

TRENDS

Electronic Medical Records Employment Impacts

by: *Douglas W. Leonard, Senior Economist*

A large infusion of federal funds to support health information technology (HIT) development will likely alter the structure of the health care industry in Wyoming, as the health care delivery system evolves from paper records to electronic records. This paper highlights some of the relevant literature related to the history of electronic medical records (EMR) and electronic health records (EHR) as they relate to the state's employment structure and employment projections. Included are definitions of some basic terms found in HIT literature and descriptions of relevant federal laws related to HIT. This analysis looks at past research and opinions on the implementation and usage of EMR/EHR technologies and their potential workforce impacts. It also addresses the potential legal implications of a fully electronic medical record system and discusses EMRs in the context of modules used for billing and insurance system management.

Research & Planning (R&P) generally approaches the development of employment projections by studying past trends and incorporating present knowledge to forecast future events. Additional explanatory variables are also introduced into forecasting models to increase fit (closeness of forecast models to historical data). As a last step, the forecasts are checked against prior

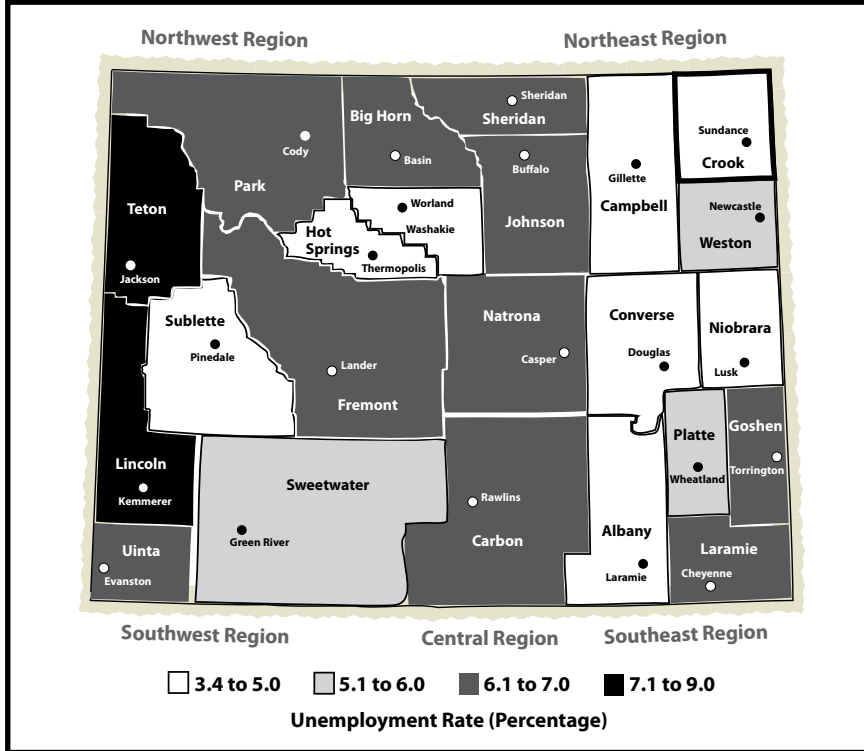
versions of state forecasts while taking into account the unique features of the state and geographic areas within the state. Some unique properties of Wyoming and local areas include area dependence on certain industries such as oil & gas exploration and production, agriculture, local population, and educational

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HIGHLIGHTS

- **With the first Baby Boomers turning 65 this year, demographics will shape Wyoming's work force like never before over the next 10 years. This is especially true in state government, where 25.6% of all employees are 55 or older. ... page 16**
- **Wyoming's seasonally adjusted unemployment rate for October 2010 was 6.7%. Teton County had the highest unemployment rate (9.0%), while Sublette County had the lowest (3.4%). ... page 33**

Unemployment Rate by Wyoming County, October 2010 (Not Seasonally Adjusted)



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attainment of state residents. The above factors and analysts’ experience and knowledge combine to create a more or less “traditional” method of employment forecasting. Table 1 shows the general steps in this process.

These forecasting methods work well when the economy is not experiencing large shocks. What happens when an outside stimulus has the potential to radically change the employment structure? Normal methods may not apply and different methods may be required. Such may be the case in the health care industry due to the Health Information Technology for Economic and Clinical Health Act (HITECH) portion of

the American Recovery and Reinvestment Act (ARRA) of 2009. A major focus of this legislation was to standardize electronic medical record information for all consumers nationally. In addition, considerable federal funding was designated to support implementation of this effort among health care providers.

Readers should also be aware that national implementation and usage of EMR/EHR is required by 2014 and is not optional. Section 3001(c) (3) (A) (ii) of the ARRA stipulates that an electronic health record is required for each person in the United States. Although our research focuses on institutions that voluntarily used EMR/EHR, universal adoption of the technology will be required in the near future.

Table 1: Generalized Method of Projections Development

Step	Data Set	Description
1	Collect historic industry employment data (10-20 year span)	Primary source is unemployment insurance quarterly tax reports
2	Statistical modeling of industry employment	The employment for each Wyoming industry is analyzed (historic data), then projected forward to future time periods (usually 2 to 10 years)
3	Occupational Projections (1)	Industry employment projections are proportioned to occupations based on Wyoming’s Occupational Employment Statistics Survey (OES) data (see http://doe.state.wy.us/LMI/EDSSept2010ECI/TOC000.htm for details)
4	Occupational Projections (2)	The projections component in Step 3 provides estimates based on net changes in industry employment. However, because of economic and demographic changes, workers must be replaced. Projections of the rate and number of workers to be replaced are developed by the Bureau of Labor Statistics (BLS; see http://www.bls.gov/emp/ep_replacements.htm for details)
5	Occupational Projections(3)	The occupational employment estimates are the combination of the effects due to the change in net industry employment and worker replacement
6	Submission	Final estimates of future industry and occupational employment are submitted to a national clearinghouse along with similar projections from other states (see http://www.projectionscentral.com/)
7	Publication	Final estimates of industry and occupational employment are published to the Labor Market Information web site (see http://doe.state.wy.us/LMI/projections.htm for details)

Definitions and Nomenclature

- EMR – Electronic Medical Record: information about individual transactions patients have with health care providers.
- EHR – Electronic Health Record: an overview of EMR data from several locations. Ideally, it would be a top-level view of one’s entire medical history including additions, corrections, and deletions of personal health information by patients.
- ICD 9/10 – International Classification of Diseases: developed by the World Health Organization (WHO, 2010). “The ICD is the international standard diagnostic classification for all general epidemiological, many health management purposes, and clinical use.” (<http://www.who.int/classifications/icd/en/>)
- SNOMED-CT – Systematized Nomenclature of Medicine Clinical Terms: developed by the International Health Terminology Standards Development Organization (IHTSDO, 2010). “SNOMED CT aims to improve patient care through the development of systems to accurately record health care encounters. Ultimately, patients will benefit from the use of SNOMED CT, for building and facilitating communication and interoperability in electronic health data exchange.” (<http://www.ihtsdo.org/snomed-ct/>)
- HL7 – Health Level 7: A prominent method by which health information is

exchanged between providers. “Health Level Seven International (HL7) is the global authority on standards for interoperability of health information technology with members in over 55 countries. HL7’s vision is to create the best and most widely used standards in healthcare.” (HL7 International, <http://www.hl7.org/>, 2010)

- HIPAA – Health Insurance Portability and Accountability Act of 1996.

Relevant Law and National Developments

Medical positions geared toward information technology are not new. Malloy and Benoit (1998) discussed the development of a Director of Medical Informatics position. This job required a physician with substantial information technology (IT) credentials. Federal government initiatives in HIT are not unique to the ARRA. In 2004, President George W. Bush established the position of National Health Information Technology Coordinator (Executive Order 13335, 3 CFR 160 (2004)). In particular, Section 3 of the executive order states the coordinator’s plan:

Advance the development, adoption, and implementation of health care information technology standards nationally through collaboration among public and private interests, and consistent with current efforts to set health information technology standards for use by the Federal Government (Subsection i).

The establishment of this office and the rules governing it were superseded when the HITECH Act passed as a portion of the ARRA. Within the HITECH Act, the Office of the National Coordinator for Health Information Technology was established (Section 3001). The responsibilities of the national coordinator included but were not limited to 1) certification of electronic health information use and exchange methods, 2) ensuring health information is secured and protected, and 3) coordinating federal HIT policy. In August 2010, it was reported that the United States Department of Health and Human Services (HHS) certified the first two technology review bodies authorized to test EMR systems (U.S. Department of Health and Human Services, 2010). Included in Section 3001 of the Act was funding to develop HIT infrastructure; Section 3012 provides for implementation assistance for health care institutions; and Section 3016 creates a program focused on training HIT workers who will implement a comprehensive system of electronic medical records. Among the institutions mentioned in the Section 3012 were HIT Regional Extension Centers. The purpose of these centers is to provide support to health care providers in their assigned regions with regard to the implementation of HIT in their operations. The regional extension center that covers Wyoming is located in Helena, MT (Harrington, 2010). This facility received a grant of \$5 million to "...help doctors in Montana and Wyoming transition to electronic health records." The funds received by the extension center could be the first of many grants it may manage to facilitate EMR implementation in the region.

In addition to the regional extension centers, several community college consortia were developed to foster the

education of information technology workers working in health care (United States Department of Health and Human Services, 2010). Although Wyoming stands to benefit from professionals trained by consortia, no Wyoming community colleges currently participate in the regional consortium. For a complete list of community colleges in the consortium, see http://healthit.hhs.gov/portal/server.pt/community/healthit_hhs_gov_community_college_program/1804.

Private companies such as Microsoft and Google are showing interest in electronic health records also. Microsoft's Health Vault and Google's Google Health provide places for individuals to upload their medical histories. According to Mitchell (2008), one drawback to such storage services is that the data individuals place in them are not protected by the Health Insurance Portability and Accountability Act of 1996 (HIPAA; P.L. 104-191).

Educational Impacts

Although one may assume that all younger students have a high degree of technical sophistication, recent research has shown this is not necessarily the case. Lea, Pearson, Clamp, Johnson, and Jones (2008) discussed the challenges in preparing students for EMR usage. The authors found that wide disparities exist even in younger students' level of IT sophistication. Wilson and Tulu (2010) found that in addition to learning the records management portion of EMR implementation, students also needed to be well-versed in nomenclature terminology (e.g., SNOMED, ICD) in

addition to data transfer technologies such as HL7. Because there is a virtual cornucopia of systems available for EMR implementation, the challenge for learning institutions is to decide which system to use. Will students who are trained on one system have a disadvantage with an employer that uses another system?

The educational system is already responding to the EMR challenge. The June 2009 issue of the *Medical Records Briefing* cited an 8% annual increase in Health Information Baccalaureate enrollment and a 10% increase in graduates between 2006 and 2007. In 2009, more than 50 baccalaureate programs, 200 associate-level, and 5 master-level accredited HIT programs existed in the United States. The accreditation agency for these programs is the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

Lake Region State College in Devils Lake, N.D., recently began offering non-degree certificate programs for four HIT occupations: workflow redesign specialist, health IT trainer, technical software support, and clinician/practitioner consultant (<http://www.lrsc.edu/programs/default.asp?ID=925#HITredesign>).

For some facilities, EMR is a recruiting tool to obtain the best candidates to fill positions. According to Joch (2009), hospitals are now using EMR to lure program completers and graduates to their facilities. One selling point for physicians in particular is the ability to enter orders from their homes (via the Internet) without having to make additional trips to hospitals.

Workforce Occupational Impacts

How might the move toward a fully electronic medical record system affect occupational employment? One occupation mentioned frequently in the literature is medical librarians. Welton (2010) indicated that these jobs formerly involved hard-copy cataloging and filing, but now are at the center of integrating IT and health care. Although these positions are typically located at teaching hospitals, the integration and management of electronic record systems may require the addition of such professionals in Wyoming's health care system. In another study (Larkin, 2010) the author estimated that an additional 51,000 HIT professionals would be needed between 2007 and 2012. Larkin also stated that workers must have extensive health care knowledge prior to employment. The author also cited a "short supply" of medical/nursing information officers.

Larkin found that smaller, rural hospitals often band together into co-operatives to share the costs associated with EMR implementation. At the time of the study, General Electric found that nearly 90% of its small and rural hospital customers prefer to completely outsource all IT functions. Spetz (2009) also found that small and rural hospitals struggle with EMR implementation. Staff had to be retrained to use IT systems, and facilities did not have the resources to allocate overtime or obtain nursing agency help as larger facilities. Palacio, Harrison, and Garets (2010) noted that urban hospitals were much more likely than rural hospitals to adopt EMR. For those who chose to adopt EMR, systems

disparity was a barrier to interoperability. In 2003, more than 264 different EMR systems were in use but only 0.4% of physicians used the same software. The authors also found that the initial startup of an EMR system generally resulted in a loss in productivity of around 15% to 30% due to training time, nursing agency assistance, learning effects, temporary hiring, and other costs. However, the authors also noted that “over the long-term, clinical information systems improve efficiency while reducing resource utilization and unnecessary provider visits.” Moreover, it is not clear to what extent productivity during implementation was negatively affected by the lack of HIT staffing. As EMR systems become common in the health care delivery system, the cost savings hypothesis can be empirically tested in a variety of health care settings.

One occupation growing with the implementation of EMR is nurse informaticists. These positions would be filled by licensed clinical nurses who obtain substantial HIT expertise (McIntire and Clark, 2009). Where the actual implementation of systems is concerned, Green & Thomas (2008) cited the need for “super users” to speed implementation. These individuals would be recommended by management and would receive in-depth training on systems. The drawback to the super users concept is that it may require extensive use of nursing agencies for coverage and substantial overtime during training periods. O’Brien (2006) also documented the presence of “super users” during EMR implementation. The author suggested that such users be available to staff for a minimum of 60 days after systems “go live.” The hospitals in the study also found that each time a system upgrade occurred it was similar to starting over without EMR because of the additional

overtime and nursing agency expenses. Although the hospitals in the study saved an estimated \$50,000 in office supplies during the two years following implementation, the savings were more than offset by overtime and nursing agency expenses. The addition of staff is not specific to nurses and those who interact directly with patients. Chao, Twu, and Hsu (2005) stated that health care facilities will need to acquire additional information specialists to design systems to store and transmit EMR data.

