems are noted as a possibility in the DEIS with most mitigation efforts falling into voluntary compliance with such recommendations as car-pooling, speed laws and concerns with sensitive areas. Emphasis was placed on existing roads in the PAPA and the use of existing right-of-way for possible pipelines. The possibility of increased dust in the area and its impact on residents and recreationists was discussed. Seasonal restrictions (November 15 through April 30) would restrict transportation within migration routes for large game. Finally, the necessity for 24 hour traffic in and out of the field is noted, but mitigation is not suggested other than traffic would be directed towards Rock Springs. Also, pad drilling with multiple wells is suggested as a way to reduce traffic.

Finally the DEIS discusses possible noise and odor impacts from drilling and flaring. Mitigation efforts for these problems are dealt with through distance of wells from residential areas and by Sublette County's odor standard (also by DEQ standards).

Comments

Although the FEIS addresses some issues raised by the oil and gas industry, state agencies, county residents and external groups, it is primarily valuable for the letters submitted during the comment period regarding the DEIS. These comments raised significant issues in 1999 about possible impacts (positive and negative) associated with development of PAPA. Many of these concerns are still significant five years later. A total 107 individual letters voiced diverse concerns relative to drilling on the PAPA. Letters, some varying from less than a page to nine pages plus attachments, were content analyzed. Each letter was coded by three different researchers in regard to its main points (BLM responded to each letter but these responses seem less significant for tapping the county's, state's and industry's views regarding oil and gas development on the Pinedale Anticline).

The letters and their comments were categorized into several constituency or stakeholder groups including: oil and gas industry, local, state, and federal government, ranchers, environmentalists, recreationalists, homeowners/landowners, and others including those outside the county (these latter three groups were difficult to pigeonhole and represent some overlap of concern).

Perhaps the most consistent group in terms of their letters is the twelve industry representatives. Generally their comments centered around spacing of wells (closer is better); economic infeasibility of pad drilling, particularly the cost of directional drilling; the limited number of drilling rigs allowed on the mesa at any one time; winter stipulations that closed the mesa to drilling from November 15 to April 30; and restrictions on drilling near "critical habitat." Of lesser concern were restrictions on roads, collection points (central production facilities being not feasible), compressors, night drilling, and emissions constraints (air, noise and water). In general, their comments centered on being able to drill faster, closer together, and year-round. Others thought that

potential harm to sage grouse was over stated, while others thought BLM used inappropriate models to estimate noise and air pollution. The mitigation restrictions were consistently referred to as a "taking."

Government officials (eight agencies) were concerned about their agency's specialization. For example, the National Park Service was concerned about possible air pollution moving into the national parks (they thought predicted levels of emissions was acceptable); the state Game and Fish division was concerned about protecting migration corridors and "critical habitat" and favored a go slow plan for development with winter stipulations in tact. Generally, state and federal officials thought that the models provided in the DEIS were adequate and they favored a plan that protected the natural resources while allowing some drilling. Fish and Wildlife (Department of Interior) wanted more quantitative data and advocated that the Endangered Species Act be enforced. EPA was concerned about Nitrogen Oxide emissions and possible destruction of wetlands. Other agencies simply voiced confidence in the DEIS and commended BLM for a job well done. One local official, Mayor Skinner was very supportive of the oil and gas development and foresaw economic benefits for Pinedale.

"Multiple use" was the defining comment by ranchers (four identifiable). Obviously, they were concerned about protecting grazing rights and how much destruction would occur to grasslands. Also, ranchers commented on water quality and the necessity to protect both surface water and aquifers. Fair compensation for surface disruption was a concern for some ranchers who ranched on split estates (generally where BLM owned the subsurface rights). Traffic in terms of volume and speed was an issue for several ranchers. One noted that in the previous year three cattle had been killed when hit by vehicles. Ranchers were aware of the necessity to obtain oil and gas, were aware of the economic benefits to the county, and were supportive of the paced development and protection for wildlife. Generally they thought adaptive resource planning was a good idea.

Environmentalists/conservationists (ten formal groups) placed emphasis on preserving existing ecosystems. Among this group there was some agreement that more "good" science projects were needed to monitor migration corridors, animal reproductive success and quality of habitat. These individuals were also concerned about air, water and noise pollution associated with extensive drilling on the mesa. As a priority water should be available for wildlife. Environmentalists/conservationists strongly supported mitigation programs based on long term monitoring. They favored forcing the oil and gas industry to meet all environmental quality standards and to expand monitoring, especially in the national forest. Environmentalists/conservationists most strongly advocated staged development, fewer wells, and maintenance of the winter drilling restrictions. These groups advocated a policy of "no net loss of habitat," and that fences should be permissive (no bottom barbs along with height restriction of the bottom wire). Evaluating cumulative impacts was also mentioned.

Recreation users (comprised of individuals in several categories) were concerned with maintaining critical habitat for wildlife and migration corridors. Hunting and fishing was emphasized many comments, particularly those from out-of-county and out-of-state. Also, a number of individuals discussed the importance of wildlife viewing as personal recreation, but also in attracting tourists to the area (some thought recreation from tourism would have a greater long term impact than oil and gas). Several

commentors recommended maintaining the winter restrictions, while others were concerned about the impact of night lighting, drilling noise and increased traffic on their recreational experience.

Homeowner (six identified) comments covered a number of topics including noise and light pollution associated with 24-hour drilling. Also significant for homeowners was the increased traffic, especially on Tyler Street. Dust coming from the truck traffic on the mesa was also a concern. Viewshed was likewise mentioned in terms of drilling on top of the mesa. Finally, homeowners commented on the need for a buffer zone around Pinedale of up to six miles. Several voiced their concerns about disposal of hazardous waste.

The residual category, "other," provide the greatest range of letters although the vast majority of the comments within those letters tended to oppose rapid development of the PAPA (55 comments) while a minority supported development (ten comments). Generally, those in support of development talked about multiple use, balance, jobs, excessive restrictions and positive mitigation efforts. Among those opposed to development as specified in the DEIS, thirteen noted the need for limited number of pads and wells and another ten wanted development to move forward slowly (cautiously). No new leasing was advocated in eight of the letters. Other comments focused on the need for winter restraints, good monitoring (paid for by the industry), water and air protection, maintenance of mesa viewshed, necessity for centralized production facilities, and the value of wildlife/scenery for today and future generations. Finally, several writers commented on the need for sagebrush ecosystem maintenance and for the need of good restoration/revegetation efforts.

