

Wyoming Department of Employment

# Cooking Up a Career:

**Examining the Outcomes of a High School  
Training Program in the Culinary Arts  
and Hospitality Management**



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## Foreword

In 1999 the Wyoming Lodging & Restaurant Association (WLRA) created its Education Foundation with one major goal in mind: creating a skilled workforce for Wyoming's hospitality industry by establishing WHAM, the Wyoming Hospitality Alliance Mentoring Program. Through WHAM we hoped to offer hospitality school-to-career programs in 6-10 high schools across Wyoming by 2005.

No one—here in Wyoming or at the National Restaurant Association's Educational Foundation in Chicago—expected the program to succeed as dramatically as it has. Wyoming's program, consistently ranked among the best in the nation, will be offered in 28 high schools in the 2005-06 school year. Not only does our enrollment exceed that of larger, more populated states but Wyoming students continually demonstrate the highest level of achievement in work experience, test scores and at the National ProStart Student Invitational, where the Wyoming Culinary Team (from Cheyenne Central High School) won first place in 2003 and the Wyoming Management Team (from Cody High School) won second place in 2005.

These results, combined with the testimony of parents who report “delight, gratitude and awe” at the opportunities available to students who complete the program, helped us come to the realization that not only were we creating the skilled workers our industry needs, we were also opening the door to exciting careers, postsecondary education and the opportunity to stay in Wyoming for hundreds of young people.

Ours, however, is an industry that relies on hard facts—not anecdotes—to make investment decisions. In keeping with that tradition, we asked the Research & Planning Section of the Wyoming Department of Employment for their assistance in determining the impact of the WHAM program on these students, particularly after they leave high school.

This report represents what we hope is the first of several studies to measure the long-term impact of WHAM on the students who participate in the full program, which includes classroom studies, connecting activities (like job shadows and the student competitions) and mentored work experience.

We're pleased to report that the research indicates that WHAM is succeeding, “our” students are working and attending college, earning more than their peers and staying in Wyoming.

In future efforts, it is our goal to provide Research & Planning with a larger population to study, and to broaden the study to include comparisons between male and female students and between those students who achieve the National Certificate of Achievement and those who do not.

The support of the Wyoming Department of Employment, Research & Planning staff in designing and implementing this project is deeply appreciated.

Lynn Birleffi, Executive Director, WLRA  
Monica Miller, Executive Director, WLRA Education Foundation



# Contents

<b>Foreword</b> . . . . .	<b>.iii</b>
<b>Introduction, Results in Brief, and Acknowledgements</b> . . . . .	<b>.vii</b>
<b>Chapter 1 Economic Context</b> . . . . .	<b>.1</b>
<b>Chapter 2 Results Using Administrative Data</b> . . . . .	<b>.9</b>
<b>Chapter 3 Results Using Survey Data</b> . . . . .	<b>.21</b>
<b>Chapter 4 Study Implications</b> . . . . .	<b>.31</b>
<b>Appendix Survey Instrument</b> . . . . .	<b>.35</b>



## **Introduction, Results in Brief, and Acknowledgements**

Wyoming's economy in recent history has grown substantially. Along with economic growth comes the demand for labor and consequently competition for the available supply. Of particular concern within the hospitality industry is a lack of workers available to move into management and supervisory positions (Wyoming Lodging & Restaurant Association Education Foundation, n.d.-a).

In conjunction with the National Restaurant Association Educational Foundation (NRAEF), the Wyoming Lodging & Restaurant Association (WLRA) established the Wyoming Hospitality Alliance Mentoring (WHAM) program. The WHAM program features high school-based training in the fields of culinary arts (the ProBaking program) and hospitality management (the ProStart program). From the employers' perspective, the program yields workers likely to seek employment in hospitality-related industries. For WHAM participants, the program appears to have a positive impact on earnings compared to a similar group of individuals who did not participate in the program.

The program, started in 1999 with 6 Wyoming high schools and 134 students, is currently offered in 28 schools to 800 students throughout the state (Wyoming Lodging & Restaurant Association Education Foundation, n.d.-a). This study focuses on the 173 participants from the 2002-2003 school year. The majority of participants (135; 78.0%) were enrolled in the ProStart (management training) program. Another 10 (5.8%) took part in the ProBaking (professional baking) program, while 28 (16.2%) were involved in both programs.

Nearly all students participate in the program's in-class learning and work experience units throughout the school year (M. Miller, personal communication, May 25, 2005). In addition, there are special activities such as the Wyoming Hospitality Student Invitational competition and opportunities to earn national certificates from NRAEF. These certificates provide students with opportunities for advanced placement at several postsecondary schools, including Sheridan College and Casper College in Wyoming. Scholarship opportunities are also available through the program (Wyoming Lodging & Restaurant Association, n.d.-b).

After hearing a presentation about Research & Planning's (R&P) research on Wyoming community college graduates' employment outcomes, the director of WLRA's Education Foundation approached R&P about conducting similar research. In December 2004, WLRA partnered with R&P to help evaluate the

program's success in training workers, especially for entry into Leisure & Hospitality firms. Because no standardized program performance measures currently exist for WHAM training, WLRA staff and R&P worked together to determine which measures would best identify participant outcomes based on WLRA interests and data available through R&P.

R&P conducted the research on 2002-2003 participant outcomes using two types of data: administrative and survey. By matching participant social security numbers (SSNs) from the WHAM participant file to the other data sources, R&P identified participant outcomes including: college enrollment, Wyoming and interstate employment and wages, and military service. This study signifies the first time in Wyoming that military data have been accessed for outcomes research. Additionally, since limited opportunities exist to examine employment outcomes of high school students in Wyoming, this report provides a unique chance to explore their wage and employment retention data.

While administrative data sources provide much information, they are not without limitations. The limitations were addressed in part by conducting a mail survey of the participants' employers. Participants' SSNs were matched with Wyoming Unemployment Insurance (UI) Wage Records to identify their employers. The employers were mailed a questionnaire to collect information about total compensation (wages that could be converted to a common unit and benefits), occupation, skills requirements, employer satisfaction with the participant, and employer satisfaction with the available labor supply.

## **Results in Brief**

In 2003, a total of 600 high school students were enrolled and 173 participated in the full WHAM program. In second and third quarter 2004 (approximately 1 year after the end of the program), 113 participants worked for 142 Wyoming employers. Twelve participants worked in a partner research state in second through fourth quarter 2003, while 15 worked in a partner research state in first or second quarter 2004. A comparison group analysis reveals that WHAM participants earned more than non-program participants with similar age and gender characteristics one quarter following the end of training.

In addition to employment outcomes, 5 students were either active duty or civilian military employees in calendar years 2003 and 2004. Another 71 attended college at some time from 2000 to 2003. The majority who attended college did so in spring or fall 2003 (58 students).

A total of 97 survey responses were received from employers, with 88 providing at least one useable response. Questionnaire responses revealed

that more than a third of the participants (33.8%) worked in Food Preparation & Serving Related occupations, the target occupational group for the WLRA Education Foundation. Employers reported that, on the whole, they were satisfied with the participants they hired. However, they indicated less satisfaction with the labor supply generally.

### **Acknowledgements**

We thank the Wyoming Lodging & Restaurant Association for their assistance with and financial support of this research. In particular, we are especially grateful for the assistance of Monica Miller, WLRA's Education Foundation Director, and Jeff Heilbrun, General Manager of Teton Pines Resort & Country Club and WLRA Board Member. Ms. Miller provided valuable guidance with student data and how WHAM functions, while Mr. Heilbrun provided helpful suggestions regarding the satisfaction portions of the questionnaire. Most of all, thanks to Wyoming's employers who responded to the survey. Without their help, the survey would not have been successful.

