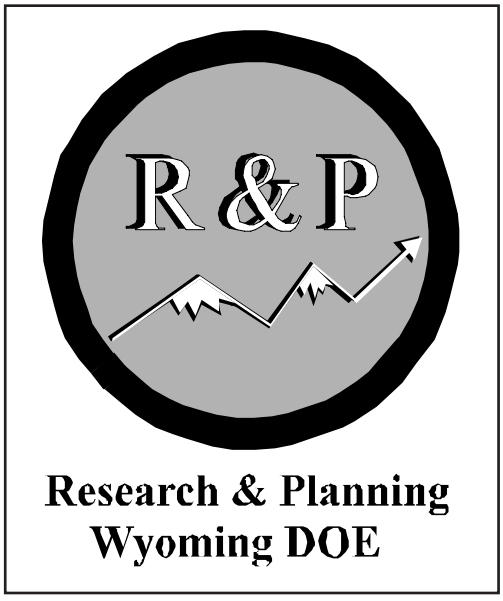
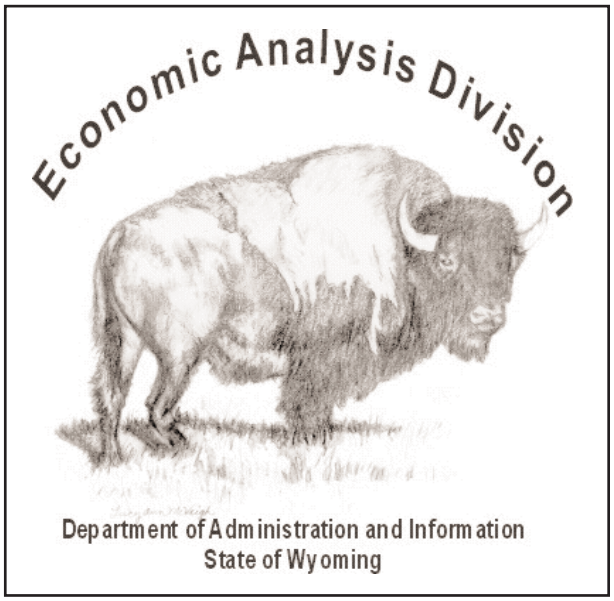
OUTLOOK 2000:
JOINT ECONOMIC & DEMOGRAPHIC FORECAST TO 2008

February 2000





Outlook 2000:
Joint Economic & Demographic Forecast to 2008

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Introduction

by: **Tom Gallagher and Buck McVeigh**

The objective of ***Outlook 2000*** is to provide state and local policy makers, businesses, economic development groups, interest groups, and the citizens of Wyoming with a consolidated and comprehensive almanac of information describing key economic, demographic and employment trends.

Traditionally, both the Department of Employment/Research and Planning Section and the Department of Administration and Information/Division of Economic Analysis have produced outlook publications focusing, respectively, on occupational demand and economic and demographic trends. There has always been one common link, however, between these two publication endeavors--employment by industry.

For years, the existence of multiple forecasts for employment data has made it confusing and complicated for both the data user and provider. "Which data series is correct?" or "Which series should I use?" are frequently asked questions. It is time that the forecasting efforts of the two agencies be consolidated into one. ***Outlook 2000*** brings both of these efforts together in one document.

Historically, the Research and Planning Section (R&P) has developed detailed industry projections as an essential first step in the production of occupational projections.[1] Occupational projections are useful to both counselors and students in making more practical career decisions and are also used by dislocated workers and training staff to help make efficient transitions to new work opportunities. Industry projections and occupational staffing patterns are also used by those developing and evaluating new training programs and Community College curriculums.

The Division of Economic Analysis has forecast population and employment since 1977. Beginning in 1991, the Division produced a comprehensive annual economic forecast, entitled the "Wyoming Economic Forecast Report," that provided data on population, employment, earnings by industry, total personal income, and mineral price and production. The main focus of the report was to provide a tool for long-range economic and policy-related planning.

The synthesis of these two efforts is possible and is evident in this report. The partnership that exists between the two agencies has enabled us to produce this report, and will likely enable us to produce future joint publications, depending on the level of usage and feedback we receive endorsing the usefulness of ***Outlook 2000***.

The focus of this report is on long-term economic activity and structural outcomes, as opposed to a short-term outlook. Short-term economic analysis focuses on issues related to fluctuations in levels and composition of economic variables. Long-term trend analysis focuses on the probable growth path of economic variables assuming equilibrium dynamics. Long-term trend forecasts, which are absent of external shocks (e.g., a major regional war), can miss crucial turning points in the economy, where short-term analysis might depict them. But, it is very difficult to predict the exact timing and magnitude of potential external shocks. Additionally, short-term statistical series can exhibit the "random walk." In a random walk, data changes (e.g, employment data) are serially independent and produce short-run patterns outside the scope of the long-term overall trend.

Wyoming's Outlook at a Glance

As ***Outlook 2000*** makes clear early on, Wyoming's position in the national economy is influenced by forces which play a far greater role in this state than in most others. Integral to understanding the direction of Wyoming's economy are energy prices, tourism, federal domestic spending, and international trade policies.

While the national economy suffered through the recession of late 1990 and early 1991, Wyoming's economy remained healthy. Strong energy prices brought about by Iraq's invasion of Kuwait buoyed Wyoming's economy and slowed the national economy. The rate of growth in federal expenditures in Wyoming increased dramatically in 1990 and 1991, providing a further boost to the state economy. At the same time, Wyoming experienced net in-migration as a result of the weak national economy, especially in California. Moving into the mid-part of the 1990s, the national economy recovered, while Wyoming's rate of growth began to wane at mid-decade under depressed commodity prices, slower growth in federal spending, and a decline in migration into the state.

It is these structural shifts in federal funding, the oil and gas markets, and, to a lesser degree (although not unimportantly), GDP's influence on tourism and domestic spending that play such a large role in the ***Outlook 2000***. Our approach in this publication is to project the impacts of basic structural elements into the future. One element of that structure that is becoming an increasingly important element of consideration is the demographics of labor supply. Structural factors (e.g., Wyoming's population size, resource base, employment diversification, relationship with the balance of the nation and world) change slowly over time. But, the aging of the baby boom generation is entering a period of relatively rapid demographic and sociological change, which may have substantive consequences in a number of arenas, chiefly in the area of labor supply.

The dilemma facing Wyoming's labor market is demand. Labor demand is dominated by the relatively lower wage Services and Retail Trade sectors, while an aging population and labor supply depend upon more substantial income opportunities. As a result, people are leaving the state in search of better income opportunities. This is supported by the most recent estimate of the state's population, which declined 0.1 percent from 1998 to1999 to a level 479,602. Employment and wages may well grow as described in this forecast, but retention of the population continues to be problematic. When employment, unemployment rates, earnings levels, and wage rates are considered independently of one another, measuring the demand for labor can lead to mistaken interpretations about the market's overall trend. For example, total net employment growth of 27,450 Wyoming jobs is expected over the forecast period of 1998-2008. While growth of this magnitude is encouraging, it is necessary to examine the underlying quality of the jobs created. A purpose of ***Outlook 2000*** is to bring the key economic, demographic and employment pieces together and present them in their mutual context.

A Note on the Data

The two state agencies responsible for this report are participants in State-Federal cooperative statistical programs.

The employment numbers presented in this publication originate through collection of the data from employers and households in Wyoming. R&P, through cooperative agreements with the U.S. Department of Labor/Bureau of Labor Statistics (BLS) and other federally funded programs, collects several types of employment and compensation information from employers. Each

quarter, R&P compiles the employment and earnings of all employers covered by Unemployment Insurance (UI). Five to six months after the end of each quarter, these UI tax data are enhanced through editing and quality control measures and are released as total payroll, average wage, and a count of jobs worked. These data also form the bulk of the Personal Income series and serve as the basis for the computation of Gross State Product. More current establishment-based estimates of the number of jobs worked are published each month from a sample of Wyoming employers (later benchmarked to UI tax records) on a one-month lag basis. R&P also publishes labor force estimates on a one-month lagged basis. The labor force is an estimate of the number of persons working and the number of persons not working and actively seeking work. Used to compute the monthly estimate of the unemployment rate, the statistical process involves a household survey conducted by the Bureau of the Census under contract to BLS, R&P administrative data, and the monthly establishment survey. Finally, this report also contains occupational information. Occupational staffing patterns and associated wage rates are estimated from a sample-based survey of Wyoming employers.

The Division of Economic Analysis is the lead agency for the U.S. Census Bureau State Data Center (SDC) program, a State-Federal program that was established for the purpose of supporting and promoting the Census Bureau and its programs. The SDC also serves as the central repository for Census Bureau products and reports. Population estimates are developed in cooperation with the U.S. Bureau of the Census, through the Federal-State Cooperative Program for Local Population Estimates (FSCPE). The Division was designated the official State FSCPE agency by Governor Mike Sullivan in 1990. The FSCPE was established for the purpose of developing consistent and jointly prepared county and subcounty estimates with complete statewide coverage through the use of established methods, comprehensive data review, and thorough testing.

I. Results in Brief

The performance of the U.S. economy in the 1990's has been nothing short of astonishing and has been arguably the best decade in U.S. economic history. But, this will slow in the future, as will Wyoming's economy after 2000 to 2008. The forecast of employment and population in ***Outlook 2000*** span the period 1998 through 2008.

The Mining sector has played a vital role in the progress of Wyoming's economy in the past. However, future contributions are forecast to have less significance on Wyoming's overall economy and employment growth, as the state changes from a goods-producing to a service-producing economy. This change is indicative of the change in the national economy. Employment in the Mining sector is expected to decline 8.2 percent over the forecast horizon to the year 2008.

The Services sector has seen the major job growth within Wyoming's economy during the 1990's, with an average annual growth rate of 3.6[2] percent. Although the increase slowed the past three years to 1.3 percent in 1996, 1.9 percent in 1997, and 2.9 percent in 1998, employment growth in the Services sector has consistently been above the increase in total employment. The Services sector is the second largest employing sector in Wyoming's economy and has the second fastest growth rate of the 1990's. Only the Construction sector has a faster growth rate. Except for a small decline in 1996, the health services sub-sector has experienced annual average job growth of 3.0 percent since 1990. A large portion of the increase in this sector is related to the aging of the population and an overall increase in the demand for health care.

The Services sector is the only sector forecast to increase at a rate of more than 2.0 percent through the forecast horizon. As a result of the high growth, the Services sector surpasses the Government sector in 2005 as the largest employing sector in Wyoming.

Employment growth in state government has been relatively flat in the 1990's and is expected to decline slightly by the year 2000. Growth in the local and state government sectors is expected to remain flat throughout the forecast period, having an estimated 52,740 jobs by 2008.

Employment in the local education sector continues to grow at a slow but steady rate despite decreasing school enrollments. Student enrollment in primary and secondary schools during 1991 was approximately 98,226 and rose to 100,899 in the 1993-1994 school year. Enrollment has been declining since that time and during the 1998-1999 school year held at 94,420 statewide. It is likely that Wyoming's school enrollments will remain flat over the next few years. Employment in this sector is expected to grow by 1.0 percent per year, rising to 25,800 by 2008. Funding is a stronger driver of employment in local education than enrollments.

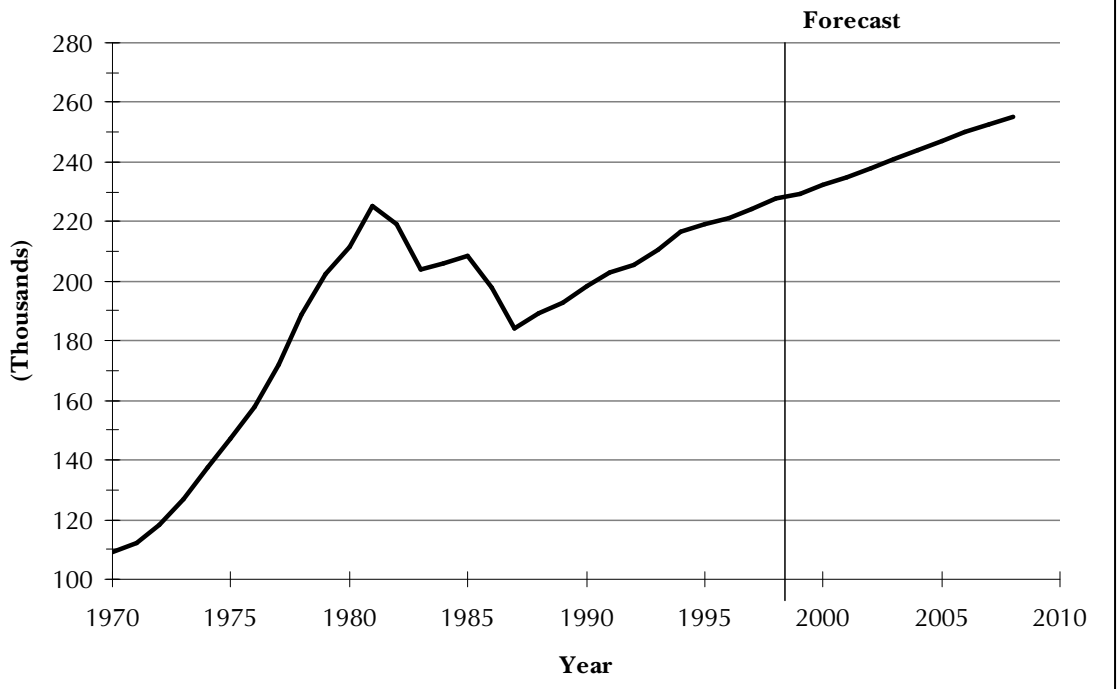
Population in Wyoming grew over 1.0 percent each year from 1991 to 1994, as the annual net in-migration exceeded 2,000 persons. The state has experienced net out-migration since 1995. Out-migration increased to over 2,500 in 1997. Net migration is forecast at a negative level each year from 1999 to 2008. This means that the number of people who leave the state is expected to exceed the number of people who move into Wyoming. The out-migration flows slow over the ten-year projection period (see **Appendix C**).

The main population segment participating in the labor force (age 25-44) gradually declined from 148,446 in 1990 to 134,480 persons in 1998. This age group is projected to continue declining at a decreasing rate through the forecast, and level off in 2008 at 126,560 persons. The population ages 45-64 includes the early post-World War II baby boom. This segment posted a remarkable increase of 36.0 percent, making it the most rapidly growing population segment

from 1990 to 1998. By the year 2008, this age segment is forecast to reach 134,100 persons. This represents an increase of 22.0 percent from the 1998 level. An increasingly older population will greatly impact many areas of our economy, from supply of labor force to demand of health and social services. Slow and steady population growth is expected throughout the ten-year forecast period.

The number of employed persons is expected to increase by 22,560 individuals and non-agricultural wage and salary employment increases by 27,450 jobs over the forecast horizon (see Figure 1). In other words, the number of nonagricultural wage and salary jobs will grow much

Figure 1: Total Nonagricultural Wage & Salary Employment



faster (11.4%) than the number of employed persons in Wyoming (6.3%). This is due to increased commuting into Wyoming, increased multiple job holding, and a decrease in self-employment and agricultural employment opportunities. The unemployment rate is expected to rise slowly from 4.6 percent in 1999 to 5.7 percent in 2008. Part of this increase is related to the different growth rates of industries. Construction, Retail Trade and Services are forecast to grow faster than average and are "high layoff" industries.

National Forecast Compared to Wyoming

The performance of the U.S. economy in the 1990's has been nothing short of astonishing and has been arguably the best decade in U.S. economic history. The questions become: what is driving the national economy, how long can it last, and will the Wyoming economy catch up? There are two main schools of thought on the national economy. First, the national economy's performance is mainly attributed to good luck. The luck argument cites lower import and energy prices due to overseas economic problems as the main reasons for the good economy and lower inflation despite nationally tight labor markets. As Asia recovers and commodity prices rebound, the argument states, the good times experienced in the U.S. economy will end. However, even

as energy prices have rebounded and the overseas economic problems have subsided, the U.S. economy has continued to perform quite well.

The second school of thought on the outstanding performance of the U.S. economy argues that the economy has undergone a structural transformation. Federal Reserve Chairman Alan Greenspan has dubbed these changes the "X-factors," which include an acceleration in the pace of technological change and the continuing globalization of the economy, with both of these factors helping to raise the economy's underlying rate of productivity. In addition, this has caused increased competitive pressures that have allowed the economy to expand at a quicker pace with low unemployment and without the usual accompanying inflationary pressures. If the "X-factor" school of thought holds true and there are no major shocks to the economy, the good times will continue to last.