Appendix C

Wyoming Rural Development Council Analysis for Sublette County

May 6-8, 2002, the Wyoming Rural Development Council under the direction of Mary Randolph conducted an assessment for Sublette County. The assessment involved community open houses in which citizens were encouraged to address three specific questions or issues including:

What are the major problems/challenges in the community?

What are the major strengths/assets of the community?

What projects would you like to see implemented in your community in the next two, five, ten or twenty years?

Comments were coded into broad categories by a University of Wyoming sociology graduate student. Under major problems or challenges 217 comments were condensed into six areas: economics, social issues, transportation/ communication, government, environment and oil and gas development. Within these broad categories more specific codes were created. For example, under economic issues there were 64 comments including lack of ecotourism (nine), lack of jobs for youth (eight), low wages (five) and high cost of living (eight). Likewise the 78 comments pertaining social issues were subcategorized with health issues (sixteen) most often noted followed by school related issues (eleven), lack of day care (ten) and affordable housing (ten). Only 34 comments noted a problem with transportation/communications and these were concentrated in "lack of infrastructure" (ten), "lack of high speed internet" (seven), limited air transportation (six) and long distance telephone service (five). Of the 34 comments regarding governmental issues twelve noted the lack of direction/planning. Other comments centered on state/community relations (five), community/federal relations (five) while four comments noted the lack of law and order. Eight individual commented on the north/south divide within Sublette County. Eight individuals noted an erosion of the environment while nine others noted problems associated with the oil and gas development.

The 174 comments regarding community assets were coded into three broad categories: cultural, economic, and social with one additional comment made regarding the high quality of local government. The 72 comments regarding cultural assets were concentrated in four categories. Eight comments noted the county's cultural heritage centered around a cowboy ethos. The tight sense of community was noted by 34 comments while an additional nineteen comments recognized the value of the land and quality of life. Finally, ten comments noted the importance of the Museum of the Mountain Man and of archeological artifacts. Obviously, residents view their physical location, western lifestyle and strong sense of community as important community assets.

The 191 suggestions for future projects were condensed into four broad categories: cultural (26), economic (52), social (62) and government (51). Although there was a wide range of cultural comments, eleven people noted the need for a visitor center/ chamber of commerce building, four suggested the need for additional signage and four more hoped the community would maintain and/or expand its western theme. Fifty-two comments that noted the need for economic projects were varied but most often mentioned was community physical improvements/ facelift (12), improved infrastructure/

streets (nine), general economic development/ diversification (seven), need for more small businesses/ shopping (six), and need for high speed internet (six). Just over half (32) of the 62 comments regarding social projects noted the need for more service facilities (recreation in general and youth oriented in specific). Eleven other comments opted for more health services while five noted the lack of affordable housing. More than one third (eighteen) of the comments regarding future government projects wanted improvements in the community's infrastructure. The need for zoning laws/ planned development was noted by nine comments. Likewise improved transportation and long term city/county planning were received nine comments each.

The large number of comments received at the community meetings attests to the civic involvement of Sublette County residents. Generally, comments regarding community assets focused on more intangible qualities such as western lifestyle and sense of community/unity. On the other hand, comments regarding problems or challenge tended to include tangible items such as improved infrastructure, affordable housing, and economic diversification. Central to the current oil and gas development and recent population growth were the diverse comments regarding planned growth and the need for better zoning regulations.

Appendix 4: Sublette and Sweetwater County Tables

Sublette County

Table 1: Population by Town, Sublette County, and Wyoming, 1950-2002

Year	Marbleton	Big Piney	Pinedale	Sublette County	Wyoming
1950	20	206	770	2,481	290,529
1960	189	663	965	3,778	330,066
1970	223	570	948	3,755	332,416
1980	537	530	1,066	4,548	469,557
1990	634	454	1,181	4,843	453,558
2000	720	408	1,412	5,920	493,785
2002	762	428	1,464	6,240	498,703

Source: US Census, Populations estimates branch

Table 2: Population Change by Town, Sublette County and Wyoming, 1950-2000

Decade	Marbleton	Big Piney	Pinedale	Sublette County	Wyoming
1950/1960	+169 (840.5%)	+457 (221.8%)	+195 (25.3%)	+1297 (52.3%)	+39,537 (13.6%)
1960/1970	+34 (18.0%)	-93 (14.0%)	-17 (1.8%)	-23 (0.6%)	+2,350 (0.7%)
1970/1980	+314 (140.8%)	-40 (7.0%)	+118 (12.4%)	+793 (21.1%)	+137,141 (41.3%)
1980/1990	+97 (18.1%)	-76 (14.3%)	+115 (10.8%)	+295 (6.5%)	-15,999 (3.4%)
1990/2000	+86 (13.6%)	-46 (10.1%)	+231 (20.0%)	+1077 (22.2%)	+40,227 (8.9%)