### **References**

- Wyoming Lodging & Restaurant Association Education Foundation. (n.d.-a). *About us*. Retrieved June 2, 2005, from <http://www.wlra.org/displaycommon.cfm?an=1&subarticlenbr=39>
- Wyoming Lodging & Restaurant Association Education Foundation. (n.d.-b). *Our news*. Retrieved June 2, 2005, from <http://www.wlra.org/displaycommon.cfm?an=1&subarticlenbr=38#>



## Chapter 1 – Economic Context

Since 2003, Wyoming's youth have entered the state's job market at a time of relative prosperity. In second quarter 2002 (2002Q2), Wyoming average monthly employment stood at 242,185 (see Table 1.1). From 2002Q2 to 2003Q2, employment rose in the state by 1,446 jobs (0.6%) to 243,631. By 2004Q2, employment grew by 7,154 jobs (2.9%) to 250,785.

By itself, Accommodation & Food Services had the second highest employment in 2004Q2 (29,223) in the private sector. Together with Arts, Entertainment, & Recreation, these two industries are referred to as the Leisure & Hospitality industry. The primary objective of the Wyoming Hospitality Alliance Mentoring (WHAM) program is to make a pool of skilled workers, particularly those who could work their way into supervisory and management positions, available for Leisure & Hospitality firms in Wyoming.

**Table 1.1: Wyoming Average Monthly Employment and Average Weekly Wage by Industry, Second Quarter 2002-2004**

Industry Title and NAICS <sup>a</sup> Sector	Average Monthly Employment								Average Weekly Wage										
	Second Quarter			Change		2002-2003			2003-2004		Second Quarter			Change		2002-2003		2003-2004	
	2002	2003	2004	n	%	n	%	2002	2003	2004	\$	%	\$	%					
<b>Total, All Industries</b>	<b>242,185</b>	<b>243,631</b>	<b>250,785</b>	<b>1,446</b>	<b>0.6%</b>	<b>7,154</b>	<b>2.9%</b>	<b>\$547</b>	<b>\$563</b>	<b>\$586</b>	<b>\$15</b>	<b>2.8%</b>	<b>\$23</b>	<b>4.1%</b>					
<b>Total Private (11-99)</b>	<b>183,527</b>	<b>183,732</b>	<b>188,905</b>	<b>205</b>	<b>0.1%</b>	<b>5,173</b>	<b>2.8%</b>	<b>\$523</b>	<b>\$537</b>	<b>\$564</b>	<b>\$14</b>	<b>2.6%</b>	<b>\$28</b>	<b>5.2%</b>					
Agriculture (11)	2,467	2,402	2,550	-65	-2.6%	148	6.2%	\$407	\$398	\$406	-\$9	-2.1%	\$8	2.0%					
Mining (21)	17,712	17,968	19,689	256	1.4%	1,721	9.6%	\$1,013	\$1,051	\$1,089	\$37	3.7%	\$39	3.7%					
Utilities (22)	2,117	2,144	2,219	27	1.3%	75	3.5%	\$1,349	\$1,392	\$1,355	\$43	3.2%	-\$37	-2.7%					
Construction (23)	20,547	19,622	19,977	-925	-4.5%	355	1.8%	\$610	\$602	\$617	-\$8	-1.3%	\$14	2.4%					
Manufacturing (31-33)	9,384	9,166	9,343	-218	-2.3%	177	1.9%	\$700	\$692	\$721	-\$7	-1.1%	\$29	4.2%					
Wholesale Trade (42)	7,049	6,981	7,380	-68	-1.0%	399	5.7%	\$694	\$730	\$785	\$36	5.2%	\$55	7.5%					
Retail Trade (44-45)	30,247	29,803	30,018	-444	-1.5%	215	0.7%	\$354	\$366	\$381	\$12	3.3%	\$15	4.2%					
Transportation & Warehousing (48-49)	6,507	6,882	7,327	376	5.8%	445	6.5%	\$590	\$601	\$619	\$11	1.9%	\$18	3.0%					
Information (51)	4,157	4,191	4,251	34	0.8%	60	1.4%	\$547	\$559	\$582	\$11	2.1%	\$23	4.1%					
Finance & Insurance (52)	6,556	6,741	6,888	185	2.8%	147	2.2%	\$647	\$663	\$688	\$16	2.5%	\$25	3.7%					
Real Estate & Rental & Leasing (53)	3,509	3,461	3,601	-48	-1.4%	140	4.0%	\$444	\$457	\$474	\$13	2.9%	\$17	3.7%					
Professional & Technical Services (54)	7,425	7,432	7,713	7	0.1%	281	3.8%	\$644	\$661	\$696	\$17	2.7%	\$35	5.3%					
Mgmt. of Companies & Enterprises (55) <sup>b</sup>	653	515	742	-139	-21.2%	227	44.2%	\$738	\$953	\$1,278	\$175	29.1%	\$325	34.1%					
Administrative & Waste Services (56)	7,729	7,964	7,209	236	3.0%	-755 <sup>c</sup>	-9.5%	\$356	\$372	\$400	\$16	4.6%	\$28	7.5%					
Educational Services (61)	992	1,153	1,204	160	16.2%	51	4.5%	\$424	\$379	\$428	-\$46	-10.7%	\$49	12.8%					
Health Care & Social Assistance (62)	18,041	18,674	19,293	633	3.5%	619 <sup>d</sup>	3.3%	\$523	\$562	\$582	\$38	7.3%	\$20	3.6%					
Arts, Entertainment, & Recreation (71)	2,586	2,678	2,739	92	3.5%	61	2.3%	\$256	\$244	\$282	-\$12	-4.7%	\$38	15.7%					
Accommodation & Food Services (72)	28,168	28,523	29,223	355	1.3%	700	2.5%	\$208	\$213	\$225	\$5	2.4%	\$12	5.7%					
Other Services (81)	7,680	7,432	7,539	-248	-3.2%	107	1.4%	\$411	\$410	\$412	-\$1	-0.3%	\$2	0.5%					
<b>Total Government</b>	<b>58,657</b>	<b>59,898</b>	<b>61,880</b>	<b>1,241</b>	<b>2.1%</b>	<b>1,982<sup>e</sup></b>	<b>3.3%</b>	<b>\$623</b>	<b>\$642</b>	<b>\$650</b>	<b>\$19</b>	<b>3.1%</b>	<b>\$8</b>	<b>1.2%</b>					

<sup>a</sup>North American Industry Classification System.

<sup>b</sup>One CEO paid in excess of \$1.0 million. Noneconomic code change employment increase of 166 from Mining (21) and Construction (23).

<sup>c</sup>Decrease mostly due to various large employers' code changes from administrative & support services (561) to various subsectors.

<sup>d</sup>Increase partially due to large employer code change from administrative & support services (561) to social assistance (624). Large employer ownership change in nursing & residential care facilities (623) from private ownership to local government ownership.

<sup>e</sup>The apparent increases in State Government employment and payroll resulted from the correction of a previous reporting error detected by a new payroll system in a unit of state government.

Table prepared by Nancy Brennan, Economist, Wyoming Department of Employment, Research & Planning.

Leisure & Hospitality firms depend on younger workers (under 20 years of age) more so than other industries to staff their businesses. In 2003, 7.0% of all workers statewide were under 20 years of age. By comparison, 16.2% (7,905 workers) of workers in Leisure & Hospitality were under the age of 20 (Jones, 2004).