It is likely that both schools of thought are at least partially correct. The national economy has undoubtedly benefited from the Asian crisis and the accompanying decline in commodity prices, but Wyoming's economy has suffered from these same changes. There is also evidence that productivity growth in the U.S. has increased, and just as the country is reaping the benefits of the information technology revolution, Wyoming will also benefit from the technology revolution. However, even with the increase in productivity, the recent torrid rate of growth in the national economy is not sustainable. In short, the national economy will slow in the future, as will Wyoming's economy after 2000 for the forecast period.

Relationship Between the National Economy and Wyoming's Economy

The relationship between Wyoming's economy and the national economy is quite weak. In fact, the Wyoming economy differs the most of any state from the national economy.[3] We estimated that only 3.0 percent of the change in employment in Wyoming is related to changes in employment at the national level.[4]

Given the reliance on commodities both mineral and agricultural, within Wyoming's economy, this conclusion is not startling. If commodity prices for goods are high, Wyoming's economy benefits while the national economy suffers. Conversely, low commodity prices hurt Wyoming's economy while they benefit the national economy. In fact, much of the demand for Wyoming's commodities is influenced by worldwide developments such as the recent Asian economic crisis.

Despite the seemingly small impact of the national economy on Wyoming's economy, it is important to understand what is occurring with the national economy as a background against which our economy can be compared. Direct impacts on Wyoming's economy from the national economy can occur through things such as interest rates, financial markets, population migration, and tourism. For instance, during the national recession of the early 1990's, a large number of people migrated from California and other states to Wyoming, which boosted the state's population growth rate considerably. Since the national economy has recovered, migration has turned negative which has, in turn, hurt the growth rate of Wyoming's economy.

Gross Domestic Product and Gross State Product

Gross Domestic Product (GDP) identifies the value of goods and services produced within the U.S. GDP grew by 3.9 percent in 1998 to $7.6 trillion, and is expected to grow by only a slightly lesser amount (3.7%) in 1999[5] in real dollars (see **Appendix A**). Year 2000 GDP growth is forecast at only 1.7 percent, picking up to almost 3.0 percent in 2001.

Total employment in 1999 is expected to grow by 1.8 percent to 128.1 million, and year 2000 total employment is forecast at 129.4 million, an increase of 1.1 percent. The U.S. unemployment rate was 4.5 percent in 1998 and is expected to be 4.3 percent in 1999 and 4.7 percent in the year 2000. U.S. citizens saw personal income grow at a pace of 5.0 percent in 1998. Personal income is forecast to grow at a rate of 4.9 percent in 1999 and 4.8 percent in the year 2000.

Gross State Product (GSP) is defined by the U.S. Bureau of Economic Analysis (BEA) as the sum of gross state product originating in all industries in the state or the value of all goods and services produced. In concept, an industry's GSP, or "value added," is equal to its gross outputs (sales or receipts and other operating income, commodity taxes, and inventory changes) minus intermediate inputs (consumption of goods and services purchased from other industries or imported).

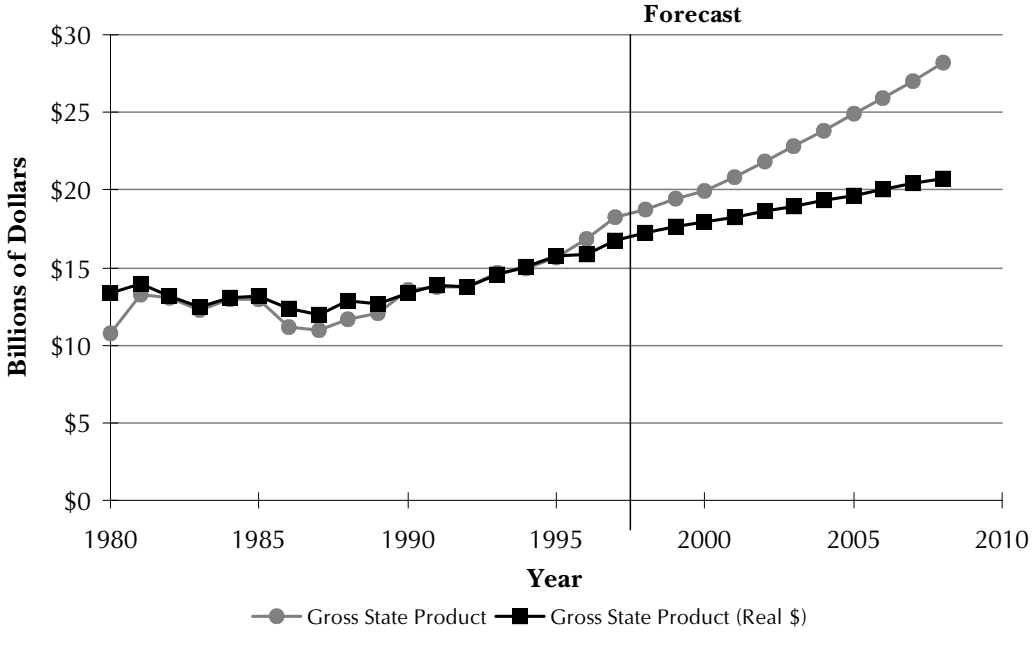
Because of the normal delay in releasing GSP data, 1997 is the most current year available. GSP for Wyoming in 1997 was $18.3 billion (see Table 1). Real dollar GSP (adjusted to 1992-dollar

Table 1: Gross State Product 1995-2008

	Historical			Forecast										
(Billions of Dollars)	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
Gross State Product	15.6	16.9	18.3	18.8	19.4	20.0	20.8	21.8	22.8	23.8	24.9	25.9	27.0	28.2
Percent Change		7.9%	8.5%	2.7%	3.5%	2.9%	4.2%	4.8%	4.6%	4.4%	4.4%	4.2%	4.3%	4.4%
Gross State Product (1992 Dollars)	15.7	15.9	16.8	17.2	17.7	17.9	18.3	18.6	19.0	19.3	19.7	20.0	20.4	20.8
Percent Change		0.7%	5.9%	2.6%	2.7%	1.4%	1.9%	1.9%	1.9%	1.8%	1.9%	1.8%	1.8%	1.8%

terms) was $16.8 billion. For 1998, the forecast puts GSP at $18.8 billion, an increase of 2.7 percent from 1997. Real GSP for 1998 is expected to increase 2.6 percent to $17.2 billion. GSP is forecast to increase 3.5 percent to $19.4 billion in 1999, and real GSP is forecast to climb by 2.7 percent to a level of $17.7 billion (see Figure 2). Year 2000 GSP is expected to reach $20.0 billion, an increase and peak growth rate of 2.9 percent, while real GSP is expected to grow by

Figure 2: Gross State Product



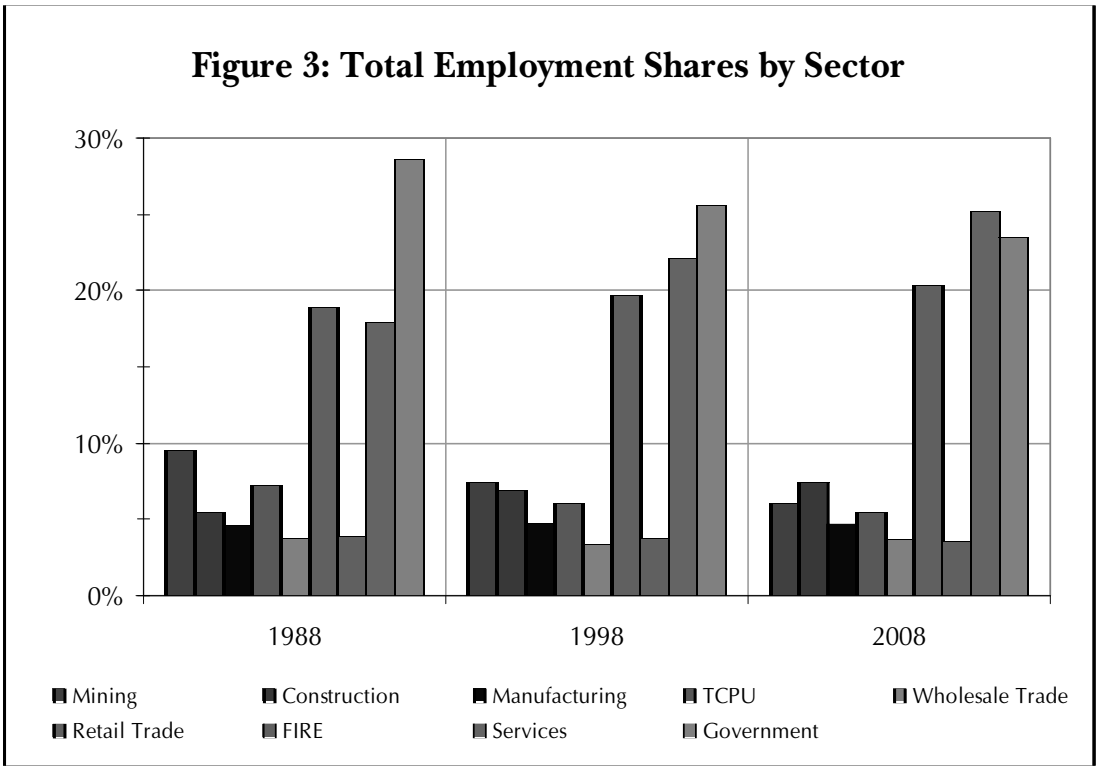
1.4 percent to $17.9 billion. For the remainder of the forecast, GSP grows at an average annual rate of 4.4 percent, and is expected to reach $28.2 billion in 2008. Real GSP is expected to grow at an average annual rate of 1.9 percent and is forecast to hit a level of $20.8 billion in 2008.

II. Labor Demand and Job Growth

Labor demand depends on total labor costs for a particular skill level and total output the firm is capable of producing to meet customer needs for profit maximization. Each industry (see **Appendix B**) and occupation has various levels of labor demand. This section covers the change in the number of jobs over the forecast horizon. The total nonagricultural wage and salary employment increases by 27,450 jobs (11.4%) over the forecast horizon (see Table 2). Three out of four jobs created through 2008 will be in the Services and Retail Trade sectors (see Figure 3, page 6). Personal income levels between 1999-2008 are projected to increase for all industries, with total personal income growing by 4.7 percent.

Table 2: Total Nonagricultural Wage & Salary Employment 1995-2008

	Historical:					Forecast:								
(in Thousands)	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
Nonagricultural Wage & Salary Employment	219.4	221.1	224.4	227.9	229.1	232.3	235.0	237.8	240.9	244.0	247.1	249.8	252.7	255.3
Percent Change		0.8%	1.5%	1.5%	0.5%	1.4%	1.1%	1.2%	1.3%	1.3%	1.2%	1.1%	1.1%	1.0%
Mining	17.0	15.9	16.8	17.0	15.6	15.5	15.5	15.5	15.5	15.5	15.7	15.6	15.6	15.6
Percent Change		-6.8%	5.4%	1.1%	-9.2%	-0.5%	0.0%	0.1%	0.0%	0.1%	0.7%	-0.1%	-0.2%	-0.1%
Construction	14.2	14.2	15.1	15.8	16.8	17.7	17.9	18.0	18.3	18.5	18.6	18.8	19.0	19.1
Percent Change		-0.2%	6.0%	4.8%	5.7%	5.1%	0.8%	0.9%	1.5%	1.1%	0.6%	0.8%	1.1%	0.9%
Manufacturing	9.7	10.8	10.8	10.9	10.9	11.0	11.1	11.3	11.4	11.6	11.7	11.8	11.9	12.0
Percent Change		9.5%	0.2%	1.0%	0.5%	0.6%	1.4%	1.2%	1.3%	1.5%	1.2%	0.9%	0.6%	0.5%
Transportation, Communication & Public Utilities (TCPU)	13.7	13.9	13.9	13.9	14.0	14.1	14.0	14.0	13.9	13.9	14.0	13.8	13.8	13.8
Percent Change		1.8%	-0.2%	0.1%	0.8%	0.6%	-0.6%	0.0%	-0.6%	0.0%	0.3%	-1.3%	0.0%	0.0%
Wholesale Trade	7.4	7.4	7.7	7.8	7.8	8.0	8.1	8.3	8.5	8.7	8.9	9.0	9.1	9.3
Percent Change		0.1%	4.2%	1.0%	0.6%	2.2%	1.6%	2.3%	2.5%	2.0%	1.8%	1.5%	1.5%	1.4%
Retail Trade	44.2	44.8	44.8	44.9	45.1	45.7	46.5	47.3	48.2	49.0	49.8	50.5	51.2	52.0
Percent Change		1.3%	0.1%	0.2%	0.5%	1.2%	1.6%	1.9%	1.7%	1.7%	1.5%	1.4%	1.4%	1.4%
Finance, Insurance & Real Estate (FIRE)	7.9	7.9	8.2	8.6	8.7	8.7	8.7	8.7	8.8	8.9	9.0	9.0	9.1	9.1
Percent Change		0.2%	2.9%	5.0%	1.3%	-0.5%	0.4%	0.2%	0.8%	1.0%	0.8%	0.8%	0.6%	0.5%
Services	47.5	48.1	49.1	50.5	52.0	53.2	54.5	55.8	57.1	58.6	60.1	61.5	63.0	64.4
Percent Change		1.3%	1.9%	2.9%	2.9%	2.2%	2.3%	2.4%	2.4%	2.5%	2.4%	2.4%	2.3%	2.2%
Total Government	57.8	58.1	58.1	58.4	58.1	58.4	58.7	58.8	59.0	59.2	59.4	59.7	59.9	60.1
Percent Change		0.6%	-0.1%	0.6%	-0.6%	0.6%	0.5%	0.1%	0.5%	0.3%	0.4%	0.5%	0.4%	0.2%
Federal Government	7.5	7.3	7.1	7.1	7.0	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
Percent Change		-2.9%	-2.9%	0.6%	-0.7%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
State & Local Government	50.3	50.9	51.0	51.3	50.9	51.1	51.4	51.5	51.7	51.9	52.1	52.4	52.6	52.7
Percent Change		1.2%	0.3%	0.6%	-0.7%	0.3%	0.6%	0.1%	0.5%	0.3%	0.4%	0.6%	0.4%	0.2%
State Government	13.6	13.5	13.6	13.6	13.5	13.5	13.5	13.5	13.4	13.4	13.4	13.4	13.4	13.5
Percent Change		-1.0%	0.9%	0.1%	-0.5%	-0.3%	-0.1%	-0.1%	-0.1%	-0.1%	0.0%	0.0%	0.1%	0.1%
Local Government	36.7	37.4	37.4	37.7	37.4	37.6	37.9	38.0	38.3	38.5	38.7	39.0	39.2	39.3
Percent Change		2.0%	0.1%	0.7%	-0.8%	0.5%	0.8%	0.2%	0.8%	0.5%	0.6%	0.8%	0.5%	0.3%



One distinction between short- and long-term forecasts needs clarification. In the short term, job growth can change dramatically due to price changes or supply and demand shocks, such as oil prices or droughts, which are difficult to predict. Long-term forecasts show the general trend of job growth, and whether or not structural changes are occurring in the economy.

Agriculture

No projections for Agriculture are given because of its small portion of total employment (1.5% of total employment in 1998[6]), but it is still an important sector and can effect other industries like Manufacturing. For example, the sugar beet industry dramatically increases employment levels in the Manufacturing sector during harvesting season, lowering unemployment rates in counties where sugar beet farming and processing exist. The covered Unemployment Insurance (UI) employment growth in Agriculture is a result of the commercialization of agricultural business; the shifting from family-owned businesses towards company ownership. As a result, more agricultural workers are covered by UI. Wyoming has a higher rate of self-employment (22.7%) than the nation (16.4%), with a large portion of the workforce employed in Agriculture positions that are not covered under UI.[7]

Occupational growth in the Agriculture sector (see Table 3, page 7) is greatest among landscape laborers, farm equipment operators, and veterinary technicians. Table 3 gives the base and forecast job growth or loss from 1998 to 2008, along with the amount and percent difference between the forecast horizon.

Since Agriculture is the smallest sector in total covered employment, it does not have an important direct effect on total employment changes, except for the seasonal factor.[8] From 1990 to 1998, by percentages, the Construction and Agriculture sectors gained the most jobs, at 43.0 percent and 42.5 percent, respectively, followed by Services at 32.9 percent.

Table 3: Occupational Growth in the Agriculture Sector 1998-2008

OES Code	Occupational Title	Base 1998	Projected 2008	Percent Change	Net Change
79041	Laborers, Landscp/Groundskeep	399	508	27.3	109
79021	Farm Equipment Operators	397	441	11.1	44
32951	Veterinary Techs/Technols	83	123	48.2	40
74002	Farm Wkrs, Ex Agri Serv	380	419	10.3	39
32114	Vets & Vet Inspectors	77	102	32.5	25
79017	Animal Caretakers, Exc Farm	82	106	29.3	24
79806	Veterinary Assistants	78	101	29.5	23
55305	Reception/Information Clks	46	65	41.3	19
71005	Farm Managers	180	198	10.0	18
79033	Pruners	44	55	25.0	11

Mining

The Mining sector has played a vital role in the progress of Wyoming's economy in the past. However, future contributions are forecast to be less significant on Wyoming's overall economy and job growth as the state changes from a goods-producing to a service-producing economy. Also, technology and productivity will decrease job growth, as the sector becomes more capital intensive.