Source: Wyoming Department of A & I, Division of Economic Analysis

Table 3: Population Age Distribution by Town and Sublette County, 2000

Age	Sublette County	Pinedale	Big Piney	Marbleton	Bondurant	Daniel	Cora	Boulder	Calpet
Under 5	348 (5.9%)	97 (6.9%)	28 (6.1%)	65 (9.0%)	6 (3.9%)	6 (6.7%)	2 (2.6%)	—	—
5 to 9	397 (6.7%)	92 (6.5%)	29 (7.1%)	49 (6.8%)	2 (1.3%)	4 (4.5%)	2 (2.6%)	1 (3.3%)	—
10 to 14	489 (8.3%)	105 (7.4%)	39 (9.6%)	71 (9.9%)	5 (3.2%)	6 (6.7%)	3 (3.9%)	1 (3.3%)	1 (14.3%)
15 to 19	403 (6.8%)	76 (5.4%)	31 (7.6%)	48 (6.7%)	13 (8.4%)	3 (3.4%)	5 (6.6%)	2 (6.7%)	1 (14.3%)
20 to 24	244 (4.1%)	67 (4.7%)	19 (4.7%)	49 (6.8%)	9 (5.8%)	1 (1.1%)	1 (1.3%)	1 (3.3%)	—
25 to 34	606 (10.2%)	181 (12.8%)	47 (11.5%)	97 (13.5%)	11 (7.1%)	4 (4.5%)	6 (7.9%)	3 (10.0%)	—
35 to 44	1021 (17.2%)	195 (13.8%)	81 (19.9%)	141 (19.6%)	33 (21.3%)	24 (27.0%)	15 (19.7%)	6 (20.0%)	—
45 to 54	1049 (17.7%)	246 (17.4%)	44 (10.8%)	90 (12.5%)	35 (22.6%)	16 (18.0%)	12 (15.8%)	7 (23.3%)	5 (71.4%)
55 to 59	358 (6.0%)	62 (4.4%)	23 (5.6%)	40 (5.6%)	10 (6.5%)	8 (9.0%)	5 (6.6%)	2 (6.7%)	—
60 to 64	294 (5.0%)	63 (4.5%)	23 (5.6%)	33 (4.6%)	4 (2.6%)	6 (6.7%)	6 (7.9%)	2 (6.7%)	—
65 to 74	427 (7.2%)	106 (7.5%)	24 (5.9%)	26 (3.6%)	20 (12.9%)	3 (3.4%)	13 (17.1%)	4 (13.3%)	—
75 to 84	212 (3.6%)	77 (5.5%)	16 (3.9%)	8 (1.1%)	7 (4.5%)	6 (6.7%)	5 (6.6%)	1 (3.3%)	—
85 and over	72 (1.2%)	45 (3.2%)	4 (1.0%)	3 (0.4%)	—	2 (2.2%)	1 (1.3%)	—	—
Median	39.8	39.2	37.1	33.6	44.3	44.1	48.0	46.0	49.5

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

Table 4: Sex Ratio for Sublette County, 1970-2000

Age	1970		1980		1990		2000	
	Male	Female	Male	Female	Male	Female	Male	Female
Under 5	54.0%	46.0%	54.9%	45.1%	52.8%	47.2%	49.4%	50.6%
5 to 9	49.8%	50.2%	51.7%	48.3%	56.6%	43.4%	50.9%	49.1%
10 to 14	51.3%	48.7%	50.9%	49.1%	49.9%	50.1%	51.1%	48.9%
15 to 19	49.8%	50.2%	55.2%	44.8%	56.7%	43.3%	54.3%	45.7%
20 to 24	47.6%	52.4%	53.6%	46.4%	55.6%	44.4%	49.2%	50.8%
25 to 34	49.8%	50.2%	53.7%	46.3%	52.0%	48.0%	50.0%	50.0%
35 to 44	53.7%	46.3%	50.3%	49.7%	52.0%	48.0%	51.5%	48.5%
45 to 54	52.5%	47.5%	53.0%	47.0%	50.1%	49.9%	51.6%	48.4%
55 to 59	60.9%	39.1%	46.8%	53.2%	53.9%	46.1%	49.2%	50.8%
60 to 64	48.6%	41.4%	58.1%	41.9%	*	*	53.4%	46.6%
65 to 74	52.5%	47.5%	51.5%	48.5%	50.7%	49.3%	52.9%	47.1%
75 to 84	34.9%	65.1%	43.5%	56.5%	43.5%	56.5%	49.1%	50.9%
85 and over	16.6%	83.4%	32.0%	68.0%	22.2%	77.8%	37.5%	62.5%

* In 1990 age categories 55-59 and 60-64 were combined

Source: U.S. Census Bureau

Table 5: Sex Ratio for Selected Towns in Sublette County, 2000

Age	Marbleton		Big Piney		Pinedale	
	Male	Female	Male	Female	Male	Female
Under 5	49.2%	50.8%	50.0%	50.0%	45.4%	54.6%
5 to 9	57.1%	42.9%	48.3%	51.7%	50.0%	50.0%
10 to 14	47.9%	52.1%	43.6%	56.4%	55.2%	44.8%
15 to 19	52.1%	47.9%	48.4%	51.6%	58.0%	42.0%
20 to 24	42.9%	57.1%	68.4%	31.6%	46.3%	53.7%
25 to 34	56.7%	43.3%	46.8%	53.2%	48.6%	51.4%
35 to 44	53.2%	46.8%	55.6%	44.4%	49.2%	50.8%
45 to 54	50.5%	49.5%	43.2%	56.8%	54.1%	45.9%
55 to 59	45.0%	55.0%	47.8%	52.2%	53.2%	46.8%
60 to 64	63.6%	36.4%	47.8%	52.2%	55.6%	44.4%
65 to 74	46.2%	53.8%	58.3%	41.7%	48.1%	51.9%
75 to 84	37.5%	62.5%	43.8%	56.2%	39.0%	61.0%
85 and over	33.3%	66.7%	25.0%	75.0%	31.1%	68.9%

Source: U.S. Census Bureau

Table 6: Race, Hispanic or Latino by Town, Sublette County and Wyoming, 2000

Location	White	Hispanic	Black	American Indian	Asian	Pacific Islander	Other	2 or More Races
Wyoming	454,670 (92.1%)	31,669 (6.4%)	3,722 (0.8%)	11,133 (2.3%)	2,771 (0.6%)	302 (0.1%)	12,301 (2.5%)	8,883 (1.8%)
Sublette County	5,771 (97.55%)	112 (1.9%)	12 (0.2%)	29 (0.5%)	14 (0.6%)	5 (0.1%)	31 (0.5%)	58 (1.0%)
Pinedale	1369 (97.0%)	21 (1.5%)	5 (0.4%)	10 (0.7%)	2 (0.1%)	2 (0.1%)	6 (0.4%)	18 (1.3%)
Big Piney	402 (98.5%)	7 (1.7%)	—	4 (1.0%)	—	—	—	2 (0.5%)
Marbleton	693 (96.3%)	12 (1.7%)	3 (0.4%)	5 (0.7%)	3 (0.4%)	1 (0.1%)	4 (0.6%)	11 (1.5%)
Bondurant	152 (98.1%)	7 (4.5%)	—	—	—	—	3 (1.9%)	—
Daniel	89 (100%)	—	—	—	—	—	—	—
Cora	75 (98.7%)	—	—	—	—	—	—	1 (1.3%)
Boulder	30 (100%)	—	—	—	—	—	—	—
Calpet	7 (100%)	—	—	—	—	—	—	—

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

Table 7: Sublette County School District #9 Enrollment for the 2003/2004 Academic Year

School	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Average
Big Piney High School	194	191	191	189	189	187	186	187	185	185	188.8
Big Piney Middle School	148	143	140	140	139	140	136	136	135	134	139.1
Big Piney Elementary School	187	185	187	183	184	187	185	184	186	185	185.3
Sublette School District #9	529	519	518	512	512	514	507	507	506	504	512.8

Source: Sublette County School District #9 Business Office.