## **Employment Opportunities**

In this chapter we identify potential long-term career opportunities for WHAM participants. Table 1.2 (see page 3) illustrates the types of occupations within Food Services & Drinking Places while Table 1.3 (see page 4) shows the occupational staffing pattern for Accommodation. Because they are part of the larger Accommodation & Food Services, these detailed industries also fall under the broader umbrella of Leisure & Hospitality. The tables were developed using R&P's Customized Staffing Patterns program located at <http://doe.state.wy.us/LMI/staffingpatterns2003/staffingpatterns2003.htm>. A user can enter a number of employees (hypothetical or known) for a three-digit North American Industry Classification System (NAICS) code (other levels of aggregation are currently unavailable). The program then generates the estimated number of employees per occupation by Standard Occupational Classification (SOC) for the occupational staffing pattern within the industry. The staffing pattern is derived from the 2003 Occupational Employment Statistics (OES) survey. Using the Current Employment Statistics (CES) estimated employment in Food Services & Drinking Places and Accommodation for February 2005, we show the approximate occupational employment distribution in Wyoming .

Shown in Table 1.2 is the occupational distribution for Food Services & Drinking Places (NAICS 722) based on CES employment of 17,202 (Bullard, 2005). Occupations in bold are potential long-term supervisory or managerial destinations for WHAM participants. Three occupations stand out as strong options because of their industry predominance (12.7% of the industry's employment or 2,189 jobs):

- **First-Line Supervisors/Managers of Food Preparation & Serving Workers, SOC 35-1012**
- **Chefs & Head Cooks, SOC 35-1011**
- **Food Service Managers, SOC 11-9051**

Wages of supervisory/management positions range from \$10.06 per hour for First-Line Supervisors/Managers of Food Preparation & Serving Related Workers (SOC 35-1012) to \$36.89 per hour for Sales Managers (SOC 11-2022). The table thus depicts a potential career path from entry-level to management.

(Text continued on page 5)

**Table 1.2: Wyoming Staffing Pattern for Food Services & Drinking Places (NAICS<sup>a</sup> 722), 2003**

Standard Occupational Classification Code and Title	Employment			2003 Wages	
	n	%	February 2005 <sup>b</sup>	Hourly	Annual
35-3021 - Combined Food Prep.& Serving Workers, Incl. Fast Food	4,134	23.4%	4,018	\$6.28	\$13,070
35-3031 - Waiters & Waitresses	3,625	15.9%	2,735	\$7.07	\$14,710
35-2011 - Cooks, Fast Food	1,531	9.6%	1,656	\$6.16	\$12,800
<b>35-1012 - First-Line Sup./Mgrs. of Food Prep. &amp; Serving Wkrs.</b>	<b>1,167</b>	<b>8.5%</b>	<b>1,466</b>	<b>\$10.06</b>	<b>\$20,930</b>
35-3011 - Bartenders	1,131	7.9%	1,351	\$7.22	\$15,020
35-2014 - Cooks, Restaurant	1,092	6.4%	1,106	\$7.97	\$16,570
35-9021 - Dishwashers	900	4.8%	834	\$6.87	\$14,290
53-3031 - Driver/Sales Workers	565	3.4%	586	\$6.15	\$12,800
35-9031 - Hosts & Hostesses, Restaurant, Lounge, & Coffee Shop	463	2.8%	473	\$7.04	\$14,650
<b>35-1011 - Chefs &amp; Head Cooks</b>	<b>327</b>	<b>2.3%</b>	<b>400</b>	<b>\$11.52</b>	<b>\$23,960</b>
35-9011 - Dining Room & Cafeteria Attendants & Bartender Helpers	304	2.2%	378	\$6.36	\$13,230
35-2021 - Food Preparation Workers	294	2.1%	356	\$7.06	\$14,680
<b>11-9051 - Food Service Managers</b>	<b>275</b>	<b>1.9%</b>	<b>323</b>	<b>\$17.54</b>	<b>\$36,470</b>
35-3022 - Counter Attendants, Cafeteria, Concession, & Coffee Shop	253	1.7%	292	\$6.24	\$12,980
35-2015 - Cooks, Short Order	0	1.4%	243	\$8.17	\$16,990
41-2011 - Cashiers	205	1.1%	197	\$7.55	\$15,690
51-3011 - Bakers	0	0.8%	141	\$11.14	\$23,160
37-2011 - Janitors & Cleaners, Except Maids & Housekeepers	113	0.6%	108	\$7.14	\$14,860
<b>11-1021 - General &amp; Operations Managers</b>	<b>75</b>	<b>0.5%</b>	<b>80</b>	<b>\$27.10</b>	<b>\$56,360</b>
43-3031 - Bookkeeping, Accounting, & Auditing Clerks	61	0.4%	67	\$7.94	\$16,510
35-3041 - Food Servers, Nonrestaurant	0	0.3%	57	\$7.01	\$14,570
43-9061 - Office Clerks, General	0	0.3%	51	\$9.73	\$20,230
35-2012 - Cooks, Institution & Cafeteria	0	0.3%	43	\$8.35	\$17,380
41-2031 - Retail Salespersons	0	0.2%	36	\$6.92	\$14,400
37-2012 - Maids & Housekeeping Cleaners	0	0.2%	29	\$6.38	\$13,280
43-4081 - Hotel, Motel, & Resort Desk Clerks	0	0.1%	26	\$7.75	\$16,120
43-3051 - Payroll & Timekeeping Clerks	0	0.1%	22	\$18.21	\$37,870
43-5081 - Stock Clerks & Order Fillers	0	0.1%	19	\$9.65	\$20,070
39-3031 - Ushers, Lobby Attendants, & Ticket Takers	0	0.1%	15	\$7.88	\$16,390
29-1031 - Dietitians & Nutritionists	0	0.1%	14	\$20.77	\$43,210
43-6011 - Executive Secretaries & Administrative Assistants	0	0.1%	12	\$14.00	\$29,120
51-3091 - Food & Tobacco Roasting, Baking, & Drying Mach. Oper.	0	0.1%	10	NA	NA
35-9099 - Food Preparation & Serving Related Workers, All Other	0	0.1%	9	\$8.02	\$16,690
43-4181 - Reservation & Transport. Ticket Agents & Travel Clerks	0	0.0%	8	\$9.62	\$20,010
<b>11-9199 - Managers, All Other</b>	<b>0</b>	<b>0.0%</b>	<b>7</b>	<b>\$26.12</b>	<b>\$54,340</b>
49-9042 - Maintenance & Repair Workers, General	0	0.0%	6	\$14.85	\$30,880
37-9099 - Bldg. & Grounds Maintenance Workers, All Other	0	0.0%	6	\$9.61	\$19,980
<b>11-2022 - Sales Managers</b>	<b>0</b>	<b>0.0%</b>	<b>5</b>	<b>\$36.89</b>	<b>\$76,730</b>
13-2011 - Accountants & Auditors	0	0.0%	5	\$21.45	\$44,610
43-1011 - First-Line Sup./Mgrs. of Office & Admin. Support Wkrs.	0	0.0%	4	\$16.68	\$34,680
37-3011 - Landscaping & Groundskeeping Workers	0	0.0%	3	\$10.03	\$20,870
<b>11-3031 - Financial Managers</b>	<b>0</b>	<b>0.0%</b>	<b>2</b>	<b>\$29.11</b>	<b>\$60,550</b>
43-4161 - Human Resources Assistants, Exc. Payroll & Timekeeping	0	0.0%	2	\$13.39	\$27,850
43-6014 - Secretaries, Except Legal, Medical, & Executive	0	0.0%	1	\$10.34	\$21,510
<b>51-1011 - First-Line Sup./Mgrs. of Production &amp; Oper. Workers</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>\$24.05</b>	<b>\$50,030</b>
<b>Total Estimated Employment</b>	<b>16,515</b>	<b>100.0%</b>	<b>17,200</b>	<b>NA</b>	<b>NA</b>

<sup>a</sup>North American Industry Classification System.

