

TRENDS

Is Wyoming’s Economy Diversifying and Is Economic Diversity in Wyoming Desirable?

by: *Mark A. Harris, Ph.D., Sociologist*

“The question is whether Wyoming’s economy can continue to diversify without negatively impacting wages further. The answer is yes, provided growth is encouraged in industries, which, like mining, offer higher wages.”

Scholars speculate that a diversified economy is less subject to the ups and downs associated with any particular industry because risk is spread more evenly across a number of industries. In reference to the U.S. as a whole, the Federal Reserve Bank of New York argues that,

by developing a diversified economy, a country can make sure that even if some industries are suffering, other, more competitive industries [at the time] will keep the economy relatively healthy.¹

If true, diversification is desirable. Past research indicates that Wyoming is subject to economic ups and downs, particularly in the Mining industry.² Theoretically speaking, increasing Wyoming’s economic diversity should soften the impact of employment loss in any particular industry.

This article presents a method and analysis of the degree of diversification in industry employment in Wyoming’s economy over time. It also compares relative diversity to annual average wages expressed in real dollars.³ Research and Planning (R&P) does not profess to know what is “best” for Wyoming’s economy in terms of proportional industry employment mix. We have the data

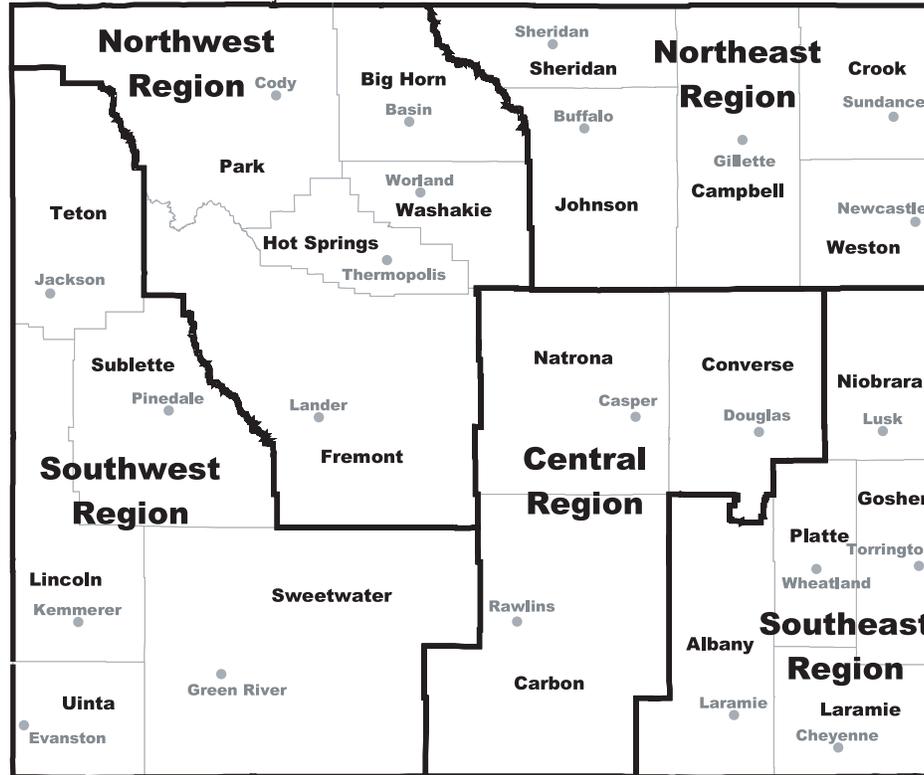
and methodology to evaluate the State’s economy relative to the nation (or other theoretically interesting employment and earnings distributions), but do not propose that this comparison represents the ideal from a theoretical standpoint. The analysis instead demonstrates a strategy to evaluate relative diversity and associated factors. Additional work needs to be done to

(Text continued on page 3)

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Wyoming Regions, Counties, and County Seats



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determine the optimum industry employment mix for Wyoming. However, that question is an economic, theoretical, and political issue beyond the scope or intent of this article.

Research findings presented here indicate that the industrial structure of Wyoming's economy has become more diversified making it more similar to the U.S. since Wyoming's energy boom of the 1970s to early 1980s (Figure 1 indicates that the height of the boom was in 1981). However, even with increasing diversification, Wyoming's economy remains very different from the nation's. Additionally, increased diversity appears negatively related to average wages, at least until recently. Diversity has not, historically nor in the current period, been associated with expanding work-related earnings.

Data

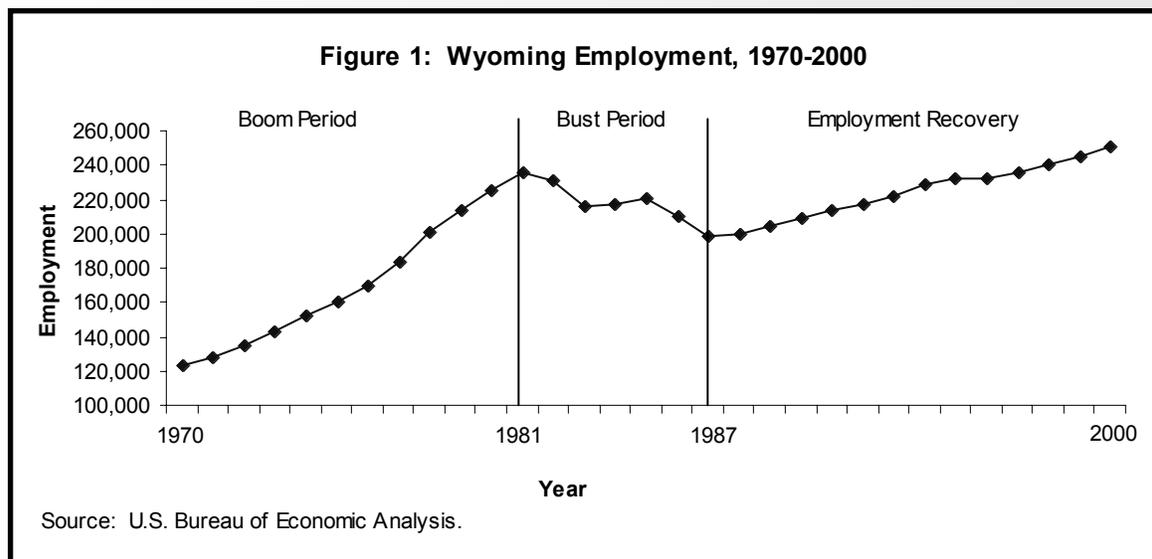
Data for this study, including national and Wyoming wage and salary employment by industry and Wyoming wage and salary disbursements by industry, come from the U.S. Bureau of Economic Analysis (BEA).⁴ BEA data are utilized because they offer consistent employment and wage information over the 30-year time period.⁵

Methodology

Wyoming employment Industry Index of Diversity (IID) scores are calculated as

$$IID = \sum_{i=1}^n (S_i - S_i^*)^2$$

where S_i is the state share of employment in industry i , S_i^* is the U.S. share of employment in industry i , and n is the number of industries.⁶ As the state share of employment approaches the U.S. share across major industry groups, the IID approaches zero. As the state share of employment across major industry groups diverges from the U.S. economy, the IID becomes increasingly larger. The IID can be considered a relative measure of economic diversity because it measures the amount of disparity between the U.S. and Wyoming industry distributions. To illustrate, Table 1 (see page 4) shows the IID values for Wyoming and Colorado in 1998 and 2000. The 1998 IID score for Wyoming (2.9401) is much larger than Colorado's (.0028) indicating that Colorado's economy looks more like the U.S. than Wyoming's does. Wyoming's share of employment is most different from the U.S. in the Manufacturing and Government industries. Manufacturing in Wyoming (4.6%) is smaller than the U.S.



(14.2%); Government in Wyoming (25.8%) is larger than the U.S. (16.6%).

Wyoming's real annual average wage is calculated as CPI-U (Consumer Price Index, All Urban Consumers) adjusted nonfarm and salary disbursements⁷ divided by nonfarm wage and salary employment. The quotient represents real wages expressed in 2000 dollars. Adjusting for inflation allows for comparison of wages across time.

Is Wyoming's Economy Diversifying?

Figure 2 (see page 5) presents IID and average weekly wage data from 1970 to 2000. The level of relative economic diversity in Wyoming varies substantially over time. Recall that higher IID numbers mean less economic diversity. Stated differently, larger IIDs indicate greater divergence from the national economy. The period from the late 1970s to early 1980s (Wyoming's energy

boom) represents the least amount of economic diversity. Subsequent to the boom, Wyoming's economy became increasingly similar to the U.S. economy. Over the 30-year time period, the IID was at its lowest level in 2000 at 2.7351. The high point was at 5.8834 in 1981, the peak of the energy boom.

The two industries that account for the largest changes in Wyoming's IID over time are Mining and Manufacturing. Figure 3 (see page 6) indicates that Wyoming has a much larger proportion of employment in Mining than the nation. Decreases in Wyoming's relative diversity during the late 1970s and early 1980s are largely accounted for by the proportionate increase in Mining employment. Figure 4 (see page 6) shows that the U.S. proportion of employment in Manufacturing has decreased substantially over the 30-year period, from a high of 25.1 percent in 1970 to a low of 13.4 percent in 2000. Wyoming's proportion of employment

Table 1: Wyoming and Colorado Industry Index of Diversity (IID),* 1998 and 2000

Industry	1998					2000				
	US Percent	Wyoming Percent	IID	Colorado Percent	IID	US Percent	Wyoming Percent	IID	Colorado Percent	IID
Agriculture	1.0%	1.0%	0.0000	1.0%	0.0000	1.0%	1.1%	0.0000	1.1%	0.0000
Mining	0.4%	7.0%	0.4263	0.6%	0.0000	0.4%	6.9%	0.4203	0.6%	0.0000
Construction	4.7%	7.0%	0.0521	6.4%	0.0003	5.1%	7.5%	0.0599	7.3%	0.0005
Manufacturing	14.2%	4.6%	0.9318	9.5%	0.0022	13.4%	4.6%	0.7757	8.8%	0.0021
TCPU**	5.0%	6.0%	0.0087	5.9%	0.0001	5.1%	5.7%	0.0039	6.2%	0.0001
Wholesale Trade	5.2%	3.3%	0.0371	4.9%	0.0000	5.1%	3.1%	0.0400	4.8%	0.0000
Retail Trade	17.3%	19.3%	0.0403	18.3%	0.0001	17.3%	19.2%	0.0359	18.2%	0.0001
FIRE***	5.7%	3.7%	0.0383	6.3%	0.0000	5.6%	3.4%	0.0498	6.1%	0.0000
Services	29.8%	22.4%	0.5519	30.3%	0.0000	30.5%	23.1%	0.5463	30.8%	0.0000
Government	16.6%	25.8%	0.8536	16.8%	0.0000	16.4%	25.4%	0.8034	16.3%	0.0000
Total	100.0%	100.0%	2.9401	100.0%	0.0028	100.0%	100.0%	2.7351	100.0%	0.0028

* Mathematically, the Industry Index of Diversity (IID) is defined as

$$IID = \sum_{i=1}^n (S_i - S_i^*)^2$$

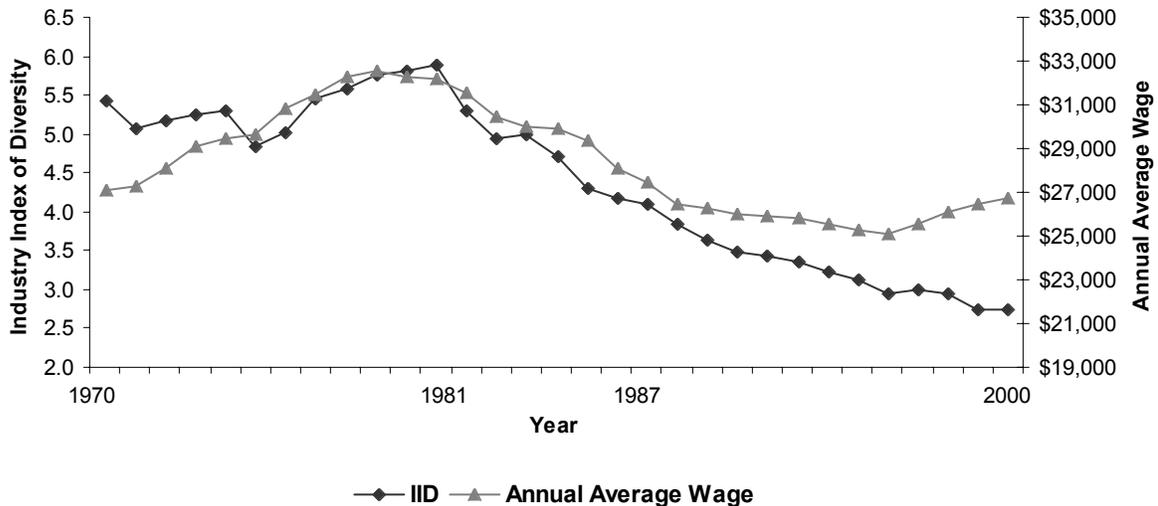
where S_i is the state share of employment in industry i , S_i^* is the U.S. share of employment in industry i , and n is the number of industries. Adapted from Tim R. Smith, "The Relationship between the Tenth District Economy and the National Economy," *Federal Reserve Bank of Kansas City Economic Review*, Volume 81, Number 4, 1996. As the state share of employment approaches the U.S. share across major industry groups, the IID approaches zero. As the state share of employment across major industry group diverges from the U.S. economy, the IID becomes increasingly larger.