In 1998, there were 17,000 jobs in Wyoming's Mining sector (see Table 2, page 5). However, Wyoming's 1999 annual average employment is forecast at 15,600 jobs--a drop of 1,400 jobs from 1998. The sub-sectors contributing to the loss were oil & gas extraction (-1,000), non-metallic minerals & quarrying (-300) and coal mining (-100). This large decline in employment started in the first quarter of 1999, and is considered an anomaly to many analysts. For example, the Current Employment Statistics (CES), Mass Layoff Statistics (MLS), and Local Area Unemployment Statistics (LAUS) statistical series did not catch this significant decline in jobs in preliminary estimates. This large decline in employment was unexpected since UI claims from the Mining sector and monthly reports from employers included in the CES sample, at the time, suggested much smaller job losses.[9]

After reviewing the Mining employment data produced by the UI employer tax records, analysts were able to confirm the large job losses by using wage records and social security numbers to track individual employees. This involved the detailed matching of individual wage records for employer accounts from first quarter 1998 through second quarter 1999. The results proved that within a six-month period, approximately 1,000 individuals from the Mining sector left Wyoming's job market.

Despite predictions of oil and gas prices remaining strong through the year 2000 and increases in the production of coal, trona and methane gas by the Consensus Revenue Estimating Group[10] (CREG), Wyoming's Mining sector is expected to remain stable through the year 2008. The increase in the number of drilling applications for coal-bed methane and the number of completed wells is expected to have minimal upward effect on employment because coal-bed methane drilling is less labor intensive than standard oil and gas drilling.

Table 4 (see page 8) shows the top ten employing occupations within the Wyoming Mining sector. Overall employment in Mining is expected to decline 8.2 percent by the year 2008.

Table 4: Occupational Growth in the Mining Sector 1998-2008

OES Code	Occupational Title	Base 1998	Projected 2008	Percent Change	Net Change
87917	Service Unit Operators	1,043	1,204	15.4	161
81005	First Line Superv: Const,Extrac	747	878	17.5	131
93914	Welders & Cutters	218	312	43.1	94
87914	Derrick Operators, Oil	371	429	15.6	58
87921	Roustabouts	904	952	5.3	48
97911	Well Head Pumpers	285	330	15.8	45
98319	Construct Trades Helpers, NEC	362	402	11.0	40
95005	Gas Plant Operators	234	271	15.8	37
87911	Rotary Drill Operators	233	269	15.5	36
97908	Oil Pumpers, Ex Well Head	231	266	15.2	35

Construction and Real Estate

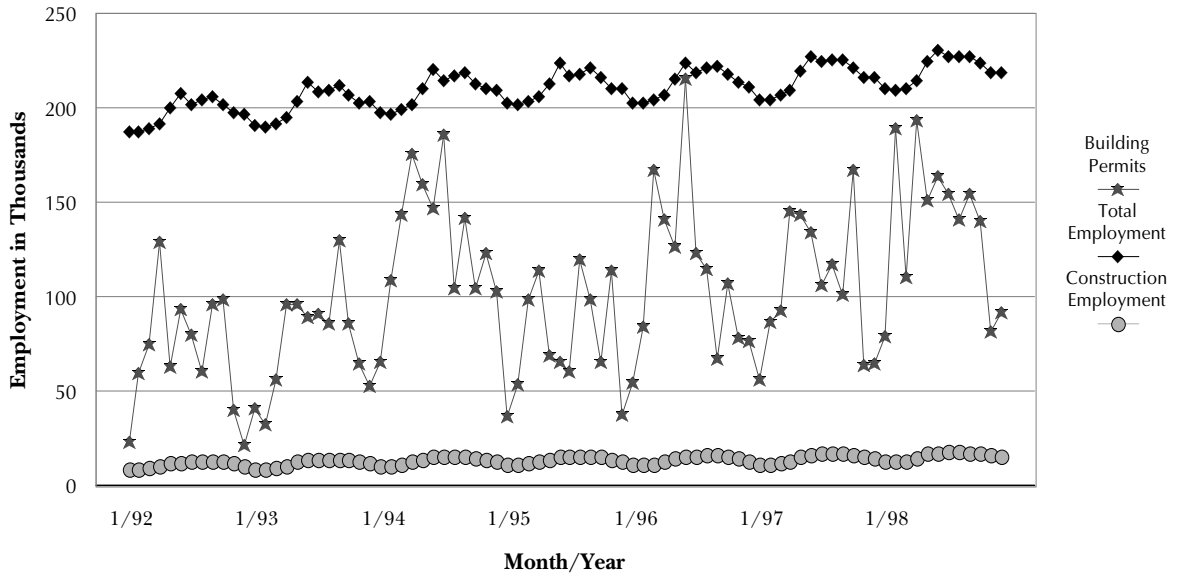
The Construction sector is defined as building construction-general contractors; heavy construction other than building construction-traditionally highway; and special trade contractors, such as electricians, carpenters, plumbers, etc. The average annual wage for the Construction sector rose from $22,826 in 1990 to $26,844 in 1998 (see Table 15, page 19). The percentage of Construction employment as a share of total employment increased from 5.5 to 7.0 percent during the period from 1990 to 1998. Statewide, employment forecasts show Construction increasing in 2000, and slowing down thereafter (see Table 2, page 5). By 2008, the number of Construction jobs is expected to increase to 19,130 jobs from 15,850 jobs in 1998. Building construction and special trade contractor employment gain the most due to increases in total population, while heavy construction employment is expected to slow down due to slower growth in federal expenditures on highways.

New construction building permits are often used as a leading economic indicator to forecast the general direction of the economy.[11] Permits fluctuate rapidly with the demand for housing. Housing starts (see Figure 4, page 9) and home sales are directly correlated with employment, the purchase of construction materials, the eventual purchase of household appliances, furniture and other household items. For example, Casper's economy has seen substantially increased requests for permits and new business formations[12] causing total and Construction employment to increase dramatically in 1999. Housing activity also increases with favorable interest rates. As interest rates fluctuate, housing starts, costs, and sales will move up and down causing employment in the Real Estate and Construction industries to fluctuate. Traditionally, interest rate changes influence the Real Estate sub-sector first, and then six to 12 months later effect the Construction sector.

Housing starts and home sales are correlated with the seasonal weather factors in Wyoming, with the second and third quarters having the largest number of housing permits issued. Construction and Real Estate employment and wages peak in the summer and drop to the lowest levels in the winter. Other contributors to fluctuations in housing starts and home sales include changes in income levels and household formations (see page 18). As average income levels go up beyond inflation, consumer-spending power goes up as well, increasing housing starts and sales.

Employment in the Construction sector also includes heavy construction, particularly in road and airport construction. Looking at the dollar amount the Wyoming Transportation Department (WDT) projects let to contract, it is evident the amount spent by WDT will also effect

Figure 4: Total Wyoming and Construction Employment
Number of Building Permits (Units)



Construction employment levels. The aggregated time series data for past employment and wage interaction in heavy construction has increased considerably. This increase in 1999 is due to the increase in federal expenditures[13] for highway construction of $26 million over 1998 levels.

Growth occupations in the Construction sector are carpenters, electricians and plumbers (see Table 5). Many other factors effect the Construction sector and can also be useful as economic indicators: demographic factors (i.e., age composition of the population, net domestic migration patterns, and household formations), rental prices, and wood prices.

Table 5: Occupational Growth in the Construction Sector 1998-2008

OES Code	Occupational Title	Base 1998	Projected 2008	Percent Change	Net Change
87102	Carpenters	1,699	2,171	27.8	472
87202	Electricians	813	1,078	32.6	265
87502	Plumbers/Pipefittrs/Steamfitrs	597	766	28.3	169
87311	Concrete & Terrazzo Finishers	494	660	33.6	166
15017	Construction Managers	543	673	23.9	130
81005	First Line Superv: Const,Extrac	529	651	23.1	122
97102	Truck Drivers, Heavy	525	642	22.3	117
19005	General Mgrs & Top Execs	464	568	22.4	104
87402	Painters & Paperhangers	265	362	36.6	97
87808	Roofers	241	317	31.5	76

Finance and Insurance

The Finance, Insurance & Real Estate (FIRE) sector is one of the smallest employing sectors in Wyoming. In 1990, the sector had 7,178 jobs, about 3.7 percent of total jobs in Wyoming. In 1998, FIRE represented about 3.8 percent of total jobs. The percentage of total FIRE jobs in 2008 is expected to be about 3.6 percent. The increased use of technology, as well as the

consolidation and/or restructuring of some financial institutions, will initiate this decrease (i.e., Internet and automatic teller machines - ATM). Depository institution employment lost 572 jobs over the past eight years and is projected to drop in the future, while employment in other Finance sub-sectors is expected to increase. This is also a general trend at the national level. Due to the development of financial market and financial innovations, direct financing is playing a bigger role in the U.S. financial markets, so the decline and restructuring in depository institutions are unavoidable.

The securities brokerage and dealing sub-sector is the only industry with a six-digit average annual wage ($104,689) and largest percentage gains at 163.8 percent (nearly 12.9% per year) in the past eight years. This phenomenon is due to the booming of the securities market and direct financing in the financial markets. Another explanation is the financial risk premium. Securities businesses are usually considered risky and high wages are needed to attract people to work in this area. Experience, demand, and licensing requirements may also contribute to the high wages (see Table 6). Other growth occupations in the FIRE sector are insurance adjusters, insurance policy processing agents, loan officers, and credit clerks.

Table 6: Occupational Growth in the Finance, Insurance & Real Estate Sector 1998-2008

OES Code	Occupational Title	Base 1998	Projected 2008	Percent Change	Net Change
53314	Insurance Policy Process Clerks	320	455	42.2	135
53121	Loan & Credit Clerks	283	405	43.1	122
85132	Maintenance Repairers, Gen Util	294	365	24.1	71
19005	General Mgrs & Top Execs	581	652	12.2	71
43002	Insurance Sales Workers	290	339	16.9	49
43014	Securities/Financial, Sales	173	218	26.0	45
53302	Insur Adjusters, Examiners	75	118	57.3	43
13002	Financial Managers	290	330	13.8	40
15011	Property & Real Estate Mgrs	148	178	20.3	30
67005	Janitors & Cleaners	140	169	20.7	29

Manufacturing

Manufacturing makes up only a small part of Wyoming's economy. The sector averaged 10,900 covered jobs or 4.8 percent of all jobs in 1998. Between 1990 and 1999, the Manufacturing sector experienced modest gains in employment especially during 1990, 1991, 1993, and 1996. The slow growth is due to the close relationship of this sector to the Agriculture and Mining sectors, which are not expected to increase significantly over the forecast horizon. More than 80.0 percent of the employment growth between 1990 and 1996 was caused by non-economic code changes. Non-economic code changes are based on a company changing its primary business activity from one sector to another.[14] For example, in 1991 and 1993, two individual companies changed their primary business industry classification from the Wholesale Trade and Mining sectors to the Manufacturing sector. From 1990 to 1998, Wyoming's Manufacturing sector increased by 1,500 jobs; however, 1,200 jobs were added by the way of non-economic code changes. These types of changes in Wyoming's economy can show artificial growth in employment levels and often are misinterpreted.

Nationally, Manufacturing's share of total jobs is expected to decline, as a decrease of 350,000 Manufacturing jobs is projected through the year 2006. However, Manufacturing is expected to

maintain its share of total output, as productivity in this sector is projected to increase. Accounting for 14.0 percent of employment in 1996, Manufacturing is expected to decline nominally to a level of 12.0 percent in 2006.

Unlike the national level, Wyoming's Manufacturing is projected to remain stable through the year 2008.[15] This sector is expected to grow 10.3 percent by the year 2008. Even though the level of employment is projected to increase by 1,100 jobs by the year 2008, the relative share of total employment in the sector remains at 4.7 percent.

Table 7 shows the top ten employing occupations within the Wyoming Manufacturing sector.

Table 7: Occupational Growth in the Manufacturing Sector 1998-2008

OES Code	Occupational Title	Base 1998	Projected 2008	Percent Change	Net Change
93956	Assemb & Fabricatrs, NEC	418	455	8.9	37
97102	Truck Drivers, Heavy	197	231	17.3	34
91714	Metal Fabricators, Structl Metal	87	114	31.0	27
91911	Metal Molding Mach Oprs/Tndrs	46	63	37.0	17
91914	Fndry Mold Assembly, Shakeout	43	58	34.9	15
98102	Mechanic & Repairer Helpers	68	80	17.6	12
93953	Grinders & Polishers, Hand	78	90	15.4	12
97938	Grader/Dozer/Scraper Oprs	35	43	22.9	8
97956	Operating Engineers	40	47	17.5	7
91508	Combin Mach Tool Oprs/Tndrs	8	14	75.0	6

Transportation, Communication & Public Utilities (TCPU)

The Transportation, Communication & Public Utilities (TCPU) sector includes: railroad transportation; motor freight transportation; electric, gas & sanitary services; as well as other transportation and communication related companies. Employment in this sector in 1998 was 13,920 and is expected to rise to 14,110 by the year 2000. Employment is forecast to dip to 14,030 in 2001 and continue to decline to approximately 13,810 in 2008. This drop in employment is mainly due to technology replacing labor. The annual wage was $34,437 in 1998. In 2000, the annual wage is expected to be $36,618. By 2008, the annual wage for the TCPU sector is expected to be $51,724, a growth rate of roughly 4.0 percent annually for the forecast period (see Table 15, page 19).

Within the TCPU sector, the electric, gas & sanitary services sub-sector is also projected to decline by 11.0 percent due to technology efficiencies. A sub-sector expected to grow substantially within the TCPU sector is transportation by air. This group is expected to grow by approximately 25.0 percent over the forecast period. The relatively small number of individuals currently employed in this sector account for a higher growth rate with increased demand for air transportation.

The fastest growing occupations within the TCPU sector are pilots and flight engineers (see Table 8, page 12). These occupations are expected to grow by about 43.0 percent over the projection period. The increased demand for these occupations within this industry are highly valued with larger increases in wages and can be seen locally. In a recent article in the ***Casper-Star Tribune***,[16] Great West Airlines reported having difficulty recruiting pilots and flight engineers to operate their flights. However, the company expects the 60 pilots they have sent for training will

Table 8: Occupational Growth in the Transportation, Communication & Public Utilities Sector 1998-2008

OES Code	Occupational Title	Base 1998	Projected 2008	Percent Change	Net Change
97702	Aircraft Pilots/Flight Engrs	196	280	42.9	84
58011	Transportation Agents	187	263	40.6	76
97108	Bus Drivers, Ex School	222	254	14.4	32
85702	Telephone/Cable TV Instlr/Rprs	390	418	7.2	28
53117	Credit Checkers	78	101	29.5	23
43021	Travel Agents	126	144	14.3	18
83008	Transportation Inspectors	50	66	32.0	16
85905	Precision Instrum Repairers	36	48	33.3	12
87202	Electricians	53	65	22.6	12
97114	Taxi Drivers & Chauffeurs	153	165	7.8	12

alleviate their dilemma. Transportation agents and parts salespersons are also expected to grow about the same rate.

Local and suburban transit and interurban highway passenger transportation are expected to grow by approximately 18.0 percent over the forecast period, along with increases in the total population. Transportation inspectors and agents are expected to grow by approximately 41.0 percent and 32.0 percent, respectively.

Wholesale Trade

Employment growth in the Wholesale Trade sector in 1998 slowed to 1.0 percent after increasing by 4.2 percent in 1997. Employment totaled 7,770 jobs in 1998. Since 1990, employment in the Wholesale Trade sector has increased by an average of 1.7 percent annually. The growth, however, has tended to occur in spurts, with gains in 1994 and 1997 above 4.0 percent and much lower increases in all other years.

For the forecast period, employment in the Wholesale Trade sector is projected to increase by 1.9 percent annually, reaching 9,260 jobs in 2008. Growth in this sector is driven by increases in population and the continued shift in the economy from the goods-producing sectors to the Services and Retail Trade sectors. Occupations within the Wholesale Trade sector which increase employment the most over the forecast horizon are driver and sales workers, heavy truck drivers, light truck drivers, sales representatives, and clerical supervisors (see Table 9).