EMR implementation is also challenging in long-term care (LTC) facilities. Phillips et al. (2010) found that EMRs were in very limited use in LTC settings. The authors stated that the adoption costs associated with EMRs do not appear to be offset by providers’ cost savings. The facilities included in the study reported that cost was the primary deterrent to EMR implementation.

Table 2 (see page 8) summarizes our estimates of potential workforce impacts due to EMR implementation. Only estimates of increasing or decreasing employment are shown. Occupations directly related to information technology in health care are projected to realize at least some employment growth due to additional demand for workers who have skills in the design, maintenance, and operation of medical record systems. More registered nurses will likely be required because some of these workers may become nurse informaticists and leave clinical practice. Also, nursing agencies may see increased demand during training and upgrade phases associated with EMRs. While demand for records technicians and administrative assistants will increase for a time as facilities transition to EMR, the demand for these occupations may decrease once systems become operational and reliable. Lastly, because of concerns about

privacy, confidentiality, and information control, the demand for legal professionals with health and IT knowledge will likely increase.

Cost and Quality of Care Impacts

The main selling points of EMR are the cost savings due to the reduction in paperwork and increases in the quality of care because medical errors are reduced. However, during this literature review, the results with EMR thus far have been mixed. Lea, Pearson, Clamp, Johnson, and Jones (2009) found that hospital length of stay tended to increase with EMR implementation. The authors surmised that shortcuts available to medical workers available in the paper system were being eliminated and their activities were being more accurately documented. Brokel (2009) noted that during implementation, considerable time and resources must be dedicated to record validation, particularly during the early phases of implementation which requires additional labor. The validation issue was also analyzed by Murphy, Oxencis, Klauck, Meyer, and Zimmerman (2009). In this study, the

authors analyzed the use of EMRs in a pharmacy. The data capture and validation process in the pharmacy required the addition of 3.5 full-time equivalent (FTE) pharmacists. In a study of diabetic patients, Crosson et al. (2007) found that the presence of EMR did not increase quality of care. Here the authors posited that clinicians were successfully subverting the clinical decision rules built into the system in the interest of time savings resulting in a decline in their quality of care metrics. Retention of experienced staff is important to successful implementation. However, Robels (2009) cited a study by the Association of American Physicians and Surgeons which found that

“...many physicians would rather retire than adopt EMRs.”

Anderson (2008) noted that EMR is sometimes seen as “not ready for prime time” and that electronic systems are viewed as less effective than paper systems. Furthermore, confusing and conflicting government regulations have made it difficult for facilities to choose optimal systems. Hochstadt and Keyt (2009) found that while EMR will probably not save money, it will drive efficiencies in medical offices. Milton (2009) found that EMR introduction has not delivered on promised cost reductions. One of the major decisions health facilities must make is which data

Table 2: List of Occupations Potentially Impacted by the HITECH Act and Electronic Medical Records and Expected Employment Impacts

Occupation Code	Occupation Title	Expected Employment Impact
11-9111	Medical and Health Services Managers	+
15-1122	Information Security Analysts	+
15-1141	Database Administrators	+
29-1140	Registered Nurses	
29-2071	Medical Records and Health Information Technicians	+ then -
43-6011	Executive Secretaries and Executive Administrative Assistants	+ then -
23-1011	Lawyers	+

elements are to be retained. Milton also stated that people may self-ration services because of privacy concerns. The author noted that for-profit companies have begun to access electronic health data for analysis by their own internal health informatics experts. The author stated that in general, nurses and other health professionals require extensive IT training for successful EMR implementation.

The authors included in this review did not place considerable effort into determining the potential cost savings to patients as a result of EMRs. However, clinical research based on EMRs has garnered more attention. Pakhomov et al. (2007) discussed using EMRs to identify heart failure patients. The authors stated that, “the EMR may enable efficient case identification by providing access to clinical reports as soon as they become transcribed; however, novel methods of identification that use the EMR require rigorous validation” (p. 281). Patient EMRs were analyzed using two methods 1) natural language processing (text mining) of clinical notes and 2) predictive modeling. The authors noted that predictive modeling was more suited to clinical trials while natural language processing “may be more suitable for observational studies.” (p. 287). This study was conducted at the Mayo Clinic, an institution that has used EMRs since 1994. In another study (Wilke et al., 2007) similar methods were used to identify subjects for a diabetes clinical research project. The work done by Wilke et al. (2007) also used natural language processing in addition to clinical notes and patient DNA data. Proper selection of research subjects using EMRs in these studies increased the efficiency of research dollars and likely produced more reliable results compared to studies where EMRs were not used.

Legal Issues

One obstacle to the use of EMRs is deciding who owns the data. Although hospitals and physicians would bear the cost of implementation, it appears a significant proportion of the benefits accrue to patients, insurance providers, and clinical researchers. One group of authors (Richardson, Hall, and Madjd-Sadjadi, Z.) suggested a method to speed EMR usage might be to store data in information warehouses similar to credit bureaus. The authors cautioned that with this approach, consumers would likely encounter errors similar to those found in their credit reports, but at least the same standards would exist for all participants in the system. Steward (2005) stated that the Department of Health and Human Services (HHS) is required to develop data management standards that follow the legal standards of HIPAA.

Other legal issues arising with EMR usage include the documentation of clinician activities and their inclusion as evidence in malpractice proceedings. McLean (2008) cited the use of EMRs to mine doctors’ activities. In response to this, new rules of evidence are being developed which require additional expertise in EMR data for liability purposes.

The Billing and Insurance System

The proper coding and recording of medical events is essential to good cost control. Hoffman (2003) indicated that a potential benefit of EMR systems would be to

stem losses involved in billing/collections.” EMRs can also assist in detecting activities which are still costly in terms of billing. Seiber (2007) analyzed the phenomena of “code creep” in Medicaid and state employee health insurance billing. Code creep occurs when medical events are coded in such a way as to increase revenue streams. An example of this could be to code a patient’s condition as more severe over time when the actual condition of the patient remains unchanged. The implementation of EMR could benefit the billing and health insurance system both in terms of accuracy and in the early detection and prevention of fraudulent billing practices.

Conclusion

The electronic medical record infrastructure in the United States is quite fragmented. A large number of data storage systems, transfer protocols, and security algorithms exist for these data. A goal of the HITECH Act was to establish standards for these systems that would eventually pave the way for a nationally interoperable electronic health record for all citizens. To accomplish this task, a tremendous amount of training and retraining must take place, in addition to filling open positions in health care with people who are skilled in health care and information technology. The impacts on Wyoming’s labor market could be dramatic. The intent of this literature review was to place national events in the context of Wyoming’s labor market to highlight what changes and challenges might occur as a result of federal legislation. Quantifying the impact on occupational projections is complicated by the fact that the best business solutions may be to add new IT skills to existing

occupations initially and subsequently develop new specialized occupations as the health care system evolves.

Although the cost savings from EMRs to patients do not appear to be well documented, benefits to some providers because of reduced paperwork and error reduction could be significant. In addition, medical researchers already leverage the power of electronic records to select and monitor subjects in both clinical trials and observational studies. This practice may increase the efficiency of medical research.

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Benefits Time Series: Can We Determine If Employers Are Dropping Health Coverage?

by: David Bullard, Senior Economist

Often Research & Planning (R&P) is asked if fewer employers are offering health insurance to their employees. To answer this question, R&P conducts the Benefits Survey. This survey is conducted on a quarterly basis and results are published annually. While it is possible to look at the annual results and see trends in the data, most of the time the year-to-year changes are not statistically significant. In other words, it could appear that fewer (or more) employers are offering benefits simply because a different group of employers was randomly selected for the survey that year. This article describes a supplemental benefits survey that was conducted in 2008 to try to determine if employers were dropping (or adding) health insurance coverage.

It should be noted that the incidence of

benefits offering varies greatly by full-time and part-time status. Also, larger employers are much more likely to offer benefits than small employers. Employers in certain sectors (e.g., government, natural resources & mining, and educational & health services) also tend to offer more benefits. Wyoming's economy is highly seasonal, especially within certain sectors. Construction employment, for example, increases greatly during the spring and summer and then decreases in the fall and winter. Leisure & hospitality is another sector where employment tends to follow a regular seasonal pattern which peaks in the summer months. Thus, the industry composition of Wyoming's economy looks different in the peak of the summer (more jobs in construction and leisure & hospitality) than in the fall or winter. Within construction and leisure & hospitality there are many small employers, and high

Time Series: A Methodological Note

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When trying to estimate the change in a variable at two different points in time, it is often helpful to have a time series, or a longitudinal data set. If, for example, analysts were to independently draw two samples at Time 1 and Time 2 and measure some variable (e.g., the unemployment rate, or the incidence of employer-provided health insurance), much of the difference between observations could be the result of sampling error. Even if it appeared that the variable had changed, the level of sampling error would make it difficult to reject the null hypothesis of no change.

An alternate (and better) method would be to draw one sample and measure the variable at time 1 and again at time 2. This reduces sampling error for the difference. One drawback of this approach is the higher respondent burden (each member of the sample must report twice). In order to reduce the error in over-the-month and over-the-year changes in the unemployment rate, the Current Population Survey (CPS) design mandates that 75% of the sample overlaps from month to month and 50% of the sample overlaps from year to year (Bureau of Labor Statistics, 2010).

employee turnover might also contribute to a lack of benefits in these sectors.

Methodology

To better understand changes in employer-provided health coverage, R&P designed a supplemental benefits survey. Analysts randomly selected 100 employers who had responded to the benefits survey in fourth quarter 2007. In order to ensure that large, medium, and small employers were included, the subsample was stratified by size class. These 100 employers were re-contacted by phone in December 2008 and asked the same health insurance questions as in 2007. These questions included the number of full-time and part-time employees, whether the employer offered health insurance, the number of employees offered coverage, and the number who enrolled. Survey respondents were also asked questions about dependent health care coverage. This allowed analysts to compare health insurance offerings in November 2008 to offerings a year earlier from the exact same employers, and thus develop a time series.

Table 1: Health Insurance Offerings by Wyoming Employers in Subsample, 2007Q4 and 2008Q4

	2007Q4	2008Q4
Percentage of Employers Offering Health Insurance to Full-Time Workers	47.7%	44.0%
Percentage of Employers Offering Health Insurance to Part-Time Workers	9.8%	8.3%
Percentage of Employers Offering Dependent Health Insurance to Full-Time Workers	41.9%	39.3%
Percentage of Employers Offering Dependent Health Insurance to Part-Time Workers	9.8%	8.3%

Note: Unweighted percentage.

Analysts chose the number 100 in order to make the workload of phone calls manageable in the time that was available without interrupting regular data collection for the ongoing quarterly benefits survey.

Results

Of the 100 firms selected, two had closed and were no longer in business in December 2008 and analysts were unable to contact one employer. Thus, 97 employers were contacted and successfully completed the survey.

The data in Table 1 are based on the matched sample of 97 employers. It shows that among the firms in the subsample, there was a slight decrease in the

percentage of employers offering health insurance to their full-time workers (44.0% in fourth quarter 2008 compared to 47.7% in fourth quarter 2007). Employers were also slightly less likely to offer health insurance to part-time workers in 2008 than in 2007.

The percentage of employers offering health coverage for their full-time workers' dependents fell from 41.9% in fourth quarter 2007 to 39.3% in fourth quarter 2008. Similarly, the number of employers offering dependent health coverage to part-time workers decreased slightly.

While Table 1 shows what happened in the aggregate of the matched sample of employers, it does not give any detail

Table 2: Wyoming Employers in Subsample Who Had Full-time Workers in Both 2007Q4 and 2008Q4

	2007Q4	2008Q4
Health Insurance in Both 2007Q4 and 2008Q4	35	44.3%
No Health Insurance in Both 2007Q4 and 2008Q4	37	46.8%
Added Health Insurance from 2007Q4-2008Q4	2	2.5%
Dropped Health Insurance from 2007Q4-2008Q4	5	6.3%
Total	79	100.0%

on whether individual employers added or dropped insurance coverage. Table 2 was created to provide that detail on sampled employers. It shows that of the 79 employers who had full-time employees in both 2007Q4 and 2008Q4, the vast majority (72, or 91.1%) did not add or drop insurance coverage for those full-time workers. A small number of employers (2, or 2.5%) added insurance coverage between 2007Q4 and 2008Q4, while a handful (5, or 6.3%) dropped coverage.

It may be important to note that Wyoming’s economy was expanding during 2007 and 2008. The results obtained during a period of strong growth may be different from those during a period of contraction, or of only modest growth.

In summary, survey results suggested that the overall percentage of employers offering health

insurance fell very slightly from fourth quarter 2007 to fourth quarter 2008. However, some employers added coverage, partially offsetting the employers who dropped coverage. The vast majority of employers neither dropped nor added coverage.

Because of the small sample size, breakouts of results by industry, region, or size-class would not be meaningful.

Conclusion

In order to develop effective public policy, it is important to understand the incidence of benefits offering by Wyoming employers. It is also important to know if the mix of benefits is changing over time. This research project demonstrated that it is possible to create a longitudinal time series of the benefits offerings of a select group of Wyoming

employers. In light of this finding, it might be worthwhile to modify the design of the current quarterly benefits survey to include the collection of longitudinal data. However, along with the advantages of such a data set, future researchers should not forget the respondent burden (and possible negative impact on response rates) created by re-contacting employers more frequently.

Acknowledgements

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Senior Economist Doug Leonard drew the random sample of 100 employers from those that responded to the fourth quarter 2007 survey.

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Driven by Demographics: Examining Employee Exits in State Government

by: *Michael Moore, Associate Editor*

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Wyoming's ability to retain state employees is influenced in large part by two key factors: demographics and the economy. A large percentage of workers nearing the traditional retirement age of 65 and a volatile economy driven by the energy sector can make it difficult for state government to retain employees. Over the long term, the rate of hires and exits in state government are in relative equilibrium. However, over the next 10 years, demographics will shape Wyoming's labor market like never before.

The aging of approximately 79 million U.S. Baby Boomers born between 1946 and 1965 has been a topic of conversation for many years. As of Jan. 1, 2011, the oldest members of the Baby Boom generation began turning 65, entering the traditional retirement age. Knowing this, employers must evaluate the replacement cost of turnover and recruitment (LSO, 2000). Wyoming employers, along with all other U.S. employers, are entering a decade where large scale exodus of workers across all sectors is increasingly probable.