*Although LaBarge Elementary School is controlled by Sublette County School District #9 it was excluded because it is located in Lincoln County.

Table 8: Enrollment for Sublette County School District #1 2003/2004 Academic Year

School	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Bondurant K-5	7	7	5	5	5	5	5	5	5	5
Pinedale K-5	291	294	296	294	294	291	288	287	287	287
Pinedale Middle School	174	175	175	174	174	173	176	174	173	170
Pinedale High	218	210	211	211	205	205	206	205	206	205
District Totals	690	686	687	684	678	674	675	671	671	667

Source: Sublette County School District #1

*In 2004 there were 29 home schools and 48 home school students in Sublette County School District #1

Table 9: Housing Profiles for Sublette County, 1960-2000

Year	Housing units	Occupied Total	Owner Occupied	Renter Occupied	Vacant Total	Vacant for Seasonal use	Homeowner Vacancy Rate	Rental Vacancy Rate
1960	1,537	1,136	715	421	401	340		
1970	1,537	1,159	758	401	378	246		
1980	2,393	1,796	1,121	470	802	597	1.7%	10.5%
1990	2,911	1,834	1,281	553	1,077	735	3.6%	12.9%
2000	3,552	2,371	1,181	930	1,731	634	1.1%	4.7%

Source: U.S. Census Bureau

Table 10: Housing Profiles by Selected Towns, 2000

Location	Housing units	Occupied Total	Owner Occupied	Renter Occupied	Vacant Total	Vacant for Seasonal use	Homeowner Vacancy Rate	Rental Vacancy Rate
Pinedale	718	582	375	207	35	4	1.3%	8.8%
Marbleton	310	268	198	70	42	15	1.0%	10.3%
Big Piney	192	161	103	58	31	7	5.5%	13.4%
Bondurant	128	75	48	27	53	44	0.0%	3.6%
Boulder	28	15	12	3	5	0	0.0%	25.0%
Calpet	5	3	0	3	2	0	0.0%	40.0%
Cora	60	38	33	5	23	4	3.6%	4.9%
Daniel	52	41	33	8	11	7	5.7%	11.1%

Source: U.S. Census Bureau

Table 11: Employment for Sublette County, 1995-2003

Year	Labor Force	Employment	Unemployment	Unemployment rate
1990	2,665	2,589	76	2.9%
1995	3,033	2,920	113	3.7%
2000	3,244	3,164	80	2.5%
2003	3,809	3,703	106	2.8%

Source: Wyoming Labor Market Information

Table 12: Employment in Sublette County by Industry, 1980-2000

INDUSTRY	1980	1990	1995	2000
Total	2,248	1,763	1,993	2,181
Total Private	1,867	1,245	1,417	1,550
Agriculture, Forestry, & Fishing	264	39	97	83
Mining	189	260	248	206
Construction	255	154	163	253
Manufacturing	24	26	31	50
Transportation, Communication, & Public Utilities	148	116	96	62
Wholesale Trade	0	51	33	29
Retail Trade	286	267	365	422
Finance, Insurance, & Real Estate	38	43	56	67
Services	179	290	327	378
Total Government	381*	518	576	631
Federal Government	N/A	92	97	97
State Government	N/A	72	63	69
Local Government	N/A	354	416	465

* In 1980 all government jobs were classified under Public Administration by The US Census Bureau.

Source: Wyoming Labor Market Information

Table 13: Employment in Sublette County by Industry, 2001-2003

INDUSTRY	2001	2002	2003
Total	2,372	2,286	2,446
Total Private	1,715	1,608	1,750
Agriculture, Forestry, Fishing, & Hunting	88	72	64
Mining	ND	253	393
Utilities	ND	ND	ND
Construction	249	214	199
Manufacturing	48	45	42
Wholesale Trade	11	9	ND
Retail Trade	275	278	269
Transportation & Warehousing	34	39	44
Information	33	33	31
Finance & Insurance	42	53	58
Real Estate & Rental & leasing	27	28	28
Professional & Technical Services	100	72	92
Management of Companies & Enterprises	ND	ND	ND
Administrative & Waste Services	16	12	16
Educational Services	ND	ND	ND
Health Care & Social Assistance	118	123	122
Arts, Entertainment, & Recreation	21	13	21
Accommodation & Food Services	307	296	269
Other Services, except Public Administration	49	50	56
Total Government	657	677	696
Federal Government	108	90	92
State Government	68	75	74
Local Government	481	513	530

ND-Not Disclosable

Source: Wyoming Labor Market Information

Table 14: Median Household Income (in dollars) for Sublette County and Wyoming, 1970-2000

Year	Sublette County	Wyoming
1970	26,657	26,707
1980	29,207	33,503
1990	26,825	27,096
2000	39,044	37,892

Source: Wyoming Department of A&I, Division of Economic Analysis

Table 15: Cost of Living Index by Sublette County for Selected Years 1981-2003

Year	All Items	Food	Housing	Apparel	Transportation	Medical	Recreation & Personal Care
1981	106	110	108	100	102	104	104
1985	108	111	112	104	100	103	104
1987	109	101	119	109	105	104	104
1999	104	96	107	116	102	104	104
2000	106	105	108*	119	108	113	112
2001	104	93	104	121	104	99	109
2002	105	96	107	123	101	97	110
2003	109	95	115	129	101	99	110

Source: Department of Administration and Information, Economic Analysis Division and the Department of Administration and Fiscal Control, Research and Statistics Division. Housing for 2000 was recorded as 180 an obvious error.