Table 9: Occupational Growth in the Wholesale Trade Sector 1998-2008

OES Code	Occupational Title	Base 1998	Projected 2008	Percent Change	Net Change
97117	Driver & Sales Workers	463	531	14.7	68
97102	Truck Drivers, Heavy	442	506	14.5	64
97105	Truck Drivers, Light	393	450	14.5	57
49008	Sales Representatives, NEC	548	597	8.9	49
51002	Clerical Supervisors	71	104	46.5	33
85311	Bus, Truck, Diesel Eng Mechs	205	233	13.7	28
49014	Salespersons, Parts	253	274	8.3	21
49005	Sales Reps, Science	213	231	8.5	18
55108	Secretaries, Ex Legal or Med	119	135	13.4	16
85314	Mobile Heavy Equipment Mechs	128	144	12.5	16

Retail Trade

The Retail Trade sector is the third largest sector in Wyoming in terms of employment, with a total of 44,920 jobs in 1998. Growth in this sector was quite high during the early part of the decade, with increases averaging over 3.0 percent from 1990 to 1995. However, the growth rate began to slow in 1996, and significantly lagged increases in total employment realized over the past two years, growing by only 0.1 percent in 1997 and by 0.2 percent in 1998.

The largest sub-sector within the Retail Trade sector is eating & drinking places, comprising just over one-third of total Retail Trade sector employment. From 1990 to 1995, this sub-sector grew in excess of 4.0 percent annually. Significant slowing occurred in 1996, with an increase of only 1.3 percent. During the next two years, employment within the sub-sector declined by 1.3 percent in 1997 and by 2.2 percent in 1998.

Two other major sub-sectors have also been losing jobs recently in the Retail Trade sector. The first is the general merchandise stores sub-sector which followed the same general pattern as eating & drinking places, with large gains early in the decade, followed by declines after 1994. Growth averaged 5.7 percent from 1990 to 1994. Since then, declines have averaged 0.9 percent, with decreases of 1.8 percent realized in 1997 and 0.6 percent in 1998. The apparel & accessory stores sub-sector gained jobs at an average rate of 1.4 percent from 1990 to 1995, but losses in employment in both 1996 and 1997 were 4.4 percent. This sub-sector experienced employment growth in 1998, suggesting a possible turn around.

Building materials, hardware, garden supply & mobile homes is one of the smaller sub-sectors within the Retail Trade sector, but has experienced the fastest growth within the sector. Growth rates averaged 7.5 percent from 1990 to 1995 and 4.2 percent from 1995 to 1998. Employment within the food stores sub-sector decreased through 1995, but grew by 1.9 percent annually thereafter, despite significant ownership changes in the sector within Wyoming.

The automobile dealers & gasoline service stores sub-sector realized consistently positive growth averaging 2.4 percent annually since 1990. The home furniture, furnishings & equipment stores sub-sector grew by a rate of over 5.0 percent annually, and the miscellaneous retail sub-sector increased by 2.7 percent annually.

For the year 2000, forecast employment in the Retail Trade sector increases by 1.2 percent, slightly slower than the overall growth in employment, but nonetheless, a significant improvement over 1997 and 1998. After 1999, employment in the Retail Trade sector increases faster than the overall level of employment growth. From 1999 to 2008, the Retail Trade sector grows by an average of 1.6 percent, the third fastest increase of any sector, behind only the Services and Wholesale Trade sectors. In 2008, the Retail Trade sector is forecast to have 51,960 jobs, comprising one-fifth of total employment. Growth in the Retail Trade sector is primarily driven by increasing population, tourism, and disposable income.

Within the Retail Trade sector, occupations projected to increase the most are retail salespersons, cashiers, food preparation workers, restaurant cooks, and combination food preparation/service workers (see Table 10, page 14).

Services

The Services sector is primarily engaged in providing a wide variety of services for individuals, businesses and government establishments and has seen major job growth within Wyoming's

Table 10: Occupational Growth in the Retail Trade Sector 1998-2008

OES Code	Occupational Title	Base 1998	Projected 2008	Percent Change	Net Change
49011	Salespersons, Retail	5,909	7,343	24.3	1434
49023	Cashiers	4,789	5,461	14.0	672
65038	Food Preparation Workers	2,117	2,419	14.3	302
65026	Cooks, Restaurant	1,796	2,038	13.5	242
65041	Comb Food Prep/Serv Wkrs	2,540	2,752	8.3	212
49021	Stock Clerks, Sales Floor	2,126	2,298	8.1	172
65008	Waiters & Waitresses	4,363	4,523	3.7	160
85302	Automotive Mechanics	733	873	19.1	140
65032	Cooks, Fast Food	1,300	1,428	9.8	128
41002	Marketing/Sales Supervisors	2,023	2,131	5.3	108

economy during the 1990's, with an average annual growth rate of 3.6 percent. Although the increases slowed during the past three years to 1.3 percent in 1996, 1.9 percent in 1997, and 2.9 percent in 1998, employment growth in the Services sector has consistently been above the increase in total employment. In addition to the second fastest growth rate of the 1990's, behind only the Construction sector, Services is the second largest employing sector in Wyoming's economy.

Except for a small decline in 1996, the health services sub-sector has enjoyed rapid and nearly continuous increases with an average job growth of 3.0 percent since 1990. A large portion of the increase in this sub-sector is related to the aging of the population and an overall increase in the demand for health care in general.

The business services sub-sector grew faster than any other Services sub-sector, with average annual increases of 6.9 percent. The gains in this sub-sector are indicative of the change going on in the national and Wyoming economies, as the shift from a goods-producing economy to a service- and information-producing economy continues.

The hotels, rooming houses, camps & other lodging places sub-sector also grew more slowly than the other large sub-sectors, with average gains of only 1.9 percent annually. Almost all of the gains occurred in the first half of the decade, when the sector grew at an annual rate of 2.6 percent, while the last three years' growth has averaged only 0.8 percent annually. This sub-sector is largely dependent on tourism and is one measure of tourism's impact on Wyoming's economy.

The Services sector is projected to have the fastest growth rate of any sector through 2008 at 2.4 percent annually. Additionally, this sector is the only sector forecast to increase at a rate of more than 2.0 percent through the forecast horizon. As a result of the high growth, the Services sector surpasses the Government sector in 2005 as the largest employing sector in Wyoming.

Within the Services sector, business services are expected to continue leading all other sub-sectors in employment growth due to the increased number of new businesses.[17] Health services should maintain a solid growth rate due to the aging population, while the other service sub-sectors will grow at somewhat slower rates.

Occupations expected to add the greatest number of jobs in the Services sector are: registered nurses, general managers and top executives, janitors and cleaners, and general utility maintenance repairers (see Table 11, page 15).

Table 11: Occupational Growth in the Services Sector 1998-2008

OES Code	Occupational Title	Base 1998	Projected 2008	Percent Change	Net Change
32502	Registered Nurses	2,968	3,763	26.8	795
31308	Teachers, Secondary School	3,908	4,508	15.4	600
19005	General Mgrs & Top Execs	1,646	1,934	17.5	288
67005	Janitors & Cleaners	3,217	3,461	7.6	244
85132	Maintenance Repairers, Gen Util	1,372	1,608	17.2	236
65038	Food Preparation Workers	1,166	1,378	18.2	212
27307	Residential Counselors	585	750	28.2	165
13002	Financial Managers	715	871	21.8	156
32505	Licensed Practical Nurses	763	918	20.3	155
68038	Child Care Workers	661	814	23.1	153

Total Government

Total Government consists of federal, state, and local government (see Table 12). The annual wage in 1998 for the Government sector was $26,305 and is expected to rise to $27,975 by the

Table 12: Total Government Nonagricultural Wage & Salary Employment 1990-1998
(Federal, State and Local Government, including Education)

(Thousands)	1990	1991	1992	1993	1994	1995	1996	1997	1998
Total Government	**55.3**	**55.8**	**56.8**	**57.2**	**58.2**	**57.8**	**58.1**	**58.1**	**58.4**
Percent Change		**0.9%**	**1.8%**	**0.7%**	**1.7%**	**-0.7%**	**0.5%**	**0.0%**	**0.5%**
Federal Government	7.6	7.4	7.5	7.5	7.5	7.5	7.3	7.1	7.1
Percent Change		-2.6%	1.4%	0.0%	0.0%	0.0%	-3.1%	-2.3%	0.0%
State & Local Government	47.7	48.4	49.4	49.7	50.7	50.3	50.9	51.0	51.3
Percent Change		1.5%	2.1%	0.6%	2.0%	-0.8%	1.2%	0.2%	0.6%
State Government	13.6	13.9	13.8	13.9	13.8	13.6	13.5	13.6	13.6
Percent Change		2.2%	-0.7%	0.7%	-0.7%	-1.4%	-0.7%	0.7%	0.0%
Education - State Govt	5.2	5.2	5.2	5.3	5.3	5.4	5.3	5.3	5.3
Percent Change		0.0%	0.0%	1.9%	0.0%	1.9%	-1.9%	0.0%	0.0%
Local Government	34.1	34.5	35.6	35.8	36.9	36.7	37.4	37.4	37.7
Percent Change		1.2%	3.2%	0.6%	3.1%	-0.5%	1.9%	0.0%	0.8%
Education - Local Govt	18.6	19	19.3	19.5	19.8	19.8	19.9	20.2	20.2
Percent Change		2.2%	1.6%	1.0%	1.5%	0.0%	0.5%	1.5%	0.0%

Source: Current Employment Statistics (CES) program.

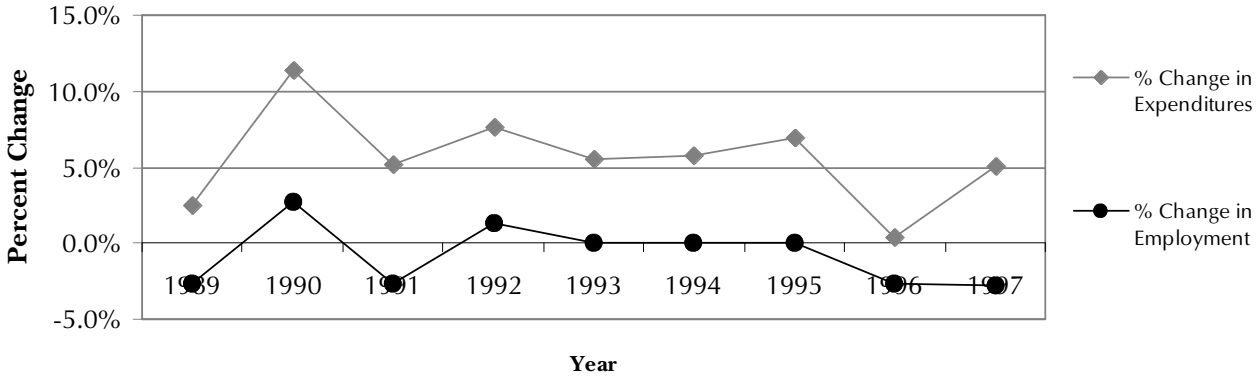
year 2000. It is estimated to increase 4.0 percent per year through 2008 to a level of $37,560. The forecast annual wage for state government mirrors the annual wage state pattern for the entire Government sector, with education increasing the fastest. Both federal and local government wages increased rapidly, too. However, compared to the sector as a whole, the annual wage is traditionally higher for the federal government and slightly lower for local government.

Local and state government employment in 1998 was 51,320 jobs. Employment growth in state government has been relatively flat in the 1990's, and both sub-sectors are expected to decline slightly to 51,100 by the year 2000. Growth in these sub-sectors is expected to remain flat

throughout the forecast period, having an estimated 52,740 jobs by 2008, although local government has shown growth and should continue during the forecast horizon. In 1998, the federal government payroll numbered 7,100 jobs in Wyoming. By the year 2000, federal employment is expected to drop to a level of 7,050 jobs. Employment in 2001 is expected to rise to 7,190 and remain steady through 2008.

Primarily, the low growth in the Government sector reflects current and projected spending cuts. Figure 5 compares the percentage change in federal expenditures to the percentage change in federal employment for the years 1989 to 1997 for the State of Wyoming. As the level of federal spending increases or decreases, employment levels rise or fall commensurately.[18]

Figure 5: Federal Expenditures and Federal Employment in Wyoming 1989-1997



In the Government sector, technology-related occupations show the highest projected net change in terms of growth over the forecast horizon (see Table 13). The number of database administrators and system analysts is expected to grow by about 70.0 percent each, along with

Table 13: Occupational Growth in the Government Sector 1998-2008

OES Code	Occupational Title	Base 1998	Projected 2008	Percent Change	Net Change
32502	Registered Nurses	451	551	22.2	100
55108	Secretaries, Ex Legal or Med	947	1,028	8.6	81
25102	Systems Analysts	93	158	69.9	65
87711	Highway Maintenance Workers	605	645	6.6	40
28302	Law Clerks	50	74	48.0	24
25103	Database Administrators	30	51	70.0	21
25108	Computer Programmer Aides	31	50	61.3	19
13014	Administrative Services Mgrs	162	175	8.0	13
22126	Electrical & Electronic Engineer	18	23	27.8	5
32505	Licensed Practical Nurses	137	142	3.6	5

higher wages.[19] Computer programming aides are expected to show a growth percent change of about 61.0 percent. Law clerks are expected to show a gain of 48.0 percent and marketing/sales supervisors, a gain of 36.0 percent. These numbers are misleading, since these occupations represent relatively few of the total positions currently available, and a small increase in the number of positions translates into a large percentage increase. System analysts are an exception to this observation. This occupation is expected to increase by 65 jobs. Other occupations expected to show the greatest increases in actual jobs include registered nurses and secretaries.

Local Education

Employment in the local education sub-sector continues to grow at a slow but steady rate despite decreasing school enrollments. Student enrollment in primary and secondary schools during 1991 was 98,226 and rose to 100,899 in the 1993-1994 school year. Enrollment has been declining since that time and during the 1998-1999 school year held at 94,420 statewide.[20]

In 1990, local education had 18,600 jobs. Between 1991 and 1999, employment in local education steadily increased. By 1997, employment had grown to 20,200 jobs statewide, and is expected to remain unchanged through 1999. Employment in this sub-sector is expected to grow by 1.0 percent per year, rising to 25,800 jobs by the year 2008. Funding is a stronger driver of employment in education than enrollments. Expenditures for local education have risen since 1992; however, expenditure levels are uncertain at this time due to school finance litigation and could change in the future.

Wages & Income

Personal income levels between 1999 and 2008 are projected to increase for all industries, with total personal income growing by 4.7 percent annually over the ten-year forecast horizon (see Table 14, page 18).

Per capita personal income levels are also projected to increase, but at a lower rate of 4.2 percent over the same time.

Despite these expectations for growth, more modest gains in median household income (3.7%) and other measures reflect the concentration of new jobs in the Retail Trade and Services sectors--currently the two lowest paying sectors in the state.[21] Between 1990 and 1998, two out of three jobs created in Wyoming were in these same sectors. In the face of strong labor market competition from neighboring states, retention of the state's population and future labor force is problematic. From 1990 to 1998, total employment covered by UI increased by 15.7 percent, or by 30,017 jobs.[22] The bulk of these jobs were in Retail Trade paying $13,783 and Services paying $19,396 annually, compared to $29,054 statewide in 1998. In 1997, Wyoming's statewide average weekly wage was 21.2 percent below the national average.[23] The more rapid growth of lower wage jobs in the context of higher earnings elsewhere is associated with slow population growth.

Projections for 1999 to 2008 indicate an employment growth of 7.5 percent, or about half of the 15.7 percent rate of growth for the period 1990-1998. The largest components of growth, Retail Trade and Services employment, are a function of population and personal income growth, the commercialization of functions formerly performed by family and community, and the functioning of Services as an export base sector (e.g., tourism, education, and financial services).

With regard to projections for personal income by sector for the period 1999-2008, the Services sector climbs 6.4 percent over the period, while Trade (Retail & Wholesale combined) grows by 5.0 percent. The traditionally higher paying sectors of Mining, TCPU, and Government are projected to grow by smaller percentages (3.7%, 4.1%, and 3.6%, respectively, over the forecast period).