Total employment in state government remained almost the same in relation to Wyoming's total population during the past 10 years. In both second quarter 2000 and second quarter 2010, when the decennial census was taken, total employment in state government accounted for 1.7% of Wyoming's total population. State statute 27-3-603 allows the Research & Planning (R&P) section of the Wyoming Department of Employment to collect and publish statistical analysis of executive branch employees.

This article examines how these two factors, demographics and the economy, affect Wyoming's ability to retain state employees. It also looks at past research on succession planning by R&P, demonstrating the importance of this concept as it relates to the anticipated large scale departure of state employees approaching retirement age.

Methodology

This analysis was generated by combining three administrative databases available to R&P. These include the State Auditor's Office Database, Wyoming's Unemployment Insurance (UI) Wage Records (WR) Database (including UI data compiled from nine partner states), and the Quarterly Census of Employment and Wages (QCEW) Database.

The Auditor's Database contains a record for each state employee by quarter from fourth quarter 2005 to present. Only select data elements of the auditor's database were used, which include social security number, gender, date of birth, state employee classification (occupation), and the specific state agency for which the employee works. A record was retained for each employee by quarter from 2005 to present which makes it possible to look at within-agency transitions where an employee changes occupation, as well as across agency changes where an employee leaves one state agency to work for another. For example, from the auditor's data alone a record can be produced on an individual who enters employment with the state of Wyoming for the first time, his or her

career advancement to higher levels within the state agency; whether the employee changed agencies (e.g., left the Department of Employment to work for the Department of Family Services); and if he or she went to work in a neighboring state.

The second database used for the analysis is the UI Wage Records Database. Wage Records includes SSN, year, quarter, employer account number, and wages for all Unemployment Insurance covered employment in Wyoming from 1992 to present (2000 to present for partner states). Wage Records, which are also collected quarterly, make it possible to determine where persons were employed and their wages prior to, during, and subsequent to their employment with the state of Wyoming.

The last database used for the current analysis is the QCEW. The QCEW captures data that describes the characteristics of the employers for which the employees worked as identified in the associated wage records. The QCEW contains data on the North American Industry Classification System (NAICS) code, which represents the industry in which the employer generates its greatest revenue. More importantly for this article, the QCEW contains data on the ownerships of the employers. These include the private sector and local, state, or federal government.

The data from the three administrative databases were combined to create a single record for each employee who worked for the executive branch of state government from first quarter 2000 to present. An algorithm to determine the primary employer for which the employee worked during the quarter was operationally defined as follows:

1. If the employee worked for the executive branch of state government, an employer was selected from state government

agencies regardless of whether or not the individual made higher wages in the private sector, local, or federal government. If the employee worked for two state agencies in the quarter, the one paying the highest wages was selected as the primary employer.

2. All other persons not working for state government were assigned to the employer paying the highest wages during the quarter.

For example, an employee who began the quarter working for the Department of Workforce Services (earning \$1,000), transitioned to the Department of Employment (earning \$750), and finally wound up with an employer in the private sector (earning \$3,000) in the same quarter would be assigned to the Department of Workforce Services. It is quite likely that in the next quarter the employee would only have one employer (the private sector employer).

Lastly, several concepts related to turnover are discussed in this analysis. The first is a continuous employee, which is defined as an employee who has the same primary employer in the current, previous, and subsequent quarter. A hire is an employee who did not work for the primary employer in the previous quarter and works for the employer in the current quarter. An exit is an employee who works for the employer in the current quarter and does not work for the employer in the subsequent quarter. For a complete overview of the turnover methodology used, please refer to Glover (2003).

Demographics and Market

Wyoming has an older population and

work force than the national average with a high percentage of workers approaching the traditional retirement age of 65. Figure 1 shows population counts for Wyoming in 2000 and estimates in 2009, as well as the number of people working at any time during those two periods. The progression of the Baby Boom generation can be seen in this figure; as the number of people in Wyoming age 55 and older increased, so did the number of workers in that age group. In 2009, 31.3% of Wyoming’s total population was age 55 or older (U.S. Census, 2010), while 19.4% of the state’s total work force fell into the same age group (WYDOE, 2010).

Figure 1 also illustrates the impact that Wyoming felt from the economic downturn in 2009, especially among younger workers. In 2000, there were more people ages 21-24 and 29-30 found working in Wyoming than actually living in the state, indicating that large amounts of younger workers were imported from other states. This changed dramatically in 2009, as large numbers of residents under the age of 30 were not found working at any time in Wyoming.

Wyoming began importing a large number of out-of-state workers in 2005 as the unemployment rate fell to 3.5% and wage and salary growth stood at 3.3%

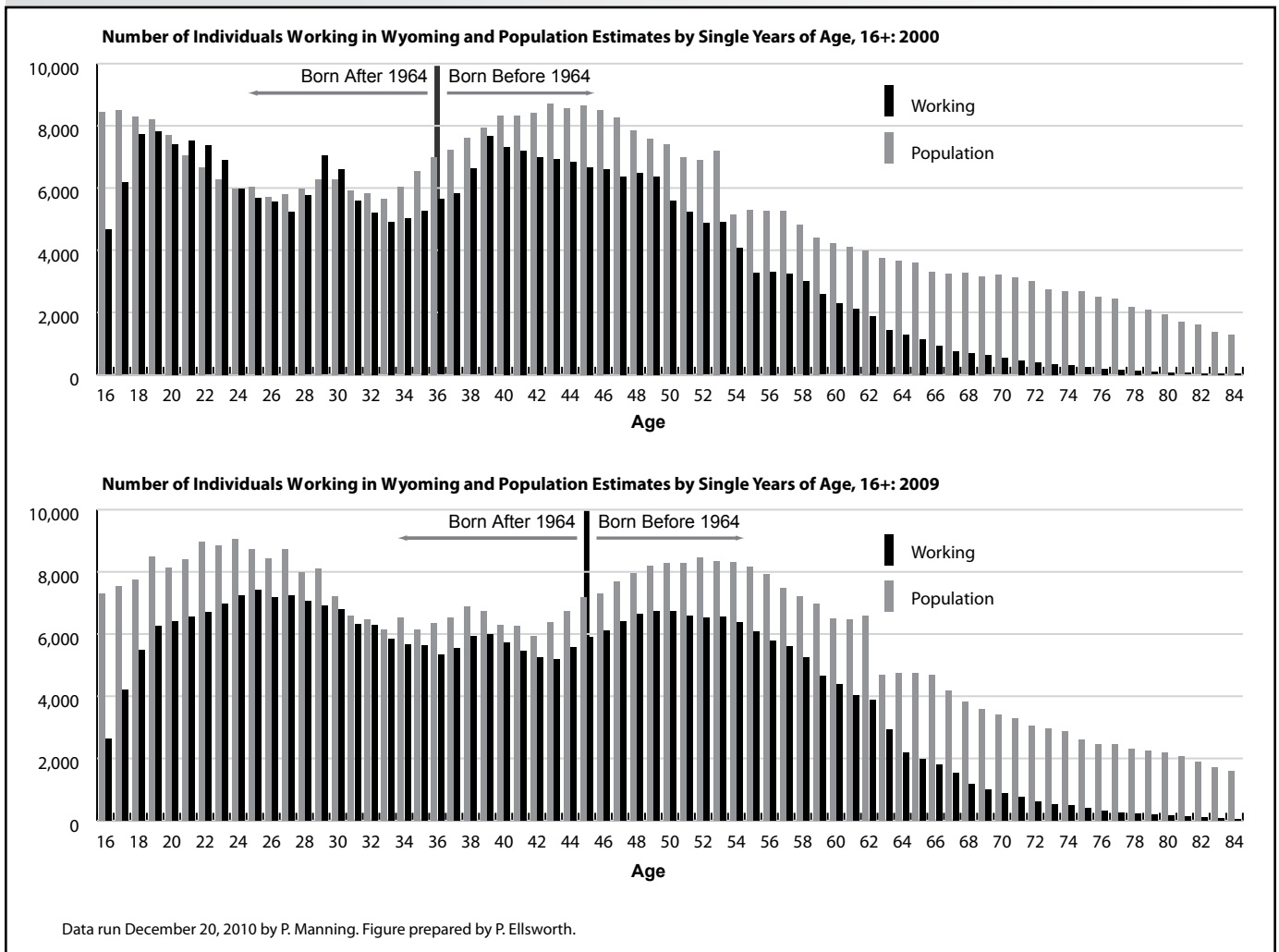


Figure 1: Number of Individuals Working in Wyoming and Population Estimates, 2000 and 2009

(Jones, 2006). The number of out-of-state workers continued to increase during the state's economic expansion over the next few years. One way to determine the percentage of non-resident workers in Wyoming's labor force is to examine the number of UI claims filed by such workers (WYDOE, 2010). In 2000, non-resident workers made up less than 10% of all UI claimants; that percentage grew considerably over the next decade, and peaked in November 2009 at 24.8%.

The percentage of workers in state government age 55 and older is even higher than the percentage in the overall work force. In first quarter 2000, workers in this age group made up 14.9% of all state employees; by second quarter 2010, these employees accounted for 25.6%

of all state employees (see Figure 2). As these employees move into the traditional retirement age of 65 in the next 10 years, Wyoming state government could be faced with a high number of exits and few workers to replace them.

Recent studies have shown that as many as one in five retired workers age 50 and older continues to work in some capacity, and that 75% of retired workers in the same age group plan on working during retirement at some time in the future (Brown, et. al, 2010). Even so, older workers in Wyoming continue to leave state government. In late 2010, several senior level administrators within the Wyoming Department of Employment (WYDOE) retired from the department, including department director Gary Child. In a letter

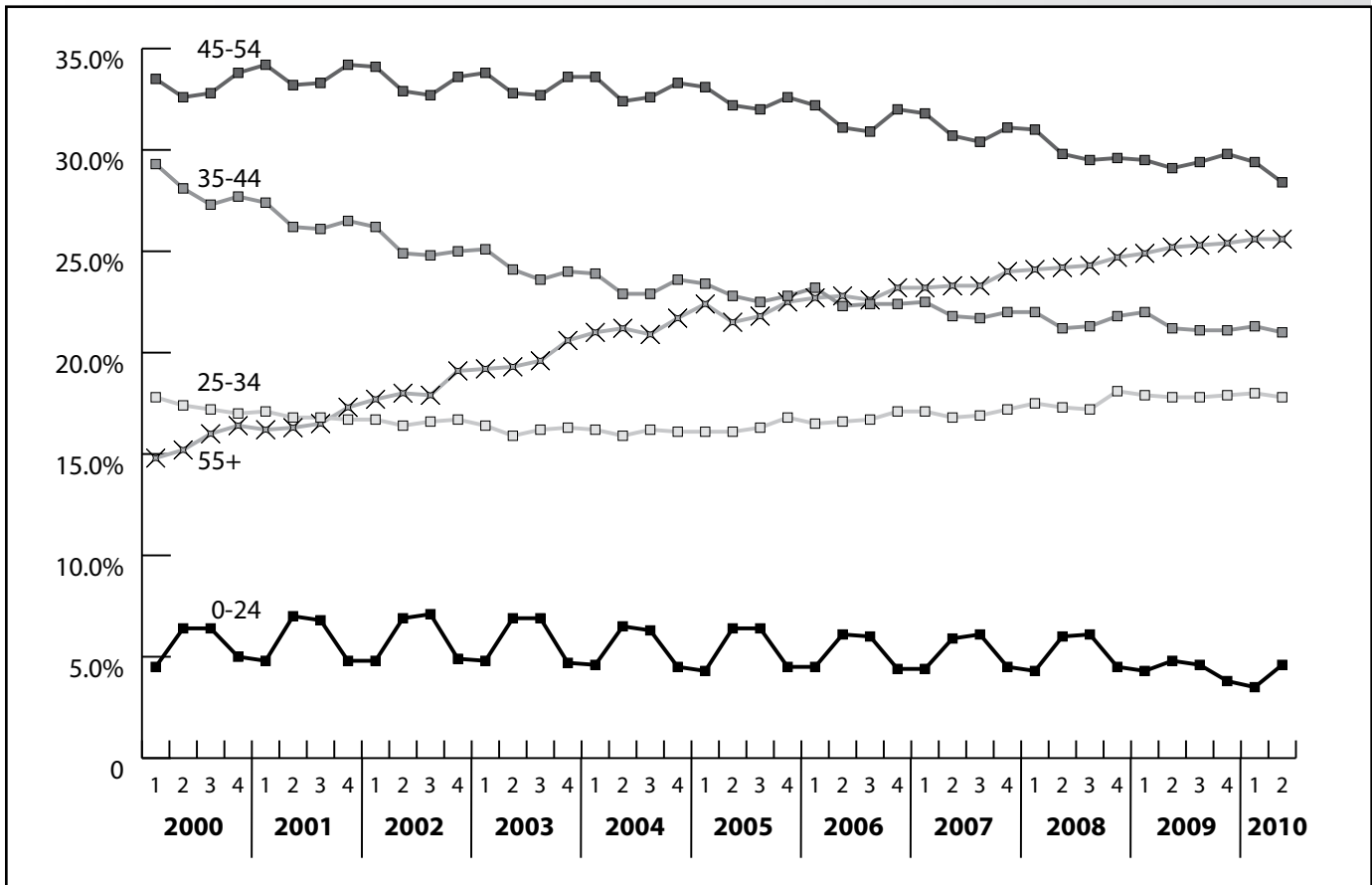


Figure 2: Percentage of Wyoming State Employees by Age Group, 2000Q1 to 2010Q2

to WYDOE employees dated Dec. 16, 2010, Child wrote, "I have been privileged for 37 years to serve in varied capacities with the State of Wyoming and particularly this past 3½ years as the Department of Employment's Director." These recent exits from state government show that, even though many people may be working past the traditional retirement age of 65, the overall age of workers in state government is an indication that the state may want to consider preparing for a high number of exits.