<sup>b</sup>Based on estimated February 2005 Current Employment Statistics employment for Wyoming in the industry.

Note: Bolded items indicate managerial positions.

NA - Not available.

**Table 1.3: Wyoming Staffing Pattern for Accommodation (NAICS<sup>a</sup> 721), 2003**

Standard Occupational Classification Code and Title	Employment			2003 Wages	
	n	%	February 2005 <sup>b</sup>	Hourly	Annual
37-2012 - Maids & Housekeeping Cleaners	2,348	18.1%	1,738	\$7.24	\$15,050
35-3031 - Waiters & Waitresses	874	9.3%	888	\$7.00	\$14,560
43-4081 - Hotel, Motel, & Resort Desk Clerks	804	6.6%	638	\$7.92	\$16,470
35-2014 - Cooks, Restaurant	380	4.3%	413	\$9.38	\$19,510
49-9042 - Maintenance & Repair Workers, General	294	3.8%	366	\$9.49	\$19,740
35-9011 - Dining Room & Cafeteria Attendants & Bartender Helpers	282	3.6%	341	\$6.79	\$14,130
41-2031 - Retail Salespersons	271	3.3%	313	\$8.51	\$17,690
35-9021 - Dishwashers	238	2.9%	279	\$7.47	\$15,540
37-3011 - Landscaping & Groundskeeping Workers	216	2.7%	257	\$7.99	\$16,620
<b>11-9081 - Lodging Managers</b>	<b>192</b>	<b>2.5%</b>	<b>243</b>	<b>\$14.16</b>	<b>\$29,460</b>
51-6011 - Laundry & Dry-Cleaning Workers	188	2.3%	220	\$7.01	\$14,580
35-3011 - Bartenders	182	2.1%	199	\$7.71	\$16,040
39-3091 - Amusement & Recreation Attendants	140	1.9%	179	\$9.34	\$19,430
41-2011 - Cashiers	140	1.8%	177	\$7.17	\$14,920
35-3041 - Food Servers, Nonrestaurant	135	1.8%	171	\$7.81	\$16,240
35-9031 - Hosts & Hostesses, Restaurant, Lounge, & Coffee Shop	134	1.7%	164	\$7.48	\$15,550
<b>37-1011 - First-Line Sup./Mgrs. of Housekeepers &amp; Janitors</b>	<b>127</b>	<b>1.6%</b>	<b>157</b>	<b>\$10.75</b>	<b>\$22,370</b>
35-2021 - Food Preparation Workers	119	1.6%	150	\$7.58	\$15,770
43-3031 - Bookkeeping, Accounting, & Auditing Clerks	118	1.5%	144	\$10.05	\$20,910
<b>35-1011 - Chefs &amp; Head Cooks</b>	<b>110</b>	<b>1.4%</b>	<b>137</b>	<b>\$12.58</b>	<b>\$26,170</b>
37-2011 - Janitors & Cleaners, Except Maids & Housekeepers	106	1.3%	127	\$8.30	\$17,260
39-9032 - Recreation Workers	102	1.2%	117	\$9.28	\$19,290
<b>11-1021 - General &amp; Operations Managers</b>	<b>87</b>	<b>1.1%</b>	<b>107</b>	<b>\$30.68</b>	<b>\$63,810</b>
<b>11-9051 - Food Service Managers</b>	<b>82</b>	<b>1.0%</b>	<b>101</b>	<b>\$16.26</b>	<b>\$33,820</b>
<b>35-1012 - First-Line Sup./Mgrs. of Food Prep. &amp; Serving Wkrs.</b>	<b>79</b>	<b>1.0%</b>	<b>96</b>	<b>\$12.29</b>	<b>\$25,570</b>
39-6011 - Baggage Porters & Bellhops	72	0.9%	88	\$7.26	\$15,100
37-9099 - Bldg. & Grounds Cleaning & Maintenance Wkrs., All Other	71	0.9%	83	\$6.06	\$12,600
<b>39-1021 - First-Line Sup./Mgrs. of Personal Service Workers</b>	<b>62</b>	<b>0.8%</b>	<b>75</b>	<b>\$14.18</b>	<b>\$29,490</b>
43-6014 - Secretaries, Except Legal, Medical, & Executive	0	0.7%	70	\$10.84	\$22,540
35-3022 - Counter Attendants, Cafeteria, Concession, & Coffee Shop	0	0.7%	66	\$6.76	\$14,060
<b>41-1011 - First-Line Sup./Mgrs. of Retail Sales Workers</b>	<b>51</b>	<b>0.7%</b>	<b>65</b>	<b>\$13.24</b>	<b>\$27,540</b>
53-3041 - Taxi Drivers & Chauffeurs	50	0.6%	61	\$8.11	\$16,880
35-2015 - Cooks, Short Order	49	0.6%	58	\$9.24	\$19,210
27-2022 - Coaches & Scouts	0	0.6%	55	\$0.00	\$23,790
35-2012 - Cooks, Institution & Cafeteria	43	0.6%	54	\$9.45	\$19,650
33-9032 - Security Guards	42	0.5%	52	\$9.30	\$19,350
35-3021 - Combined Food Prep. & Serving Workers, Incl. Fast Food	0	0.5%	49	\$6.52	\$13,560
43-4171 - Receptionists & Information Clerks	0	0.5%	47	\$9.56	\$19,880
43-4181 - Reservation & Transportation Ticket Agents & Travel	36	0.5%	45	\$10.40	\$21,640
35-9099 - Food Preparation & Serving Related Workers, All Other	35	0.4%	43	\$7.75	\$16,110
13-1121 - Meeting & Convention Planners	34	0.4%	41	\$14.91	\$31,010
<b>43-1011 - First-Line Sup./Mgrs. of Admin. Support Workers</b>	<b>31</b>	<b>0.4%</b>	<b>38</b>	<b>\$14.14</b>	<b>\$29,410</b>
<b>11-3011 - Administrative Services Managers</b>	<b>29</b>	<b>0.4%</b>	<b>37</b>	<b>\$13.16</b>	<b>\$27,370</b>
43-9061 - Office Clerks, General	29	0.4%	35	\$8.87	\$18,460
43-6011 - Executive Secretaries & Administrative Assistants	27	0.3%	33	\$14.50	\$30,160
51-3011 - Bakers	25	0.3%	32	\$9.25	\$19,240
39-2021 - Nonfarm Animal Caretakers	0	0.3%	31	\$8.00	\$16,650
41-2021 - Counter & Rental Clerks	24	0.3%	29	\$6.28	\$13,060
<b>49-1011 - 1st-Line Sup./Mgrs. of Mech., Installers, &amp; Repairers</b>	<b>0</b>	<b>0.3%</b>	<b>27</b>	<b>\$23.19</b>	<b>\$48,230</b>
35-2011 - Cooks, Fast Food	0	0.3%	25	\$6.17	\$12,840
13-2011 - Accountants & Auditors	0	0.3%	25	\$21.45	\$44,610
43-2011 - Switchboard Operators, Including Answering Service	19	0.3%	24	\$9.03	\$18,780
49-3023 - Automotive Service Technicians & Mechanics	0	0.2%	24	\$14.70	\$30,570
39-6021 - Tour Guides & Escorts	18	0.2%	23	\$9.21	\$19,150
53-7062 - Laborers & Freight, Stock, & Material Movers, Hand	18	0.2%	22	\$8.90	\$18,510
<b>11-2022 - Sales Managers</b>	<b>17</b>	<b>0.2%</b>	<b>20</b>	<b>\$24.94</b>	<b>\$51,880</b>
<b>11-9199 - Managers, All Other</b>	<b>0</b>	<b>0.2%</b>	<b>19</b>	<b>\$26.12</b>	<b>\$54,340</b>
<b>37-1012 - 1st-Line Sup./Mgrs. of Landscapers &amp; Groundskeepers</b>	<b>15</b>	<b>0.2%</b>	<b>19</b>	<b>\$17.24</b>	<b>\$35,860</b>