Table 16: AFDC Benefits and Recipients by Rock Springs Field Office, 1970-1995

	1970	1980	1990	1995
AFDC- Cost in Dollars	18,729	35,981	112,641	122,032
AFDC-Households	N/A			386
AFDC Recipients	219	357	994	1,029
AFDC Adult Recipients	51			360
AFDC Child Recipients	168			741
Unemployed Parent Program-Benefits Paid	N/A		Wow	1,894
Unemployed Parent Program-Recipients	N/A		Wow	21
Unemployed Parent Program-Households	N/A		Wow	5
Food Stamps-Dollar value of Coupons issued	2578	21,600	107,675	151,794
Food Stamps-Recipients	596	585	1,750	2,129
Food Stamps-Households	51	236	632	794
Food Stamps-Non-AFDC Households	N/A		320	447
Food Stamps-AFDC Households	N/A		312	347

Source: Wyoming Department of Family Services

Table 17: Arrests for Sublette County, Selected Years 1995 to 2003

Arrests	1995	2000	2002	2003
All Index Crimes	20 Adults 7 Juveniles	17 Adults 8 Juveniles	22 Adults 4 Juveniles	15 Adults
Crimes Against Persons I	9 Adults 2 Juveniles	1 Adult 1 Juvenile	4 Adults	5 Adults
Crimes Against Property	11 Adults 5 Juveniles	16 Adults 7 Juveniles	16 Adults 4 Juveniles	10 Adults
All crimes	119 Adults 13 Juveniles	230 Adults 12 Juveniles	251 Adults 14 Juveniles	344 Adults 14 Juveniles

Table 18: Big Game Harvest estimates for Sublette County, 2001 and 2002

Year	Elk	Deer/mule	Deer/white tail	Big Horn Sheep	Antelope	Moose	Black bear
2001	1,847	3223	N/A	45	3,435	332	32
2002	1,727	3,630	31	30	4,156	349	48

Source: Wyoming Game and Fish

Table 19: Fishing License Sales by Sublette County, 2003

License Type	Resident	Non-Resident	Number of Licenses	Commission	License Fees Due
Conservation Stamps	N/A	N/A	6,151	\$1,473.00	\$61,510.00
Daily Fish	548	6,664	7,212	\$6,838.00	\$142,330.00
Fish Annual	2,375	1,083	3,458	\$1,697.50	\$106,010.00
Youth Fish Annual	217	430	647	\$322.00	\$8,550.00
Seine or Trap Fish	N/A	23	23	\$0.00	\$345.00
Fishing Totals	3,140	8,200	17,491	\$10,330.50	\$318,745.00
County Totals	N/A	N/A	24,178	\$13,259.25	\$469,558.00

Source: Wyoming Game and Fish

Table 20: Big Game License Sales by Sublette County, 2003

License Type	Resident	Non-Resident	Number of Licenses	Commission	License Fees Due
Black Bear	204	61	265	\$102.00	\$21,370.00
Cow/Calf Elk	62	44	106	\$53.00	\$13,720.00
Youth Cow/Calf Elk	3	1	4	\$2.00	\$160.00
Deer	N/A	1,191	1,191	\$563.50	\$29,775.00
Doe/Fawn Antelope	106	89	195	\$97.50	\$6,570.00
Youth Doe/Fawn Antelope	28	2	30	\$15.00	\$452.00
Pioneer Deer	N/A	9	9	\$0.00	\$18.00
Pioneer Elk	N/A	15	15	\$0.00	\$75.00
Mountain Lion	46	2	48	\$20.50	\$1,420.00
Big Game Totals	449	1,414	1,863	\$853.50	\$73,560.00
County Totals	N/A	N/A	24,178	\$13,259.25	\$469,558.00

Source: Wyoming Game and Fish

Table 21: Bird, Small Game, and Archery License Sales by Sublette County, 2003

License Type	Resident	Non-Resident	Number of Licenses	Commission	License Fees Due
Daily Bird/Small Game	N/A	62	62	\$44.50	\$1,380.00
Youth Bird/Small Game	N/A	1	1	\$0.50	\$40.00
Bird	141	N/A	141	\$60.00	\$1,410.00
Small Game	52	N/A	52	\$25.00	\$520.00
Bird/Small Game	213	60	273	\$130.00	\$6,195.00
Furbearer/Trapping	34	N/A	34	\$14.50	\$1,020.00
Youth Furbearer/Trapping	6	N/A	6	\$2.00	\$36.00
Archery	315	91	406	\$189.50	\$4,935.00
County Totals	N/A	N/A	24,178	\$13,259.25	\$469,558.00

Source: Wyoming Game and Fish

Table 22: Sales Tax Collections for Sublette County, 1996-2003

Industrial Sector	Fiscal 1996	Fiscal 1997	Fiscal 1998	Fiscal 1999	Fiscal 2000	Fiscal 2001	Fiscal 2002	Fiscal 2003
Agriculture	\$5,133	\$9,991	\$25,615	\$25,813	\$27,937	\$26,579	\$27,534	\$373,671
Mining	\$109,025	\$577,186	\$2,402,020	\$2,751,184	\$2,590,650	\$61,58,207	\$9,483,985	\$8,585,423
Construction	\$75,812	\$70,587	\$103,903	\$85,725	\$125,070	\$143,219	\$180,314	\$174,310
Manufacturing	\$53,641	\$75,705	\$499,194	\$383,163	\$381,001	\$907,547	\$1,093,883	\$1,053,615
Transportation	\$353,890	\$307,127	\$362,077	\$391,294	\$481,089	\$472,373	\$504,098	\$543,340
Wholesale Trade	\$65,080	\$206,160	\$905,205	\$1,000,805	\$1,145,008	\$1,235,262	\$1,626,908	\$1,331,862
Retail Trade	\$1,086,223	\$1,280,720	\$160,078	\$156,486	\$1,923,365	\$2,354,323	\$2,690,488	\$2,767,724
Finance	\$0	\$3,000	\$12,439	\$13,690	\$13,153	\$7,964	\$4,959	\$5,885
Service	\$277,104	\$395,842	\$877,421	\$1,216,555	\$1,208,792	\$2,527,142	\$3,626,396	\$3,963,270
Public ADM	\$134,268	\$359,070	\$435,320	\$393,618	\$451,809	\$464,261	\$676,805	\$632,742
Total	\$2,160,175	\$3,285,389	\$7,223,982	\$7,838,332	\$8,347,874	\$14,296,878	\$19,915,371	\$19,431,841