As workers matured from one age group into the next during this period, older age groups began to make up a higher percentage of total state employment. From first quarter 2000 to second quarter 2010, the number of employees age 55 and older in state government more than doubled, increasing from 1,173 (14.8% of total employment) to 2,424 (25.6%; see Table 1, page 21). By comparison, state government employment among other age groups largely remained flat or declined during this period. The 35-44 age group saw the largest decline during this time, from 2,320 (29.3%) to 1,986 (21.0%). The overall number of workers ages 45-54 increased from 2,646 to 2,692, but this age group made up a smaller percentage of total employment in second quarter 2010 (28.4%) than it did in first quarter 2009 (33.5%). The number of workers in the 25-34 age group also increased during this period from 1,408 to 1,689, but this age group accounted for the same percentage (17.8%) of total employment in both periods.

Table 2 (see page 22) shows hires and exits within the executive branch of Wyoming state government, divided into three categories each: those who were hired from or left for another sector of employment in Wyoming, such as local government or private industry; those found

working in one of nine states for which R&P has access to data; or those who were not found in the market of Wyoming or surrounding states (administrative records) for the prior quarter for hires or subsequent quarter for exits. Within-quarter turnover consists of workers who were both hires and exits during the same quarter.

The first category consists of workers who were hired into state government from another sector in Wyoming, or left state employment to go to work in another sector in Wyoming. This includes such examples as a registered nurse leaving a private practice in the health care & social services industry to work for the Wyoming State Hospital, or a state employee leaving to work in the natural resources & mining industry during a period of economic expansion.

The second category of hires and exits is comprised of workers found working in one of nine states for which R&P has access to information. R&P acquires data from nine states that makes it possible to track workers who leave to find employment in one of those states. Included in this consortium are surrounding states of Colorado, Idaho, Montana, Nebraska, South Dakota, and Utah, as well as other states with high employment in the oil and gas industry, namely Alaska, New Mexico, and Texas.

The final category of hires and exits is comprised of workers who were not found in the WR database in a prior quarter for hires, or in a subsequent quarter for exits. Workers not found during a subsequent quarter include those who left a job in Wyoming state government and could not be found working in another sector or in one of the states for which data are available to R&P. This could be explained in a variety of ways, such as a person choosing to retire or work in another state for which data is not available to R&P,

Table 1: Wyoming State Employment by Age Group, 2000Q1 to 2010Q2

	0-24		25-34		35-44		45-54		55+		Unknown	
	n	%	n	%	n	%	n	%	n	%	n	%
2000Q1	352	4.5	1,408	17.8	2,320	29.3	2,646	33.5	1,173	14.8	10	0.1
2000Q2	524	6.4	1,421	17.4	2,293	28.1	2,660	32.6	1,243	15.2	20	0.2
2000Q3	534	6.4	1,430	17.2	2,273	27.3	2,731	32.8	1,329	16.0	24	0.3
2000Q4	406	5.0	1,384	17.0	2,255	27.7	2,755	33.8	1,335	16.4	17	0.2
2001Q1	387	4.8	1,390	17.1	2,229	27.4	2,778	34.2	1,318	16.2	25	0.3
2001Q2	606	7.0	1,456	16.8	2,264	26.2	2,872	33.2	1,410	16.3	41	0.5
2001Q3	587	6.8	1,445	16.8	2,251	26.1	2,869	33.3	1,422	16.5	52	0.6
2001Q4	402	4.8	1,403	16.7	2,224	26.5	2,869	34.2	1,448	17.3	42	0.5
2002Q1	398	4.8	1,398	16.7	2,190	26.2	2,852	34.1	1,477	17.7	37	0.4
2002Q2	608	6.9	1,455	16.4	2,203	24.9	2,915	32.9	1,598	18.0	80	0.9
2002Q3	627	7.1	1,474	16.6	2,203	24.8	2,911	32.7	1,588	17.9	88	1.0
2002Q4	419	4.9	1,440	16.7	2,157	25.0	2,902	33.6	1,647	19.1	61	0.7
2003Q1	416	4.8	1,417	16.4	2,160	25.1	2,908	33.8	1,654	19.2	61	0.7
2003Q2	625	6.9	1,433	15.9	2,177	24.1	2,962	32.8	1,742	19.3	83	0.9
2003Q3	619	6.9	1,461	16.2	2,125	23.6	2,942	32.7	1,766	19.6	96	1.1
2003Q4	409	4.7	1,410	16.3	2,075	24.0	2,902	33.6	1,785	20.6	65	0.8
2004Q1	391	4.6	1,388	16.2	2,053	23.9	2,887	33.6	1,803	21.0	59	0.7
2004Q2	583	6.5	1,435	15.9	2,069	22.9	2,923	32.4	1,911	21.2	96	1.1
2004Q3	564	6.3	1,447	16.2	2,048	22.9	2,906	32.6	1,865	20.9	94	1.1
2004Q4	389	4.5	1,401	16.1	2,045	23.6	2,887	33.3	1,887	21.7	68	0.8
2005Q1	369	4.3	1,389	16.1	2,023	23.4	2,852	33.1	1,930	22.4	66	0.8
2005Q2	574	6.4	1,432	16.1	2,032	22.8	2,873	32.2	1,919	21.5	90	1.0
2005Q3	575	6.4	1,451	16.3	2,006	22.5	2,855	32.0	1,947	21.8	89	1.0
2005Q4	388	4.5	1,441	16.8	1,960	22.8	2,800	32.6	1,935	22.5	63	0.7
2006Q1	394	4.5	1,428	16.5	2,014	23.2	2,794	32.2	1,973	22.7	77	0.9
2006Q2	546	6.1	1,485	16.6	2,001	22.3	2,785	31.1	2,042	22.8	107	1.2
2006Q3	538	6.0	1,505	16.7	2,012	22.4	2,784	30.9	2,036	22.6	126	1.4
2006Q4	382	4.4	1,493	17.1	1,959	22.4	2,800	32.0	2,033	23.2	83	0.9
2007Q1	383	4.4	1,501	17.1	1,971	22.5	2,790	31.8	2,041	23.2	93	1.1
2007Q2	542	5.9	1,537	16.8	1,991	21.8	2,805	30.7	2,131	23.3	138	1.5
2007Q3	560	6.1	1,539	16.9	1,980	21.7	2,771	30.4	2,128	23.3	144	1.6
2007Q4	400	4.5	1,522	17.2	1,950	22.0	2,749	31.1	2,122	24.0	107	1.2
2008Q1	380	4.3	1,555	17.5	1,956	22.0	2,749	31.0	2,136	24.1	104	1.2
2008Q2	553	6.0	1,596	17.3	1,961	21.2	2,754	29.8	2,237	24.2	132	1.4
2008Q3	568	6.1	1,601	17.2	1,981	21.3	2,739	29.5	2,262	24.3	142	1.5
2008Q4	411	4.5	1,655	18.1	1,986	21.8	2,704	29.6	2,254	24.7	117	1.3
2009Q1	396	4.3	1,641	17.9	2,016	22.0	2,696	29.5	2,275	24.9	126	1.4
2009Q2	444	4.8	1,662	17.8	1,979	21.2	2,708	29.1	2,344	25.2	181	1.9
2009Q3	421	4.6	1,634	17.8	1,937	21.1	2,700	29.4	2,323	25.3	169	1.8
2009Q4	347	3.8	1,637	17.9	1,931	21.1	2,722	29.8	2,320	25.4	181	2.0
2010Q1	320	3.5	1,651	18.0	1,956	21.3	2,696	29.4	2,348	25.6	201	2.2
2010Q2	437	4.6	1,689	17.8	1,986	21.0	2,692	28.4	2,424	25.6	247	2.6

such as Louisiana or Michigan.

In addition to exits associated with demographic change, exits from state government fluctuate with Wyoming's economy. During times of economic prosperity, more state employees leave their jobs to work in another sector in Wyoming,

especially private industry. In third quarter 2005, during Wyoming's most recent economic expansion, 258 state employees (2.9%) left to take a job in private industry in Wyoming. On the other hand, in third quarter 2009, when the state was well into an economic downturn, that number dropped to 142 (1.5%). During the first

Table 2: State Employee Turnover by Employee Source and Destination, 2000Q1 to 2010Q2

	Total Transactions	Continuous Employees	Within-Quarter Turnover	Hires			Exits			
				Hired from Another Sector in Wyoming	Hired from Another Known State	Hired from Unknown	Exited to Another Sector in Wyoming	Exited to Another Known State	Exited to Unknown	Exit Rate
2000Q1	7,909	7,300	42	136	23	102	130	32	144	4.4%
2000Q2	8,161	7,213	69	288	29	214	152	43	153	5.1%
2000Q3	8,321	7,224	145	242	43	147	232	47	241	8.0%
2000Q4	8,152	7,365	123	230	35	108	133	26	132	5.1%
2001Q1	8,127	7,465	59	194	29	107	130	22	121	4.1%
2001Q2	8,649	7,426	119	374	57	304	147	31	191	5.6%
2001Q3	8,626	7,593	103	198	36	128	239	52	277	7.8%
2001Q4	8,388	7,649	91	204	27	111	123	15	168	4.7%
2002Q1	8,352	7,765	47	166	36	112	93	14	119	3.3%
2002Q2	8,859	7,723	131	299	48	302	149	28	179	5.5%
2002Q3	8,891	7,805	114	212	35	158	181	39	347	7.7%
2002Q4	8,626	7,889	70	176	33	137	113	27	181	4.5%
2003Q1	8,616	7,940	60	171	32	118	107	19	169	4.1%
2003Q2	9,022	7,886	89	268	45	359	141	21	213	5.1%
2003Q3	9,009	7,977	112	172	37	130	237	27	317	7.7%
2003Q4	8,646	7,985	58	150	16	106	135	25	171	4.5%
2004Q1	8,581	7,976	41	163	29	91	111	20	150	3.8%
2004Q2	9,017	7,842	95	315	37	311	149	33	235	5.7%
2004Q3	8,924	7,899	92	174	26	127	246	39	321	7.8%
2004Q4	8,677	7,915	73	222	38	118	117	24	170	4.4%
2005Q1	8,629	7,906	67	149	29	91	164	25	198	5.3%
2005Q2	8,920	7,820	66	342	48	289	147	26	182	4.7%
2005Q3	8,923	7,836	88	204	26	106	258	51	354	8.4%
2005Q4	8,587	7,932	37	220	28	130	111	13	116	3.2%
2006Q1	8,680	7,917	71	166	23	110	201	25	167	5.3%
2006Q2	8,966	7,862	86	310	57	297	163	19	172	4.9%
2006Q3	9,001	7,982	88	219	15	153	238	48	258	7.0%
2006Q4	8,750	8,010	36	187	38	120	156	21	182	4.5%
2007Q1	8,779	8,050	67	192	37	128	130	21	154	4.2%
2007Q2	9,144	8,016	79	289	48	321	149	31	211	5.1%
2007Q3	9,122	8,124	86	208	24	130	219	31	300	7.0%
2007Q4	8,850	8,169	33	176	25	130	120	22	175	4.0%
2008Q1	8,880	8,201	51	178	14	137	127	13	159	3.9%
2008Q2	9,233	8,185	60	292	45	306	148	24	173	4.4%
2008Q3	9,293	8,308	79	193	37	156	214	38	268	6.4%
2008Q4	9,127	8,396	39	201	33	160	109	13	176	3.7%
2009Q1	9,150	8,568	33	160	27	140	71	10	141	2.8%
2009Q2	9,318	8,549	36	149	26	212	96	27	223	4.1%
2009Q3	9,184	8,521	39	74	15	120	142	25	248	4.9%
2009Q4	9,138	8,502	32	118	39	219	60	0	168	2.8%
2010Q1	9,172	8,641	25	125	11	133	66	0	171	2.9%
2010Q2	9,475	8,603	40	199	1	325	2	0	305	3.7%

two quarters of 2010, only 126 employees left state government for another sector in Wyoming, the lowest at any period dating back to first quarter 2000. To some extent, state employees serve as a reservoir of human resources for the private sector accessible during times of rapid economic expansion.

Tables 3a and 3b (see page 24) show occupations in state government with especially high exits for two different periods. The periods in these tables coincide with state fiscal years. Average positions per quarter are used as an analogous way to view the total number of positions for each occupation within state government. From third quarter 2006Q3 to second quarter 2007, there were an average of 419 nursing aides, orderlies, & attendants in state government per quarter, with an average of 345 retained per quarter. During this fiscal year, 171 left state government, which accounts for an exit rate of 40.8% over this four-quarter period. From third quarter 2008 to second quarter 2009, these numbers were similar: there were an average of 413 nurses, aides, orderlies & attendants per quarter, with 349 retained and 144 leaving state government (34.8%) over the fiscal year.

Succession Planning

Retaining employees can be a challenge for state government for a variety of reasons. Through succession planning, however, state government can identify many of the causes of turnover and take action to reduce replacement costs when feasible.

Succession planning is defined as a “process that not only seeks to identify areas within an organization that will not have

enough workers as older employees retire, but also seeks to identify areas of workplace satisfaction that could be improved upon to increase worker retention” (Knapp, 2009). R&P has studied the importance of succession planning extensively, specifically in relation to Wyoming state government. In 2008, R&P observed that one-third of all state employees were age 55 or older, with another third between the ages of 45 and 54 (Knapp, 2008). This indicated that within 20 years, 60% of Wyoming state employees could retire, taking with them years of experience that would be difficult to replace.

In 2005, R&P surveyed 306 employees of the Department of Employment in order to study worker retention and identify factors associated with the decision to leave current employment (Gallagher, et. al, 2006). Research in this area has identified several factors in an employee’s decision to leave state government, including availability of health insurance, household income, education, and the quality of the work environment and experience; this research also suggested that “the retention in the Department (of Employment) of workers in general is not exclusively a function of compensation.” State agencies can take action to address factors associated with turnover separate from state compensation policy in order to reduce replacement cost.