** Transportation, Communications, & Public Utilities.

*** Finance, Insurance, & Real Estate.

Source: U.S. Bureau of Economic Analysis.

Figure 2: Wyoming Industry Index of Diversity (IID)* and Annual Average Wage, 1970-2000



* Mathematically, the Industry Index of Diversity (IID) is defined as
$$IID = \sum_{i=1}^n (S_i - S_i^*)^2$$

where S_i is the state share of employment in industry i , S_i^* is the U.S. share of employment in industry i , and n is the number of industries. Adapted from Tim R. Smith, "The Relationship between the Tenth District Economy and the National Economy," *Federal Reserve Bank of Kansas City Economic Review*, Volume 81, Number 4, 1996. As the state share of employment approaches the U.S. share across major industry groups the IID approaches zero. As the state share of employment across major industry groups diverges from the U.S. economy, the IID becomes increasingly larger.

in Manufacturing has remained relatively constant at about 5 percent over this time period. Decreases in Wyoming's IID from the mid-1980s to 2000 are largely accounted for by the decrease in the U.S. share of employment in Manufacturing (i.e., over time, the U.S. and Wyoming are becoming increasingly similar in Manufacturing).

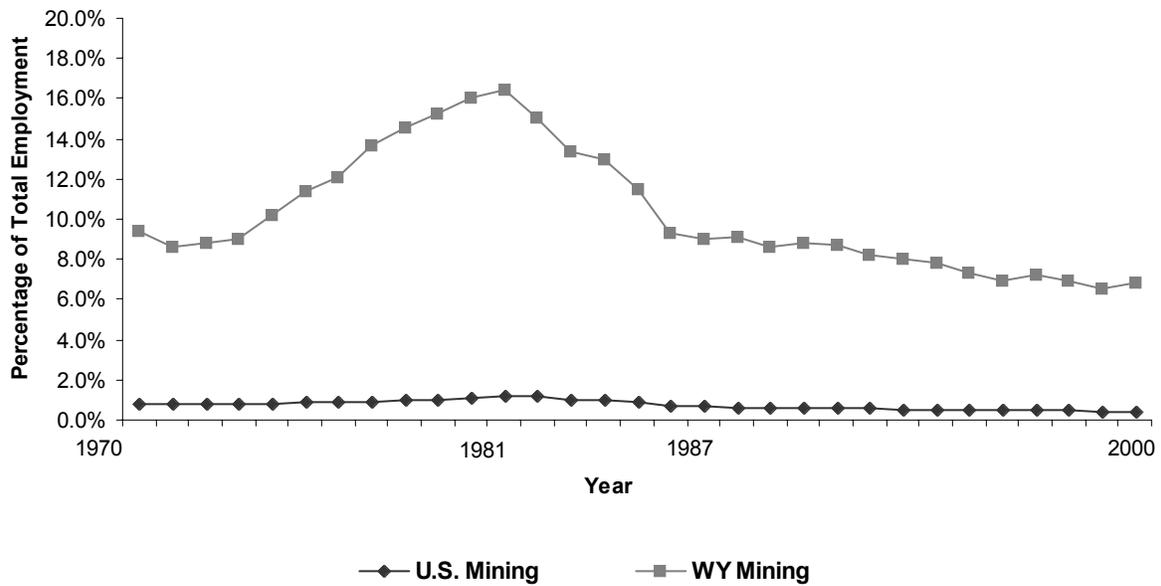
Overall, the IID indicates that Wyoming's economy has diversified or become more similar to the nation's economy since the boom period. Changes in the level of economic diversity have been tied closely to changes in Mining in Wyoming and changes in Manufacturing in the U.S.

Does Economic Diversity Benefit Wyoming?

Economic diversity may make Wyoming's economy less vulnerable to the ups and downs in any particular industry. However, it may also have other consequences. The question R&P sought to answer in this analysis was, "What is the relationship between economic diversity and real wages?" To answer this question, R&P plotted real annual average wages in 2000 dollars against the IID scores. Figure 2 generally indicates that there is a close relationship between real wages and economic diversity. Historically speaking, as Wyoming's economy becomes

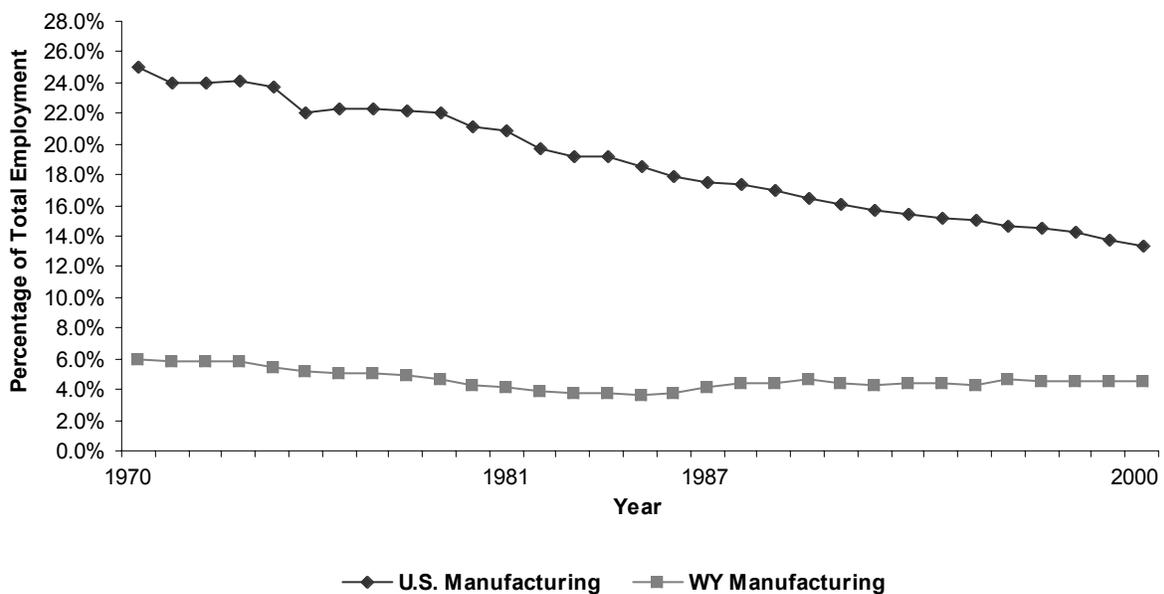
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Figure 3: U.S. and Wyoming Mining Employment as a Percentage of Total Employment, 1970-2000



Source: U.S. Bureau of Economic Analysis.

Figure 4: U.S. and Wyoming Manufacturing Employment as a Percentage of Total Employment, 1970-2000



Source: U.S. Bureau of Economic Analysis.

divergent from the nation's economy (i.e., larger IID scores), Wyoming's real wages increase. When Wyoming's industry employment distribution becomes more like the nation's, Wyoming's real wages decline. This pattern is generally true, except that wages began to increase in 1996. A statistical test of the data indicates a fairly robust, significant positive correlation between the IID scores and real wages ($r=.87$, $p<.001$). It will be interesting to see whether the more recent pattern of increasing diversity (i.e., lower IID scores) and increasing wages continues into the future. The more recent increase in the annual average wage could be attributed to growth in higher paying sub-industries within major industries, a general tightening of the labor market during this period, and/or increases in the magnitude of paid bonuses. Future research will address this issue more closely.

Observations

From the standpoint of wages, it would appear that increasing economic diversity relative to the U.S. economy, at least as experienced so far, has been detrimental to real wages in Wyoming. Some may be concerned that diversifying Wyoming's economy, as defined here, implies less employment in Mining and thus a loss of high paying jobs. However, diversifying the economy does not necessarily mean a reduction in the number of jobs in Mining. In fact, Mining can continue to grow, and Wyoming's overall economy can continue to diversify at the same time, provided other industries grow faster.

Two likely candidates for increasing diversity are Manufacturing and Services. In 2000, Manufacturing made up only 4.6 percent of Wyoming's economy, but 13.4 percent of the U.S. economy (see Figure 4, page 6). Increasing Manufacturing's share of Wyoming's economy would likely result in a smaller IID (i.e., greater relative diversity). As can be seen in Figure 5 (see page 8),

Wyoming also had a smaller share of employment in Services in 2000 than the nation (23.1% and 30.5%, respectively). This difference has been increasing over time. Increased employment in Services would also serve to reduce the IID, net of other changes.

The relative share of Manufacturing employment has been declining in the nation as a whole (see Figure 4, page 6) due to technological improvements and relocation to other nations. Relocation to other nations is driven by more favorable taxes, fewer environmental regulations, and lower labor costs.⁸ As shown in Figure 4, Wyoming seems to demonstrate a capacity to retain a constant relative share in Manufacturing employment while the U.S. does not. Thus, relocating Manufacturing firms to Wyoming may incur less risk of future employment loss than other locations in the nation.

Steady growth in Services has occurred both in the U.S. and Wyoming over the period from 1970 to 2000 (see Figure 5, page 8). As such, encouraging growth in this industry may be associated with less overall risk than Manufacturing. While Manufacturing does have higher annual average wages than Services (see Table 2, page 8), growth in particular sub-industries within Services could offer wages in Wyoming that are competitive with or may exceed annual average wages in Manufacturing (e.g., health services and engineering & management services).⁹ However, growth in low-wage Services industries could depress growth in Wyoming's annual average wage.