Source: Department of Administration and Information, Economic Analysis Division

Table 23: Use Tax Collections for Sublette County, 1998-2003

Industrial Sector	Fiscal 1998	Fiscal 1999	Fiscal 2000	Fiscal 2001	Fiscal 2002	Fiscal 2003
Agriculture	\$605	\$437	\$903	\$785	\$439	\$3,743
Mining	\$206,903	\$220,252	\$209,822	\$535,688	\$389,679	\$732,984
Construction	\$24,271	\$40,238	\$43,908	\$151,724	\$55,426	\$98,558
Manufacturing	\$829	\$1,676	\$6,928	\$2,739	\$9,998	\$31,652
Transportation	\$32,535	\$1,599	\$10,592	\$88,264	\$26,052	\$12,446
WHSL. & RET. Trade	\$156,465	\$40,385	\$40,722	\$44,157	\$120,076	\$158,894
Finance	\$5	\$6	\$6	\$1	\$0	\$0
Service	\$707	\$1,549	\$237	\$1,197	\$2,573	\$2,839
Public ADM	\$262,924	\$238,350	\$265,268	\$372,837	\$407,632	\$452,786
Total	\$544,415	\$541,287	\$578,375	\$1,197,391	\$1,011,875	\$1,493,902

Source: Department of Administration and Information, Economic Analysis Division

Table 24: Average Daily Traffic for Daniel JCT. Milepost 110.47 Route US-191 Station Number 17E, 1980-2003

	1980	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003
Average Day	1,131	1,337	1,697	1,646	1,681	1,809	1,821	1,878	2,001	2,183	2,180
Average Weekday	1,123	1,351	1,730	1,679	1,714	1,852	1,872	1,935	2,066	2,259	2,270
Average Sunday	1,124	1,235	1,543	1,507	1,530	1,617	1,620	1,640	1,750	1,884	1,856
Average Monday	1,115	1,297	1,656	1,650	1,680	1,781	1,811	1,844	1,974	2,182	2,200
Average Tuesday	1,097	1,283	1,630	1,591	1,642	1,774	1,801	1,847	1,992	2,174	2,204
Average Wednesday	1,095	1,310	1,685	1,600	1,670	1,823	1,807	1,889	2,015	2,202	2,242
Average Thursday	1,099	1,376	1,754	1,701	1,740	1,897	1,916	1,967	2,093	2,299	2,277
Average Friday	1,231	1,491	1,924	1,852	1,838	1,983	2,024	2,127	2,257	2,435	2,425
Average Saturday	1,173	1,369	1,689	1,618	1,670	1,788	1,765	1,835	1,927	2,103	2,054
%Cars	86.6	89.2	87.5	87.4	88.1	87.4	89.9	89.9	87.2	87.4	
%Trucks	13.4	10.8	12.5	12.6	11.9	12.6	10.1	10.1	12.8	12.6	

Source: Wyoming Department of Transportation

Table 25: Average Daily Traffic for Daniel JCT. Milepost 131.45 Route US-189 Station Number 17S, 1980-2003

	1980	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003
Average Day	749	792	916	901	999	1,034	999	1,042	1,074	1,239	1,250
Average Weekday	780	816	952	943	1,038	1,080	1,038	1,095	1,133	1,310	1,329
Average Sunday	616	655	750	733	829	845	829	817	827	977	958
Average Monday	763	766	909	895	1,008	1,010	1,008	1,024	1,060	1,257	1,252
Average Tuesday	769	772	904	924	999	1,051	999	1,071	1,118	1,280	1,322
Average Wednesday	767	800	943	914	1,011	1,072	1,011	1,077	1,125	1,263	1,330
Average Thursday	766	832	969	977	1,065	1,113	1,065	1,108	1,160	1,342	1,340
Average Friday	833	909	1,035	1,004	1,108	1,155	1,108	1,197	1,204	1,407	1,399
Average Saturday	728	813	900	858	972	988	972	1,004	1,022	1,149	1,150
%Cars	89.7	86.1	87.0	87.0	83.7	87.0	90.2	90.2	90.0	91.0	
%Trucks	10.3	13.9	13.0	13.0	16.3	13.0	9.8	9.8	10.0	9.0	

Source: Wyoming Department of Transportation

Table 26: Average Daily Traffic for Daniel JCT. Milepost 110.47 Route US-191&189
Station Number 17N, 1980-2002

	1980	1990	1995	1996	1997	1998	1999	2000	2001	2002
Average Day	917	1,200	1,511	1,533	1,576	1,642	1674	1,686	1,740	1,864
Average Weekday	885	1,182	1,508	1,539	1,574	1,643	1,683	1,701	1,754	1,894
Average Sunday	1,008	1,211	1,485	1,487	1,545	1,605	1,620	1,615	1,656	1,764
Average Monday	882	1,159	1,466	1503	1,545	1,593	1,656	1,641	1,688	1,846
Average Tuesday	847	1,113	1,418	1467	1,495	1,566	1,597	1,614	1,682	1,793
Average Wednesday	860	1,145	1,463	1462	1,515	1,596	1,608	1,649	1,701	1,823
Average Thursday	849	1,176	1,500	1549	1,586	1,661	1,707	1,712	1,764	1,928
Average Friday	992	1,317	1,692	1715	1,728	1,798	1,847	1,889	1,937	2,082
Average Saturday	986	1,282	1,555	1,546	1,620	1,673	1,682	1,681	1,751	1,850
%Cars	87.3	89.3	86.2	86.2	89.2	86.2	88.5	88.5	90.0	90.1
%Trucks	12.7	10.7	13.8	13.8	10.8	13.8	11.5	11.5	10.0	9.9

Source: Wyoming Department of Transportation

Table 27: Percent Average Month traffic distribution by Daniel Jct. Mile Post 110.47
Station Number 17N, 1997-2002