(Continued on next page)

**Table 1.3: Wyoming Staffing Pattern for Accommodation (NAICS<sup>a</sup> 721), 2003 (Continued)**

Standard Occupational Classification Code and Title	Employment			2003 Wages	
	n	%	February 2005 <sup>b</sup>	Hourly	Annual
53-6031 - Service Station Attendants	0	0.2%	19	\$7.96	\$16,550
<b>11-3031 - Financial Managers</b>	<b>14</b>	<b>0.2%</b>	<b>18</b>	<b>\$26.63</b>	<b>\$55,390</b>
<b>53-1021 - F-L Sup./Mgrs. of Helpers, Laborers, &amp; Movers, Hand</b>	<b>0</b>	<b>0.2%</b>	<b>17</b>	<b>\$15.72</b>	<b>\$32,700</b>
39-6012 - Concierges	13	0.2%	16	\$10.32	\$21,480
39-9099 - Personal Care & Service Workers, All Other	0	0.2%	16	\$7.71	\$16,050
43-3021 - Billing & Posting Clerks & Machine Operators	0	0.2%	16	\$11.71	\$24,370
51-3099 - All Other Food Processing Workers	0	0.2%	15	\$11.14	\$23,170
53-3099 - Motor Vehicle Operators, All Other	0	0.2%	15	\$16.64	\$34,610
33-9099 - Protective Service Workers, All Other	0	0.1%	14	\$13.98	\$29,070
43-3051 - Payroll & Timekeeping Clerks	11	0.1%	14	\$14.56	\$30,280
43-4161 - Human Resources Assistants, Exc. Payroll & Timekeeping	11	0.1%	13	\$10.65	\$22,150
<b>11-2021 - Marketing Managers</b>	<b>0</b>	<b>0.1%</b>	<b>13</b>	<b>\$26.49</b>	<b>\$55,090</b>
53-6021 - Parking Lot Attendants	0	0.1%	12	\$7.23	\$15,040
<b>41-1012 - First-Line Sup./Mgrs. of Non-Retail Sales Workers</b>	<b>0</b>	<b>0.1%</b>	<b>12</b>	<b>\$20.22</b>	<b>\$42,050</b>
43-4051 - Customer Service Representatives	0	0.1%	11	\$10.71	\$22,270
51-8021 - Stationary Engineers & Boiler Operators	0	0.1%	11	\$19.84	\$41,260
<b>11-2011 - Advertising &amp; Promotions Managers</b>	<b>0</b>	<b>0.1%</b>	<b>10</b>	<b>\$21.53</b>	<b>\$44,780</b>
Remaining Occupations <sup>c</sup>	NA	NA	221	NA	NA
<b>Total Estimated Employment</b>	<b>8,594</b>	<b>97.7%</b>	<b>9,600</b>	<b>NA</b>	<b>NA</b>

<sup>a</sup>North American Industry Classification System.

<sup>b</sup>Based on February 2005 Current Employment Statistics estimated employment for Wyoming.

<sup>c</sup>Remaining occupations each account for less than 0.1 percent of employment.

Note: Bolded items indicate managerial positions.

NA - Not available.

Hotels, motels, and related businesses often couple their services with Food Services & Drinking Places. To illustrate the link between the two, the occupational distribution for Accommodation (NAICS 721) is shown in Table 1.3 (see page 4). As with Table 1.2, the industry employment in Wyoming for February 2005 (9,600; Bullard, 2005) was used to develop employment estimates via the Customized Staffing Patterns program. Firms in Accommodation require a broader diversity of management and supervisory occupations (shown in bold), including Lodging Managers (SOC 11-9081), First-Line Supervisors/Managers of Housekeeping & Janitorial Workers (SOC 37-1011), and Chefs & Head Cooks (SOC 35-1011). The broader assortment may yield additional opportunities for WHAM participants to transfer into positions of greater responsibility and higher corresponding wages. Supervisory and management wages range from \$10.75 per hour for First-Line Supervisors/Managers of Housekeeping & Janitorial Workers (SOC 37-1011) to \$30.68 per hour for General & Operations Managers (SOC 11-1021).

### **Employment Growth in Leisure & Hospitality**

The sub-industries of Accommodation & Food Services (which includes Food Services & Drinking Places and Accommodation) and Arts, Entertainment, &

Recreation within Leisure & Hospitality both saw job growth during 2002-2004. Employment rose by 92 jobs or 3.5% in Arts, Entertainment, & Recreation from 2,586 in 2002Q2 to 2,678 in 2003Q2 (see Table 1.1, page 1). Growth in this industry was less pronounced from 2003Q2 to 2004Q2, with growth of 61 jobs (2.3%). An increase of 355 jobs was experienced in Accommodation & Food Services from 2002Q2 to 2003Q2, from 28,168 to 28,523 jobs (1.3%). In contrast to Arts, Entertainment, & Recreation, growth in Accommodation & Food Services was stronger from 2003 to 2004. Accommodation & Food Services added 700 jobs, from 28,523 in 2003Q2 to 29,223 in 2004Q2 (2.5%).

The average weekly wage in Arts, Entertainment, & Recreation fell by \$12 from \$256 per week in 2002 to \$244 in 2003 (-4.7%; see Table 1.1, page 1). Wages in the industry rebounded in 2004 to \$282 (up \$38 or 15.7%).

The Accommodation & Food Services industry also experienced rising wages, but with less fluctuation than that experienced in Arts, Entertainment, & Recreation. The average weekly wage increased from \$208 in 2002 to \$213 (up 2.4%) by 2003 and up an additional \$12 or 5.7% in 2004.

### **Projected Growth**

Over the 2002-2012 time period, the Leisure & Hospitality industry is projected to undergo the third largest net growth in employment behind the Education & Health Care and Construction industries. Projected growth in Leisure & Hospitality is 5,192 jobs or 1.5% (Wyoming Department of Employment, Research & Planning, 2004). By comparison, Education & Health Care is projected to grow by 1.6% (8,532 jobs), while Construction is anticipated to grow by 2.7% (6,128 jobs). Across all industries, employment is projected to grow by 1.5% to 37,776 jobs.