Average annual wages for nonagricultural covered employment (see Table 15, page 19) are projected to increase for all industries over the period 1999-2008, with Construction expected to show the lowest percent change (9.8%) and Services to experience the highest percentage gain

Table 14: Personal Income and Industry Earnings 1995-2008

(Millions of Dollars unless otherwise noted.)	Historical 1995	1996	1997	Forecast 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total Personal Income	$9,895.00	$10,332.75	$10,846.25	$11,141.00	$11,475.16	$12,006.49	$12,554.16	$13,192.12	$13,865.51	$14,542.33	$15,185.09	$15,884.30	$16,558.02	$17,296.51
Percent change		4.4%	5.0%	2.7%	3.0%	4.6%	4.6%	5.1%	5.1%	4.9%	4.4%	4.6%	4.2%	4.5%
Real Personal Income (1992 Dollars)	$9,199.58	$9,415.28	$9,701.19	$9,885.59	$10,064.00	$10,345.82	$10,562.37	$10,771.24	$11,006.77	$11,230.57	$11,414.31	$11,627.69	$11,803.22	$12,005.43
Percent change		2.3%	3.0%	1.9%	1.8%	2.8%	2.1%	2.0%	2.2%	2.0%	1.6%	1.9%	1.5%	1.7%
Population (Thousands)	478.62	480.06	480.04	480.91	481.95	484.10	486.24	488.48	490.81	493.23	495.63	498.02	500.38	502.78
Percent change		0.3%	0.0%	0.2%	0.2%	0.4%	0.4%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Per Capita Personal Income (Dollars)	$20,674	$21,524	$22,594	$23,167	$23,810	$24,801	$25,819	$27,006	$28,250	$29,484	$30,638	$31,895	$33,091	$34,401
Percent change		4.1%	5.0%	2.5%	2.8%	4.2%	4.1%	4.6%	4.6%	4.4%	3.9%	4.1%	3.8%	4.0%
Real Per Capita Personal Income (1992 Dollars)	$19,221	$19,613	$20,209	$20,556	$20,882	$21,371	$21,723	$22,051	$22,426	$22,770	$23,030	$23,348	$23,589	$23,878
Percent change		2.0%	3.0%	1.7%	1.6%	2.3%	1.6%	1.5%	1.7%	1.5%	1.1%	1.4%	1.0%	1.2%
Median Household Income (Dollars)	$31,529	$30,952	$33,420	$34,608	$35,522	$36,701	$38,093	$39,554	$41,052	$42,656	$44,169	$45,902	$47,530	$49,337
Percent change		-1.8%	8.0%	3.6%	2.6%	3.3%	3.8%	3.8%	3.8%	3.9%	3.5%	3.9%	3.5%	3.8%
US CPI-U (Index Number - 1982-84=100)	152.49	156.95	160.62	163.13	166.52	170.43	175.06	180.21	185.37	190.44	195.42	200.46	205.65	211.00
Percent change		2.9%	2.3%	1.6%	2.1%	2.3%	2.7%	2.9%	2.9%	2.7%	2.6%	2.6%	2.6%	2.6%
Derivation of Total Personal Income														
Earnings by Place of Work	$6,791.75	$6,938.00	$7,325.75	$7,531.50	$7,821.94	$8,201.03	$8,586.98	$9,024.04	$9,502.32	$10,006.63	$10,469.97	$10,990.60	$11,476.30	$12,033.17
Percent change		2.2%	5.6%	2.8%	3.9%	4.8%	4.7%	5.1%	5.3%	5.3%	4.6%	5.0%	4.4%	4.9%
less: Contributions for Social Insurance	$472.50	$483.75	$508.75	$528.75	$545.42	$573.00	$599.34	$629.24	$663.55	$699.18	$732.24	$770.17	$804.94	$843.98
Percent change		2.4%	5.2%	3.9%	3.2%	5.1%	4.6%	5.0%	5.5%	5.4%	4.7%	5.2%	4.5%	4.9%
plus: Residence Adjustment	-$23.50	-$21.25	-$20.25	-$18.25	-$18.23	-$18.64	-$19.38	-$20.04	-$20.63	-$21.21	-$21.81	-$22.50	-$22.98	-$23.27
Percent change		-9.6%	-4.7%	-9.9%	-0.1%	2.2%	4.0%	3.4%	2.9%	2.8%	2.8%	3.2%	2.1%	1.3%
equals: Net Earnings by Place of Residence	$6,295.75	$6,433.00	$6,796.75	$6,984.50	$7,258.29	$7,609.38	$7,968.26	$8,374.76	$8,818.14	$9,286.24	$9,715.93	$10,197.93	$10,648.38	$11,165.92
Percent change		2.2%	5.7%	2.8%	3.9%	4.8%	4.7%	5.1%	5.3%	5.3%	4.6%	5.0%	4.4%	4.9%
plus: Dividends, Interest & Rents	$2,039.50	$2,239.25	$2,317.50	$2,361.25	$2,368.24	$2,432.23	$2,517.08	$2,642.99	$2,767.54	$2,867.77	$2,970.07	$3,074.32	$3,180.70	$3,284.66
Percent change		9.8%	3.5%	1.9%	0.3%	2.7%	3.5%	5.0%	4.7%	3.6%	3.6%	3.5%	3.5%	3.3%
plus: Transfer Payments	$1,559.75	$1,660.50	$1,732.00	$1,795.25	$1,848.63	$1,964.87	$2,068.82	$2,174.37	$2,279.84	$2,388.32	$2,499.09	$2,612.05	$2,728.94	$2,845.93
Percent change		6.5%	4.3%	3.7%	3.0%	6.3%	5.3%	5.1%	4.9%	4.8%	4.6%	4.5%	4.5%	4.3%
Earnings by Place of Work Components of Earnings														
Wages & Salaries	$5,255.75	$5,405.25	$5,706.25	$5,976.25	$6,204.41	$6,523.34	$6,829.53	$7,177.25	$7,552.78	$7,956.21	$8,315.25	$8,726.40	$9,099.35	$9,543.12
Percent change		2.8%	5.6%	4.7%	3.8%	5.1%	4.7%	5.1%	5.2%	5.3%	4.5%	4.9%	4.3%	4.9%
Income: Other Labor	$558.25	$544.00	$549.75	$554.50	$559.77	$589.65	$619.84	$654.84	$694.92	$734.43	$775.28	$817.53	$861.12	$905.21
Percent change		-2.6%	1.1%	0.9%	1.0%	5.3%	5.1%	5.6%	6.1%	5.7%	5.6%	5.4%	5.3%	5.1%
Proprietors Income	$977.75	$988.75	$1,069.75	$1,000.75	$1,057.76	$1,088.04	$1,137.61	$1,191.95	$1,254.63	$1,315.98	$1,379.44	$1,446.67	$1,515.83	$1,584.84
Percent change		1.1%	8.2%	-6.5%	5.7%	2.9%	4.6%	4.8%	5.3%	4.9%	4.8%	4.9%	4.8%	4.6%
Wage & Salary Disbursements by Industry														
Farm and Agricultural Services	$86.51	$87.41	$97.36	$103.31	$115.40	$124.56	$106.22	$90.56	$75.50	$77.67	$86.11	$98.36	$111.93	$124.89
Percent change		1.0%	11.4%	6.1%	11.7%	7.9%	-14.7%	-14.7%	-16.6%	2.9%	10.9%	14.2%	13.8%	11.6%
Mining	$742.87	$716.06	$794.32	$832.73	$800.41	$840.83	$887.43	$941.14	$995.57	$1,045.11	$1,083.05	$1,125.38	$1,156.09	$1,202.18
Percent change		-3.6%	10.9%	4.8%	-3.9%	5.0%	5.5%	6.1%	5.8%	5.0%	3.6%	3.9%	2.7%	4.0%
Construction	$356.41	$369.88	$404.67	$442.74	$486.87	$528.61	$555.49	$592.47	$633.75	$670.34	$694.48	$726.30	$761.28	$797.66
Percent change		3.8%	9.4%	9.4%	10.0%	8.6%	5.1%	6.7%	7.0%	5.8%	3.6%	4.6%	4.8%	4.8%
Manufacturing	$259.00	$318.00	$331.50	$353.26	$384.75	$414.78	$441.32	$470.29	$500.78	$529.98	$562.41	$592.88	$615.93	$646.34
Percent change		22.8%	4.2%	6.6%	8.9%	7.8%	6.4%	6.6%	6.5%	5.8%	6.1%	5.4%	3.9%	4.9%
TCPU*	$527.75	$527.25	$547.75	$543.98	$566.69	$593.22	$618.22	$646.64	$672.64	$701.38	$731.70	$754.94	$785.34	$816.85
Percent change		-0.1%	3.9%	-0.7%	4.2%	4.7%	4.2%	4.6%	4.0%	4.3%	4.3%	3.2%	4.0%	4.0%
Trade	$761.25	$790.25	$833.75	$880.17	$920.33	$966.51	$1,012.43	$1,069.05	$1,126.67	$1,194.98	$1,248.89	$1,315.08	$1,368.83	$1,439.44
Percent change		3.8%	5.5%	5.6%	4.6%	5.0%	4.8%	5.6%	5.4%	6.1%	4.5%	5.3%	4.1%	5.2%
FIRE**	$210.25	$225.75	$245.25	$264.09	$285.87	$298.44	$311.09	$326.64	$344.88	$364.58	$379.48	$398.68	$412.95	$431.96
Percent change		7.4%	8.6%	7.7%	8.3%	4.4%	4.2%	5.0%	5.6%	5.7%	4.1%	5.1%	3.6%	4.6%
Services	$879.88	$921.16	$972.21	$1,032.67	$1,111.99	$1,177.81	$1,253.92	$1,330.09	$1,420.44	$1,518.36	$1,602.99	$1,711.37	$1,805.11	$1,922.41
Percent change		4.7%	5.5%	6.2%	7.7%	5.9%	6.5%	6.1%	6.8%	6.9%	5.6%	6.8%	5.5%	6.5%
Government	$1,299.75	$1,317.00	$1,347.00	$1,388.81	$1,394.79	$1,438.04	$1,499.06	$1,561.76	$1,629.70	$1,696.77	$1,765.01	$1,838.12	$1,912.31	$1,987.41
Percent change		1.3%	2.3%	3.1%	0.4%	3.1%	4.2%	4.2%	4.3%	4.1%	4.0%	4.1%	4.0%	3.9%
Military	$132.08	$132.49	$132.44	$134.51	$137.31	$140.53	$144.35	$148.60	$152.85	$157.03	$161.14	$165.29	$169.58	$173.98
Percent change		0.3%	0.0%	1.6%	2.1%	2.3%	2.7%	2.9%	2.9%	2.7%	2.6%	2.6%	2.6%	2.6%

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Table 15: Average Annual Wages, in Nominal Dollars, by Major Industry 1995-2008

	Historical	Forecast												
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Mining	$43,671	$44,926	$47,064	$47,675	$49,621	$51,079	$52,281	$53,486	$54,692	$55,901	$57,112	$58,325	$59,541	$60,759
Percent Change		2.9%	4.8%	1.3%	4.1%	2.9%	2.4%	2.3%	2.3%	2.2%	2.2%	2.1%	2.1%	2.0%
Construction	$23,801	$24,634	$25,513	$26,844	$28,574	$29,258	$29,583	$29,888	$30,173	$30,442	$30,695	$30,934	$31,160	$31,374
Percent Change		3.5%	3.6%	5.2%	6.4%	2.4%	1.1%	1.0%	1.0%	0.9%	0.8%	0.8%	0.7%	0.7%
Manufacturing	$26,557	$29,474	$30,725	$32,197	$31,938	$33,235	$34,461	$35,663	$36,842	$38,001	$39,142	$40,265	$41,373	$42,468
Percent Change		11.0%	4.2%	4.8%	-0.8%	4.1%	3.7%	3.5%	3.3%	3.1%	3.0%	2.9%	2.8%	2.6%
TCPU*	$31,612	$31,664	$33,283	$34,437	$34,590	$36,618	$38,426	$40,245	$42,088	$43,958	$45,856	$47,782	$49,738	$51,724
Percent Change		0.2%	5.1%	3.5%	0.4%	5.9%	4.9%	4.7%	4.6%	4.4%	4.3%	4.2%	4.1%	4.0%
Trade	$14,136	$14,550	$15,277	$16,234	$16,684	$17,108	$17,417	$17,716	$18,006	$18,287	$18,559	$18,824	$19,083	$19,334
Percent Change		2.9%	5.0%	6.3%	2.8%	2.5%	1.8%	1.7%	1.6%	1.6%	1.5%	1.4%	1.4%	1.3%
FIRE**	$25,406	$27,247	$28,956	$29,326	$31,279	$32,462	$33,431	$34,378	$35,307	$36,217	$37,111	$37,988	$38,850	$39,699
Percent Change		7.2%	6.3%	1.3%	6.7%	3.8%	3.0%	2.8%	2.7%	2.6%	2.5%	2.4%	2.3%	2.2%
Services	$17,660	$18,048	$18,710	$19,411	$20,034	$21,054	$22,162	$23,450	$24,962	$26,758	$28,908	$31,502	$34,653	$38,497
Percent Change		2.2%	3.7%	3.8%	3.2%	5.1%	5.3%	5.8%	6.5%	7.2%	8.0%	9.0%	10.0%	11.1%
Government	$24,309	$24,708	$25,391	$26,305	$26,894	$27,975	$29,020	$30,105	$31,232	$32,403	$33,620	$34,883	$36,196	$37,560
Percent Change		1.6%	2.8%	3.6%	2.2%	4.0%	3.7%	3.7%	3.7%	3.7%	3.8%	3.8%	3.8%	3.8%
Total	**$25,894**	**$26,906**	**$28,115**	**$29,054**	**$29,952**	**$31,099**	**$32,098**	**$33,116**	**$34,163**	**$35,246**	**$36,375**	**$37,563**	**$38,824**	**$40,177**
Percent Change		**3.9%**	**4.5%**	**3.3%**	**3.1%**	**3.8%**	**3.2%**	**3.2%**	**3.2%**	**3.2%**	**3.2%**	**3.3%**	**3.4%**	**3.5%**

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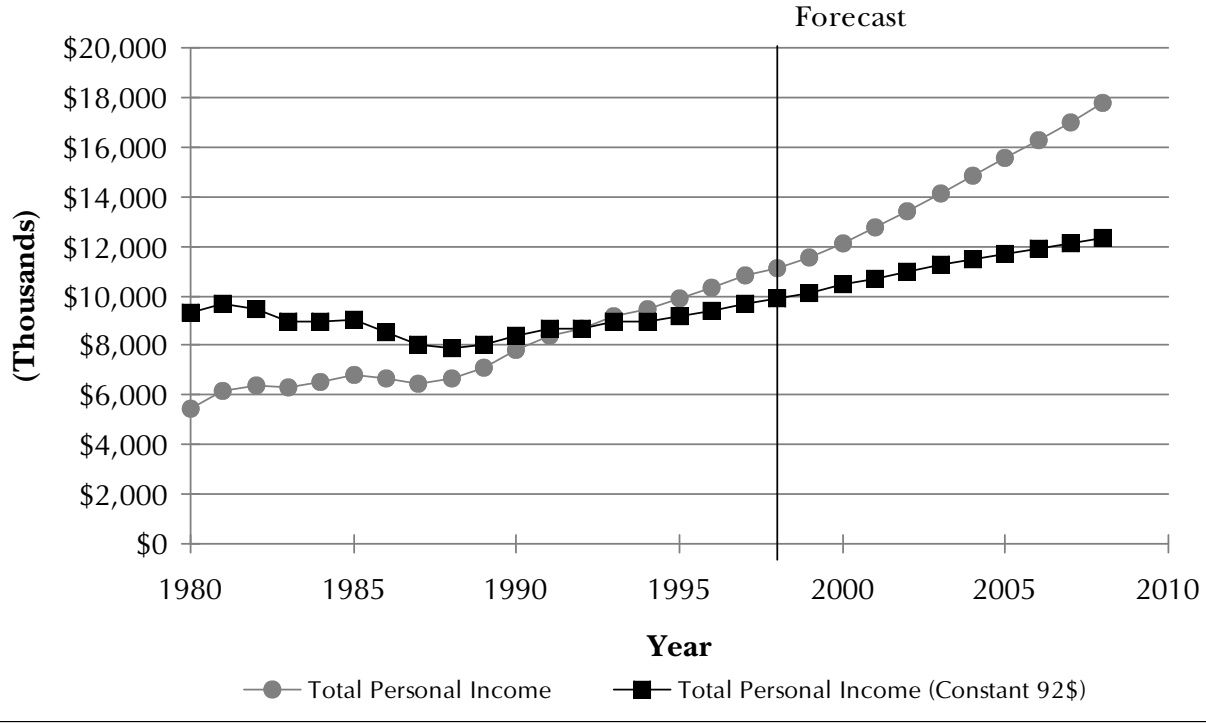
(92.2%, averaging 7.1% annual growth). By 2008, the Mining and TCPU sectors should continue to lead other sectors in average annual wages ($60,759 and $51,724, respectively). The Services sector is expected to surpass Government and Construction in average annual wages, but Trade is projected to lag far behind other industries in the year 2008, at $19,334, more than $10,000 behind its nearest rival, the Construction sector ($31,374). These trends in average annual wages reflect the transformation in the opportunity structure of Wyoming's labor market as it continues to shift from goods producing to services producing (see Figure 6).

Figure 6: Total Personal Income



III. Labor Supply

This section covers the expected increase in population and labor force, along with the factors influencing the labor supply. It also covers the number of individuals living in Wyoming that are employed and unemployed over the forecast horizon.