An example of this can be seen among correctional officers in Wyoming. In 1999, 77 correctional officers left state government, among the highest number of exits of all occupations in state government. These employees then went on to earn 26% less in another sector in Wyoming after leaving state government (LSO, 2005). The authors of the publication interviewed some of these workers, and identified four main areas of dissatisfaction in their jobs as correctional officers: communication, management

Table 3a: State Government Occupational Turnover from 2006Q3 to 2007Q2

Rank	Description	Average	Average	Hired State		Exit Rate
		Positions per Quarter	Employees Retained per Quarter	Government	Government	
1	AWECs*	720	430	548	611	84.9%
2	Nursing Aides, Orderlies, & Attendants	419	345	126	171	40.8%
3	Correctional Officers & Jailers	321	257	130	129	40.2%
4	Excavating & Loading Machine & Dragline Op.	670	621	97	97	14.5%
5	Office Clerks, General	208	181	62	47	22.6%
6	Social & Human Service Assistants	133	110	46	44	33.1%
7	Registered Nurses	193	176	27	40	20.7%
8	Child, Family, & School Social Workers	252	231	46	39	15.5%
9	Secretaries, Exc. Legal, Medical, & Executive	223	202	45	38	17.1%
10	Health Educators	150	136	25	31	20.7%
11	Executive Secretaries & Admin. Assistants	242	228	26	29	12.0%
12	Probation Officers & Correctional Treatment Spec.	156	140	32	29	18.6%
13	Accountants & Auditors	439	420	45	29	6.6%
14	Managers, All Other	195	184	17	26	13.4%
15	Eligibility Interviewers, Government Programs	240	230	15	22	9.2%
16	Transportation Workers, All Other	60	50	19	20	33.3%
17	Landscaping & Groundskeeping Workers	135	124	24	20	14.8%
18	Civil Engineers	202	194	13	19	9.4%
19	Employment, Recruit., & Placement Spec.	128	120	13	16	12.5%
20	Mobile Heavy Equipment Mechanics, Exc. Engines	84	79	7	16	19.0%
21	Cooks, Institution & Cafeteria	62	54	16	16	25.7%
22	Transportation Inspectors	103	95	14	16	15.6%
23	Management Analysts	123	116	14	14	11.4%
24	Bookkeeping, Accounting, & Auditing Clerks	81	75	10	13	16.1%
25	Lawyers	70	65	9	13	18.6%

Table 3b: State Government Occupational Turnover from 2008Q3 to 2009Q2

Rank	Description	Average	Average	Hired State		Exit Rate
		Positions per Quarter	Employees Retained per Quarter	Government	Government	
1	AWECs*	729	432	529	659	90.4%
2	Nursing Aides, Orderlies, & Attendants	413	349	112	144	34.8%
3	Correctional Officers & Jailers	370	313	148	82	22.1%
4	Excavating & Loading Machine & Dragline Op.	679	646	72	62	9.1%
5	Child, Family, & School Social Workers	267	249	36	33	12.4%
6	Office Clerks, General	175	159	34	32	18.3%
7	Social & Human Service Assistants	145	132	25	27	18.7%
8	Accountants & Auditors	478	465	27	26	5.4%
9	Secretaries, Except Legal, Medical, & Exec.	230	215	33	26	11.3%
10	Registered Nurses	198	185	27	25	12.6%
11	Eligibility Interviewers, Government Programs	238	229	12	24	10.1%
12	Probation Officers & Correctional Treatment Spec.	177	166	25	20	11.3%
13	Executive Secretaries & Admin. Assistants	248	238	19	20	8.1%
14	Managers, All Other	215	207	13	19	8.9%
15	Health Educators	160	152	12	17	10.7%
16	Security Guards	51	46	6	15	29.4%
17	Employment, Recruitment, & Placement Spec.	120	112	19	15	12.5%
18	Landscaping & Groundskeeping Workers	136	129	17	13	9.5%
19	Police & Sheriff's Patrol Officers	169	161	19	13	7.7%
20	Management Analysts	164	158	10	12	7.3%
21	Transportation Workers, All Other	56	49	16	11	19.6%
22	Computer Systems Analysts	142	136	16	11	7.7%
23	Court, Municipal, & License Clerks	72	69	3	11	15.3%
24	Transportation Inspectors	102	98	4	10	9.8%
25	Zoologists & Wildlife Biologists	180	175	8	10	5.6%

* AWECs are short-term contract employees.

support, professionalism, and staffing.

Based on these findings, the authors made several recommendations, including “improving staff’s perception of management through increased communication, providing consistent policies, and improving management support and recognition,” as well as “increasing recruitment efforts, implementing more rigorous screening, and addressing wage and benefit issues.” Current data suggest that several areas of concern that were identified may not have been addressed. From third quarter 2006 to second quarter 2007, 129 correctional officers (40.2%) left state government, and an additional 82 (22.1%) left from third quarter 2007 to second quarter 2008 (see Tables 3a and 3b).

Conclusion

With the first Baby Boomers reaching age 65, it seems important that Wyoming state government consider the cost of turnover and recruitment as state employees leave the work force. Although it is impossible to determine exactly when employees will leave state government, an understanding of historical trends and current demographics can help the state prepare for such events.

A future *Trends* article will examine state employees’ departures by exploring where they went to work and what wages they earned after leaving state government.

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2010 Publications from Research & Planning

Research & Planning produced a variety of reports and publications in 2010. Many are available in print, and all may be found online at <http://doe.state.wy.us/LMI>. For print copies, call (307) 473-3807 or e-mail pellsw@state.wy.us or mmoore1@state.wy.us.

Topic and Title	Description	Pages	URL
Wyoming Labor Force Trends			
<i>January 2010 through December 2010</i>	Monthly publication with current employment, unemployment, employment growth, unemployment insurance claims, county and regional data, and analysis of workforce topics.	316 (12 month total)	http://doe.state.wy.us/LMI/trends.htm

Trends Issue Date	Feature Articles
December 2010	Electronic Medical Records Employment Impacts; Benefits Time Series: Can We Determine If Employers Are Dropping Health Coverage?; Driven by Demographics: Examining Employee Exits in State Government
November 2010	Tracking Workers' Re-Employment After Job Loss; Workplace Safety: Analysis Using Workers' Compensation Data in Wyoming; Recent Developments in Wyoming New Business Formation
October 2010	Covered Employment and Wages for First Quarter 2010: Net Job Losses Slow; Wyoming IMPLAN Analysis of ARRA Spending
September 2010	The Survey of Occupational Injuries and Illnesses for 2008; Wyoming Earnings by Age, Gender, Industry, and County for Persons Who Worked at Any Time During the Year; New Hires Survey Results Parallel Occupational Projections
August 2010	Estimating the Impact of Unemployment Insurance Benefit Payments on Wyoming's Economy; Wyoming Occupational Fatalities Drop to Record Low in 2009; Employment Change and Impacts on Workplace Fatalities in Wyoming
July 2010	Covered Employment and Wages for Fourth Quarter 2009: Total Payroll Declines in 16 Wyoming Counties; Building Permits Decline Over Two-Year Period
June 2010	Inside the OES: Occupations and Wages in Wyoming
May 2010	Long-Term Industry Projections for Wyoming, 2008-2018: Slow Growth Projected for Most Industries
April 2010	Covered Employment and Wages for Third Quarter 2009: Mining Payroll Declines by \$120.9 Million; A New Economic Indicator for Wyoming: Average Weekly Hours of All Employees on Private Nonfarm Payrolls
March 2010	Job Attainment and Wages of Wyoming Vocational Rehabilitation Participants; Ask an Economist: What Are Smoothed Seasonally Adjusted Estimates?
February 2010	Wyoming Unemployment Insurance Benefit Payments Reach Record High in 2009
January 2010	Covered Employment and Wages for Second Quarter 2009: Job Losses Accelerate

News Releases

<i>Labor Force Estimates – January 2010 through December 2010</i>	Updates on the labor force in Wyoming, including employment growth by industry as well as statewide and county unemployment rates.	http://doe.state.wy.us/LMI/news_archive.htm
<i>Quarterly Covered Employment and Wages</i>	Employment and payroll news by industry and county, updated quarterly.	http://doe.state.wy.us/LMI/QCEW/toc.htm
<i>Census of Fatal Occupational Injuries and Illnesses</i>	Wyoming occupational fatality rates by industry.	http://doe.state.wy.us/LMI/CFOI/CFOI_09/2009_cfoi_newsrelease.pdf

Table continued on page 27

Table continued from page 26

Topic and Title	Description	Pages	URL
Projections			
<i>Wyoming Short-Term Statewide Employment Projections 2010-2011</i>	Short-term projections for Wyoming employment by occupation for 2010 to 2011.	8	http://doe.state.wy.us/LMI/projections/proj2010_2011.pdf
<i>Wyoming Long-Term Industry Projections 2008-2018</i>	Long-term projections for Wyoming employment by industry for 2008 to 2018.		http://doe.state.wy.us/LMI/projections08_18/LTI_08_18.htm
<i>Wyoming Long-Term Occupational Projections 2008-2018</i>	Long-term projections for Wyoming employment by occupation for 2008 to 2018.		http://doe.state.wy.us/lmi/projections/LT_occ_0818.htm
Wages			
<i>Wyoming Wage Survey 2010</i>	Occupational wage data for Wyoming at the statewide, county, and metropolitan statistical area (MSA) levels.	68	http://doe.state.wy.us/LMI/oes2010/oes10.pdf
<i>Earnings in Wyoming by County, Industry, Age, & Gender</i>	Provides wage and salary earnings by demographics dating back to 1992.		http://doe.state.wy.us/LMI/earnings_tables/2010/index.htm
Annual Report			
<i>Wyoming Workforce Annual Report 2010</i>	An overview of the Wyoming labor market situation in 2009.	28	http://doe.state.wy.us/LMI/report2010/report2010.pdf
Special Reports			
<i>Commuting Patterns</i>	Interstate and intrastate flow of workers and wages are published each year by using Quarterly Census of Employment and Wages, wage records and Department of Transportation database.		http://doe.state.wy.us/LMI/commute.htm
<i>Job Attainment and Wages of Wyoming Vocational Rehabilitation Participants</i>	Examines the success rate of participants who have completed the Wyoming Department of Workforce Services' Vocational Rehabilitation program.	20	http://doe.state.wy.us/LMI/0310/VR_full_article.pdf
<i>Employment Change and Impacts on Workplace Fatalities in Wyoming</i>	Compares the number of workplace fatalities with changes in employment.	7	http://doe.state.wy.us/LMI/safety/CFOI_Reg_Model_2010.pdf

New!

News releases from Research & Planning will be released on the following dates in 2011. These publication dates are tentative and subject to change. All estimates (statewide and all areas) are released on the same day.

News releases and this schedule can be found online at <http://doe.state.wy.us/LMI/releases.htm>.

Reference Month	Tentative Publication Date
January 2011	March 8
February	March 29
March	April 19
April	May 24
May	June 21
June	July 26
July	August 23
August	September 20
September	October 25
October	November 22
November	December 20
December	January 24, 2012

Occupation Spotlight

There are an estimated 2,830 workers classified as elementary school teachers, except special education in Wyoming. According to the Occupational Employment Statistics (OES) survey, these teachers in Wyoming earn a mean annual wage of \$56,432; those in the 90th percentile earn a mean annual wage of \$71,476.



Elementary School Teachers

Wage data for specific occupations is available online at <http://doe.state.wy.us/LMI/oes.htm>. Click on the “County and Regional Wages (estimates for Wyoming wages for September 2010)” link.

Wyoming Adds 3,000 Jobs in October 2010

by: David Bullard, Senior Economist

The Research & Planning section of the Wyoming Department of Employment has reported that total nonfarm employment in the state increased by 3,000 jobs (1.1%) from October 2009 to October 2010. The state’s seasonally adjusted¹ unemployment rate decreased very slightly from 6.8% in September to 6.7% in October and was lower than its October 2009 level of 7.4%. Wyoming’s unemployment rate has remained between 6.7% and 6.8% in each of the past five months.

Over the year, Wyoming gained 3,000 nonfarm jobs (1.1%). Natural resources & mining (including oil & gas) posted the largest job gains (3,100 jobs, or 12.8%) followed by government (including public schools, colleges, & hospitals; 1,400 jobs, or 1.9%), educational & health services (900 jobs, or 3.5%), wholesale trade (600 jobs, or 7.1%), and transportation & utilities (600 jobs, or 4.4%). Job losses continued in leisure & hospitality (-1,700 jobs, or -5.3%),

retail trade (-1,100 jobs, or -3.6%), and professional & business services (-300 jobs, or -1.7%).

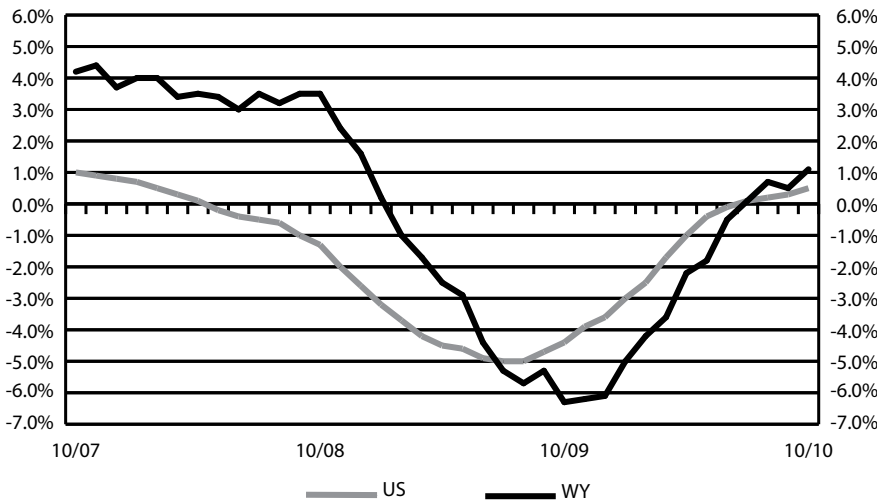
From September to October, Wyoming nonfarm employment fell by 3,700 jobs (-1.3%). This level of decrease is consistent with normal seasonal patterns. Seasonal job losses in leisure & hospitality (-4,800, or -13.6%) and retail trade (-700 jobs, or -2.3%) more than offset seasonal gains in government (including public schools, colleges, & hospitals; 1,000 jobs, or 1.4%), natural resources & mining (including oil & gas; 600 jobs, or 2.2%), and educational & health services (400 jobs, or 1.5%).

Unemployment rates fell from October 2009 to October 2010 in all but one county (Teton County’s unemployment rate rose from 8.1% to 9.0%). From September to October, most county unemployment rates decreased slightly. The largest decreases occurred in Washakie County (down from 5.6% to 5.0%) and Weston and Goshen counties (both down from 5.8% to 5.3%).