### **Summary**

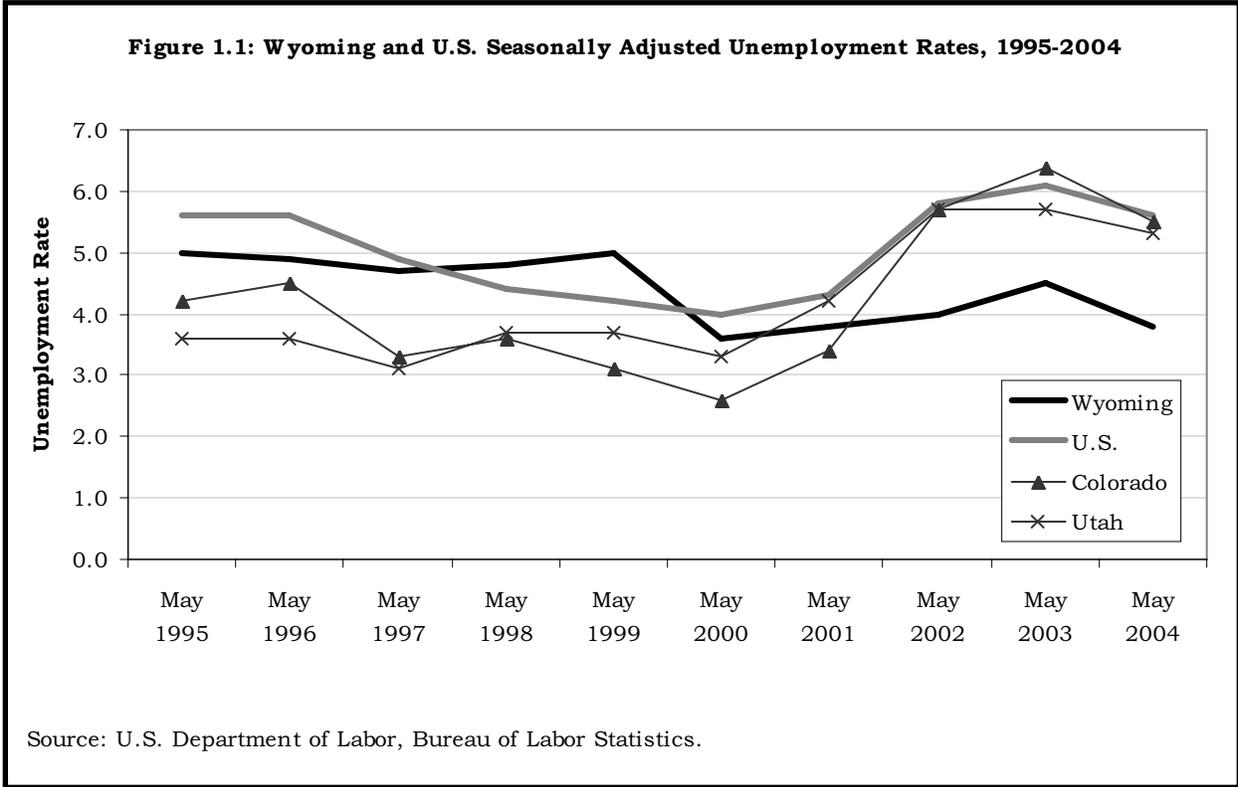
On the whole, Wyoming's economy expanded briskly in recent history. The state's strong economy translated to increased job opportunities and wages for Wyoming's labor force. As the state's second largest industry, Accommodation & Food Services provides a variety of opportunities for employment, particularly for younger members of the state's workforce. WHAM participants have opportunities to capitalize on both the growth in wages and jobs in the Leisure & Hospitality industry. Potential career paths exist from entry level to management positions. Skills transferability also exists because of the overlap in occupations required to staff Leisure & Hospitality firms. This transferability allows greater labor mobility between Accommodation and Food Services & Drinking Places.

**Technical Notes**

Wyoming employment grew by 0.6% from 2002Q2 to 2003Q2 and by 2.9% from 2003Q2 to 2004Q2. The Mining industry was the main driver of much of the job growth during this time. From 2002 to 2003, Mining experienced the fourth largest amount of job growth (see Table 1.1, page 1). Job growth in Mining jumped by 1,721 jobs, making it the state’s fastest growing industry from 2003 to 2004. The growth in Mining directly or indirectly impacted all other industries, including the demand for goods and services in Leisure & Hospitality.

Wages in the state over the period also increased, with more dramatic earnings growth occurring from 2003 to 2004 (see Table 1.1, page 1). In 2002Q2, the average weekly wage was \$547. Wages rose by \$15 to \$563 per week in 2003Q2 (2.8%). Wage growth intensified into 2004, with the average weekly wage increasing by 4.1% to \$586 per week.

From May 2002 to May 2003, Wyoming’s unemployment rate rose from 4.0% to 4.5% (see Figure 1.1). The state’s unemployment rate then dropped to 3.8% in 2004. U.S. unemployment rates remained higher than Wyoming’s during the 3 years. U.S. unemployment rates were 5.8%, 6.1%, and 5.6% in 2002, 2003, and 2004, respectively (U.S. Department of Labor, Bureau of



Labor Statistics, n.d.). In fact, with the exception from May 1998 and May 2000, Wyoming's unemployment rate was lower than the U.S. rate for May 1995 to May 2001.

Colorado and Utah, the partner research states where WHAM participants most commonly found employment other than Wyoming (see Chapter 2), experienced higher unemployment rates than Wyoming from 2002 to 2003. Unemployment rates in Colorado and Utah hovered between 5% and 6%, while Wyoming's was closer to 4% during the 3 years. During the 1995-2004 period, Colorado and Utah's rates more closely moved with the national unemployment rate than did Wyoming's. This is especially true of the 2001-2004 period when not only were the rates very similar but the change over time was also comparable.

Overall, Wyoming's economy gained strength during the 2002-2004 period. Mining was the primary driver of growth, with other industries experiencing gains as well. Colorado and Utah more strongly felt the effects of a weakened national economy as demonstrated by unemployment rates near 6%.

## References

- Bullard, D. Wyoming nonagricultural wage and salary employment. *Wyoming Labor Force Trends*, 42(4). Retrieved June 24, 2005, from <http://doe.state.wy.us/LMI/0405/ces1.htm>
- Cowan, C., Hauf, D., & Leonard, D. *Wages and Benefits in Wyoming*. Retrieved June 21, 2005, from <http://doe.state.wy.us/LMI/OESBenPub.pdf>
- Jones, S. (2004, June). *Earnings by age, gender, & industry, 1994-2003*. Retrieved June 20, 2005, from <http://doe.state.wy.us/LMI/wfdemog/toc3.htm>
- U.S. Department of Labor, Bureau of Labor Statistics. (n.d.). *Overview of BLS statistics on employment and unemployment*. Retrieved June 3, 2005, from <http://stats.bls.gov/bls/employment.htm>
- Wyoming Department of Employment, Research & Planning. (2004, August 18). *Wyoming long term employment forecasts (rollups): 2002-2012*. Retrieved June 8, 2005, from <http://doe.state.wy.us/LMI/proj2004/Wyoming%20LT%20Rollups%202012.pdf>

## Chapter 2 – Results Using Administrative Data

In this chapter we examine Wyoming WHAM participants' outcomes using administrative data sources. The data sources include:

- WHAM participant records
- Wyoming Unemployment Insurance Wage Records
- Interstate Wage Records obtained from our partner research states (Alaska, Colorado, Idaho, Montana, Nebraska, New Mexico, Texas, and Utah) via Memoranda of Understanding
- Student records from Wyoming's seven community colleges
- Data from the Defense Manpower Data Center (DMDC), which houses records of active duty military and civilian employees

### Participant Characteristics

Participant demographic characteristics are summarized in Table 2.1. Of the 173 participants, 114 were women (65.3%) and 52 were men (29.5%). By age group, the largest number of participants were ages 17-19 (129 participants; 74.6%), while 37 participants (21.4%) were ages 14-16. For the remaining 7 participants, their age and gender were unavailable from participant records or other data sources.