Conclusions

Wyoming's economy has diversified since the boom and throughout the period of the 1990s. This may help buffer Wyoming against economic ups and downs in any particular industry. However, increased diversity for Wyoming, as currently constituted, appears to be consistent with lower wages. The question is whether

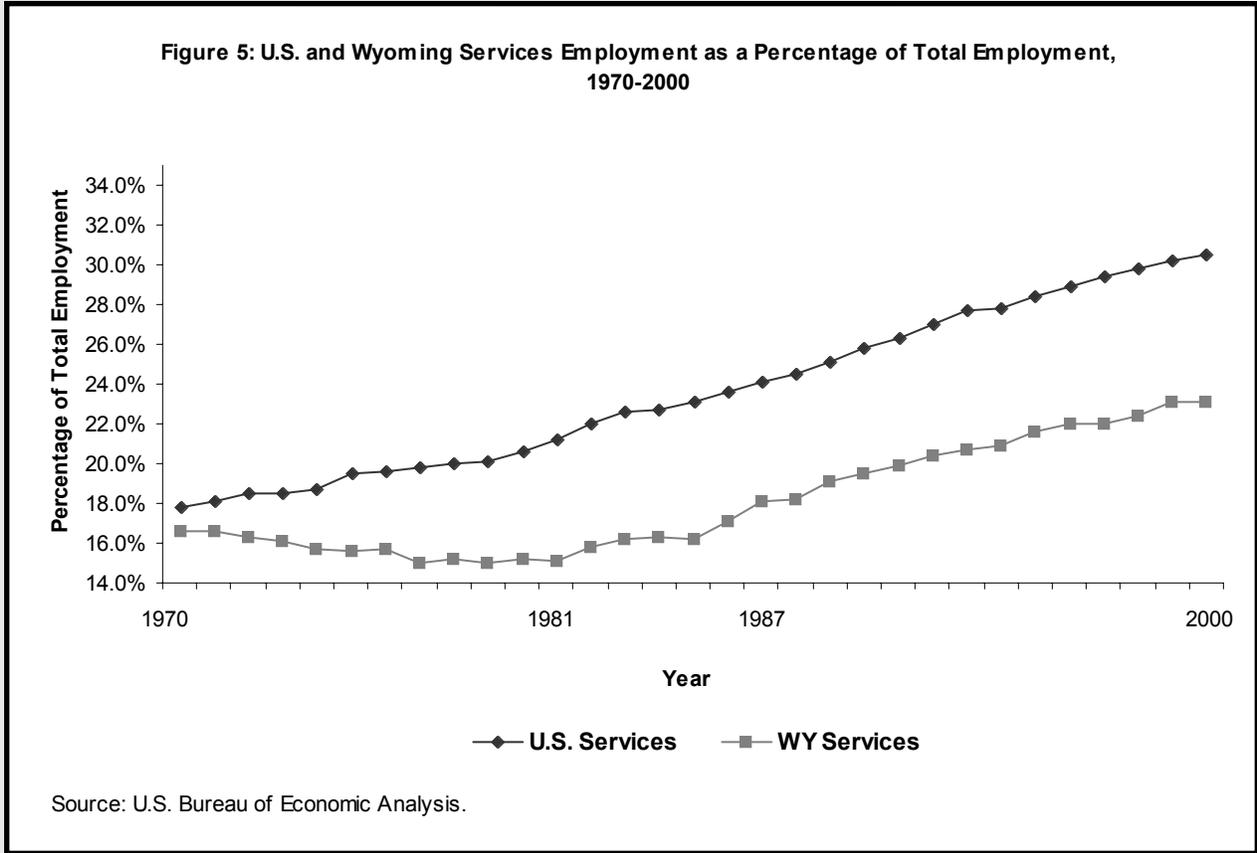


Table 2: Wyoming Industry Annual Average Wage by Industry, 2000

Industry	Annual Average Wage
Agriculture	\$15,843
Mining	\$54,675
Construction	\$29,622
Manufacturing	\$34,075
TCPU*	\$42,875
Wholesale Trade	\$33,035
Retail Trade	\$14,767
FIRE**	\$31,587
Services	\$21,150
Health Services	\$32,136
Engineering & Management Services	\$37,161
Government	\$26,513

* Transportation, Communications, & Public Utilities.
 ** Finance, Insurance, & Real Estate.

Source: U.S. Bureau of Economic Analysis.

Wyoming’s economy can continue to diversify without negatively impacting wages further. The answer is yes, provided growth is encouraged in industries which, like mining, offer higher wages. To this end, the State and its communities may want to consider attracting Manufacturing and/or high-wage Services firms into Wyoming. Of course, our ability to do this rests on many factors, including our ability to provide the labor and satisfy employers’ needs with respect to the quality of that labor.

¹Federal Reserve Bank of New York, “Benefits of Trade,” *The Basics of Foreign Trade and Exchange*, September 4, 2002, <<http://www.ny.frb.org/pihome/educator/fx/benefits.html#benefits>> (September 13, 2002).

²Sherry Yu, “Thirty Years of Wyoming Employment and Wages,” *Wyoming Labor Force Trends*, August 2002, pp. 1-7.

³Because inflation erodes consumers' purchasing power, a given dollar amount of income will not purchase the same amount of goods from one year to the next. Real wages are the actual paid wages (nominal wages) adjusted for inflation. To account for inflation, we use consumer price indexes to adjust the nominal wage to the real wage. The consumer price index used here is "All Urban Consumers - (CPI-U) U.S. city average, all items," available online at <http://ftp.bls.gov/pub/special.requests/cpi/cpi.ai.txt>.

⁴U.S. Department of Commerce, Bureau of Economic Analysis, **Regional Accounts Data**, Tables SA07 and SA27, April 23, 2002, <http://www.bea.gov/bea/regional/spi/> (September 5, 2002).

⁵The vast majority of earnings and employment data utilized by the Bureau of Economic Analysis (BEA) are originally produced by state research offices as part of the Bureau of Labor Statistics (BLS) ES-202 program. Unfortunately, the ES-202 data do not form a consistent time series. The methodology used for this analysis requires a history of employment and earnings data organized in consistent industrial categories, thus we rely upon BEA's transformed data. The current research is based on the Standard Industrial Classification (SIC) system.

⁶Adapted from Tim R. Smith, "The Relationship between the Tenth District Economy and the National Economy," **Federal Reserve Bank of Kansas City Economic Review**, Volume 81, Number 4, 1996.

⁷U.S. Bureau of Labor Statistics Consumer Price Index (CPI) numbers come from Consumer Price Index-All Urban Consumers at <http://stats.bls.gov/cpi/#data>. CPI adjusted nonfarm and salary disbursements are calculated by dividing the CPI index by 172.2, then dividing the nonfarm wage and salary disbursement by this number. For example, the CPI for 1970 is 38.8 and the Wyoming nonfarm wage and salary disbursement for 1970 is 753,863,000. The CPI adjusted Wyoming nonfarm and salary disbursement for 1970 is $753,863,000 / (38.8 / 172.2) = 3,345,752,799$.

⁸William Julius Wilson, **When Work Disappears: The World of the New Urban Poor**, 1997.

⁹Health services and engineering & management services in Wyoming in 2000 had annual average wages of \$32,136 and \$37,161, respectively.



Nursing in Wyoming, Part One: Supply and Retention

by: *Tony Glover, Statistical Analyst*

"Turnover data indicate that Wyoming graduates are more likely to remain in Wyoming than out-of-state graduates."

Federal research suggests our country is currently in the middle of a nursing shortage which will increase substantially over the next decade. The General Accounting Office (GAO) report, "Emerging Nurse Shortages Due to Multiple Factors," states that "national data are not adequate to describe the nature and extent of nurse workforce shortages, nor are the data sufficiently sensitive or current to compare nurse workforce availability across states, specialties, or provider types."¹ Research and Planning's (R&P) analysis is based on Wyoming administrative databases and has

the capacity to answer issues of nurse shortages specifically for the State. Our findings on Wyoming's supply of nurses are similar to many of the conclusions of the GAO report regarding national trends. This article presents part one of a three-part series exploring Wyoming's nursing supply and demand.

Scope

The shortage of nursing-related health care practitioners is not limited to Registered Nurses (RNs) but also includes many of the

support occupations such as Licensed Practical Nurses (LPNs) and Certified Nursing Assistants (CNAs). Due to time constraints and difficulties associated with occupational analysis, this series of articles focuses on RNs who were issued licenses in the State of Wyoming during the past decade. Eighty-four percent of RNs in this country work in public and private health services (SIC 80)² and are often cited as the industry's occupational backbone. The majority of the remaining RNs are employed in Public Administration (6.3%), public and private educational services (3.3%), business services (3.3%), and social services (1.5%).³

Projected Demand

In Wyoming, health services has grown 25.1 percent from 1992 to 2000. Within this industry, the range of growth is between 39.2 percent of jobs created during the eight-year period in offices and clinics of doctors and 7.1 percent of jobs created in nursing and personal care facilities. During the same period, average employment for all industries in Wyoming grew 16.6 percent. Trends in industry employment provide the foundation for occupational projections. Because RNs comprise the largest proportion of the health care industry, it is not surprising that the projected demand for RNs over the next decade will be great. Table 1 (see page 11) presents projected demand from 1998 to 2008 and the 1999 average hourly wage of RNs for all 50 states and the nation.⁴

Table 1 shows that while nationally the number of RNs is projected to grow 21.7 percent from 1998 to 2008, Wyoming should experience 12.7 percent growth. All of Wyoming's border states have a greater projected demand: Montana (19.0%), South Dakota (22.2%), Nebraska (25.2%), Colorado (26.6%), Idaho (28.7%) and Utah (46.0%). Wyoming's border states also paid higher wages in 1999 than Wyoming, which ranked 49th of the 50 states in average hourly wage.

Given this, it may be difficult to attract and retain RNs in the State. Part two of this series will demonstrate that while health care services, and in particular the RNs in this industry, have relatively low turnover rates compared to other industries in Wyoming, the turnover rates are increasing. Based on the occupational projections and wages in Table 1, turnover is likely to continue to increase.

Wyoming Specific Data

The Wyoming State Board of Nursing (WSBN) provided an exhaustive database of all Registered Nurse licenses active in the State of Wyoming from 1992 to 2001.

Database variables include the following:

- Social Security Number (SSN)
- Date of License Issue
- Date of License Expiration
- Date of Birth
- Gender
- School of Training
- Year of Graduation

This database was merged with R&P's Wage Records⁵ database which contains the employer and wages by SSN for all calendar quarters from 1992Q1 to 2001Q3. Combining these two data sets made it possible to track RNs across time through the labor force. Wyoming's Wage Records is further supplemented with wage record data provided through data sharing agreements with several other states (Colorado, Idaho, Nebraska, New Mexico, South Dakota, Texas, and Utah). Interstate wage data provide the basis for the detailed analysis of RNs working in hospitals in 1999, which will be presented in part three.

Supply

Our databases provide us two perspectives when measuring the labor supply of RNs in Wyoming. The first is the supply of RNs with degrees from Wyoming colleges. The second is the number of RNs that actually become

(Text continued on page 12)

Table 1: Projected Demand for Registered Nurses and Average Hourly Wage (1999) by State, 1998-2008

State	Base Employment 1998	Projected Employment 2008	Annual Jobs Created	Total Percentage Change	Average Hourly Wage (1999)	Wage Rank
United States	2,073,000	2,523,250	79,240	21.7	\$21.38	
Alabama	30,000	37,300	1,230	24.3	\$18.65	41
Alaska	3,900	5,450	220	39.7	23.29	10
Arizona	28,400	38,000	1,430	33.8	20.84	18
Arkansas	20,200	28,050	1,120	38.9	18.40	43
California	172,100	221,200	8,160	28.5	26.00	2
<i>Colorado</i>	<i>27,450</i>	<i>34,750</i>	<i>1,180</i>	<i>26.6</i>	<i>21.01</i>	<i>15</i>
Connecticut	30,000	34,500	950	15.0	23.79	5
Delaware	6,250	7,800	260	24.8	20.88	17
Florida	118,650	151,200	5,220	27.4	20.36	22
Georgia	51,700	67,200	2,410	30.0	19.56	30
Hawaii	8,600	10,000	280	16.3	27.37	1
<i>Idaho</i>	<i>9,750</i>	<i>12,550</i>	<i>440</i>	<i>28.7</i>	<i>19.43</i>	<i>32</i>
Illinois	100,150	116,250	3,260	16.1	20.15	24
Indiana	46,300	57,250	1,860	23.7	18.98	36
Iowa	24,900	29,000	820	16.5	16.76	50
Kansas	23,000	29,450	1,020	28.0	18.44	42
Kentucky	31,600	38,650	1,230	22.3	19.32	34
Louisiana	32,700	38,500	1,120	17.7	20.27	23
Maine	11,750	14,400	460	22.6	19.46	31
Maryland	40,650	49,700	1,580	22.3	23.54	7
Massachusetts	73,950	84,400	2,270	14.1	23.66	6
Michigan	74,300	81,100	1,910	9.2	21.88	14
Minnesota	39,800	46,850	1,360	17.7	23.39	9
Mississippi	21,000	24,750	720	17.9	19.20	35
Missouri	49,350	57,200	1,600	15.9	18.92	37
<i>Montana</i>	<i>6,850</i>	<i>8,150</i>	<i>240</i>	<i>19.0</i>	<i>17.61</i>	<i>48</i>
<i>Nebraska</i>	<i>15,250</i>	<i>19,100</i>	<i>640</i>	<i>25.2</i>	<i>18.07</i>	<i>44</i>
Nevada	9,650	14,400	640	49.2	23.05	12
New Hampshire	10,700	13,800	490	29.0	18.89	38
New Jersey	72,150	84,800	2,460	17.5	24.46	3
New Mexico	10,700	13,900	500	29.9	19.34	33
New York	154,550	171,750	4,270	11.1	24.27	4
North Carolina	60,000	82,800	3,270	38.0	19.57	29
North Dakota	6,750	7,900	230	17.0	18.07	45
Ohio	100,350	119,850	3,610	19.4	19.69	28
Oklahoma	24,150	30,850	1,070	27.7	18.76	40
Oregon	22,850	25,250	560	10.5	22.45	13
Pennsylvania	106,100	130,250	4,170	22.8	20.92	16
Rhode Island	9,850	11,150	290	13.2	23.10	11
South Carolina	31,400	39,350	1,310	25.3	20.41	20
<i>South Dakota</i>	<i>7,900</i>	<i>9,650</i>	<i>310</i>	<i>22.2</i>	<i>17.89</i>	<i>47</i>
Tennessee	44,500	52,750	1,560	18.5	18.78	39
Texas	127,400	155,700	4,930	22.2	20.49	19
<i>Utah</i>	<i>14,450</i>	<i>21,100</i>	<i>900</i>	<i>46.0</i>	<i>20.41</i>	<i>21</i>
Vermont	5,250	6,350	200	21.0	19.81	26
Virginia	45,550	57,850	1,980	27.0	19.86	25
Washington	41,250	53,400	1,900	29.5	23.43	8
West Virginia	13,550	15,850	450	17.0	17.92	46
Wisconsin	42,400	50,950	1,560	20.2	19.74	27
Wyoming	3,758	4,234	48	12.7	17.06	49