Slow and steady population growth is expected throughout the ten-year forecast period. Total population in Wyoming is expected to increase less than 2,200 persons per year with an annual growth rate of approximately 0.5 percent. Out-migration is forecast to surpass in-migration based on the assumption that the Wyoming economy will continue to be outperformed by other states in the west and south. However, net out-migration is reduced to 700 persons in 1999 and averages approximately 300 each year for the remainder of the forecast period.

Labor force is the sum of the number of employed and unemployed persons. As seen in Table 16, the labor force is expected to increase 7.5 percent during the ten-year forecast period. Labor force levels are expected to rise from an estimated 260,870 in 1999 to a projected 280,530 in 2008. This represents an increase of 19,660 individuals who are either working or available and looking for work.

Table 16: Labor Force and Unemployment 1995-2008

	Historical:			Forecast:										
(in Thousands)	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
Civilian Labor Force	255.3	256.2	251.3	258.0	260.9	263.4	265.5	267.0	268.6	271.0	273.5	276.0	278.3	280.5
Percent Change		0.3%	-2.0%	2.6%	1.1%	1.0%	0.8%	0.5%	0.6%	0.9%	0.9%	0.9%	0.9%	0.8%
Number of Employed	243.1	243.3	238.5	245.6	248.8	250.2	251.4	252.4	253.9	256.1	258.3	260.5	262.6	264.5
Percent Change		0.1%	-2.0%	2.9%	1.3%	0.6%	0.5%	0.4%	0.6%	0.9%	0.9%	0.8%	0.8%	0.7%
Number of Unemployed	12.2	12.8	12.8	12.4	12.1	13.2	14.1	14.6	14.8	15.0	15.2	15.5	15.8	16.1
Percent Change		5.2%	-0.7%	-3.3%	-2.3%	8.8%	6.1%	3.5%	1.1%	1.5%	1.6%	1.5%	1.7%	1.9%
Unemployment Rate	4.8	5.0	5.1	4.8	4.6	5.0	5.3	5.5	5.5	5.5	5.6	5.6	5.7	5.7

The number of persons employed in Wyoming is forecast to increase by 6.3 percent from 1999 to 2008, reaching 264,460 persons. The number of unemployed persons in Wyoming is expected to increase by almost one-third from 12,080 in 1999 to 16,070 in 2008. The unemployment rate is expected to rise slowly from 4.6 percent in 1999 to 5.7 percent in 2008.

Population

Population growth in Wyoming since 1995 has been largely a function of the number of births being greater than the number of deaths. Between 1995 and 1998, growth averaged less than 0.2 percent and fell by 0.1 percent to 479,602 in 1999.[24]

Population change is a function of three processes: births, deaths, and migration. This involves births "into" a population, deaths "from" a population, and migration either into (net in-migration) or out of (net out-migration) a population. Both births and deaths are biological and physiological processes. However, migration is most often a direct result of processes such as employment, income, and other socioeconomic opportunities. The impact from the process of natural increase (combined effects of births and deaths) is usually long term in the areas of employment, housing, and the demand for goods and services. On the other hand, migration

tends to have immediate impacts, reducing demand with net out-migration and creating demand with net in-migration.

The level of migration tends to change according to the local economic conditions with migration occurring most often among young adults, among persons with higher educational attainment, higher income, and greater socioeconomic resources.

Both in-migration and out-migration numbers were slightly over 20,000 annually for the state in recent years. In the early 1990's, the national economy was performing poorly, as was the economy in California due partially to the cut backs in the defense industry. Thus, many Californians relocated to neighboring states and in the Rocky Mountains.[25] As a result, the population in Wyoming grew more than 1.0 percent each year from 1991 to 1994. Annual net in-migration exceeded 2,000 persons during these years. However, as the overall economy for the nation, and California's economy, became stronger, Californian out-migrants diminished. Net in-migration (in-migration minus out-migration) to Wyoming from California amounted to only 111 persons during the period of 1996-1997, compared to the 1993-1994 level of 1,820. Wyoming experienced net out-migration after 1995, increasing to over 2,500 in 1997. These out-migrants moved mainly to western states (Colorado, Utah, Idaho, Arizona, and Texas)[26] whose economies were growing faster than Wyoming's.

Net migration is forecast as negative each year from 1999 to 2008 (see Table 17). This means that the number of people who leave the state is expected to exceed the number of people who move to Wyoming. Out-migration flows slow over the ten-year projection period. Table 17 shows a net migration of -2,680 people in 1997, but net out-migration is expected to decrease gradually to -100 persons in 2008.

Table 17: Population and Demographics 1995-2008

	Historical	Forecast												
(Thousands)	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
Total Population	**478.6**	**480.1**	**480.0**	**480.9**	**482.0**	**484.1**	**486.2**	**488.5**	**490.8**	**493.2**	**495.6**	**498.0**	**500.4**	**502.8**
Percent Change		**0.3%**	**0.0%**	**0.2%**	**0.2%**	**0.4%**	**0.4%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**
Population: 00-04	31.8	31.2	31.2	31.4	31.8	32.2	32.4	32.7	33.0	33.3	33.5	33.7	33.9	34.1
Percent Change		-1.95%	0.05%	0.80%	0.96%	1.28%	0.91%	0.90%	0.86%	0.80%	0.72%	0.59%	0.54%	0.47%
Population: 05-19	118.7	118.2	116.1	114.2	112.6	111.0	109.9	109.0	108.2	107.8	107.5	107.3	107.3	107.5
Percent Change		-0.4%	-1.8%	-1.6%	-1.4%	-1.4%	-1.0%	-0.9%	-0.7%	-0.3%	-0.3%	-0.2%	0.0%	0.1%
Population: 20-24	34.6	34.8	35.3	35.8	36.2	36.7	37.0	37.1	37.2	36.9	36.6	36.1	35.5	35.0
Percent Change		0.5%	1.4%	1.4%	1.0%	1.4%	0.9%	0.4%	0.2%	-0.6%	-1.1%	-1.1%	-1.7%	-1.6%
Population: 25-44	140.3	138.3	136.3	134.6	132.8	131.7	130.4	129.3	128.4	127.7	127.2	126.8	126.6	126.6
Percent Change		-1.4%	-1.4%	-1.3%	-1.3%	-0.9%	-1.0%	-0.9%	-0.7%	-0.6%	-0.3%	-0.3%	-0.2%	0.0%
Population: 45-64	100.1	103.7	106.6	109.7	112.8	115.9	119.0	122.0	124.7	127.2	129.5	131.6	133.3	134.1
Percent Change		3.6%	2.8%	2.9%	2.9%	2.8%	2.6%	2.6%	2.2%	2.0%	1.8%	1.6%	1.3%	0.6%
Population: 65 and older	53.2	54.2	54.9	55.6	56.2	57.0	57.8	58.7	59.7	60.7	61.8	62.8	64.1	66.0
Percent Change		1.9%	1.2%	1.2%	1.1%	1.6%	1.4%	1.5%	1.6%	1.7%	1.8%	1.7%	2.0%	2.9%
Net Migration	-0.1	-1.7	-2.7	-1.3	-0.7	-0.5	-0.4	-0.4	-0.3	-0.3	-0.2	-0.3	-0.2	-0.1
Percent Change		1680.5%	57.5%	-52.5%	-45.1%	-29.9%	-20.3%	13.2%	-22.1%	-21.5%	-12.4%	10.3%	-25.3%	-47.2%
Households	181.5	183.7	183.8	184.4	185.3	186.4	187.4	188.4	189.4	190.5	191.6	192.7	193.7	194.7
Percent Change		1.2%	0.0%	0.3%	0.5%	0.6%	0.5%	0.5%	0.5%	0.6%	0.6%	0.6%	0.5%	0.5%

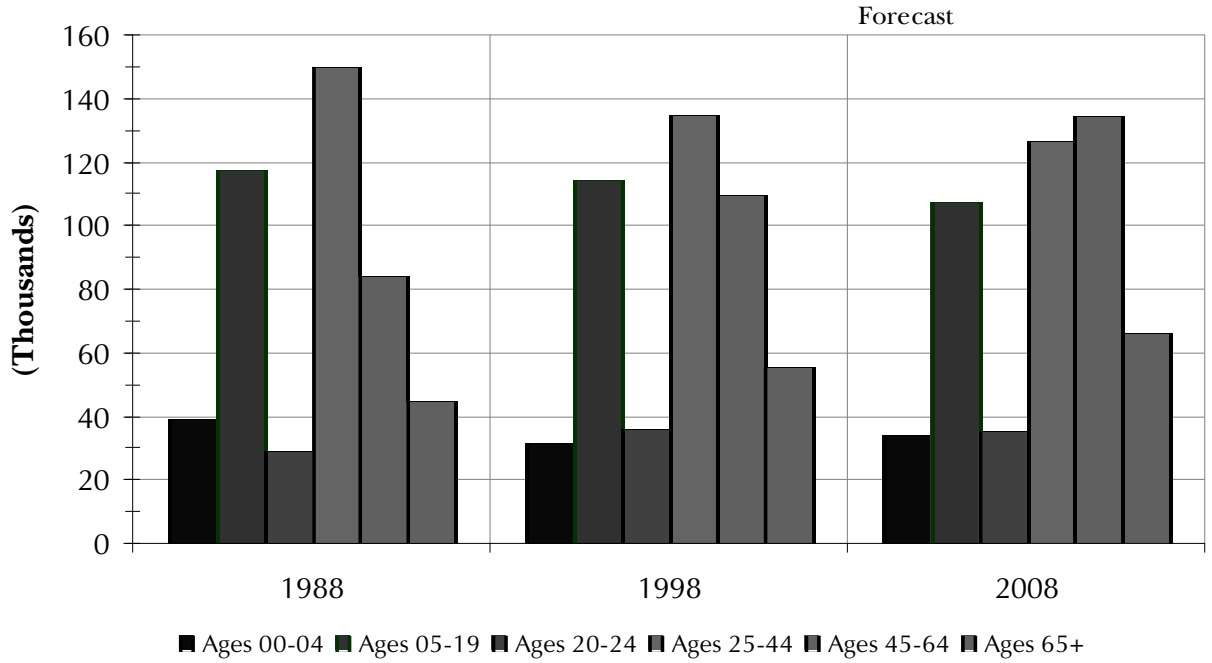
Generally, when a state's economic conditions are less favorable than other nearby states, net out-migration occurs. This is because people tend to move where employment opportunities are best (employment growth is highest and unemployment rates are lowest). Some readers may wonder how total population can continue to increase, when more people are moving out of the

state than moving in. The answer lies in the fact that more people are born than die each year in Wyoming. The total number of newborn babies in the state ranged from 6,720 in 1992 to 6,248 in 1998. The number of deaths totaled 3,152 in 1991 and 3,847 in 1998.

Population age structure has profound implications for business leaders, planners, marketers, and public policy makers. The state has experienced a substantial decrease in the pre-school (age 0-4) group in the early 1990's. However, this cohort is expected to grow by 0.7 percent annually throughout the forecast period, eventually reaching 34,070 persons by the year 2008. This is due to an increasing number of women in the middle childbearing years. The 5-19 year age group declined after 1996, resulting in the drop of K-12 school enrollments in the state from 100,899 in 1993 to 94,420 in 1998. This decline in school age population is expected to continue through 2006, dropping from the current level of 116,110 to 107,300 persons in 2006, and slowly increasing thereafter to 107,470 in 2008. Therefore, it is likely that Wyoming's school enrollments will remain flat over the forecast horizon. The young adult group (age 20-24) expanded rapidly in the 1990's, at an annual rate of 3.6 percent, to 35,790 persons in 1998. This group, children of those born between 1946 and 1964 (the baby boom), is expected to continue to increase during the earlier years of the forecast and start to taper off in 2004.

The main population cohort participating in the labor force (age 25-44) declined from 148,446 in 1990 to 134,480 persons in 1998 (see Figure 7). To a certain degree, out-migration contributed to the decline of this cohort. This age group is projected to continue declining through the

Figure 7: Population by Age



forecast, as the baby boomers continue to age and are replaced in the cohort by generation "X." The 25-44 age cohort is expected to fall to a level of 126,560 persons in 2008. The decline in this age segment could reduce the availability of labor.

The population ages 45-64 includes the early post-World War II baby boom. From 1990 to 1998, this group posted a remarkable increase of 36.0 percent, making it the most rapidly

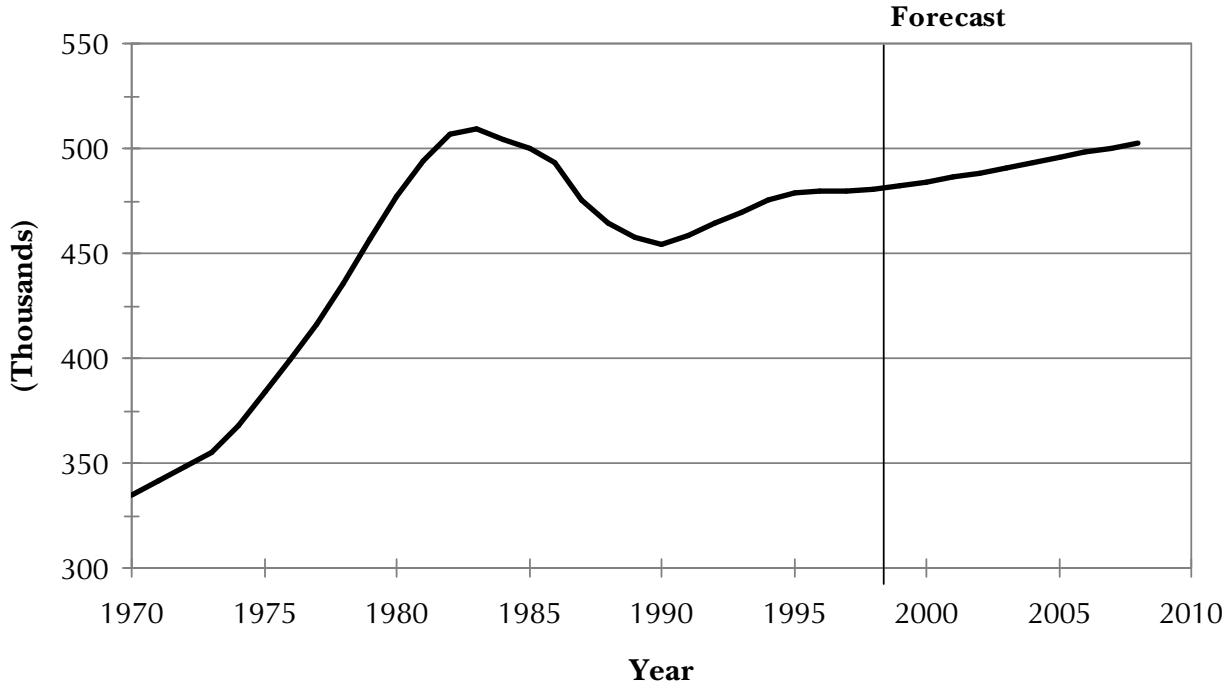
growing age group. By the year 2008, this age group is forecast to reach 134,100 persons. This represents an increase of 22.0 percent from the 1998 level.

Nationally and in Wyoming, the average age has been increasing for some time. In 1998, there were 55,560 residents age 65 and over in Wyoming. With an annual growth rate of 2.3 percent since 1990, this population cohort expanded much more rapidly than the total population. The growth rate in Wyoming was also higher than the national average of 1.4 percent for this population cohort. In the meantime, the proportion of persons age 65 and older in the state increased to 11.6 percent in 1998, slightly below the national average of 12.7 percent. Rapid growth for this cohort is projected to continue, reaching 65,970 persons by 2008. This represents a growth of 18.7 percent over the forecast period. The age 65 and older cohort will increase to 13.1 percent of total population in 2008, from 11.6 percent in 1998.

Increases in life expectancy contributed to the growth of the older population, especially those at the oldest ages. A more numerous older population will greatly impact many areas of our economy, from the labor supply to demand for health and social services. Those aged 65 and over at the end of the forecast will be better educated, expect to live longer, and be healthier. If the unemployment rate in Wyoming remains moderately low as forecasted, combined with continued net out-migration, should result in increased employment opportunities in Wyoming for experienced people in this age group.

Slow and steady population growth is expected throughout the ten-year forecast period (see Figure 8). Total population in Wyoming is expected to increase less than 2,200 persons per year, with an annual growth rate of approximately 0.5 percent. An out-migration is forecast to surpass

Figure 8: Total Population



in-migration based on the assumption that the Wyoming economy will continue to be outperformed by other states in the west and south. However, net out-migration is reduced to

700 persons in 1999, and averages approximately 300 each year for the remainder of the forecast period.

Labor Force

Labor supply is based upon the decisions individuals make about whether or not to participate in the labor force, that is whether or not to look for paid employment. In addition, population growth and migration impact the labor supply. People decide if they wish to seek work in the local market, move elsewhere for better opportunities, or to not actively seek work.