<b>Age</b>		<b>Women</b>	<b>Men</b>	<b>Total</b>
14-16	Number	28	9	37
	Row %	75.7%	24.3%	100.0%
	Column %	24.6%	17.3%	21.4%
17-19	Number	86	43	129
	Row %	66.7%	33.3%	100.0%
	Column %	75.4%	82.7%	74.6%
Age and Gender Unknown	Number			7
	Row %	NA	NA	NA
	Column %			4.0%
<b>Total</b>	<b>Number<sup>a</sup></b>	<b>114</b>	<b>52</b>	<b>173</b>
	<b>Row %</b>	<b>65.9%</b>	<b>30.1%</b>	<b>100.0%</b>
	<b>Column %</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

<sup>a</sup>Other than grand total, excludes values for age and gender unknown.  
NA - Not available.

## **Summary of Program Participant Matches to Administrative Data**

Using WHAM participant SSNs as the common element among data sources, student records were matched to administrative data. From this process we learned about participants' employment experiences in Wyoming and other states, college enrollment status, and military service.

Table 2.2 (see page 11) summarizes information obtained about WHAM participants from administrative data sources. A total of 173 high school students participated in the full WHAM program during the 2002-2003 school year. The majority (78.0%; 135 students) were enrolled in the ProStart (management training) program. Ten students (5.8%) participated in the ProBaking (professional baking) program, while 28 students (16.2%) took part in both the ProStart and ProBaking programs.

Nearly two thirds of the participants (65.3%; 113) worked in Wyoming during 2004Q2 or 2004Q3, of which 95 worked in both quarters. Six worked in 2004Q2 only, while 12 worked only in 2004Q3. Note that the third quarter includes the months July, August, and September when students are more likely to be available for work. Participants were employed by 142 individual employers during 2004Q2-2004Q3. Most firms (90; 63.4%) employed participants in both quarters. There were 23 firms that employed participants in 2004Q2 only, while 29 employed participants only in 2004Q3. Five participants (2.9%) were employed by the military in 2003 and 2004.

A total of 22 participants worked in a partner research state at some point from 2003Q2 through 2004Q2. Colorado and Utah were the most common destinations over the 5 quarters (14 participants); the remaining 8 worked in Alaska, Idaho, Montana, Nebraska, New Mexico, South Dakota, or Texas.

In 2004Q2, 14 participants worked 16 jobs in a partner research state. Average quarterly wages for 13 participants were \$1,843 (one participant's wages were excluded because of quarterly wages exceeding \$10,000). Five participants worked in Colorado; the remainder worked in Alaska, Nebraska, South Dakota, Texas, or Utah. The 5 participants employed in Colorado earned \$2,154 in 2004Q2. Average quarterly earnings for the 8 participants in the remaining states were \$1,649.

Table 2.2 also indicates more than a third of all participants (41.0% or 71 students) attended college at some point between 2000 and 2003. A total of 58 attended in the spring or fall of 2003 and 17 attended college both semesters. Because data about Wyoming's overall high school population is largely unavailable, it is difficult to determine whether or not WHAM participation increases the likelihood of attending college.

**Table 2.2: Summary of Program Participant Matches to Administrative Data**

	% of Number Participants	
<b>Total Unique Wyoming Hospitality Alliance Mentoring (WHAM) Program Participants, 2002-2003 School Year</b>	<b>173</b>	<b>100.0%</b>
ProBaking Program Only	10	5.8%
ProStart Program Only	135	78.0%
Both ProBaking & ProStart Program	28	16.2%
Employed in Wyoming in 2nd or 3rd Quarter 2004	113	65.3%
Employed in 2nd Quarter 2004 Only	6	3.5%
Employed in 3rd Quarter 2004 Only	12	6.9%
Employed in Both 2nd and 3rd Quarters of 2004	95	54.9%
Unique Wyoming Employers of Participants in 2nd or 3rd Quarter 2004	142	NA
Unique Employers in 2nd Quarter 2004 Only	23	NA
Unique Employers in 3rd Quarter 2004 Only	29	NA
Unique Employers in Both 2nd and 3rd Quarters of 2004	90	NA
Employed by U.S. Military (Active Duty or Civilian), 2003-2004	5	2.9%
Participants' College Attendance, 2000-2003	71	41.0%
Attended College in Spring or Fall 2003	58	33.5%
Attended College in Spring 2003 Only	19	11.0%
Attended College in Fall 2003 Only	22	12.7%
Attended College in Both Spring and Fall 2003	17	9.8%
Participants Who Worked in a Partner Research <sup>a</sup> State		
2003	12	6.9%
2nd Quarter (2003Q2)	8	4.6%
3rd Quarter (2003Q3)	12	6.9%
4th Quarter (2003Q4)	7	4.0%
2004	15	8.7%
1st Quarter (2004Q1)	9	5.2%
2nd Quarter (2004Q2)	14	8.1%
Partner Research State Work Location, 2003Q2 to 2004Q2	22	12.7%
Colorado	6	3.5%
Utah	8	4.6%
All Other States	8	4.6%

<sup>a</sup>Includes the following states with which we have Memoranda of Understanding (MOU): Alaska, Colorado, Idaho, Montana, Nebraska, New Mexico, South Dakota, Texas, and Utah. Participants may be included in more than one quarter.

NA - Not applicable.

Table 2.3 illustrates participants' Wyoming employment and community college attendance status from spring 2003 to fall 2004. Older participants would more likely be taking college courses than younger participants. Employment status is based on 2004Q2 and 2004Q3, approximately one year after the end of the 2002-2003 WHAM program year. Participants range from 14 to 19 years of age, therefore they are not all available for work or college.

A total of 17 participants (9.8%) attended college in both spring and fall 2003. Another 95 (54.9%) worked in both 2004Q2 and 2004Q3. Ten participants (5.8%) worked and attended college in all four time periods. About two thirds (66.5%; 115 participants) did not attend college, while 34.7% (60 participants) did not work in either quarter. Slightly more than one fourth (27.7%; 48 participants) neither went to college nor worked in Wyoming.

**Employment Characteristics**

Table 2.4 (see page 13) shows participants' employment by industry and their average quarterly wage in 2004Q2. Employed participants and their respective employers were included more than once in the table if they worked for more than one employer or employed multiple participants in 2004Q2. The

Employment Status		Spring and Fall 2003						Total	
		No College Attendance		Spring or Fall Only		Both Spring and Fall			
		n	Col. %	n	Col. %	n	Col. %	n	Col. %
Not Employed in 2004Q2 or 2004Q3	Number of Participants	48	41.7%	9	22.0%	3	17.6%	60	34.7%
	Row %	80.0%		15.0%		5.0%		100.0%	
	% of Total		<b>27.7%</b>		<b>5.2%</b>		<b>1.7%</b>		<b>34.7%</b>
Employed in Either 2004Q2 or 2004Q3	Number of Participants	9	7.8%	5	12.2%	4	23.5%	18	10.4%
	Row %	50.0%		27.8%		22.2%		100.0%	
	% of Total		<b>5.2%</b>		<b>2.9%</b>		<b>2.3%</b>		<b>10.4%</b>
Employed in Both 2004Q2 or 2004Q3	Number of Participants	58	50.4%	27	65.9%	10	58.8%	95	54.9%
	Row %	61.1%		28.4%		10.5%		100.0%	
	% of Total		<b>33.5%</b>		<b>15.6%</b>		<b>5.8%</b>		<b>54.9%</b>
Total	Number of Participants	115	100.0%	41	100.0%	17	100.0%	173	100.0%
	Row %	66.5%		23.7%		9.8%		100.0%	
	% of Total		<b>66.5%</b>		<b>23.7%</b>		<b>9.8%</b>		<b>100.0%</b>

**Table 2.4: Number of Jobs Held by Participants Employed in Wyoming by Industry and Average Quarterly Wage, Second Quarter 2004**

<b>Industry</b>	<b>Number<sup>a</sup></b>	<b>% in Industry</b>	<b>Avg. Quarterly Wage</b>
Natural Resources & Mining	0	0.0%	N/A
Construction	7	5.1%	\$1,578
Manufacturing	ND	ND	ND
Trade, Transportation, & Utilities	37	27.2%	\$1,505
Information	ND	ND	ND
Financial Activities	4	2.9%	\$2,540
Professional & Business Services	4	2.9%	\$1,237
Education & Health Services	23	16.9%	\$1,321
Leisure & Hospitality	45	33.1%	\$1,464
Other Services	ND	ND	ND
Public Administration	10	7.4%	\$886
<b>Total</b>	<b>136</b>	<b>100.0%</b>	<b>\$1,405</b>

<sup>a</sup>A participant or employer is included more than once if they worked for more than one employer or employed more than one participant, respectively, in the quarter.