Note: Italicized rows represent states bordering Wyoming.

Sources: Bureau of Labor Statistics and Employment and Training Administration.

Table 2: Graduates of Registered Nurse Programs from Wyoming Colleges, 1992-2001

Year of Graduation	Casper College	Central Wyoming College	Laramie County Community College	NWCCD*	Northwest College	University of Wyoming	Western Wyoming Community College	Total
1992	48	23	49	26	24	51	20	241
1993	43	29	71	45	24	54	21	287
1994	38	31	53	23	18	56	23	242
1995	45	16	38	39	23	52	19	232
1996	43	22	24	17	17	56	23	202
1997	32	24	27	26	22	50	16	197
1998	49	14	24	24	21	42	19	193
1999	43	13	17	23	22	39	16	173
2000	40	17	22	13	16	40	19	167
2001	38	10	38	22	23	30	13	174
Percentage Change**	-6.2%	-51.8%	-55.5%	-38.3%	-7.6%	-32.3%	-25.0%	-33.2%

* Northern Wyoming Community College District (NWCCD) includes Sheridan College and the NWCCD Gillette Campus.

** Percentage Change is the change from the first three-year (1992-1994) and last three-year (1999-2001) averages.

Source: Wyoming State Board of Nursing.

licensed in the State, of which graduates from Wyoming-based nursing programs are a subset. Table 2 lists the number of graduates with nursing degrees from all Wyoming colleges offering nursing programs.⁶ A review of Table 2 shows that the number of graduates from Wyoming schools has declined 33.2 percent over the last decade (using the first and last three-year averages). Although of much greater magnitude, this coincides with the GAO report which states that nationally, enrollments in RN associate degree programs have declined 11 percent and baccalaureate programs 19 percent from 1995 to 1998.

Table 3 (see page 13) lists the number of new licenses issued to RNs in the State by school and year⁷ from 1992 to 2001. Overall, the number of new licenses issued has declined by 20.0 percent from 1992-1994 to 1999-2001. Additionally, the proportion of those licenses issued to graduates of Wyoming schools has declined from 41.3 percent to 25.3 percent. State employers are

relying more heavily on graduates from institutions outside Wyoming to fill nursing positions. In comparing Tables 2 and 3, it appears that the decline in the proportion of licenses issued to graduates from Wyoming schools is not entirely explained by the decline in the number of Wyoming graduates. In 1992-1994, 83.0 percent of Wyoming graduates were licensed in the State; by 1999-2001, only 69.8 percent were. The decline may be due to the increased demand for RNs elsewhere in the country. So, not only is Wyoming producing fewer RNs but a greater percentage of those we do produce do not become licensed in the State.

The importance of Wyoming colleges in providing a supply of nurses for the State is demonstrated by Table 4 (see page 14). Table 4 was created using the merged WSNB and Wage Records database and shows the number of individuals issued new licenses by their appearance in Wage Records.⁸ For example, of the 227 nursing graduates of Wyoming colleges who were issued a license

Table 3: Wyoming Registered Nurse Licenses by College and Year of Graduation, 1992-2001

Year of Graduation	Wyoming College Graduates						
	Casper College	Central Wyoming College	Laramie County Community College	NWCCD*	Northwest College	University of Wyoming	Western Wyoming Community College
1992	41	20	36	35	14	35	21
1993	46	29	56	28	15	37	16
1994	38	22	44	41	9	33	23
1995	40	23	29	15	17	45	19
1996	33	21	23	29	14	39	17
1997	26	18	18	13	12	38	15
1998	42	10	27	25	16	28	18
1999	37	11	18	12	16	20	10
2000	35	12	13	17	9	22	15
2001	40	10	21	6	10	13	12
Percentage Change**	-10.4%	-53.5%	-61.8%	-66.3%	-7.9%	-47.6%	-38.3%

Year of Graduation	Total Wyoming Graduates	Total Out-of-State Graduates	Total Graduates	Percentage Wyoming Graduates	Percentage Out-of-State Graduates
1992	202	287	489	41.3	58.7
1993	227	342	569	39.9	60.1
1994	210	386	596	35.2	64.8
1995	188	382	570	33.0	67.0
1996	176	268	444	39.6	60.4
1997	140	289	429	32.6	67.4
1998	166	290	456	36.4	63.6
1999	124	293	417	29.7	70.3
2000	123	341	464	26.5	73.5
2001	112	331	443	25.3	74.7
Percentage Change**	-43.8%	-4.9%	-20.0%	-30.0%	19.0%

* Northern Wyoming Community College District (NWCCD) includes Sheridan College and the NWCCD Gillette Campus.

** Percentage Change is the change from the first three-year (1992-1994) and last three-year (1999-2001) averages.

Source: Wyoming State Board of Nursing.

in 1993 (1992Q4 to 1993Q3), 208 (91.6%) worked in Wyoming in all four quarters immediately following the license issue date. In contrast, of the 342 who graduated outside Wyoming, 211 (61.7%) were found working in Wyoming. The WSNB⁹ suggests that there are several reasons why an individual would obtain a Wyoming license but not always work in Wyoming. For

example, some may be circuit nurses who come to work in Wyoming on a temporary basis,¹⁰ or insurance company representatives employed in other states who review health insurance claims of clients residing in Wyoming.

Table 4 (see page 14) also presents data related to retention, defined as the number of

Table 4: New Wyoming Registered Nurse Licenses and Wyoming Retention for Wyoming and Out-of-State Graduates, 1993-2000

	License Issue Date	New	One-year Retention	One-Year	Three-Year Retention	Three-Year
		Licenses Issued		Retention Rate		Retention Rate
Graduates of Wyoming Colleges	1993	227	208	91.6	183	88.0
	1994	210	194	92.4	153	78.9
	1995	188	174	92.6	145	83.3
	1996	176	154	87.5	127	82.5
	1997	140	126	90.0	101	80.2
	1998	166	155	93.4	132	85.2
	1999	124	116	93.5	87	N/A*
	2000	123	114	92.7	N/A	N/A
Graduates of Out-of-State Colleges	1993	342	211	61.7	135	64.0
	1994	386	258	66.8	169	65.5
	1995	382	255	66.8	141	55.3
	1996	268	183	68.3	100	54.6
	1997	269	207	77.0	119	57.5
	1998	290	211	72.8	114	54.0
	1999	293	206	70.3	103	N/A
	2000	341	221	64.8	N/A	N/A

* Data not available for three-year analysis.

Sources: Wyoming State Board of Nursing and Research & Planning.

those who start working in the first year following the license issue date who still appear in Wyoming Wage Records three years later. Of the 208 nursing graduates of Wyoming colleges who appeared in the first year of license issue, 183 (88.0%) were found working for employers in Wyoming three years later. In contrast, of the 211 who graduated outside Wyoming, only 135 (64.0%) were found working in the State three years later. Thus, in terms of retention, it appears advantageous for State health services firms to solicit nursing graduates of Wyoming educational institutions.

Summary

Research suggests that the nation is experiencing a nursing shortage and Wyoming is no exception. This article, part one of the series, examined the supply of RNs in Wyoming based on the number of nursing graduates and licenses issued. Our analysis

indicates that from 1998 to 2008 the demand for RNs is projected to grow 21.7 percent nationally and 12.7 percent in Wyoming. Furthermore, the number of graduates from Wyoming’s RN degree programs has declined 33.2 percent. Not only are there fewer graduates but fewer Wyoming graduates are obtaining a Wyoming license (69.8% in 1999-2001 compared to 83.0% in 1992-1994). However, even though numbers are down, turnover data indicate that Wyoming graduates are more likely to remain in Wyoming than out-of-state graduates. One implication of this research is efforts that increase the number of Wyoming nursing graduates will increase the pool of RNs willing and able to remain in the State.

¹U.S. General Accounting Office, “Nursing Workforce: Emerging Nurse Shortages Due to Multiple Factors,” **GAO Report GAO-01-944**, July 10, 2001, <<http://www.gao.gov>> (September 10, 2002).

²The health services industry is defined as firms in Standard Industrial Classification (SIC) 80. It includes offices and clinics of health practitioners, nursing care facilities, hospitals, medical/dental laboratories, and home health care services.

³Wyoming Department of Employment, Research & Planning, Customized Staffing Patterns and Wages, July 2001, <<http://LMI.state.wy.us/staffing/Staffing.htm>> (September 3, 2002).

⁴U.S. Department of Labor, Bureau of Labor Statistics, Wages by Area and Occupation, November 28, 2001, <<http://stats.bls.gov/bls/blswage.htm>> (August 13, 2002). U.S. Department of Labor, Employment and Training Administration, State Occupational Projections 1998-2008, n.d., <<http://alms.dws.state.ut.us/occ/projhome.asp>> (August 13, 2002).

⁵Wage Records is an administrative database. Each employer in the State that has employees covered under Unemployment Insurance, by law, must submit quarterly tax reports to the State showing each employee's Social Security Number and wages earned. For more information, see Wayne M. Gosar,

"Insurance Wage Record Summary: A New Way to Look at Wyoming," *Wyoming Labor Force Trends*, May 1995, pp. 4-8.

⁶Graduate data supplied by the Wyoming State Board of Nursing (WSBN) on August 6, 2002. Initially the draft of this article used data on the number of graduates provided by the Directors of Institutional Research for the corresponding colleges. Using the WBSN data did not materially affect the conclusion or observations in the final report.

⁷Tables 1 to 4 are based on a calendar school year.

⁸The Wage Records database does not reflect Federal employment. Therefore, some Wyoming nursing graduates who were issued licenses are unaccounted for because they are or were employed by the Federal Government.

⁹Wyoming State Board of Nursing, Meeting, February 26, 2002.

¹⁰The wages of temporary workers are included in the Wage Records database.



Local Area Unemployment Statistics for Second Quarter 2002

by: *Brad Payne, Economist*

During the second quarter of 2002, Local Area Unemployment Statistics (LAUS) over-the-year statewide employment increased by 597 jobs or 0.2 percent. Employment grew between the second quarters of 2001 and 2002 by 1.3 percent, less than it grew between the second quarters of 2000 and 2001. Similarly, the labor force increased by 1,790 or 0.7 percent between first quarters 2001 and 2002, unemployment increased by 1,193 or 11.8 percent over the same time period. The 11.8 percent increase in unemployment is considerably larger than the 3.1 percent increase in unemployment a year ago. Consequently, the unemployment rate during second quarter 2002 (4.1%) was much higher

than the unemployment rate during second quarter 2001 (3.7%).