Labor force is the sum of the number of employed and unemployed persons. As seen in Table 16 (see page 20), the labor force is expected to increase 7.5 percent during the ten-year forecast period. Labor force levels are expected to rise from an estimated 260,870 in 1999 to a projected 280,530 in 2008. This represents an increase of 19,660 individuals who are either working, or available and looking for work. At least two factors help explain the increase in labor force: population and participation rate.

First, Wyoming's population is projected to increase by 4.3 percent or 20,830 people by 2008. Second, due to increased labor force participation by women, overall labor force participation will increase. Labor force participation is defined as the percentage of the working-age population employed or looking for work. For the past 20 years, labor force participation rates in Wyoming[27] exceeded the national level. Wyoming's high participation rate may be related to high levels of educational attainment and numerous opportunities for agricultural self-employment.

Number of Employed Persons in Wyoming

The number of persons employed in Wyoming is forecast to increase by 6.3 percent over the next ten years. Table 2 (see page 5) shows that while the number of employed persons increases by 22,560 individuals, nonagricultural wage and salary employment increases by 27,450 jobs. In other words, the number of nonagricultural wage and salary jobs will grow much faster than the number of employed persons in Wyoming (11.4% compared to 6.3%). There are several possible explanations for this apparent anomaly.

First, the number of employed is based on place of residence; that is, only Wyoming residents are included, while nonagricultural wage and salary employment is based on place of work. Three out of four jobs created by 2008 will be in the Services and Retail Trade sectors (see page 5). Employment in these sectors includes large numbers of seasonal jobs. We expect that many of these jobs will be held by non-residents.

Part of the difference can be explained by interstate commuting patterns, where more residents of other states commute to work in Wyoming. The Census 2000 will allow us to measure how interstate commuting has changed since 1990. Some analysts suggest that the fast employment growth in Teton County has resulted in increased commuting from Idaho. Unemployment Insurance (UI) covered employment in Teton County increased 36.5 percent from 1990 to 1997, but population grew at a slower rate of 26.8 percent. Just across the border in Idaho's Teton County, population grew by 59.6 percent from 1990 to 1998, leading some analysts to suggest that a large part of these 2,049 new residents may be working in Wyoming. Other examples of interstate commuting exist in the Cheyenne and Evanston areas. Evanston's proximity to the expanding labor markets of Salt Lake City-Park City provides ample opportunity for Wyoming

residents to take advantage of work in Utah. In addition, commuting to and from Cheyenne and the Denver-Boulder-Greely-Ft. Collins area occurs daily in both directions. Thus, increased interstate commuting is likely a partial explanation for the differing growth rates of nonagricultural employment and the number of persons employed.

In summary, the number of employed persons is expected to grow at a slower rate than nonagricultural employment. This is due to increased commuting into Wyoming and increased multiple job holding.

Unemployment

Unemployed persons are those individuals actively seeking work, but not currently working. The number of unemployed persons in Wyoming in the 1990's peaked at 13,639 in 1992. Since then, the number of unemployed persons fell to 12,361 in 1998. With the decline in the number of unemployed persons, the unemployment rate in Wyoming also dropped. The unemployment rate fell from 5.7 percent in 1992 to 4.8 percent in 1998. For the past four years, the unemployment rate has remained between 4.8 and 5.1 percent.

The number of unemployed persons in Wyoming is expected to increase by almost one-third from 12,080 in 1999 to 16,070 in 2008. The unemployment rate is expected to rise slowly from 4.6 percent in 1999 to 5.7 percent in 2008. Part of this increase can be related to the different industry growth rates (see Table 18). Workers in some sectors have a greater likelihood of losing their jobs on a seasonal basis than the average for all sectors. With a higher proportion of total employment in the "high seasonal layoff" sectors, overall unemployment is expected to increase. Construction, Retail Trade, and Services are forecast to grow faster than average and are "high seasonal layoff" sectors. These three sectors will account for 82.0 percent of all the new jobs through 2008. Conversely, Government and TCPU are expected to grow much slower than average and are typically "low seasonal layoff" sectors.

Table 18: 1998 Average Annual Unemployment Rate by Industry for Wyoming

Industry	Unempl Ra
Total	**4.5%**
Agriculture	3.5%
Construction	14.4%
Manufacturing	4.1%
TCPU*	3.0%
Trade	5.4%
FIRE**	1.4%
Services	5.8%
Government	2.4%

Source: Geographic Profile of Employment and Unemployment, 1998. Bureau of Labor Statistics

Construction employment will increase 13.8 percent, while total nonagricultural employment increases 11.4 percent during the forecast period 1998 to 2008. Construction work in Wyoming is highly seasonal. Cold winter weather makes many construction projects difficult or impossible in the first and fourth quarters, leaving many construction workers unemployed in the winter months.

Similarly, employment in the tourism industry tends to be seasonal.[28] Employment in the Services sector is expected to grow 23.7 percent, and Retail Trade is expected to grow 15.1 percent. Due to a higher proportion of the work force employed in seasonal industries, average unemployment is expected to grow.

The projections show Government employment increasing a meager 3.5 percent over the ten-year forecast period. Government employment tends to be more stable and government employees typically face a smaller chance of seasonal job loss than employees in other

industries. Therefore, a smaller proportion of employment in Government tends to increase unemployment.

Finally, employment in the TCPU sector is expected to decrease over the next ten years in both absolute and relative terms. Specifically, TCPU is forecast to lose 80 jobs in 2001, 90 jobs in 2003, and 180 jobs in 2006. A decline in the relative importance of jobs with low seasonal unemployment increases the overall rate of unemployment during the forecast period.

IV. Conclusion

The performance of the U.S. economy in the 1990's has been nothing short of astonishing and has been arguably the best decade in U.S. economic history. But, this will slow in the future, as will Wyoming's economy after 2000 to 2008.

Wyoming's Mining sector has played a vital role in the progress of Wyoming's economy in the past. However, future contributions will have less significance on Wyoming's overall economy and employment growth, as the state changes from a goods-producing to a service-producing economy that is indicative of the change going on in the national economy. Employment in the Mining sector is expected to decline 8.2 percent by the year 2008.

The percentage of Construction employment as a share of total employment increased from 5.5 percent to 7.0 percent during the period from 1990 to 1998, due to the increase in federal expenditures in 1999 for highway construction. By percentages, the Construction and Agriculture sectors gained the most, at 43.0 percent and 42.5 percent respectively, followed by services at 32.9 percent from 1990 to 1998.

Depository institution employment lost 572 jobs over the past eight years, and is projected to drop in the future, while employment in other finance sub-sectors is expected to increase. The securities brokerage and dealing sub-sector is the only industry with a six-digit average annual wage ($104,689) and largest percentage gain at 163.8 percent (nearly 12.9% per year) in the past eight years.

Manufacturing makes up only a small part of Wyoming's economy. Over the last nine years, the Manufacturing sector experienced modest gains in employment especially during 1990, 1991, 1993, and 1996. From 1990 to 1998, Wyoming's Manufacturing sector increased by 1,500 jobs; however, 1,200 jobs were added by the way of non-economic code changes. Unlike the nation, Wyoming's Manufacturing sector is projected to remain stable through the year 2008.

Employment in TCPU is forecast to dip to 14,030 in 2001 and continue to decline to approximately 13,810 in 2008. This drop in employment is mainly due to technology replacing labor.

Employment growth in the Wholesale Trade sector in 1998 slowed to 1.0 percent after increasing by 4.2 percent in 1997. Employment totaled 7,770 jobs in 1998. Since 1990, employment in the Wholesale Trade sector has increased by an average of 1.7 percent annually. The growth, however, has tended to occur in spurts, with gains in 1994 and 1997 above 4.0 percent and much lower increases in all other years. For the forecast period, employment in the Wholesale Trade sector is projected to increase by 1.9 percent annually, reaching 9,260 jobs in 2008.

The Retail Trade sector is the third largest sector in Wyoming in terms of employment, with a total of 44,920 jobs in 1998. Growth in the sector was quite high during the early part of the

decade, with increases averaging over 3.0 percent from 1990 to 1995. The growth rate began to slow in 1996, and significantly lagged behind the increases in total employment in the state over the past two years, growing by only 0.1 percent in 1997 and by 0.2 percent in 1998.

The Services sector has been a major strength within Wyoming's economy during the 1990's, with an average annual growth rate of 3.6 percent. Although the increases slowed the past three years to 1.3 percent in 1996, 1.9 percent in 1997, and 2.9 percent in 1998, employment growth in the Services sector has consistently been above the increase in total employment. In addition to the second fastest growth rate of the 1990's behind only Construction, the Services sector is the second largest employing sector in Wyoming's economy.

Since 1990, the health services sub-sector has experienced annual average growth of 3.0 percent, except for a small decline in 1996. A large portion of the increase in this sub-sector is related to the aging of the population, and an overall increase in the demand for health care in general. The gains in the business services sub-sector are indicative of the change going on through the national and Wyoming economies as the shift from a goods-producing economy to a service- and information-producing economy continues.

The Services sector is the only sector that is forecast to increase at a rate of more than 2.0 percent. As a result of the highest growth rate in the forecast, the Services sector becomes the largest employing sector within the Wyoming economy in 2005, surpassing the Government sector.

Employment growth in state government has been relatively flat in the 1990's and is expected to decline slightly by the year 2000. Growth in the local and state government sectors is expected to remain flat throughout the forecast period, having an estimated 52,740 jobs by 2008.

Employment in local education continues to grow at a slow but steady rate despite decreasing school enrollments. Student enrollment in primary and secondary schools during 1991 was 98,226 and rose to 100,899 in the 1993-1994 school year. Enrollment has been declining since that time and during the 1998-1999 school year held at 94,420 statewide. It is likely that Wyoming's school enrollments will remain flat over the next few years. Employment in this sector is expected to grow by 1.0 percent per year, rising to 25,800 by 2008. Funding is a stronger driver of employment in education than enrollments.

The population in Wyoming grew over 1.0 percent each year from 1991 to 1994, as the annual net in-migration exceeded 2,000 persons during these years. The state has experienced net out-migration since 1995, increasing to over 2,500 in 1997. Net migration is forecast to be negative each year from 1999 to 2008. This means that the number of people who leave the state is expected to exceed the number of people who move to Wyoming. Out-migration flows slow over the ten-year projection period.

The main group participating in the labor force (ages 25-44) endured a gradual decline from 148,446 in 1990 to 134,480 persons in 1998. This age group is projected to continue to decline through the forecast, but at a decreasing rate. In 2008, the age 25-44 cohort will number 126,560 persons. The population ages 45-64 includes the early post-World War II baby boom. This group posted a remarkable increase of 36.0 percent, making it the most rapidly growing age group from 1990 to 1998. By the year 2008, this age segment is forecast to reach 134,100 persons. This represents an increase of 22.0 percent from the 1998 level. An increasingly older population will greatly impact many areas of our economy, from supply of labor force to demand of health and social services. Slow and steady population growth is expected throughout the ten-year forecast period.

The number of employed persons is expected to increase by 22,560 individuals, and nonagricultural wage and salary employment increases by 27,450 jobs. In other words, the number of nonagricultural wage and salary jobs will grow much faster than the number of employed persons in Wyoming (11.4% compared to 6.3%). This is due to increased commuting into Wyoming and increased multiple job holding. The unemployment rate is expected to rise slowly from 4.6 percent in 1999 to 5.7 percent in 2008.

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Appendix A. Derivation of Gross State Product (GSP)

In practice, GSP estimates are measured as the sum of distributions by industry of the components of gross domestic income. The components of gross domestic income include compensation to employees, indirect business tax and non-tax liability, and property-type income. For the 1997 GSP, the compensation of employees' component made up 39.6 percent of total GSP. The indirect business tax and non-tax liability component contributed 10.8 percent to total GSP, and the property-type income component contributed most to the total GSP at 49.7 percent.

Compensation to employees includes employee wages and salaries as well as supplements to wages and salaries such as employer contributions for social insurance and other labor income (i.e., employer contributions to private pension and profit-sharing plans). Indirect business tax and non-tax liabilities mainly include the sum of state and local non-personal property taxes, licenses, non-tax liabilities, and sales and gross receipt taxes. Federal non-tax liabilities and excise taxes on goods and services are also included.

Property-type income on the proprietor's side comprises income of unincorporated establishments, rental income of persons, proprietors inventory valuation adjustment, and non-corporate capital consumption allowance (CCA). On the corporate side, property-type income includes corporate profits before taxes, net interest, corporate inventory valuation adjustment, corporate CCA, business transfer payments, and subsidies. In short, the distributions by industry of the components of gross domestic income are the sums of costs incurred (such as compensation of employees, net interest and indirect business taxes) and the profits earned in production.

Appendix B: Two and Three-Digit Standard Industrial Classification (SIC) Codes

"NEC" Indicates Not Elsewhere Classified
List of Short SIC Titles

CODE	SHORT TITLE
A.	AGRICULTURE, FORESTRY, AND FISHING
01	AGRICULTURAL PRODUCTION - CROPS
011	Cash Grains
013	Field Crops, Except Cash Grains
016	Vegetables and Melons
017	Fruits and Tree Nuts
018	Horticultural Specialties
019	General Farms, Primarily Crop
02	AGRICULTURAL PRODUCTION-LIVESTOCK
021	Livestock, Except Dairy and Poultry
024	Dairy Farms
025	Poultry and Eggs
027	Animal Specialties
029	General Farms, Primarily Livestock and Animal Specialties
07	AGRICULTURAL SERVICES
071	Soil Preparation Services
072	Crop Services
074	Veterinary Services
075	Animal Services, Except Veterinary
076	Farm Labor and Management Services
078	Landscape and Horticultural Services
08	FORESTRY
081	Timber Tracts
083	Forest Products
085	Forestry Services
09	FISHING, HUNTING, AND TRAPPING
091	Commercial Fishing
092	Fish Hatcheries and Preserves
097	Hunting, Trapping and Game Propagation
B.	MINING
10	METAL MINING
101	Iron Ores
102	Copper Ores
103	Lead and Zinc Ores
104	Gold and Silver Ores
106	Ferroalloy Ores, Except Vanadium
108	Metal Mining Services
109	Misc. Metal Ores
12	COAL MINING
122	Bituminous Coal and Lignite Mining
123	Anthracite Mining
124	Coal Mining Services
13	OIL AND GAS EXTRACTION
131	Crude Petroleum and Natural Gas
132	Natural Gas Liquids
138	Oil and Gas Field Services
14	NONMETALLIC MINERALS, EXCEPT FUELS
141	Dimension Stone
142	Crushed and Broken Stone
144	Sand and Gravel
145	Clay, Ceramic & Refractory Minerals
147	Chemical and Fertilizer Minerals
148	Nonmetallic Minerals Services
149	Misc. Nonmetallic Minerals
C.	CONSTRUCTION
15	GENERAL BUILDING CONTRACTORS
152	Residential Building Construction
153	Operative Builders
154	Nonresidential Building Construction
16	HEAVY CONTRACTORS, EXCEPT BUILDING
161	Highway and Street Construction
162	Heavy Construction, Except Highway
17	SPECIAL TRADE CONTRACTORS
171	Plumbing, Heating, and Air Conditioning
172	Painting and Paper Hanging
173	Electrical Work
174	Masonry, Stonework, and Plastering
175	Carpentry and Floor Work
176	Roofing, Siding, and Sheet Metal Work
177	Concrete Work
178	Water Well Drilling
179	Misc. Special Trade Contractors
D.	MANUFACTURING
20	FOOD AND KINDRED PRODUCTS
201	Meat Products
202	Dairy Products

Appendix B: (continued)