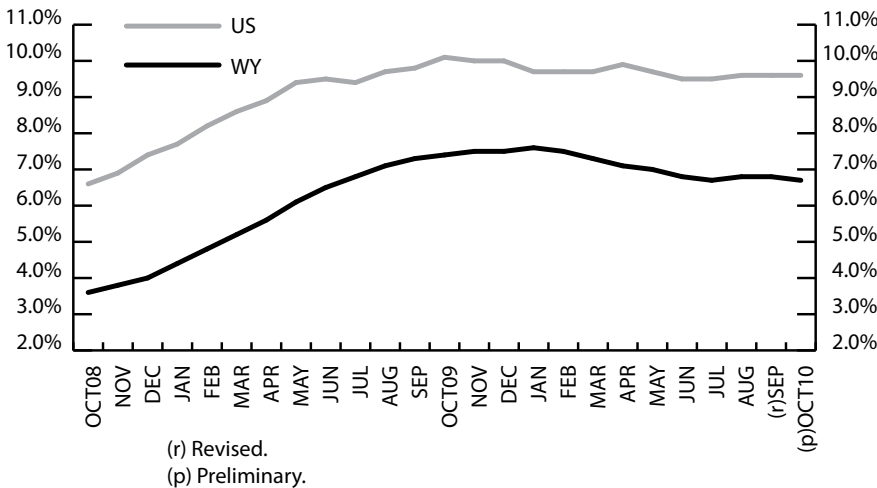


¹ Seasonal adjustment is a statistical procedure to remove the impact of normal regularly recurring events (such as weather, major holidays, and the opening and closing of schools) from economic time series to better understand changes in economic conditions from month to month.

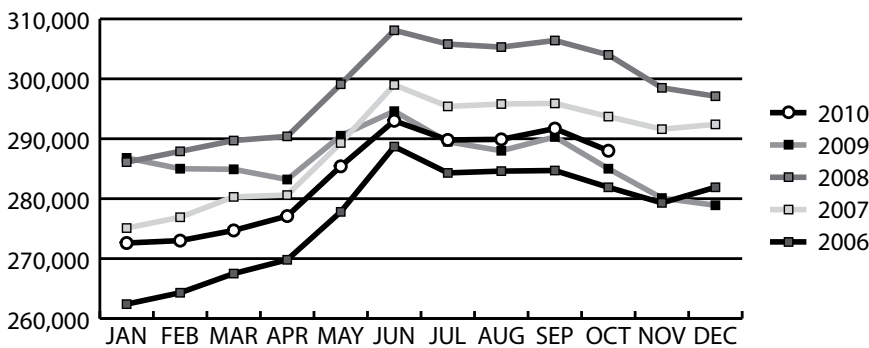
**Nonagricultural Employment Growth
(Percentage Change Over Previous Year)**



Seasonally Adjusted Unemployment Rate (Percentage)



Wyoming Nonagricultural Wage and Salary Employment



**State Unemployment Rates
October 2010
(Seasonally Adjusted)**

State	Unemp. Rate
Puerto Rico	15.7
Nevada	14.2
Michigan	12.8
California	12.4
Florida	11.9
Rhode Island	11.4
South Carolina	10.7
Oregon	10.5
Kentucky	10.0
Georgia	9.9
Indiana	9.9
Ohio	9.9
Illinois	9.8
District of Columbia	9.7
Mississippi	9.7
North Carolina	9.6
United States	9.6
Arizona	9.5
Missouri	9.4
Tennessee	9.4
West Virginia	9.3
New Jersey	9.2
Connecticut	9.1
Idaho	9.1
Washington	9.1
Alabama	8.9
Pennsylvania	8.8
Colorado	8.4
New Mexico	8.4
Delaware	8.3
New York	8.3
Louisiana	8.1
Massachusetts	8.1
Texas	8.1
Alaska	7.9
Arkansas	7.8
Wisconsin	7.8
Utah	7.6
Maine	7.4
Maryland	7.4
Montana	7.3
Minnesota	7.1
Oklahoma	6.9
Virginia	6.8
Iowa	6.7
Kansas	6.7
Wyoming	6.7
Hawaii	6.4
Vermont	5.7
New Hampshire	5.4
Nebraska	4.7
South Dakota	4.5
North Dakota	3.8

Wyoming Nonagricultural Wage and Salary Employment

by: David Bullard, Senior Economist

Over-the-year job losses continued in leisure & hospitality, retail trade, and professional & business services.

	% Change Total Employment						% Change Total Employment				
	Employment in Thousands			Employment Sep 10 Oct 9			Employment in Thousands			Employment Sep 10 Oct 9	
	Oct 10(p)	Sep 10(r)	Oct 09	Sep 10	Oct 10		Oct 10(p)	Sep 10(r)	Oct 09	Sep 10	Oct 10
WYOMING STATEWIDE						LARAMIE COUNTY					
TOTAL NONAG. WAGE & SALARY EMPLOYMENT	288.0	291.7	285.0	-1.3	1.1	TOTAL NONAG. WAGE & SALARY EMPLOYMENT	43.3	43.6	44.3	-0.7	-2.3
TOTAL PRIVATE	213.6	218.3	212.0	-2.2	0.8	TOTAL PRIVATE	29.4	29.6	30.3	-0.7	-3.0
GOODS PRODUCING	61.2	60.5	58.1	1.2	5.3	GOODS PRODUCING	4.2	4.2	4.7	0.0	-10.6
Natural Resources & Mining	27.3	26.7	24.2	2.2	12.8	Natural Res., Mining, & Const.	2.8	2.8	3.2	0.0	-12.5
Mining	27.1	26.6	24.1	1.9	12.4	Manufacturing	1.4	1.4	1.5	0.0	-6.7
Oil & Gas Extraction	4.3	4.3	4.0	0.0	7.5	SERVICE PROVIDING	39.1	39.4	39.6	-0.8	-1.3
Mining Except Oil & Gas	9.8	9.8	9.6	0.0	2.1	Trade, Transportation, & Utilities	8.9	9.0	9.1	-1.1	-2.2
Coal Mining	7.0	7.0	7.0	0.0	0.0	Wholesale Trade	0.8	0.8	0.8	0.0	0.0
Support Activities for Mining	13.0	12.5	10.5	4.0	23.8	Retail Trade	5.1	5.2	5.3	-1.9	-3.8
Support Act. for Oil & Gas	8.8	8.6	8.0	2.3	10.0	Trans., Warehousing, & Utilities	3.0	3.0	3.0	0.0	0.0
Construction	24.6	24.5	24.5	0.4	0.4	Information	1.1	1.1	1.1	0.0	0.0
Construction of Buildings	3.9	4.0	4.3	-2.5	-9.3	Financial Activities	2.2	2.2	2.2	0.0	0.0
Heavy & Engineering Constr.	8.1	8.1	7.9	0.0	2.5	Professional & Business Services	3.2	3.2	3.2	0.0	0.0
Specialty Trade Contractors	12.6	12.4	12.3	1.6	2.4	Educational & Health Services	4.0	4.0	4.0	0.0	0.0
Manufacturing	9.3	9.3	9.4	0.0	-1.1	Leisure & Hospitality	4.2	4.3	4.4	-2.3	-4.5
Durable Goods	4.7	4.7	4.6	0.0	2.2	Other Services	1.6	1.6	1.6	0.0	0.0
Nonurable Goods	4.6	4.6	4.8	0.0	-4.2	TOTAL GOVERNMENT	13.9	14.0	14.0	-0.7	-0.7
SERVICE PROVIDING	226.8	231.2	226.9	-1.9	0.0	Federal Government	2.6	2.7	2.7	-3.7	-3.7
Trade, Trans., Warehousing, & Util.	52.5	53.5	52.4	-1.9	0.2	State Government	4.0	4.0	4.0	0.0	0.0
Wholesale Trade	9.1	9.1	8.5	0.0	7.1	Local Government	7.3	7.3	7.3	0.0	0.0
Merch. Wholesalers, Durable	5.3	5.3	5.5	0.0	-3.6	Local Education	3.8	3.8	3.8	0.0	0.0
Retail Trade	29.3	30.0	30.4	-2.3	-3.6	NATRONA COUNTY					
Motor Vehicle & Parts Dealers	4.0	4.0	4.2	0.0	-4.8	TOTAL NONAG. WAGE & SALARY EMPLOYMENT	38.5	38.4	38.4	0.3	0.3
Food & Beverage Stores	4.6	4.7	4.7	-2.1	-2.1	TOTAL PRIVATE	32.3	32.4	32.2	-0.3	0.3
Grocery Stores	4.0	4.0	4.0	0.0	0.0	GOODS PRODUCING	7.5	7.3	7.1	2.7	5.6
Gasoline Stations	3.6	3.7	3.9	-2.7	-7.7	Natural Resources & Mining	3.2	3.1	2.7	3.2	18.5
General Merchandise Stores	6.2	6.6	6.7	-6.1	-7.5	Construction	2.7	2.7	2.8	0.0	-3.6
Miscellaneous Store Retailers	1.8	1.8	1.8	0.0	0.0	Manufacturing	1.6	1.5	1.6	6.7	0.0
Trans., Warehousing, & Utilities	14.1	14.4	13.5	-2.1	4.4	SERVICE PROVIDING	31.0	31.1	31.3	-0.3	-1.0
Utilities	2.5	2.5	2.5	0.0	0.0	Trade, Transportation, & Utilities	8.2	8.3	8.5	-1.2	-3.5
Transp. & Warehousing	11.6	11.9	11.0	-2.5	5.5	Wholesale Trade	2.3	2.3	2.3	0.0	0.0
Truck Transportation	3.9	3.9	3.9	0.0	0.0	Retail Trade	4.8	4.9	5.1	-2.0	-5.9
Information	3.8	3.8	3.9	0.0	-2.6	Trans., Warehousing, & Utilities	1.1	1.1	1.1	0.0	0.0
Financial Activities	10.9	10.8	11.1	0.9	-1.8	Information	0.5	0.5	0.5	0.0	0.0
Finance & Insurance	6.9	6.8	7.1	1.5	-2.8	Financial Activities	1.9	1.9	1.9	0.0	0.0
Real Estate & Rental & Leasing	4.0	4.0	4.0	0.0	0.0	Professional & Business Services	2.6	2.7	2.7	-3.7	-3.7
Professional & Business Services	16.9	17.0	17.2	-0.6	-1.7	Educational & Health Services	5.7	5.7	5.5	0.0	3.6
Prof., Scientific, & Tech. Services	8.9	8.9	9.1	0.0	-2.2	Leisure & Hospitality	3.9	4.0	4.0	-2.5	-2.5
Architect., Engineering, & Rel.	2.8	2.8	2.7	0.0	3.7	Other Services	2.0	2.0	2.0	0.0	0.0
Mgmt. of Co.s & Enterprises	0.8	0.8	0.7	0.0	14.3	TOTAL GOVERNMENT	6.2	6.0	6.2	3.3	0.0
Admin., Support, & Waste Svcs.	7.2	7.3	7.4	-1.4	-2.7	Federal Government	0.7	0.7	0.7	0.0	0.0
Educational & Health Services	26.6	26.2	25.7	1.5	3.5	State Government	0.7	0.7	0.7	0.0	0.0
Educational Services	2.8	2.8	2.7	0.0	3.7	Local Government	4.8	4.6	4.8	4.3	0.0
Health Care & Social Assistance	23.8	23.4	23.0	1.7	3.5	Local Education	3.2	3.1	3.3	3.2	-3.0
Ambulatory Health Care	9.0	8.7	8.6	3.4	4.7	Note: Current 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 that includes the 12th of the month. Self-employed, domestic services, and personnel of the armed forces are excluded. Data are not seasonally adjusted. Data for Wyoming, Laramie County, and Natrona County are published in cooperation with the Bureau of Labor Statistics.					
Offices of Physicians	3.1	3.1	3.1	0.0	0.0	(p) Preliminary. (r) Revised.					
Hospitals	3.3	3.3	3.3	0.0	0.0						
Nursing & Res. Care Facilities	4.7	4.6	4.5	2.2	4.4						
Social Assistance	6.8	6.8	6.6	0.0	3.0						
Leisure & Hospitality	30.4	35.2	32.1	-13.6	-5.3						
Arts, Entertainment, & Rec.	2.7	3.2	2.9	-15.6	-6.9						
Accommodation & Food Svcs.	27.7	32.0	29.2	-13.4	-5.1						
Accommodation	9.5	12.7	10.1	-25.2	-5.9						
Food Svcs. & Drinking Places	18.2	19.3	19.1	-5.7	-4.7						
Other Services	11.3	11.3	11.5	0.0	-1.7						
Repair & Maintenance	3.7	3.7	3.7	0.0	0.0						
TOTAL GOVERNMENT	74.4	73.4	73.0	1.4	1.9						
Federal Government	7.7	8.0	7.6	-3.8	1.3						
State Government	17.2	17.2	16.6	0.0	3.6						
State Government Education	7.7	7.7	7.3	0.0	5.5						
Local Government	49.5	48.2	48.8	2.7	1.4						
Local Government Education	25.8	24.3	25.3	6.2	2.0						
Hospitals	6.7	6.7	6.7	0.0	0.0						

Wyoming Nonagricultural Wage and Salary Employment

(Continued)

	Employment in Thousands		% Change Total Employment		
	in Thousands		Employment		
	Oct 10	Sep 10	Oct 09	Oct 10	Oct 10
CAMPBELL COUNTY					
TOTAL NONAG. WAGE & SALARY EMPLOYMENT	28.9	28.8	29.3	0.3	-1.4
TOTAL PRIVATE	24.3	24.4	24.8	-0.4	-2.0
GOODS PRODUCING	12.3	12.4	12.5	-0.8	-1.6
Natural Resources & Mining	8.1	8.2	7.8	-1.2	3.8
Construction	3.7	3.7	4.1	0.0	-9.8
Manufacturing	0.5	0.5	0.6	0.0	-16.7
SERVICE PROVIDING	16.6	16.4	16.8	1.2	-1.2
Trade, Transport., & Utilities	5.5	5.5	5.5	0.0	0.0
Information	0.2	0.2	0.2	0.0	0.0
Financial Activities	0.7	0.7	0.7	0.0	0.0
Professional & Bus. Services	1.7	1.7	1.9	0.0	-10.5
Educational & Health Serv.	1.0	1.0	1.0	0.0	0.0
Leisure & Hospitality	2.0	2.0	2.0	0.0	0.0
Other Services	0.9	0.9	1.0	0.0	-10.0
GOVERNMENT	4.6	4.4	4.5	4.5	2.2