Within Wyoming, the Central and Southeast regions experienced negative employment growth, while the remaining three regions posted positive over-the-year employment growth. Of the regions showing growth, the Northwest recorded the highest rate of growth (1.5 percent) by adding 690 jobs. Employment growth in Fremont County (619 jobs) and Park County (381 jobs) offset employment losses in the remaining counties of the region.

The statewide increase in unemployment was driven by the Southwest region where

job losses increased between the second quarters of 2001 and 2002 by 468 or 22.5 percent. Uinta County led the region with increased unemployment of 171 or 33.6 percent. The job losses were mainly in the Construction and oil & gas extraction industries.

The most dramatic quarter-to-quarter increases in the unemployment rates were found in Niobrara and Uinta counties. Niobrara County's over-the-year change in the unemployment rate was 1.5 percentage points (up from 2.5% in second quarter 2001 to 4.0% in second quarter 2002). Uinta County's unemployment rate increased from 4.6 percent in second quarter 2001 to 6.1 percent in second quarter 2002. In Niobrara County, a decrease in both the number

employed and the labor force, and an increase in the number unemployed contributed to the increase in the unemployment rate.

Fremont, Converse, Crook, Weston, and Goshen were the only counties in Wyoming showing a decrease in the over-the-year quarterly unemployment rates. The unemployment rates between the second quarters of 2001 and 2002 fell from 6.4 percent to 5.7 percent in Fremont County, 4.0 percent to 3.9 percent in Converse County, 3.7 percent to 3.6 percent in Crook County, 3.9 percent to 3.8 percent in Weston County, and 3.6 percent to 3.5 percent in Goshen County. The decreases in the unemployment rates for Fremont County and Weston County were driven by increases in

Table: Change in Wyoming's Labor Force, Employment, Unemployment, and Unemployment Rates by Region and County, First Quarter 2002

REGION/ County	Labor Force				Employment				Unemployment				Unemployment Rate		
	First Quarter 2002	2001	Change Number	Percent	First Quarter 2002	2001	Change Number	Percent	First Quarter 2002	2001	Change Number	Percent	First Quarter 2002	2001	Percent Change
NORTHWEST	48,084	47,413	671	1.4	45,615	44,924	690	1.5	2,469	2,489	-20	-0.8	5.1	5.2	-0.1
Big Horn	5,899	6,001	-102	-1.7	5,600	5,714	-114	-2.0	299	287	12	4.1	5.1	4.8	0.3
Fremont	19,045	18,527	518	2.8	17,954	17,335	619	3.6	1,091	1,192	-101	-8.4	5.7	6.4	-0.7
Hot Springs	2,480	2,493	-13	-0.5	2,365	2,384	-19	-0.8	115	109	6	5.5	4.7	4.4	0.3
Park	16,159	15,745	414	2.6	15,467	15,086	381	2.5	692	659	33	5.0	4.3	4.2	0.1
Washakie	4,501	4,647	-146	-3.1	4,230	4,406	-176	-4.0	271	241	30	12.6	6.0	5.2	0.8
NORTHEAST	47,381	46,667	713	1.5	45,713	45,208	505	1.1	1,667	1,459	208	14.3	3.5	3.1	0.4
Campbell	22,742	22,010	733	3.3	21,954	21,412	542	2.5	789	598	191	32.0	3.5	2.7	0.8
Crook	2,993	3,068	-74	-2.4	2,886	2,954	-68	-2.3	108	114	-6	-5.6	3.6	3.7	-0.1
Johnson	4,117	3,922	195	5.0	4,000	3,820	180	4.7	117	102	15	14.8	2.8	2.6	0.2
Sheridan	14,155	14,339	-184	-1.3	13,628	13,822	-194	-1.4	527	517	10	1.9	3.7	3.6	0.1
Weston	3,373	3,329	44	1.3	3,245	3,200	45	1.4	127	129	-1	-1.0	3.8	3.9	-0.1
SOUTHWEST	54,715	54,082	632	1.2	52,163	51,999	164	0.3	2,552	2,083	468	22.5	4.7	3.9	0.8
Lincoln	6,729	6,738	-9	-0.1	6,345	6,430	-85	-1.3	384	308	76	24.7	5.7	4.6	1.1
Sublette	3,494	3,338	156	4.7	3,400	3,276	124	3.8	94	63	32	50.5	2.7	1.9	0.8
Sweetwater	20,579	20,501	78	0.4	19,648	19,627	21	0.1	931	874	57	6.5	4.5	4.3	0.3
Teton	12,708	12,497	211	1.7	12,246	12,168	78	0.6	462	329	133	40.3	3.6	2.6	1.0
Uinta	11,205	11,008	197	1.8	10,524	10,498	26	0.2	681	510	171	33.6	6.1	4.6	1.4
SOUTHEAST	73,370	73,460	-89	-0.1	71,011	71,359	-349	-0.5	2,360	2,100	259	12.3	3.2	2.9	0.4
Albany	19,517	19,261	256	1.3	19,131	18,916	215	1.1	386	345	41	12.0	2.0	1.8	0.2
Goshen	6,323	6,480	-157	-2.4	6,103	6,250	-146	-2.3	220	230	-10	-4.5	3.5	3.6	-0.1
Laramie	41,774	41,860	-86	-0.2	40,236	40,514	-278	-0.7	1,538	1,346	192	14.3	3.7	3.2	0.5
Niobrara	1,229	1,259	-30	-2.4	1,180	1,228	-48	-3.9	49	31	18	57.0	4.0	2.5	1.5
Platte	4,527	4,600	-73	-1.6	4,360	4,452	-91	-2.1	167	148	19	12.6	3.7	3.2	0.5
CENTRAL	49,845	49,980	-136	-0.3	47,616	48,030	-414	-0.9	2,228	1,950	278	14.3	4.5	3.9	0.6
Carbon	8,258	8,226	32	0.4	7,891	7,910	-19	-0.2	367	316	51	16.3	4.4	3.8	0.6
Converse	6,479	6,554	-76	-1.2	6,228	6,289	-61	-1.0	251	265	-14	-5.4	3.9	4.0	-0.2
Natrona	35,108	35,200	-92	-0.3	33,498	33,831	-333	-1.0	1,610	1,369	241	17.6	4.6	3.9	0.7
STATEWIDE	273,392	271,602	1,790	0.7	262,118	261,521	597	0.2	11,274	10,081	1,193	11.8	4.1	3.7	0.4

employment with corresponding decreases in unemployment. Converse, Crook, and Goshen counties' unemployment rate decreases were driven by a shrinking labor force which could have been caused by potential employees either leaving the county to find work or abandoning their job searches.



Available only on the Internet from Research & Planning...

***Where Are the Jobs? What do They Pay?
2000 Annual Covered Employment and Wages***
<http://LMI.state.wy.us/00202pub/toc.htm>

The primary objective of this publication is to support local planning and economic development efforts. It also provides information for the administration of employment and training programs. To meet various customer needs, the data in this publication are organized into many different sections, including statewide, region, county, industry, and establishment size. The following questions can be addressed through this publication:

- * Which regions and counties are growing the fastest?
- * What industries pay the highest wages?
- * Which industries have the most jobs? The least?

2002-2003 Wyoming Career Explorer
<http://LMI.state.wy.us/0200exp/toc.htm>

This website is based on the ***2000-2001 Wyoming Career Explorer*** publication with updated data for 2002-2003. It contains tools for students beginning their job search such as how to write resumes, interview tips, and job descriptions and wages. It also includes information on colleges and financial aid.

State Unemployment Rates July 2002 (Not Seasonally Adjusted)

State	Unemp. Rate
Puerto Rico	12.9
Michigan	7.2
North Carolina	7.0
Oregon	7.0
Washington	6.9
Illinois	6.7
California	6.6
New Mexico	6.6
Arizona	6.5
District of Columbia	6.5
Mississippi	6.5
Texas	6.5
West Virginia	6.1
New York	6.0
United States	6.0
Louisiana	5.9
New Jersey	5.9
Alabama	5.8
Ohio	5.8
Alaska	5.7
Arkansas	5.7
South Carolina	5.7
Nevada	5.5
Pennsylvania	5.5
Florida	5.4
Missouri	5.4
Utah	5.4
Kentucky	5.3
Colorado	5.2
Indiana	5.2
Tennessee	5.2
Massachusetts	5.0
Georgia	4.9
Idaho	4.8
Wisconsin	4.7
Hawaii	4.5
Kansas	4.5
Rhode Island	4.3
Maryland	4.2
Oklahoma	4.2
Connecticut	4.1
Virginia	4.1
Minnesota	4.0
Montana	4.0
New Hampshire	4.0
Delaware	3.9
Nebraska	3.8
Vermont	3.7
Iowa	3.5
Maine	3.4
Wyoming	3.2
North Dakota	3.1
South Dakota	2.7

State Unemployment Rates July 2002 (Seasonally Adjusted)

State	Unemp. Rate
Puerto Rico	13.0
Oregon	7.3
Washington	7.1
North Carolina	6.8
Alaska	6.7
Illinois	6.7
Michigan	6.6
Mississippi	6.5
California	6.3
New Mexico	6.3
West Virginia	6.2
Arizona	6.0
District of Columbia	6.0
New York	6.0
Texas	6.0
United States	5.9
Alabama	5.7
Ohio	5.7
Louisiana	5.6
Idaho	5.4
Nevada	5.4
New Jersey	5.4
Pennsylvania	5.4
Florida	5.3
Kentucky	5.3
Arkansas	5.2
Colorado	5.2
Missouri	5.2
South Carolina	5.2
Indiana	5.1
Utah	5.1
Massachusetts	4.9
Tennessee	4.9
Wisconsin	4.7
Georgia	4.6
Kansas	4.6
Montana	4.5
Hawaii	4.3
Minnesota	4.3
Maine	4.2
Maryland	4.2
New Hampshire	4.2
Oklahoma	4.2
Rhode Island	4.2
Iowa	4.0
Virginia	4.0
Delaware	3.9
Vermont	3.9
Connecticut	3.8
Wyoming	3.7
Nebraska	3.6
North Dakota	3.4
South Dakota	2.9

Wyoming Unemployment Falls in July

by: *David Bullard, Senior Economist*

Wyoming's seasonally adjusted unemployment rate fell from 4.3 percent in June to 3.7 percent in July. In contrast, U.S. unemployment was unchanged at 5.9 percent. Wyoming job growth, measured on an over-the-year basis, was 0.7 percent in July. The U.S. continued to lose jobs in over-the-year comparisons (-1.0%).

From June to July 2002, Wyoming lost 3,800 jobs or 1.5 percent of employment. It is normal for employment to fall from June to July as schools close for the summer. This year's decline is slightly smaller than last year's (-3,900 jobs). Employment in Government, including public schools and hospitals, fell by 5,600 jobs, while Retail Trade increased by 900 jobs, Services increased by 500 jobs, and Mining increased by 200 jobs.

When compared to July 2001, Wyoming added 1,800 jobs or 0.7 percent. Job gains in Wholesale Trade (400 jobs or 4.9%), Services (1,500 jobs or 2.4%), and Government (1,100 jobs or 1.9%) were partially offset by losses in Mining (-700 jobs or -3.4%), Construction (-200 or -1.0%), and Manufacturing (-300 or -2.7%). Within Mining, gains in coal mining (200 jobs or 4.2%) were overshadowed by significant job losses in oil & gas extraction (-800 jobs or -6.4%). Within Services, significant gains appeared in health services (300 jobs or 2.6%), private social services (200 jobs or 3.1%), and engineering & management services (300 jobs or 6.7%).

The decrease in unemployment from 4.3 percent to 3.7 percent brought with it a declining labor force. Labor force (the sum of all employed and unemployed individuals in the state) fell from July 2001 (-951 or -0.3%). July marks the first time labor force has contracted (in over-the-year comparisons) since 1998.