CODE	SHORT TITLE
203	Preserved Fruits and Vegetables
204	Grain Mill Products
205	Bakery Products
206	Sugar and Confectionery Products
207	Fats and Oils
208	Beverages
209	Misc. Food and Kindred Products
21	TOBACCO PRODUCTS
211	Cigarettes
212	Cigars
213	Chewing and Smoking Tobacco
214	Tobacco Stemming and Redrying
22	TEXTILE MILL PRODUCTS
221	Broadwoven Fabric Mills, Cotton
222	Broadwoven Fabric Mills, Manmade
223	Broadwoven Fabric Mills, Wool
224	Narrow Fabric Mills
225	Knitting Mills
226	Textile Finishing, Except Wool
227	Carpets and Rugs
228	Yarn and Thread Mills
229	Miscellaneous Textile Goods
23	APPAREL AND OTHER TEXTILE PRODUCTS
231	Mens and Boys Suits and Coats
232	Mens and Boys Furnishings
233	Womens and Misses Outerwear
234	Womens and Childrens Undergarments
235	Hats, Caps, and Millinery
236	Girls and Childrens Outerwear
237	Fur Goods
238	Misc. Apparel and Accessories
239	Misc. Fabricated Textile Products
24	LUMBER AND WOOD PRODUCTS
241	Logging
242	Sawmills and Planing Mills
243	Millwork, Plywood, and Structural Members
244	Wood Containers
245	Wood Buildings and Mobile Homes
249	Miscellaneous Wood Products
25	FURNITURE AND FIXTURES
251	Household Furniture
252	Office Furniture
253	Public Building and Related Furniture
254	Partitions and Fixtures
26	PAPER AND ALLIED PRODUCTS
261	Pulp Mills
262	Paper Mills
263	Paperboard Mills
265	Paperboard Containers and Boxes
267	Misc. Converted Paper Products
27	PRINTING AND PUBLISHING
271	Newspapers
272	Periodicals
273	Books
274	Miscellaneous Publishing
275	Commercial Printing
276	Manifold Business Forms
277	Greeting Cards
278	Blankbooks and Bookbinding
279	Printing Trade Services
28	CHEMICALS AND ALLIED PRODUCTS
281	Industrial Inorganic Chemicals
282	Plastics Materials and Synthetics
283	Drugs
284	Soap, Cleaners, and Toilet Goods
285	Paints and Allied Products
286	Industrial Organic Chemicals
287	Agricultural Chemicals
289	Misc. Chemical Products
29	PETROLEUM AND COAL PRODUCTS
291	Petroleum Refining
295	Asphalt Paving and Roofing Materials
299	Misc. Petroleum and Coal Products
30	RUBBER AND MISC. PLASTICS PRODUCTS
301	Tires and Inner Tubes
302	Rubber and Plastics Footwear
305	Hose and Belting and Gaskets and Packing
306	Fabricated Rubber Products, NEC
308	Misc. Plastic Products, NEC
31	LEATHER AND LEATHER PRODUCTS
311	Leather Tanning and Finishing
313	Footwear Cut Stock
314	Footwear, Except Rubber
315	Leather Gloves and Mittens
316	Luggage
317	Handbags and Personal Leather Goods
319	Leather Goods, NEC

Appendix B: (continued)

CODE	SHORT TITLE
32	STONE, CLAY, GLASS, AND CONCRETE PRODUCTS
321	Flat Glass
322	Glass and Glassware, Pressed or Blown
323	Products of Purchased Glass
324	Cement, Hydraulic
325	Structural Clay Products
326	Pottery and Related Products
327	Concrete, Gypsum, and Plaster Products
328	Cut Stone and Stone Products
329	Misc. Nonmetallic Mineral Products
33	PRIMARY METAL INDUSTRIES
331	Blast Furnace and Basic Steel Products
332	Iron and Steel Foundries
333	Primary Nonferrous Metals
334	Secondary Nonferrous Metals
335	Nonferrous Rolling and Drawing
336	Nonferrous Foundries (Castings)
339	Misc. Primary Metal Products
34	FABRICATED METAL PRODUCTS
341	Metal Cans and Shipping Containers
342	Cutlery, Hand Tools, and Hardware
343	Plumbing and Heating, Except Electric
344	Fabricated Structural Metal Products
345	Screw Machine Products, Bolts, Etc.
346	Metal Forgings and Stampings
347	Metal Services, NEC
348	Ordnance and Accessories, NEC
349	Misc. Fabricated Metal Products
35	INDUSTRIAL MACHINERY AND EQUIPMENT
351	Engines and Turbines
352	Farm and Garden Machinery
353	Construction and Related Machinery
354	Metalworking Machinery
355	Special Industry Machinery
356	General Industrial Machinery
357	Computer and Office Equipment
358	Refrigeration and Service Machinery
359	Industrial Machinery, NEC
36	ELECTRONIC AND OTHER ELECTRIC EQUIPMENT
361	Electric Distribution Equipment
362	Electrical Industrial Apparatus
363	Household Appliances
364	Electric Lighting and Wiring Equipment
365	Household Audio and Video Equipment
366	Communications Equipment
367	Electronic Components and Accessories
369	Misc. Electrical Equipment and Supplies
37	TRANSPORTATION EQUIPMENT
371	Motor Vehicles and Equipment
372	Aircraft and Parts
373	Ship and Boat Building and Repairing
374	Railroad Equipment
375	Motorcycles, Bicycles, and Parts
376	Guided Missiles, Space Vehicles, Parts
379	Misc. Transportation Equipment
38	INSTRUMENTS AND RELATED PRODUCTS
381	Search and Navigation Equipment
382	Measuring and Controlling Devices
384	Medical Instruments and Supplies
385	Ophthalmic Goods
386	Photographic Equipment and Supplies
387	Watches, Clocks, Watchcases, and Parts
39	MISCELLANEOUS MANUFACTURING INDUSTRIES
391	Jewelry, Silverware, and Plated Ware
393	Musical Instruments
394	Toys and Sporting Goods
395	Pens, Pencils, Office, and Art Supplies
396	Costume Jewelry and Notions
399	Miscellaneous Manufactures
E.	TRANSPORTATION, COMMUNICATIONS, ELECTRIC, GAS & SANITARY SERVICES
40	RAILROAD TRANSPORTATION
401	Railroads
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
411	Local and Suburban Transportation
412	Taxicabs
413	Intercity and Rural Bus Transportation
414	Bus Charter Service
415	School Buses
417	Bus Terminal and Service Facilities
42	TRUCKING AND WAREHOUSING
421	Trucking and Courier Services, Except Air
422	Public Warehousing and Storage
423	Trucking Terminal Facilities
43	U.S. POSTAL SERVICE
431	U.S. Postal Service
44	WATER TRANSPORTATION
441	Deep Sea Foreign Trans. of Freight
442	Deep Sea Domestic Trans. of Freight
443	Freight Trans. on the Great Lakes

Appendix B: (continued)

CODE	SHORT TITLE
444	Water Transportation of Freight, NEC
448	Water Transportation of Passengers
449	Water Transportation Services
45	TRANSPORTATION BY AIR
451	Air Transportation, Scheduled
452	Air Transportation, Nonscheduled
458	Airports, Flying Fields, and Services
46	PIPELINES, EXCEPT NATURAL GAS
461	Pipelines, Except Natural Gas
47	TRANSPORTATION SERVICES
472	Passenger Transportation Arrangement
473	Freight Transportation Arrangement
474	Rental of Railroad Cars
478	Misc. Transportation Services
48	COMMUNICATIONS
481	Telephone Communications
482	Telegraph and Other Communications
483	Radio and Television Broadcasting
484	Cable and Other Pay TV Services
489	Communications Services, NEC
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	Electric Services
492	Gas Production and Distribution
493	Combination Utility Services
494	Water Supply
495	Sanitary Services
496	Steam and Air Conditioning Supply
497	Irrigation Systems
F.	WHOLESALE TRADE
50	WHOLESALE TRADE - DURABLE GOODS
501	Motor Vehicles, Parts, and Supplies
502	Furniture and Homefurnishings
503	Lumber and Construction Materials
504	Professional & Commercial Equipment
505	Metals and Minerals, Except Petroleum
506	Electrical Goods
507	Hardware, Plumbing, and Heating Equipment
508	Machinery, Equipment, and Supplies
509	Miscellaneous Durable Goods
51	WHOLESALE TRADE - NONDURABLE GOODS
511	Paper and Paper Products
512	Drugs, Proprietaries, and Sundries
513	Apparel, Piece Goods, and Notions
514	Groceries and Related Products
515	Farm-Product Raw Materials
516	Chemicals and Allied Products
517	Petroleum and Petroleum Products
518	Beer, Wine, and Distilled Beverages
519	Misc. Nondurable Goods
G.	RETAIL TRADE
52	BUILDING MATERIALS AND GARDEN SUPPLIES
521	Lumber and Other Building Materials
523	Paint, Glass, and Wallpaper Stores
525	Hardware Stores
526	Retail Nurseries and Garden Stores
527	Mobile Home Dealers
53	GENERAL MERCHANDISE STORES
531	Department Stores
533	Variety Stores
539	Misc. General Merchandise Stores
54	FOOD STORES
541	Grocery Stores
542	Meat and Fish Markets
543	Fruit and Vegetable Markets
544	Candy, Nut, and Confectionery Stores
545	Dairy Products Stores
546	Retail Bakeries
549	Miscellaneous Food Stores
55	AUTOMOTIVE DEALERS AND SERVICE STATIONS
551	New and Used Car Dealers
552	Used Car Dealers
553	Auto and Home Supply Stores
554	Gasoline Service Stations
555	Boat Dealers
556	Recreational Vehicle Dealers
557	Motorcycle Dealers
559	Automotive Dealers, NEC
56	APPAREL AND ACCESSORY STORES
561	Mens and Boys Clothing Stores
562	Womens Clothing Stores
563	Womens Accessory and Specialty Stores
564	Childrens and Infants Wear Stores
565	Family Clothing Stores
566	Shoe Stores
569	Misc. Apparel and Accessory Stores

Appendix B: (continued)

CODE	SHORT TITLE
57	FURNITURE AND HOMEFURNISHING STORES
571	Furniture and Homefurnishing Stores
572	Household Appliance Stores
573	Radio, Television, and Computer Stores
58	EATING AND DRINKING PLACES
581	Eating and Drinking Places
59	MISCELLANEOUS RETAIL
591	Drug Stores and Proprietary Stores
592	Liquor Stores
593	Used Merchandise Stores
594	Misc. Shopping Goods Stores
596	Nonstore Retailers
598	Fuel Dealers
599	Retail Stores, NEC
H.	FINANCE, INSURANCE, AND REAL ESTATE
60	DEPOSITORY INSTITUTIONS
601	Central Reserve Depositories
602	Commercial Banks
603	Savings Institutions
606	Credit Unions
608	Foreign Bank and Branches and Agencies
609	Functions Closely Related to Banking
61	NONDEPOSITORY INSTITUTIONS
611	Federal and Federally-Sponsored Credit Agencies
614	Personal Credit Institutions
615	Business Credit Institutions
616	Mortgage Bankers and Brokers
62	SECURITY AND COMMODITY BROKERS
621	Security Brokers and Dealers
622	Commodity Contracts Brokers, Dealers
623	Security and Commodity Exchanges
628	Security and Commodity Services
63	INSURANCE CARRIERS
631	Life Insurance
632	Medical Service and Health Insurance
633	Fire, Marine, and Casualty Insurance
635	Surety Insurance
636	Title Insurance
637	Pension, Health, and Welfare Funds
639	Insurance Carriers, NEC
64	INS. AGENTS, BROKERS, AND SERVICE
641	Ins. Agents, Brokers, and Service

CODE	SHORT TITLE
65	REAL ESTATE
651	Real Estate Operators and Lessors
653	Real Estate Agents and Managers
654	Title Abstract Offices
655	Subdividers and Developers
67	HOLDING AND OTHER INVESTMENT OFF.
671	Holding Offices
672	Investment Offices
673	Trusts
679	Misc. Investing
I.	SERVICES
70	HOTELS AND OTHER LODGING PLACES
701	Hotels and Motels
702	Rooming and Boarding Houses
703	Camps and Recreational Vehicle Parks
704	Membership-Basis Organization Hotels
72	PERSONAL SERVICES
721	Laundry, Cleaning, and Garment Services
722	Photographic Studios, Portrait
723	Beauty Shops
724	Barber Shops
725	Shoe Repair and Shoeshine Parlors
726	Funeral Service and Crematories
729	Misc. Personal Services
73	BUSINESS SERVICES
731	Advertising
732	Credit Reporting and Collection
733	Mailing, Reproduction, Stenographic
734	Services to Buildings
735	Misc. Equipment Rental and Leasing
736	Personnel Supply Services
737	Computer and Data Processing Services
738	Misc. Business Services
75	AUTO REPAIR, SERVICES, AND PARKING
751	Automotive Rentals, No Drivers
752	Automobile Parking
753	Automotive Repair Shops
754	Automotive Services, Except Repair
76	MISCELLANEOUS REPAIR SERVICES
762	Electrical Repair Shops
763	Watch, Clock, and Jewelry Repair
764	Reupholstery and Furniture Repair
769	Misc. Repair Shops

Appendix B: (continued)

CODE	SHORT TITLE
78	MOTION PICTURES
781	Motion Picture Production and Services
782	Motion Picture Distribution and Services
783	Motion Picture Theaters
784	Video Tape Rental
79	AMUSEMENT AND RECREATION SERVICES
791	Dance Studios, Schools, and Halls
792	Producers, Orchestras, Entertainers
793	Bowling Centers
794	Commercial Sports
799	Misc. Amusement, Recreation Services
80	HEALTH SERVICES
801	Offices and Clinics of Medical Doctors
802	Office and Clinics of Dentists
803	Offices of Osteopathic Physicians
804	Offices of Other Health Practitioners
805	Nursing and Personal Care Facilities
806	Hospitals
807	Medical and Dental Laboratories
808	Home Health Care Services
809	Health and Allied Services, NEC
81	LEGAL SERVICES
811	Legal Services
82	EDUCATIONAL SERVICES
821	Elementary and Secondary Schools
822	Colleges and Universities
823	Libraries
824	Vocational Schools
829	Schools & Educational Services, NEC
83	SOCIAL SERVICES
832	Individual and Family Services
833	Job Training and Related Services
835	Child Day Care Services
836	Residential Care
839	Social Services, NEC
84	MUSEUMS, BOTANICAL AND ZOOLOGICAL GARDENS
841	Museums and Art Galleries
842	Botanical and Zoological Gardens
86	MEMBERSHIP ORGANIZATIONS
861	Business Associations
862	Professional Organizations
863	Labor Organizations
864	Civic and Social Associations
865	Political Organizations
866	Religious Organizations
869	Membership Organizations, NEC
87	ENGINEERING AND MANAGEMENT SERVICES
871	Engineering and Architectural Services
872	Accounting, Auditing, and Bookkeeping
873	Research and Testing Services
874	Management and Public Relations
88	PRIVATE HOUSEHOLDS
881	Private Households
89	SERVICES, NEC
899	Services, NEC
J.	PUBLIC ADMINISTRATION
91	EXECUTIVE, LEGISLATIVE, AND GENERAL GOVERNMENT
911	Executive Offices
912	Legislative Bodies
913	Executive and Legislative Combined
919	General Government, NEC
92	JUSTICE, PUBLIC ORDER, AND SAFETY
921	Courts
922	Public Order and Safety
93	FINANCE, TAXATION, AND MONETARY POLICY
931	Finance, Taxation, and Monetary Policy
94	ADMINISTRATION OF HUMAN RESOURCES
941	Admin. of Educational Programs
943	Admin. of Public Health Programs
944	Admin. of Social and Human Resource Programs
945	Admin. of Veterans' Affairs
95	ENVIRONMENTAL QUALITY AND HOUSING
951	Environmental Quality
953	Housing and Urban Development Programs
96	ADMINISTRATION OF ECONOMIC PROGRAMS
961	Admin. of General Economic Programs
962	Regulation, Admin. of Transportation
963	Regulation, Admin. of Utilities
964	Regulation of Agricultural Marketing
965	Regulation, Misc. Commercial Sectors
966	Space Research and Technology
97	NATIONAL SECURITY AND INTL. AFFAIRS
971	National Security
972	International Affairs
K.	NONCLASSIFIABLE ESTABLISHMENTS
99	NONCLASSIFIABLE ESTABLISHMENTS
999	Nonclassifiable Establishments

Appendix C. Methodology

The state forecast was constructed jointly by the Department of Administration and Information/ Division of Economic Analysis (EAD) and the Department of Employment/Employment Resources Division/Research & Planning Section (R&P). The Mining production and price forecast was taken from the Consensus Revenue Estimating Group (CREG) revenue forecast of October 15, 1999.

The national forecast was provided by Regional Financial Associates (RFA) to the Division of Economic Analysis in June of 1999. In addition, we compared the assumptions and results of the RFA forecast with one from Food and Agricultural Policy Research Institute released in January of 1999. Both forecasts projected similar growth paths for the national economy.

The forecasting process began with two employment by industry forecasts, one from EAD and one from R&P. An econometric model was used by EAD to construct its employment forecasts, while the forecasts from R&P were constructed using time series analysis. The two forecasts were examined by EAD and R&P analysts. After careful review, a "best" forecast for each industry was chosen from the two methodologies. Estimates for job growth were finalized in November, 1999. Job growth in 1999 actually occurred at a higher level than our estimates but should not change the overall trend to 2008.

Once the employment forecast was agreed upon, the employment variables were set as exogenous in the EAD econometric model which was then used to generate the income, GSP, and population forecasts. One interpretation of the decrease in out-migration is Wyoming's economic performance will improve relative to other states over the ten-year projection period, while another interpretation is that older people are least likely to migrate and the population is aging. These forecasts were further reviewed by EAD and R&P analysts, and some minor adjustments made to these forecasts.