	Employment in Thousands		% Change Total Employment		
	in Thousands		Employment		
	Oct 10	Sep 10	Oct 09	Oct 10	Oct 10
SWEETWATER COUNTY					
TOTAL NONAG. WAGE & SALARY EMPLOYMENT	23.8	23.8	23.9	0.0	-0.4
TOTAL PRIVATE	18.9	19.0	19.1	-0.5	-1.0
GOODS PRODUCING	8.1	8.1	7.9	0.0	2.5
Natural Resources & Mining	4.9	4.9	5.1	0.0	-3.9
Construction	1.9	1.9	1.5	0.0	26.7
Manufacturing	1.3	1.3	1.3	0.0	0.0
SERVICE PROVIDING	15.7	15.7	16.0	0.0	-1.9
Trade, Transport., & Utilities	4.7	4.7	4.9	0.0	-4.1
Information	0.2	0.2	0.2	0.0	0.0
Financial Activities	0.9	0.9	0.9	0.0	0.0
Professional & Bus. Services	1.0	1.1	1.0	-9.1	0.0
Educational & Health Serv.	1.0	1.0	1.0	0.0	0.0
Leisure & Hospitality	2.2	2.2	2.4	0.0	-8.3
Other Services	0.8	0.8	0.8	0.0	0.0
GOVERNMENT	4.9	4.8	4.8	2.1	2.1

	Employment in Thousands		% Change Total Employment		
	in Thousands		Employment		
	Oct 10	Sep 10	Oct 09	Oct 10	Oct 10
TETON COUNTY					
TOTAL NONAG. WAGE & SALARY EMPLOYMENT	15.7	18.1	16.6	-13.3	-5.4
TOTAL PRIVATE	13.4	15.7	14.3	-14.6	-6.3
GOODS PRODUCING	1.8	1.8	2.2	0.0	-18.2
Nat. Res., Mining & Const.	1.6	1.6	2.0	0.0	-20.0
Manufacturing	0.2	0.2	0.2	0.0	0.0
SERVICE PROVIDING	13.9	16.3	14.4	-14.7	-3.5
Trade, Transport., & Utilities	2.1	2.4	2.3	-12.5	-8.7
Information	0.2	0.2	0.2	0.0	0.0
Financial Activities	0.7	0.8	0.8	-12.5	-12.5
Professional & Bus. Services	1.6	1.6	1.6	0.0	0.0
Educational & Health Serv.	0.9	1.0	0.9	-10.0	0.0
Leisure & Hospitality	5.6	7.4	5.8	-24.3	-3.4
Other Services	0.5	0.5	0.5	0.0	0.0
GOVERNMENT	2.3	2.4	2.3	-4.2	0.0

State Unemployment Rates October 2010 (Not Seasonally Adjusted)

State	Unemp. Rate
Puerto Rico	15.8
Nevada	13.7
California	12.0
Michigan	12.0
Florida	11.6
Rhode Island	11.0
South Carolina	10.2
Oregon	9.9
Mississippi	9.7
District of Columbia	9.6
Georgia	9.6
Ohio	9.5
Arizona	9.3
Kentucky	9.3
Illinois	9.2
Indiana	9.2
Alabama	9.1
North Carolina	9.1
Tennessee	9.1
United States	9.0
Missouri	8.8
New Jersey	8.8
Idaho	8.7
Connecticut	8.5
Washington	8.5
West Virginia	8.5
Pennsylvania	8.4
New Mexico	8.3
Delaware	8.2
Colorado	8.1
Louisiana	8.1
New York	8.0
Texas	7.9
Massachusetts	7.7
Alaska	7.6
Utah	7.4
Arkansas	7.1
Wisconsin	7.0
Maryland	6.9
Oklahoma	6.8
Maine	6.7
Montana	6.7
Virginia	6.5
Hawaii	6.4
Kansas	6.4
Minnesota	6.4
Iowa	6.2
Wyoming	6.1
Vermont	5.1
New Hampshire	5.0
Nebraska	4.2
South Dakota	4.1
North Dakota	2.8

Economic Indicators

by: Margaret Hiatt, Administrative/Survey Support Specialist

The Baker Hughes rig count for Wyoming increased by 10.0% from October 2009 to October 2010.

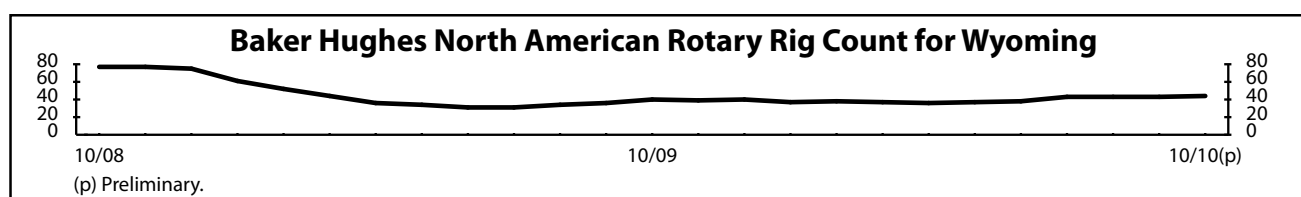
	Oct 2010 (p)	Sep 2010 (r)	Oct 2009 (b)	Percent Change	
				Month	Year
Wyoming Total Civilian Labor Force¹	292,927	293,637	293,665	-0.2	-0.3
Unemployed	17,845	18,045	20,554	-1.1	-13.2
Employed	275,082	275,592	273,111	-0.2	0.7
Wyoming Unemployment Rate/Seas. Adj.	6.1%/6.7%	6.1%/6.8%	7.0%/7.4%	N/A	N/A
U.S. Unemployment Rate/Seas. Adj.	9.0%/9.6%	9.2%/9.6%	9.5%/10.1	N/A	N/A
U.S. Multiple Jobholders	6,817,000	6,681,000	7,224,000	2.0	-5.6
As a percent of all workers	4.9%	4.8%	5.2%	N/A	N/A
U.S. Discouraged Workers	1,219,000	1,209,000	808,000	0.8	50.9
U.S. Part Time for Economic Reasons	8,408,000	8,628,000	8,474,000	-2.5	-0.8
Hours & Earnings for Production Workers					
Wyoming Manufacturing Hours & Earnings					
Average Weekly Earnings	\$835.58	\$840.50	\$860.69	-0.6	-2.9
Average Weekly Hours	40.8	40.1	41.3	1.7	-1.2
U.S. Manufacturing Hours & Earnings					
Average Weekly Earnings	\$775.22	\$772.31	\$740.53	0.4	4.7
Average Weekly Hours	41.5	41.3	40.4	0.5	2.7
Wyoming Unemployment Insurance					
Weeks Compensated	18,743	18,524	32,019	1.2	-41.5
Benefits Paid	\$5,957,806	\$6,103,667	\$11,097,512	-2.4	-46.3
Average Weekly Benefit Payment	\$317.87	\$329.50	\$346.59	-3.5	-8.3
State Insured Covered Jobs ¹	266,549	269,869	264,379	-1.2	0.8
Insured Unemployment Rate	2.1%	2.0%	2.6%	N/A	N/A
Consumer Price Index (U) for All U.S. Urban Consumers					
(1982 to 1984 = 100)					
All Items	218.7	218.4	216.2	0.1	1.2
Food & Beverages	221.0	220.6	218.0	0.2	1.4
Housing	216.1	216.6	216.6	-0.2	-0.2
Apparel	122.5	121.0	124.0	1.2	-1.2
Transportation	194.3	192.4	185.4	1.0	4.8
Medical Care	391.2	390.6	378.6	0.2	3.4
Recreation (Dec. 1997=100)	113.0	113.1	114.2	-0.1	-1.0
Education & Communication (Dec. 1997=100)	131.0	131.2	129.1	-0.1	1.4
Other Goods & Services	382.8	383.7	375.4	-0.2	1.9
Producer Prices (1982 to 1984 = 100)					
All Commodities	186.8	185.1	175.2	0.9	6.6
Wyo. Bldg. Permits (New Privately Owned Housing Units Authorized)					
Total Units	218	134	96	62.7	127.1
Valuation	\$45,881,000	\$27,028,000	\$15,633,000	69.8	193.5
Single Family Homes	190	106	88	79.2	115.9
Valuation	\$43,628,000	\$24,694,000	\$15,373,000	76.7	183.8
Casper MSA ² Building Permits	13	16	12	-18.8	8.3
Valuation	\$4,590,000	\$2,533,000	\$1,764,000	81.2	160.2
Cheyenne MSA Building Permits	30	36	14	-16.7	114.3
Valuation	\$3,435,000	\$4,105,000	\$1,637,000	-16.3	109.8
Baker Hughes North American Rotary Rig Count for Wyoming	44	43	40	2.3	10.0

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

¹Local Area Unemployment Statistics Program estimates.

²Metropolitan Statistical Area.

Note: Hours and earnings data for mining have been dropped from the Economic Indicators page as data for Wyoming mining are no longer available.



Wyoming County Unemployment Rates

by: Carola Cowan, BLS Programs Supervisor

Teton County posted the highest unemployment rate at 9.0% in October 2010.

REGION County	Labor Force			Employed			Unemployed			Unemployment Rates		
	Oct 2010 (p)	Sep 2010 (r)	Oct 2009 (b)	Oct 2010 (p)	Sep 2010 (r)	Oct 2009 (b)	Oct 2010 (p)	Sep 2010 (r)	Oct 2009 (b)	Oct 2010 (p)	Sep 2010 (r)	Oct 2009 (b)
NORTHWEST	45,650	46,068	45,321	42,756	43,129	42,033	2,894	2,939	3,288	6.3	6.4	7.3
Big Horn	5,106	5,048	5,087	4,763	4,691	4,682	343	357	405	6.7	7.1	8.0
Fremont	19,039	18,975	18,827	17,718	17,640	17,324	1,321	1,335	1,503	6.9	7.0	8.0
Hot Springs	2,508	2,516	2,479	2,383	2,391	2,317	125	125	162	5.0	5.0	6.5
Park	14,570	15,255	14,583	13,685	14,371	13,630	885	884	953	6.1	5.8	6.5
Washakie	4,427	4,274	4,345	4,207	4,036	4,080	220	238	265	5.0	5.6	6.1
NORTHEAST	54,804	54,440	55,138	51,868	51,361	51,419	2,936	3,079	3,719	5.4	5.7	6.7
Campbell	27,823	27,716	28,417	26,502	26,320	26,619	1,321	1,396	1,798	4.7	5.0	6.3
Crook	3,573	3,520	3,463	3,423	3,359	3,254	150	161	209	4.2	4.6	6.0
Johnson	3,947	3,902	3,927	3,692	3,631	3,629	255	271	298	6.5	6.9	7.6
Sheridan	16,140	15,977	16,132	15,106	14,919	14,935	1,034	1,058	1,197	6.4	6.6	7.4
Weston	3,321	3,325	3,199	3,145	3,132	2,982	176	193	217	5.3	5.8	6.8
SOUTHWEST	62,275	63,463	62,916	58,250	59,638	58,252	4,025	3,825	4,664	6.5	6.0	7.4
Lincoln	8,139	8,229	8,146	7,525	7,605	7,500	614	624	646	7.5	7.6	7.9
Sublette	7,315	6,833	6,905	7,064	6,578	6,579	251	255	326	3.4	3.7	4.7
Sweetwater	22,967	22,995	23,490	21,635	21,586	21,717	1,332	1,409	1,773	5.8	6.1	7.5
Teton	12,864	14,065	13,118	11,711	13,229	12,050	1,153	836	1,068	9.0	5.9	8.1
Uinta	10,990	11,341	11,257	10,315	10,640	10,406	675	701	851	6.1	6.2	7.6
SOUTHEAST	74,704	74,035	74,904	70,246	69,487	70,157	4,458	4,548	4,747	6.0	6.1	6.3
Albany	20,061	19,480	20,318	19,212	18,627	19,400	849	853	918	4.2	4.4	4.5
Goshen	6,471	6,317	6,244	6,128	5,949	5,890	343	368	354	5.3	5.8	5.7
Laramie	42,695	42,735	43,143	39,744	39,737	40,001	2,951	2,998	3,142	6.9	7.0	7.3
Niobrara	1,275	1,303	1,245	1,212	1,240	1,176	63	63	69	4.9	4.8	5.5
Platte	4,202	4,200	3,954	3,950	3,934	3,690	252	266	264	6.0	6.3	6.7
CENTRAL	55,494	55,630	55,385	51,963	51,975	51,249	3,531	3,655	4,136	6.4	6.6	7.5
Carbon	7,732	7,947	7,738	7,250	7,429	7,177	482	518	561	6.2	6.5	7.2
Converse	7,669	7,555	7,463	7,303	7,164	6,995	366	391	468	4.8	5.2	6.3
Natrona	40,093	40,128	40,184	37,410	37,382	37,077	2,683	2,746	3,107	6.7	6.8	7.7
STATEWIDE	292,927	293,637	293,665	275,082	275,592	273,111	17,845	18,045	20,554	6.1	6.1	7.0
Statewide Seasonally Adjusted										6.7	6.8	7.4
U.S.										9.0	9.2	9.5
U.S. Seasonally Adjusted										9.6	9.6	10.1

Prepared in cooperation with the Bureau of Labor Statistics. Benchmarked 03/2010. Run Date 11/2010.