As expected, unemployment fell from June to July in all 23 of Wyoming's counties. Five counties (Washakie, Weston, Lincoln, Uinta, and Hot Springs) experienced a decrease of one percentage point or more.

From July 2001, unemployment decreased in a majority of counties. Fremont County experienced the largest decrease, where unemployment fell from 6.0 percent to 4.9 percent.

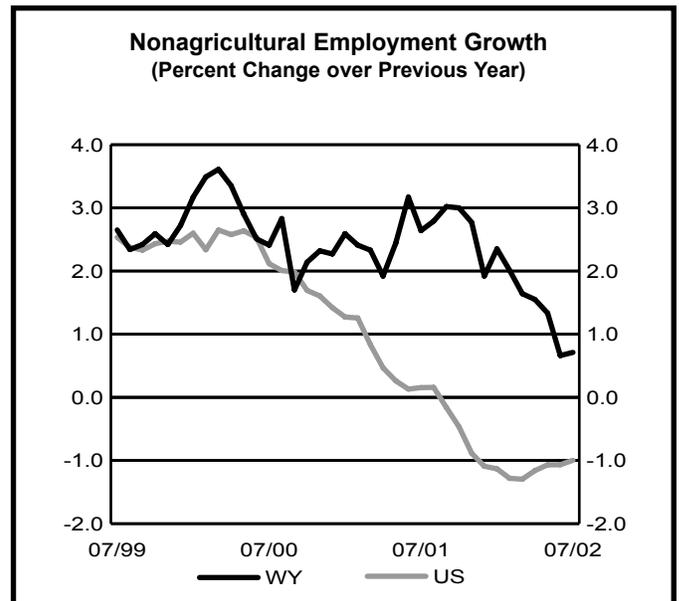


Wyoming Nonagricultural Wage and Salary Employment¹

by: David Bullard, Senior Economist

“Job gains in Wholesale Trade, Services, and Government were partially offset by losses in Mining, Construction, and Manufacturing.”

WYOMING STATEWIDE*	Employment in Thousands			Percent Change Total Employment		LARAMIE COUNTY	Employment in Thousands			Percent Change Total Employment	
	JUL02(p)	JUN02(r)	JUL01	JUN 02	JUL 01		JUL02(p)	JUN02(r)	JUL01	JUN 02	JUL 01
TOTAL NONAG. WAGE & SALARY EMPLOYMENT	254.7	258.5	252.9	-1.5	0.7	TOTAL NONAG. WAGE & SALARY EMPLOYMENT	38.9	38.8	38.5	0.3	1.0
TOTAL GOODS PRODUCING	50.4	50.1	51.6	0.6	-2.3	TOTAL GOODS PRODUCING	4.0	4.0	4.1	0.0	-2.4
Mining	19.6	19.4	20.3	1.0	-3.4	Mining & Construction	2.4	2.4	2.4	0.0	0.0
Coal Mining	5.0	5.0	4.8	0.0	4.2	Manufacturing	1.6	1.6	1.7	0.0	-5.9
Oil & Gas Extraction	11.7	11.6	12.5	0.9	-6.4	TOTAL SERVICE PRODUCING	34.9	34.8	34.4	0.3	1.5
Crude Petrol-Natural Gas	3.4	3.5	3.6	-2.9	-5.6	Transportation & Public Utilities	2.9	2.9	2.9	0.0	0.0
Oil & Gas Field Services	8.3	8.1	8.9	2.5	-6.7	Trade	9.2	9.1	9.1	1.1	1.1
Nonmetallic Minerals	2.7	2.7	2.7	0.0	0.0	Wholesale Trade	0.9	0.9	0.9	0.0	0.0
Construction	20.0	19.9	20.2	0.5	-1.0	Retail Trade	8.3	8.2	8.2	1.2	1.2
General Building Contractors	4.4	4.5	4.5	-2.2	-2.2	Finance, Insurance & Real Estate	1.9	1.9	1.8	0.0	5.6
Heavy Construction	6.3	6.1	6.6	3.3	-4.5	Services	8.5	8.7	8.4	-2.3	1.2
Special Trade Construction	9.3	9.3	9.1	0.0	2.2	Total Government	12.4	12.2	12.2	1.6	1.6
Manufacturing	10.8	10.8	11.1	0.0	-2.7	Federal Government	2.5	2.4	2.5	4.2	0.0
Durable Goods	5.0	5.0	5.1	0.0	-2.0	State Government	3.8	3.7	3.6	2.7	5.6
Nondurable Goods	5.8	5.8	6.0	0.0	-3.3	Local Government	6.1	6.1	6.1	0.0	0.0
Printing & Publishing	1.7	1.6	1.6	6.2	6.2						
Petroleum & Coal Products	1.2	1.2	1.2	0.0	0.0						
TOTAL SERVICE PRODUCING	204.3	208.4	201.3	-2.0	1.5	NATRONA COUNTY*					
Transportation & Public Utilities	14.3	14.2	14.3	0.7	0.0	TOTAL NONAG. WAGE & SALARY EMPLOYMENT	32.7	33.3	32.8	-1.8	-0.3
Transportation	9.5	9.4	9.4	1.1	1.1	TOTAL GOODS PRODUCING	6.1	6.0	6.1	1.7	0.0
Railroad Transportation	3.0	3.0	3.0	0.0	0.0	Mining	2.3	2.2	2.3	4.5	0.0
Trucking & Warehousing	3.8	3.8	3.9	0.0	-2.6	Construction	2.1	2.1	2.1	0.0	0.0
Communications	2.1	2.1	2.1	0.0	0.0	Manufacturing	1.7	1.7	1.7	0.0	0.0
Telephone Communications	1.0	1.0	1.1	0.0	-9.1	TOTAL SERVICE PRODUCING	26.6	27.3	26.7	-2.6	-0.4
Electric, Gas & Sanitary Services	2.8	2.8	2.7	0.0	3.7	Transportation & Public Utilities	1.6	1.6	1.6	0.0	0.0
Electric Services	1.9	1.9	1.9	0.0	0.0	Transportation	1.2	1.2	1.2	0.0	0.0
Trade	58.4	57.4	57.9	1.7	0.9	Communications & Public Utilities	0.4	0.4	0.4	0.0	0.0
Wholesale Trade	8.6	8.5	8.2	1.2	4.9	Trade	8.7	8.6	8.9	1.2	-2.2
Durable Goods	5.2	5.1	4.8	2.0	8.3	Wholesale Trade	2.4	2.4	2.5	0.0	-4.0
Nondurable Goods	3.4	3.4	3.4	0.0	0.0	Retail Trade	6.3	6.2	6.4	1.6	-1.6
Retail Trade	49.8	48.9	49.7	1.8	0.2	Finance, Insurance & Real Estate	1.3	1.3	1.2	0.0	8.3
Building Materials & Garden Supply	2.4	2.3	2.2	4.3	9.1	Services	10.1	10.1	10.2	0.0	-1.0
General Merchandise Stores	6.0	6.1	6.1	-1.6	-1.6	Personal & Business Services	2.1	2.1	2.2	0.0	-4.5
Department Stores	4.5	4.7	4.6	-4.3	-2.2	Health Services	3.0	3.1	3.0	-3.2	0.0
Food Stores	5.2	5.1	5.2	2.0	0.0	Government	4.9	5.7	4.8	-14.0	2.1
Auto Dealers & Service Stations	8.4	8.3	8.5	1.2	-1.2	Federal Government	0.7	0.7	0.7	0.0	0.0
Gas Stations	4.3	4.3	4.5	0.0	-4.4	State Government	0.8	0.7	0.7	14.3	14.3
Apparel & Accessory Stores	1.3	1.2	1.3	8.3	0.0	Local Government	3.4	4.3	3.4	-20.9	0.0
Furniture & Home Furnishing Stores	1.6	1.7	1.6	-5.9	0.0	Local Education	1.9	2.8	1.9	-32.1	0.0
Eating & Drinking Places	18.9	18.3	18.7	3.3	1.1						
Miscellaneous Retail	6.0	5.9	6.1	1.7	-1.6						
Finance, Insurance & Real Estate	8.5	8.6	8.6	-1.2	-1.2						
Depos-Nondepos & Security Brokers	4.4	4.4	4.3	0.0	2.3						
Depository Institutions	3.5	3.5	3.5	0.0	0.0						
Insurance	1.9	1.9	1.8	0.0	5.6						
Services	64.5	64.0	63.0	0.8	2.4						
Hotels & Other Lodging Places	13.7	13.1	13.0	4.6	5.4						
Personal Services	2.2	2.1	2.0	4.8	10.0						
Business Services	8.6	8.8	8.7	-2.3	-1.1						
Automotive & Misc. Repair Services	3.4	3.5	3.3	-2.9	3.0						
Amusements (Rec Services & Mot. Pics.)	3.8	3.6	4.3	5.6	-11.6						
Health Services	11.9	11.9	11.6	0.0	2.6						
Offices of Doctors of Medicine	2.9	2.9	2.7	0.0	7.4						
Legal Services	1.3	1.3	1.3	0.0	0.0						
Social Services	6.6	6.8	6.4	-2.9	3.1						
Membership Organizations	3.8	3.8	3.8	0.0	0.0						
Engineering & Management	4.8	4.7	4.5	2.1	6.7						
Government	58.6	64.2	57.5	-8.7	1.9						
Total Federal Government	8.4	8.1	8.2	3.7	2.4						
Department of Defense	0.9	0.9	0.9	0.0	0.0						
Total State Government	13.9	14.3	13.6	-2.8	2.2						
State Education	4.8	5.2	4.6	-7.7	4.3						
Total Local Government	36.3	41.8	35.7	-13.2	1.7						
Local Hospitals	5.6	5.6	5.5	0.0	1.8						
Local Education	16.1	21.7	16.1	-25.8	0.0						



¹Current Employment Statistics (CES) estimates include all full- and part-time wage and salary workers in nonagricultural establishments who worked or received pay during the week which includes the 12th of the month. Self-employed, domestic services, and personnel of the armed forces are excluded. Data are not seasonally adjusted.

*Published in cooperation with the Bureau of Labor Statistics.

(p) Subject to revision. (r) Revised.

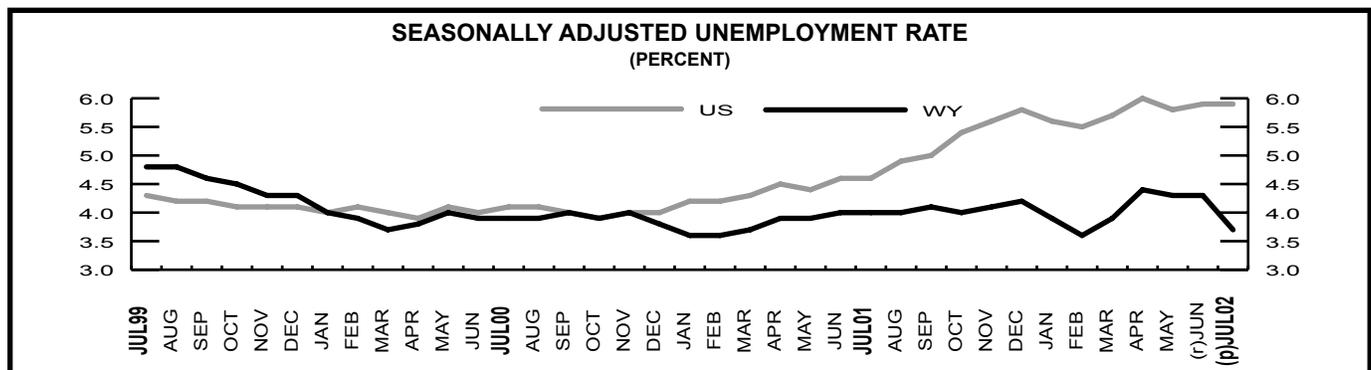
Economic Indicators

by: David Bullard, Senior Economist

“The number of residential building permits issued in July 2002 was up 20.8 percent from July 2001.”