Month	1980	1990	1995	1996	1997	1998	1999	2000	2001	2002
January					50.6	56.4	58.3	61.2	60.8	56.7
February					57.2	60.0	60.9	66.1	63.2	63.6
March					62.6	62.0	68.4	71.2	68.1	66.1
April					64.0	65.2	63.4	70.3	68.3	66.1
May					94.0	97.7	88.0	96.8	100.1	53.6
June					139.8	132.6	135.4	133.9	133.2	141.6
July					172.0	172.5	169.3	169.0	166.2	178.0
August					168.2	167.9	161.4	161.8	154.7	162.7
September					145.1	146.1	147.5	135.7	141.6	145.1
October					108.6	104.6	107.6	99.5	105.8	116.5
November					73.2	70.6	74.2	71.2	75.5	78.4
December					64.8	64.2	65.7	63.7	62.4	71.5

Note: % Average Month = Percent Month Daily is of the Year Daily Average

Source: Wyoming Department of Transportation

Table 28: Percent Average Month traffic distribution by Daniel Jct. Mile Post 131.45
Station Number 17S, 1997-2003

Month	1980	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003
January					61.7	69.7	71.7	72.6	75.8	67.7	80.2
February					68.3	72.1	72.9	76.3	74.4	70.7	73.1
March					71.8	71.6	77.0	77.7	80.8	69.5	76.3
April					78.8	80.5	75.7	80.1	81.8	75.2	84.4
May					104.3	101.5	96.6	96.7	98.4	96.4	99.9
June					140.9	116.8	123.3	119.6	117.7	120.3	120.0
July					144.6	145.3	141.1	143.3	137.2	142.9	139.0
August					142.3	147.6	137.0	143.6	135.2	136.4	136.4
September					124.2	131.4	128.2	121.7	122.9	158.1	119.4
October					105.3	105.8	110.4	104.8	111.5	119.7	109.6
November					82.1	80.46	85.8	85.2	86.4	92.5	83.5
December					75.5	76.8	81.0	79.2	77.9	80.6	79.0

Note: % Average Month = Percent Month Daily is of the Year Daily Average

Source: Wyoming Department of Transportation

Table 29: Percent Average Month traffic distribution by Daniel Jct. Mile Post 110.47
Station Number 17E, 1997-2003

Month	1980	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003
January					54.6	62.2	64.6	65.0	67.0	63.7	63.2
February					60.6	66.7	66.0	69.8	67.7	67.9	62.7
March					64.3	67.4	72.4	73.5	72.4	69.9	65.4
April					68.7	71.5	68.6	73.9	73.1	70.5	69.6
May					95.7	100.0	90.2	94.9	99.7	99.8	96.1
June					131.6	128.6	130.7	126.9	128.3	132.2	133.1
July					165.8	165.0	160.5	162.3	157.5	160.8	165.0
August					162.0	155.8	152.4	152.6	146.4	147.3	163.7
September					139.3	135.9	138.9	130.1	133.8	133.5	135.4
October					108.2	102.3	105.5	103.8	105.2	107.8	109.8
November					78.2	75.3	78.5	77.2	80.1	78.8	71.1
December					71.3	69.5	72.0	70.2	68.7	67.8	65.6

Note: % Average Month = Percent Month Daily is of the Year Daily Average

Source: Wyoming Department of Transportation

Sweetwater County

Table 30: Population for Rock Spring, Sweetwater County and Wyoming, 1950-2003

Year	Rock Springs	Sweetwater County	Wyoming
1950	10,857	22,017	290,529
1960	10,371	17,920	330,066
1970	11,657	18,391	332,416
1980	19,458	41,723	469,557
1990	19,050	38,823	453,558
2000	18,708	39,322	493,785
2002	18,464	37,194	498,703

Source: U.S. Census Bureau

Table 31: Population Change by Sweetwater County, Rock Spring and Wyoming, 1950-2000

Decade	Rock Springs	Sweetwater County	Wyoming
1950/1960	-486 (-4.5%)	-4,097 (-18.6%)	39,537 (13.6%)
1960/1970	1,286 (12.4%)	471 (2.6%)	2,350 (0.7%)
1970/1980	7,801 (66.9%)	23,330 (126.9%)	137,141 (41.3%)
1980/1990	-408 (-2.1%)	-2,900 (-7.0%)	-15,999 (-3.4%)
1990/2000	-342 (-1.8%)	499 (1.3%)	40,227 (8/9%)

Source: Wyoming Department of A & I, Division of Economic Analysis

Table 32: Population Age Distribution by Rock Springs, Sweetwater County, and Wyoming for 2000

Age	Rock Springs	Sweetwater County	Wyoming
Under 5	1,279 (6.8%)	2,850 (6.9%)	30,940 (6.3%)
5 to 9	1,336 (7.1%)	2,842 (7.6%)	34,127 (6.9%)
10 to 14	1,451 (7.8%)	3,206 (8.5%)	38,376 (7.8%)
15 to 19	1,736 (9.3%)	3,595 (9.6%)	41,903 (8.5%)
20 to 24	1,368 (7.3%)	2,431 (6.5%)	33,455 (6.8%)
25 to 34	2,318 (12.4%)	4,519 (12.0%)	59,854 (12.1%)
35 to 44	3,150 (16.8%)	6,512 (17.3%)	78,765 (16.0%)
45 to 54	2,805 (15.0%)	5,950 (15.8%)	74,079 (15.0%)
55 to 59	797 (4.3%)	1,768 (4.7%)	24,935 (5.0%)
60 to 64	611 (3.3%)	1,201 (3.2%)	19,655 (4.0%)
65 to 74	912 (4.9%)	1,599 (4.3%)	31,343 (6.3%)
75 to 84	721 (3.9%)	1,076 (2.9%)	19,615 (4.0%)
85 and over	224 (1.2%)	334 (0.9%)	6,735 (1.4%)
Median	34.5	34.2	36.2