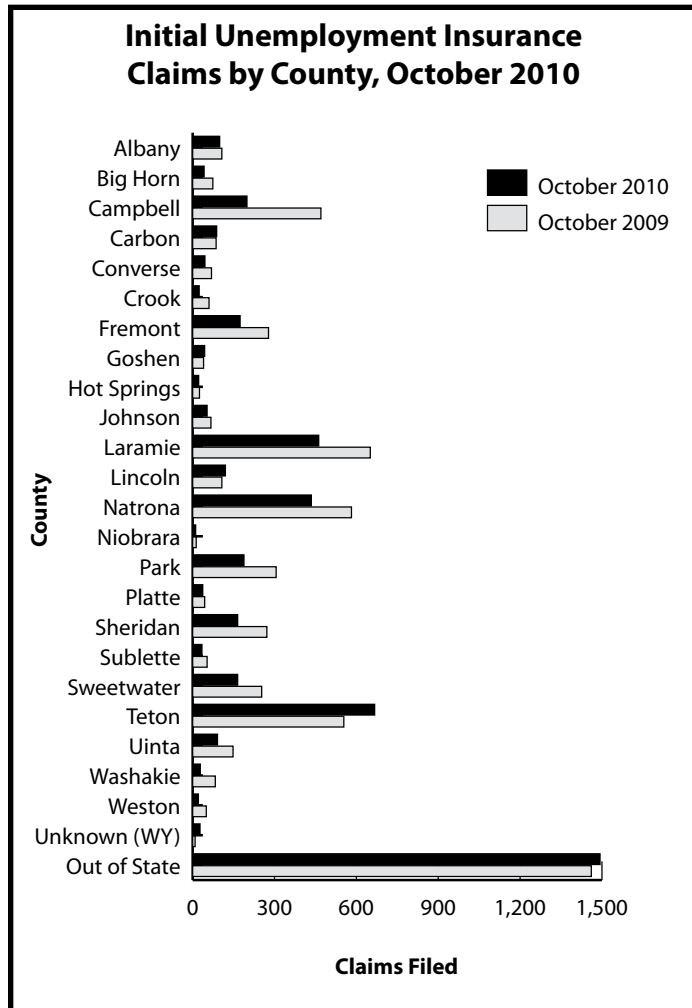
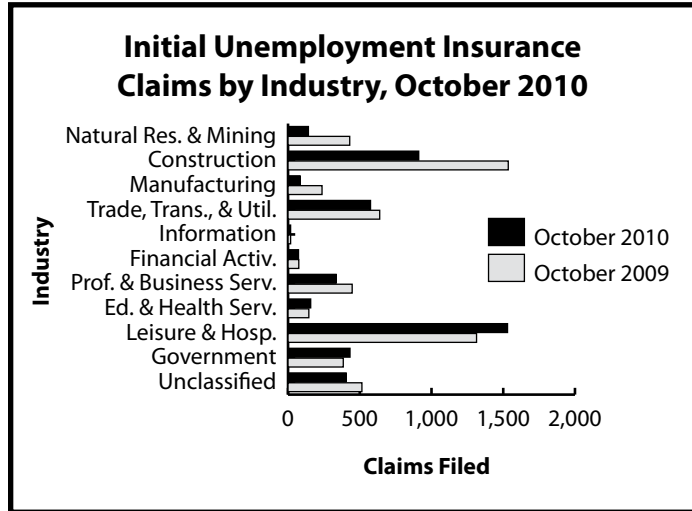
Data are not seasonally adjusted except where otherwise specified.

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

Wyoming Normalized^a Unemployment Insurance Statistics: Initial Claims

by: Douglas W. Leonard, Senior Economist

Statewide initial claims declined by 19.3% over the year and increased 74.8% over the month. Large over-the-year claims declines were observed in mining (-68.7%), manufacturing (-64.6%), and construction (-40.7%).



Initial Claims	Claims Filed		Percent Change	
	Oct 10	Oct 09	Oct 10	Oct 09
	Oct 10	Sep 10	Oct 10	Sep 10
Wyoming Statewide	4,732	2,707	74.8	-19.3
TOTAL CLAIMS FILED	4,732	2,707	74.8	-19.3
TOTAL GOODS-PRODUCING	1,137	845	34.6	-48.4
Natural Res. & Mining	142	148	-4.1	-67.0
Mining	120	140	-14.3	-68.7
Oil & Gas Extraction	13	16	-18.8	-13.3
Construction	911	624	46.0	-40.7
Manufacturing	84	73	237	-64.6
TOTAL SERVICE-PROVIDING	2,758	1,294	113.1	-0.1
Trade, Transp., & Utilities	575	428	639	34.3
Wholesale Trade	107	108	80	-0.9
Retail Trade	332	239	328	38.9
Transp., Warehousing & Utilities	136	81	231	67.9
Information	18	16	18	12.5
Financial Activities	73	66	75	10.6
Prof. and Business Svcs.	335	185	447	81.1
Educational & Health Svcs.	158	154	145	2.6
Leisure & Hospitality	1,530	390	1,314	292.3
Other Svcs., exc. Public Admin.	69	55	123	25.5
TOTAL GOVERNMENT	432	288	385	50.0
Federal Government	280	158	220	77.2
State Government	37	29	31	27.6
Local Government	115	101	134	13.9
Local Education	28	27	24	3.7
UNCLASSIFIED	405	280	515	44.6

Laramie County					
TOTAL CLAIMS FILED	461	403	647	14.4	-28.7
TOTAL GOODS-PRODUCING	175	144	356	21.5	-50.8
Construction	155	120	294	29.2	-47.3
TOTAL SERVICE-PROVIDING	219	178	224	23.0	-2.2
Trade, Transp., & Utilities	72	62	80	16.1	-10.0
Financial Activities	14	7	14	100.0	0.0
Prof. & Business Svcs.	51	33	58	54.5	-12.1
Educational & Health Svcs.	35	32	26	9.4	34.6
Leisure & Hospitality	37	32	34	15.6	8.8
TOTAL GOVERNMENT	48	65	43	-26.2	11.6
UNCLASSIFIED	19	16	24	18.8	-20.8

Natrona County					
TOTAL CLAIMS FILED	432	377	581	14.6	-25.6
TOTAL GOODS-PRODUCING	133	121	262	9.9	-49.2
Construction	101	78	198	29.5	-49.0
TOTAL SERVICE-PROVIDING	259	225	285	15.1	-9.1
Trade, Transp., & Utilities	118	115	92	2.6	28.3
Financial Activities	8	9	8	-11.1	0.0
Prof. & Business Svcs.	42	25	53	68.0	-20.8
Educational & Health Svcs.	31	24	30	29.2	3.3
Leisure & Hospitality	38	38	61	0.0	-37.7
TOTAL GOVERNMENT	29	26	21	11.5	38.1
UNCLASSIFIED	11	5	13	120.0	-15.4

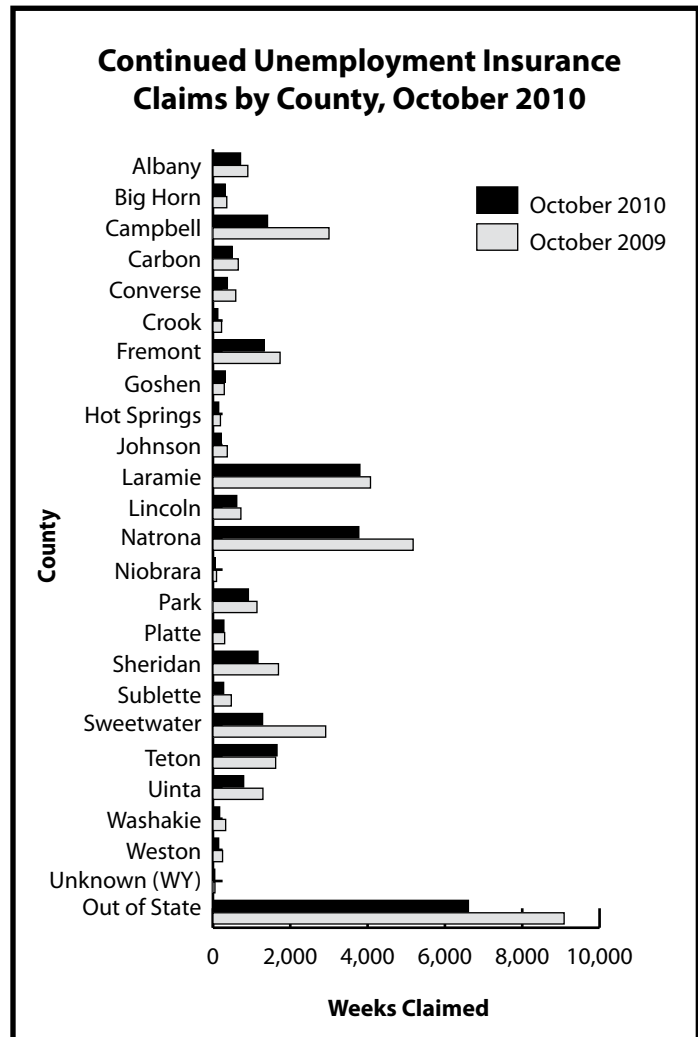
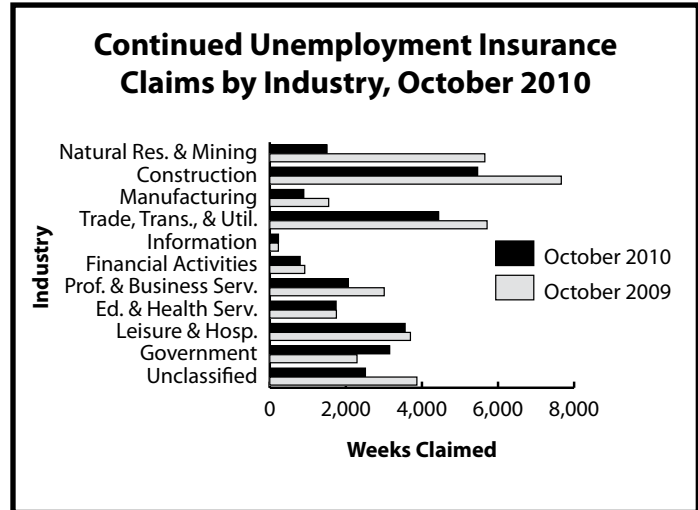
^aAn average month is considered 4.33 weeks. If a month has four weeks, the normalization factor is 1.0825. If the month has five weeks, the normalization factor is 0.866. The number of raw claims is multiplied by the normalization factor to achieve the normalized claims counts.

Wyoming Normalized^a Unemployment Insurance Statistics: Continued Claims

by: Douglas W. Leonard, Senior Economist

Statewide continued claims edged up compared to September (0.5%), while extended benefit weeks claimed declined both over the month (-4.9%) and over the year (-11.9%).

Continued Claims	Continued Weeks Claimed			Percent Change Weeks Claimed	
	Oct 10	Sep 10	Oct 09	Sep 10	Oct 09
Wyoming Statewide					
TOTAL WEEKS CLAIMED	27,045	26,920	37,548	0.5	-28.0
EXTENDED WEEKS CLAIMED	14,668	15,426	16,641	-4.9	-11.9
TOTAL UNIQUE CLAIMANTS^b	8,093	6,617	10,993	22.3	-26.4
<i>Benefit Exhaustions</i>	1,038	1,064	1,254	-2.4	-17.2
<i>Benefit Exhaustion Rates</i>	12.8%	16.1%	11.4%	-3.3%	1.4%
TOTAL GOODS-PRODUCING	7,863	8,677	14,864	-9.4	-47.1
Natural Res. & Mining	1,505	1,799	5,653	-16.3	-73.4
Mining	1,373	1,637	5,479	-16.1	-74.9
Oil & Gas Extraction	83	115	332	-27.8	-75.0
Construction	5,464	5,883	7,663	-7.1	-28.7
Manufacturing	894	995	1,548	-10.2	-42.2
TOTAL SERVICE-PROVIDING	13,516	12,632	16,524	7.0	-18.2
Trade, Transp., & Utilities	4,439	4,433	5,712	0.1	-22.3
Wholesale Trade	697	821	1,245	-15.1	-44.0
Retail Trade	2,838	2,766	2,843	2.6	-0.2
Transp., Warehousing & Utilities	904	846	1,624	6.9	-44.3
Information	228	249	226	-8.4	0.9
Financial Activities	799	860	919	-7.1	-13.1
Prof. & Business Services	2,063	1,989	3,008	3.7	-31.4
Educational & Health Svcs.	1,744	1,878	1,751	-7.1	-0.4
Leisure and Hospitality	3,558	2,341	3,697	52.0	-3.8
Other Svcs., exc. Public Admin.	685	882	1,211	-22.3	-43.4
TOTAL GOVERNMENT	3,152	2,903	2,293	8.6	37.5
Federal Government	1,388	1,085	615	27.9	125.7
State Government	325	326	358	-0.3	-9.2
Local Government	1,439	1,492	1,320	-3.6	9.0
Local Education	467	511	428	-8.6	9.1
UNCLASSIFIED	2,514	2,708	3,867	-7.2	-35.0
Laramie County					
TOTAL WEEKS CLAIMED	3,801	3,734	4,073	1.8	-6.7
TOTAL UNIQUE CLAIMANTS	1,094	928	1,220	17.9	-10.3
Total Goods-Producing	990	876	1,269	13.0	-22.0
Construction	787	728	998	8.1	-21.1
Total Service-Providing	2,079	2,172	2,280	-4.3	-8.8
Trade, Transp., and Utilities	685	758	801	-9.6	-14.5
Financial Activities	168	176	158	-4.5	6.3
Prof. & Business Svcs.	402	372	502	8.1	-19.9
Educational and Health Svcs.	348	389	345	-10.5	0.9
Leisure & Hospitality	291	256	291	13.7	0.0
TOTAL GOVERNMENT	635	582	380	9.1	67.1
UNCLASSIFIED	97	104	144	-6.7	-32.6
Natrona County					
TOTAL WEEKS CLAIMED	3,771	3,875	5,180	-2.7	-27.2
TOTAL UNIQUE CLAIMANTS	1,111	973	1,443	14.2	-23.0
Total Goods-Producing	914	1,024	2,075	-10.7	-56.0
Construction	527	532	755	-0.9	-30.2
Total Service-Providing	2,489	2,482	2,782	0.3	-10.5
Trade, Transp., and Utilities	1,084	965	1,037	12.3	4.5
Financial Activities	129	153	167	-15.7	-22.8
Professional & Business Svcs.	320	357	411	-10.4	-22.1
Educational & Health Svcs.	378	394	308	-4.1	22.7
Leisure & Hospitality	394	415	338	-5.1	16.6
TOTAL GOVERNMENT	299	312	203	-4.2	47.3
UNCLASSIFIED	69	57	120	21.1	-42.5



^aAn average month is considered 4.33 weeks. If a month has four weeks, the normalization factor is 1.0825. If the month has five weeks, the normalization factor is 0.866. The number of raw claims is multiplied by the normalization factor to achieve the normalized claims counts.
^bDoes not include claimants receiving extended benefits.

**Wyoming Department
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Research & Planning
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