	July 2002 (p)	June 2002 (r)	July 2001 (b)	Percent Change Month	Year
Wyoming Total Civilian Labor Force(1)	277,407	278,470	278,358	-0.4	-0.3
Unemployed	9,010	10,911	9,886	-17.4	-8.9
Employed	268,397	267,559	268,472	0.3	0.0
Wyoming Unemployment Rate/Seas. Adj.	3.2%/3.7%	3.9%/4.3%	3.6%/4.0%	N/A	N/A
U.S. Unemployment Rate/Seas. Adj.	6.0/5.9%	6.0/5.9%	4.7%/4.6%	N/A	N/A
U.S. Multiple Jobholders	7,168,000	7,231,000	7,452,000	-0.9	-3.8
As a percent of all workers	5.3%	5.4%	5.5%	N/A	N/A
U.S. Discouraged Workers	398,000	337,000	308,000	18.1	29.2
U.S. Part Time for Economic Reasons	4,286,000	4,188,000	3,681,000	2.3	16.4
Hours & Earnings for Production Workers					
Wyoming Mining					
Average Weekly Earnings	\$906.36	\$911.94	\$849.73	-0.6	6.7
Average Weekly Hours	42.0	42.2	41.9	-0.5	0.2
U.S. Mining Hours & Earnings					
Average Weekly Earnings	\$754.99	\$767.78	\$769.56	-1.7	-1.9
Average Weekly Hours	42.8	43.5	43.7	-1.6	-2.1
Wyoming Manufacturing Hours & Earnings					
Average Weekly Earnings	\$648.46	\$647.79	\$675.42	0.1	-4.0
Average Weekly Hours	38.1	39.0	39.2	-2.3	-2.8
U.S. Manufacturing Hours & Earnings					
Average Weekly Earnings	\$616.19	\$629.54	\$599.54	-2.1	2.8
Average Weekly Hours	40.3	41.2	40.4	-2.2	-0.2
Wyoming Unemployment Insurance					
Weeks Compensated (2)	12,041	9,775	7,725	23.2	55.9
Benefits Paid	\$2,719,639	\$2,227,259	\$1,589,296	22.1	71.1
Average Weekly Benefit Payment	\$225.86	\$227.85	\$205.73	-0.9	9.8
State Insured Covered Jobs (1)	227,395	232,498	226,416	-2.2	0.4
Insured Unemployment Rate	1.4%	1.4%	0.9%	N/A	N/A
Consumer Price Index for All U.S. Urban Consumers (CPI-U) (1982 to 1984 = 100)					
All Items	180.1	179.9	177.5	0.1	1.5
Food & Beverages	176.6	176.4	174.0	0.1	1.5
Housing	181.2	180.7	177.6	0.3	2.0
Apparel	118.7	122.7	122.6	-3.3	-3.2
Transportation	153.7	153.4	154.4	0.2	-0.5
Medical Care	286.6	284.7	273.1	0.7	4.9
Recreation (Dec. 1997=100)	106.2	106.2	105.0	0.0	1.1
Education & Communication (Dec. 1997=100)	107.6	106.9	104.8	0.7	2.7
Other Goods & Services	294.5	294.4	285.8	0.0	3.0
Producer Prices (1982 to 1984 = 100)					
All Commodities	131.2	131.1	133.4	0.1	-1.6
Wyoming Building Permits					
New Privately Owned Housing Units Authorized	174	208	144	-16.3	20.8
Valuation	\$28,621,000	\$32,066,000	\$24,281,000	-10.7	17.9

(p) Preliminary. (r) Revised. (b) Benchmarked. (1) Local Area Unemployment Statistics Program Estimates. (2) Not Normalized.



Wyoming County Unemployment Rates

by: Brad Payne, Economist

“The decrease in statewide seasonally adjusted unemployment from 4.3 percent in June 2002 to 3.7 percent in July reflects a declining labor force (278,470 to 277,407).”

REGION County	Labor Force			Employed			Unemployed			Unemployment Rate		
	July 2002 (p)	June 2002 (r)	July 2001 (b)									
NORTHWEST	49,375	49,576	49,342	47,442	47,255	47,002	1,933	2,321	2,340	3.9	4.7	4.7
Big Horn	5,738	5,997	6,023	5,491	5,710	5,729	247	287	294	4.3	4.8	4.9
Fremont	18,772	18,941	18,576	17,856	17,874	17,460	916	1,067	1,116	4.9	5.6	6.0
Hot Springs	2,421	2,537	2,599	2,345	2,423	2,494	76	114	105	3.1	4.5	4.0
Park	17,961	17,586	17,534	17,458	16,971	16,931	503	615	603	2.8	3.5	3.4
Washakie	4,483	4,515	4,610	4,292	4,277	4,388	191	238	222	4.3	5.3	4.8
NORTHEAST	47,545	48,334	47,696	46,295	46,774	46,300	1,250	1,560	1,396	2.6	3.2	2.9
Campbell	23,039	22,942	22,974	22,378	22,162	22,334	661	780	640	2.9	3.4	2.8
Crook	2,997	3,180	3,169	2,926	3,090	3,079	71	90	90	2.4	2.8	2.8
Johnson	4,234	4,370	4,084	4,161	4,256	3,999	73	114	85	1.7	2.6	2.1
Sheridan	14,008	14,440	14,146	13,645	13,982	13,675	363	458	471	2.6	3.2	3.3
Weston	3,267	3,402	3,323	3,185	3,284	3,213	82	118	110	2.5	3.5	3.3
SOUTHWEST	57,336	57,185	57,397	55,304	54,732	55,397	2,032	2,453	2,000	3.5	4.3	3.5
Lincoln	6,708	6,965	7,093	6,425	6,592	6,799	283	373	294	4.2	5.4	4.1
Sublette	3,752	3,726	3,682	3,681	3,640	3,620	71	86	62	1.9	2.3	1.7
Sweetwater	20,164	20,584	20,187	19,281	19,629	19,243	883	955	944	4.4	4.6	4.7
Teton	15,406	14,435	15,278	15,190	14,129	15,101	216	306	177	1.4	2.1	1.2
Uinta	11,306	11,475	11,157	10,727	10,742	10,634	579	733	523	5.1	6.4	4.7
SOUTHEAST	73,400	73,347	73,495	71,365	70,922	71,294	2,035	2,425	2,201	2.8	3.3	3.0
Albany	18,761	19,109	18,459	18,465	18,736	18,108	296	373	351	1.6	2.0	1.9
Goshen	6,186	6,466	6,351	5,985	6,224	6,147	201	242	204	3.2	3.7	3.2
Laramie	42,802	41,851	42,749	41,462	40,264	41,282	1,340	1,587	1,467	3.1	3.8	3.4
Niobrara	1,226	1,285	1,344	1,192	1,238	1,312	34	47	32	2.8	3.7	2.4
Platte	4,425	4,636	4,592	4,261	4,460	4,445	164	176	147	3.7	3.8	3.2
CENTRAL	49,748	50,031	50,430	47,989	47,876	48,480	1,759	2,155	1,950	3.5	4.3	3.9
Carbon	8,294	8,584	8,599	8,049	8,250	8,313	245	334	286	3.0	3.9	3.3
Converse	6,582	6,581	6,636	6,366	6,328	6,372	216	253	264	3.3	3.8	4.0
Natrona	34,872	34,866	35,195	33,574	33,298	33,795	1,298	1,568	1,400	3.7	4.5	4.0
STATEWIDE	277,407	278,470	278,358	268,397	267,559	268,472	9,010	10,911	9,886	3.2	3.9	3.6
Statewide Seasonally Adjusted										3.7	4.3	4.0
U.S.										6.0	6.0	4.7
U.S. Seasonally Adjusted.....										5.9	5.9	4.6

Prepared in cooperation with the Bureau of Labor Statistics. Benchmarked 02/02. Run Date 08/02.

Data are not seasonally adjusted except where otherwise specified.

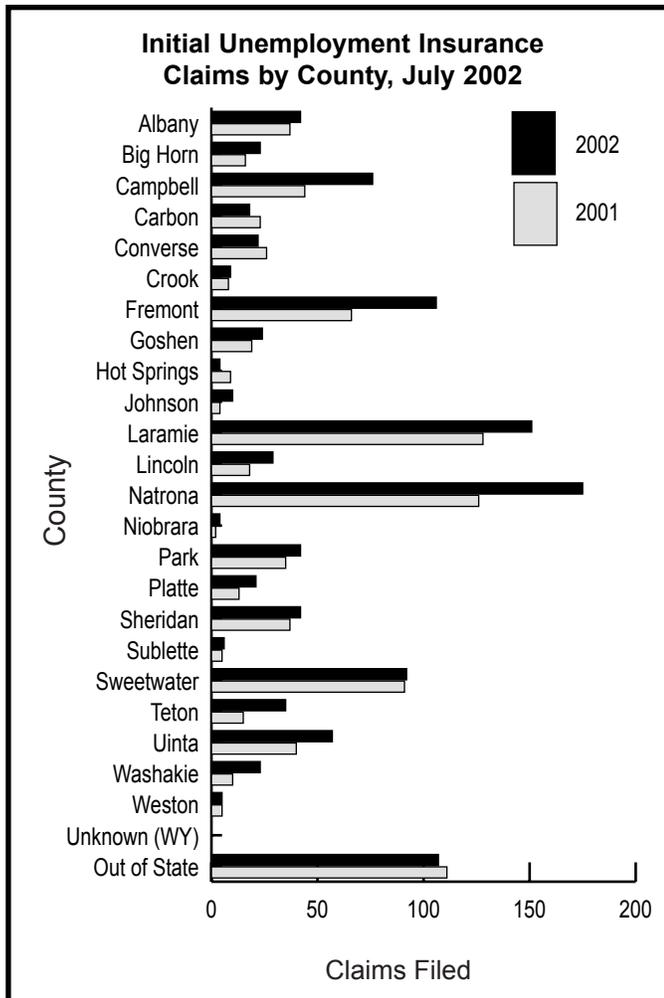
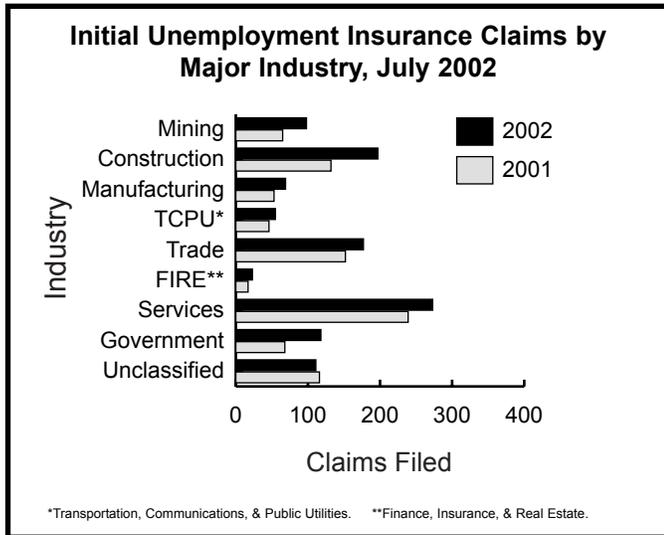
(p) Preliminary. (r) Revised. (b) Benchmarked.

NOTE: The Current Population Survey (CPS) estimated the 2001 annual average Wyoming unemployment rate at 3.9 percent.

The 90 percent confidence interval for this estimate suggests that in 9 of 10 cases, the interval 3.4 to 4.4 percent would contain the actual rate.

Wyoming Normalized Unemployment Insurance Statistics: Initial Claims by: Douglas Leonard, Economist

“July Statewide initial claims were up 26.2 percent from the prior year, primarily due to increases in Mining, Construction, and Local Government.”