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

Table 33: Sex Ratio for Rock Springs, 1970-200

Age	1970		1980		1990		2000	
	Male	Female	Male	Female	Male	Female	Male	Female
Under 5	50.2%	49.8%	50.2%	49.8%	47.4%	52.6%	51.1%	48.9%
5 to 9	53.8%	46.2%	48.3%	51.7%	51.7%	48.3%	50.7%	49.3%
10 to 14	51.6%	48.4%	52.9%	47.1%	50.5%	49.5%	47.7%	52.3%
15 to 19	50.0%	50.0%	52.2%	47.8%	47.4%	52.6%	51.3%	48.7%
20 to 24	44.7%	55.3%	55.3%	44.7%	48.3%	51.7%	48.2%	51.8%
25 to 34	50.3%	49.7%	55.6%	44.4%	50.8%	49.2%	49.1%	50.9%
35 to 44	50.3%	49.7%	56.0%	44.0%	52.0%	48.0%	51.3%	48.7%
45 to 54	49.9%	50.1%	51.1%	48.9%	52.8%	47.2%	52.4%	47.6%
55 to 59	49.3%	50.7%	48.5%	51.5%	50.2%	49.8%	52.9%	47.1%
60 to 64	48.6%	51.4%	50.9%	49.1%	*	*	52.2%	47.8%
65 to 74	47.8%	52.2%	46.0%	54.0%	44.5%	55.5%	45.6%	54.4%
75 to 84	47.4%	52.6%	41.6%	58.4%	39.7%	60.3%	40.0%	60.0%
85 and over	49.3%	50.7%	38.9%	61.1%	33.0%	67.0%	30.8%	69.2%

* In 1990 age categories 55-59 and 60-64 were combined

Source: U.S. Census Bureau

Table 34: Race, Hispanic or Latino by Rock Springs, Sweetwater County, and Wyoming, 2000

Location	White	Hispanic	Black	American Indian	Asian	Pacific Islander	Other	2 or More Races
Wyoming	454,670 92.1%	31,669 6.4%	3,722 0.8%	11,133 2.3%	2,771 0.6%	302 0.1%	12,301 2.5%	8,883 1.8%
Sweetwater County	34,461 91.6%	3,545 9.4%	275 0.7%	380 1.0%	240 0.6%	16 0.0%	1,349 3.6%	892 2.4%
Rock Springs	17,164 91.7%	1,676 9.0%	201 1.1%	160 0.9%	191 1.0%	6 0.0%	570 3.0%	416 2.2%

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

Table 35: Top 10 Employers in Sweetwater County, 2003

Company	Product	No. F/T Employees
FMC Wyoming corporation	Trona, mining & processing	849
Sweetwater County School District No. 1	Public Schools	642
General Chemical Company	Trona, mining & processing	509
OCI	Trona, mining & processing	412
Halliburton	Oil Field Service	400
Solvay Minerals	Trona, mining & processing	392
PacifiCorp (Power plant & Other)	Power generation	373
Bridger Coal Company	Surface coal mining	352
Sweetwater County School District No. 2	Public Schools	320
Memorial Hospital of Sweetwater County	Health	311

Source: Sweetwater Economic Development Association (SWEDA), Business Directory 2003.

Table 36: Employment for Sweetwater County, 1995-2003

Year	Labor force	Employment	Unemployment	Unemployment rate
1990	20,379	19,262	1,117	5.5%
1995	21,802	20,658	1,144	5.2%
2000	20,288	19,310	978	4.8%
2003	20,667	19,770	897	4.3%

Source: Wyoming Labor Market Information

Table 37: Median Household Income (in dollars) for Sweetwater County and Wyoming, 1970-2000

Year	Sweetwater	Wyoming
1970	26,071	26,707
1980	40,407	33,503
1990	36,210	27,096
2000	46,537	37,892

Source: Wyoming Department of A&I, Division of Economic Analysis

Table 38: Tenure and Vacancy Characteristics for Sweetwater County, 1960-2000

Year	Housing units	Occupied Total	Owner Occupied	Renter Occupied	Vacant Total	Vacant for Seasonal use	Homeowner Vacancy Rate	Rental Vacancy Rate
1960	6,470	5,525	3,011	2,514	945	103		
1970	6,516	5,889	3,769	2,120	627	9		
1980	15,116	14,052	9,470	4,582	999	65	1.6%	7.8%
1990	15,444	13,616	9,552	4,064	1,828	119	2.9%	14.5%
2000	15,921	14,105	10,586	3,519	1,816	243	2.6%	16.2%

Source: U.S. Census Bureau

Table 39: Tenure and Vacancy Characteristics for Rock Springs, 1960-2000

Year	Housing units	Occupied Total	Owner Occupied	Renter Occupied	Vacant Total	Vacant for Seasonal use	Homeowner Vacancy Rate	Rental Vacancy Rate
1960	3,654	3,391	1,876	1,515	263	70	1.7%	3.3%
1970	4,104	3,852	2,426	1,426	252	1	0.8%	3.4%
1980	7,515	7,031	4,475	2,556	469	15	1.7%	7.1%
1990	8,033	7,098	4,769	2,349	835	18	2.4%	15.2%
2000	8,359	7,348	5,724	2,074	1,011	63	3.1%	18.2%

Source: U.S. Census Bureau

Table 40: Average AFDC Benefits and Recipients by Rock Springs Field Office, 1970-2000

	1970	1980	1990	1995	
AFDC- Cost in Dollars	18,729	35,981	112,641	122,032	
AFDC-Households	N/A			386	
AFDC Recipients	219	357	994	1,029	
AFDC Adult Recipients	51			360	
AFDC Child Recipients	168			741	
Unemployed Parent Program-Benefits Paid	N/A		Wow	1,894	
Unemployed Parent Program-Recipients	N/A		Wow	21	
Unemployed Parent Program-Households	N/A		Wow	5	
Food Stamps-Dollar value of Coupons issued	2578	21,600	107,675	151,794	
Food Stamps-Recipients	596	585	1,750	2,129	
Food Stamps-Households	51	236	632	794	
Food Stamps-Non-AFDC Households	N/A		320	447	
Food Stamps-AFDC Households	N/A		312	347	

Source: Wyoming Department of Family Services

Table 41: Reported Index Crimes for Rock Springs, 1985 to 2001

Year	Total Index Crimes	Violent Crime	Property Crime
1985	1612	199	1413
1986	1692	207	1485
1987	1331	137	1194
1988	1155	178	977
1989	1218	95	1123
1990	1229	93	1136
1991	1372	128	1244
1992	1615	161	1454
1993	1303	132	1171
1994	1232	111	1121
1995	1477	132	1345
1996	1263	120	1143
1997	1216	84	1132
1998	1287	93	1194
1999	1159	86	1073
2000	1128	106	1022
2001	963	86	877