WYOMING STATEWIDE	Claims Filed			Percent Change	
	Jul 02	Jun 02	Jul 01	Jul 02	Jul 01
TOTAL CLAIMS FILED	1,121	1,191	888	-5.9	26.2
TOTAL GOODS PRODUCING	364	415	250	-12.3	45.6
Mining	98	106	65	-7.5	50.8
Oil & Gas Extraction	82	92	51	-10.9	60.8
Construction	197	233	132	-15.5	49.2
Manufacturing	69	76	53	-9.2	30.2
TOTAL SERVICES PRODUCING	646	670	522	-3.6	23.8
Transportation, Comm., & Pub. Utilities	55	45	46	22.2	19.6
Transportation	40	26	31	53.8	29.0
Communications & Public Utilities	15	19	15	-21.1	0.0
Trade	177	187	152	-5.3	16.4
Wholesale Trade	36	31	23	16.1	56.5
Retail Trade	141	156	129	-9.6	9.3
Finance, Insurance, & Real Estate	23	19	17	21.1	35.3
Services	273	276	239	-1.1	14.2
Personal & Business Services	70	57	77	22.8	-9.1
Health Services	39	43	29	-9.3	34.5
Government	118	143	68	-17.5	73.5
Local Government	76	111	41	-31.5	85.4
Local Education	41	61	17	-32.8	141.2
UNCLASSIFIED	111	106	116	4.7	-4.3

LARAMIE COUNTY					
LARAMIE COUNTY	Claims Filed			Percent Change	
	Jul 02	Jun 02	Jul 01	Jul 02	Jul 01
TOTAL CLAIMS FILED	152	160	125	-5.0	21.6
TOTAL GOODS PRODUCING	32	33	20	-3.0	60.0
Mining	1	0	1	0.0	0.0
Oil & Gas Extraction	1	0	1	0.0	0.0
Construction	23	16	13	43.8	76.9
Manufacturing	8	17	6	-52.9	33.3
TOTAL SERVICES PRODUCING	111	121	86	-8.3	29.1
Transportation, Comm., & Pub. Utilities	14	8	13	75.0	7.7
Transportation	6	3	12	100.0	-50.0
Communications & Public Utilities	8	5	1	60.0	700.0
Trade	27	33	18	-18.2	50.0
Wholesale Trade	4	5	3	-20.0	33.3
Retail Trade	23	28	15	-17.9	53.3
Finance, Insurance, & Real Estate	5	8	6	-37.5	-16.7
Services	44	50	40	-12.0	10.0
Personal & Business Services	10	11	16	-9.1	-37.5
Health Services	10	10	3	0.0	233.3
Government	21	22	9	-4.5	133.3
Local Government	9	14	4	-35.7	125.0
Local Education	6	8	3	-25.0	100.0
UNCLASSIFIED	9	6	19	50.0	-52.6

NATRONA COUNTY					
NATRONA COUNTY	Claims Filed			Percent Change	
	Jul 02	Jun 02	Jul 01	Jul 02	Jul 01
TOTAL CLAIMS FILED	172	180	124	-4.4	38.7
TOTAL GOODS PRODUCING	53	62	50	-14.5	6.0
Mining	17	19	13	-10.5	30.8
Oil & Gas Extraction	16	19	12	-15.8	33.3
Construction	23	31	23	-25.8	0.0
Manufacturing	13	12	14	8.3	-7.1
TOTAL SERVICES PRODUCING	109	114	70	-4.4	55.7
Transportation, Comm., & Pub. Utilities	4	3	5	33.3	-20.0
Transportation	3	1	2	200.0	50.0
Communications & Public Utilities	1	2	3	-50.0	-66.7
Trade	35	35	29	0.0	20.7
Wholesale Trade	12	8	4	50.0	200.0
Retail Trade	23	27	25	-14.8	-8.0
Finance, Insurance, & Real Estate	3	1	0	200.0	0.0
Services	56	62	31	-9.7	80.6
Personal & Business Services	11	9	10	22.2	10.0
Health Services	12	9	6	33.3	100.0
Government	11	13	5	-15.4	120.0
Local Government	7	9	2	-22.2	250.0
Local Education	3	9	2	-66.7	50.0
UNCLASSIFIED	10	4	4	150.0	150.0

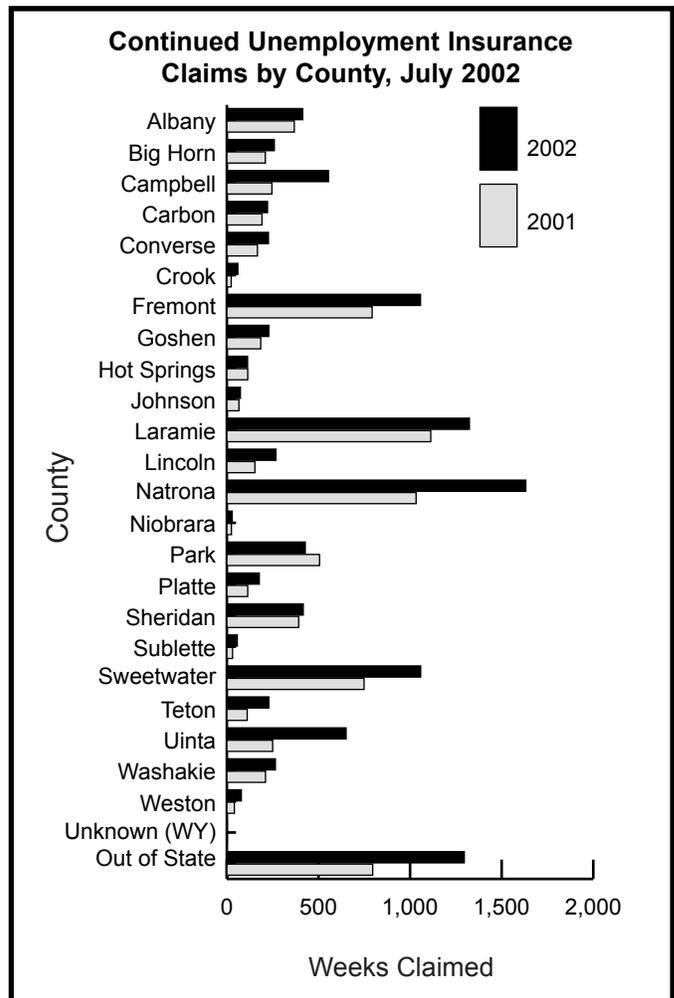
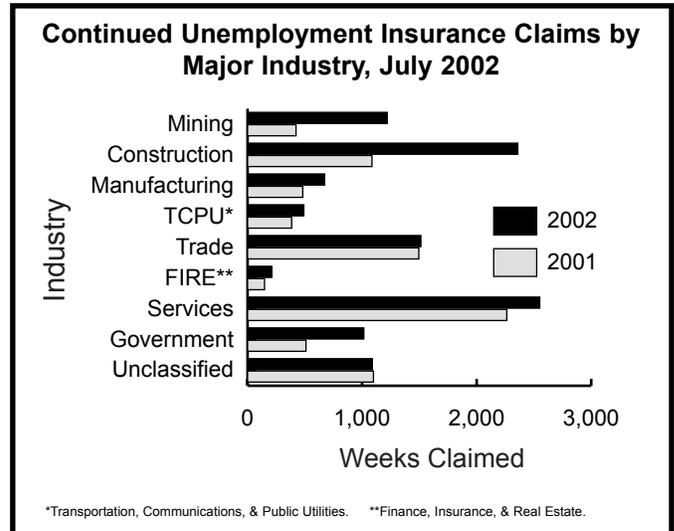
Wyoming Normalized Unemployment Insurance Statistics: Continued Claims by: Douglas Leonard, Economist

“Statewide continued weeks claimed rose 40.9 percent over last year, with oil & gas extraction, Construction, and Local Government accounting for a large proportion of the change.”

WYOMING STATEWIDE	Weeks Claimed			Percent Change	
	Weeks Claimed			Weeks Claimed	
	Jul 02	Jun 02	Jul 01	Jul 02	Jul 02
TOTAL CLAIMS FILED	11,122	11,599	7,891	-4.1	40.9
TOTAL UNIQUE CLAIMANTS	3,025	3,750	2,506	-19.3	20.7
TOTAL GOODS PRODUCING	4,251	4,611	1,991	-7.8	113.5
Mining	1,219	1,549	423	-21.3	188.2
Oil & Gas Extraction	1,132	1,462	305	-22.6	271.1
Construction	2,359	2,365	1,086	-0.3	117.2
Manufacturing	673	697	482	-3.4	39.6
TOTAL SERVICES PRODUCING	5,782	5,813	4,801	-0.5	20.4
Transportation, Comm., & Pub. Utilities	491	493	385	-0.4	27.5
Transportation	275	330	272	-16.7	1.1
Communications & Public Utilities	216	163	113	32.5	91.2
Trade	1,513	1,688	1,495	-10.4	1.2
Wholesale Trade	308	314	274	-1.9	12.4
Retail Trade	1,205	1,374	1,221	-12.3	-1.3
Finance, Insurance, & Real Estate	212	191	148	11.0	43.2
Services	2,551	2,577	2,263	-1.0	12.7
Personal & Business Services	696	777	578	-10.4	20.4
Health Services	277	237	245	16.9	13.1
Government	1,015	864	510	17.5	99.0
Local Government	680	509	289	33.6	135.3
Local Education	339	195	174	73.8	94.8
UNCLASSIFIED	1,089	1,175	1,099	-7.3	-0.9

LARAMIE COUNTY	Weeks Claimed			Percent Change	
	Weeks Claimed			Weeks Claimed	
	Jul 02	Jun 02	Jul 01	Jul 02	Jul 02
TOTAL CLAIMS FILED	1,324	1,280	1,112	3.4	19.1
TOTAL UNIQUE CLAIMANTS	354	412	356	-14.1	-0.6
TOTAL GOODS PRODUCING	280	269	235	4.1	19.1
Mining	3	0	6	0.0	-50.0
Oil & Gas Extraction	3	0	2	0.0	50.0
Construction	211	226	140	-6.6	50.7
Manufacturing	66	43	89	53.5	-25.8
TOTAL SERVICES PRODUCING	947	910	797	4.1	18.8
Transportation, Comm., & Pub. Utilities	137	120	156	14.2	-12.2
Transportation	38	49	89	-22.4	-57.3
Communications & Public Utilities	99	71	67	39.4	47.8
Trade	218	233	213	-6.4	2.3
Wholesale Trade	44	63	41	-30.2	7.3
Retail Trade	174	170	172	2.4	1.2
Finance, Insurance, & Real Estate	42	27	44	55.6	-4.5
Services	421	391	323	7.7	30.3
Personal & Business Services	137	147	105	-6.8	30.5
Health Services	72	55	30	30.9	140.0
Government	129	139	61	-7.2	111.5
Local Government	48	40	38	20.0	26.3
Local Education	25	15	23	66.7	8.7
UNCLASSIFIED	97	101	80	-4.0	21.3

NATRONA COUNTY	Weeks Claimed			Percent Change	
	Weeks Claimed			Weeks Claimed	
	Jul 02	Jun 02	Jul 01	Jul 02	Jul 02
TOTAL CLAIMS FILED	1,634	1,708	1,032	-4.3	58.3
TOTAL UNIQUE CLAIMANTS	466	566	337	-17.7	38.3
TOTAL GOODS PRODUCING	585	706	261	-17.1	124.1
Mining	206	248	61	-16.9	237.7
Oil & Gas Extraction	197	238	61	-17.2	223.0
Construction	285	343	144	-16.9	97.9
Manufacturing	94	115	56	-18.3	67.9
TOTAL SERVICES PRODUCING	983	929	705	5.8	39.4
Transportation, Comm., & Pub. Utilities	67	70	36	-4.3	86.1
Transportation	50	56	30	-10.7	66.7
Communications & Public Utilities	17	14	6	21.4	183.3
Trade	287	310	231	-7.4	24.2
Wholesale Trade	86	83	73	3.6	17.8
Retail Trade	201	227	158	-11.5	27.2
Finance, Insurance, & Real Estate	39	30	29	30.0	34.5
Services	498	447	360	11.4	38.3
Personal & Business Services	131	155	83	-15.5	57.8
Health Services	40	27	73	48.1	-45.2
Government	92	72	49	27.8	87.8
Local Government	69	53	34	30.2	102.9
Local Education	42	27	26	55.6	61.5
UNCLASSIFIED	66	73	66	-9.6	0.0



Wyoming Department of Employment
Research & Planning
P.O. Box 2760
Casper, WY 82602

Official Business
Penalty for Private Use \$300

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