N/A - Not applicable.

ND - Not disclosable due to confidentiality of information.

most jobs were held in Leisure & Hospitality (45 jobs; 33.1%), the primary target of the program's efforts.

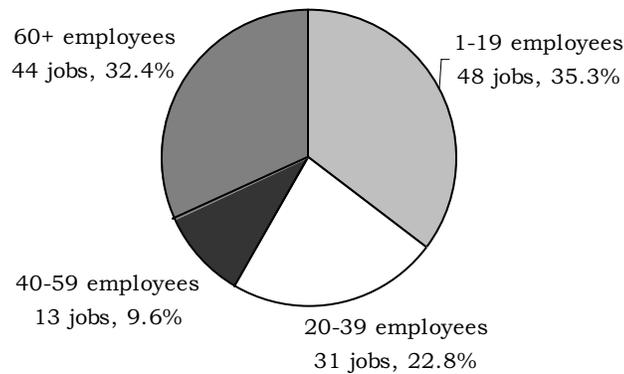
On average, participants earned \$1,405 in 2004Q2. The average quarterly wage in Leisure & Hospitality was \$1,464, while the average quarterly wage in Trade, Transportation, & Utilities was \$1,505. The highest average quarterly wage was for the 4 participants employed in Financial Activities (\$2,540).

The largest number of jobs held by participants were in firms with 1 to 19 employees (48 jobs or 35.3%; see Figure 2.1, page 14); not far behind were firms with 60 or more workers (44 jobs or 32.4%). This was followed by firms employing 20-39 workers (31 jobs or 22.8%). Firms with 40-59 employees had the fewest participant jobs (13 jobs or 9.6%).

Quarterly wages in 2004Q2 were highest in large firms (see Figure 2.2, page 14). Average quarterly wages of participants working in firms with 60 or more employees were \$1,747, followed by firms with 40-59 employees at \$1,628.

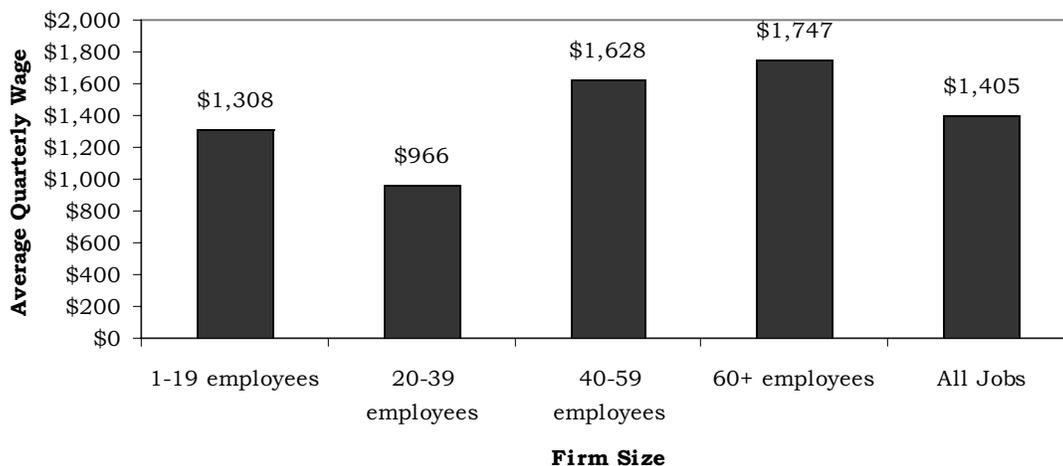
Figure 2.3 (see page 15) shows the average number of quarters worked from 2003Q3 to 2004Q2 for participants and a comparison group of program non-

**Figure 2.1: Distribution of Jobs Held in Wyoming by Participants by Firm Size, Second Quarter 2004**



Note: A participant or employer was included more than once if they worked for more than one employer or employed more than one participant, respectively, in the quarter.

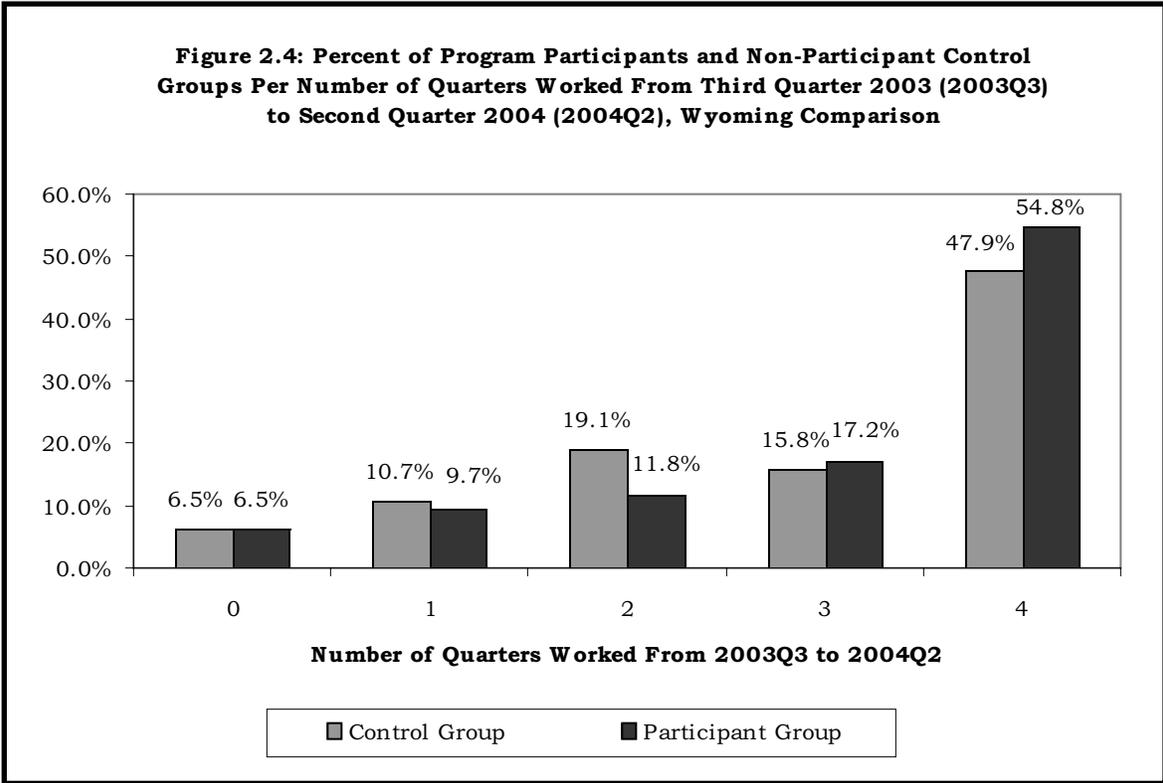
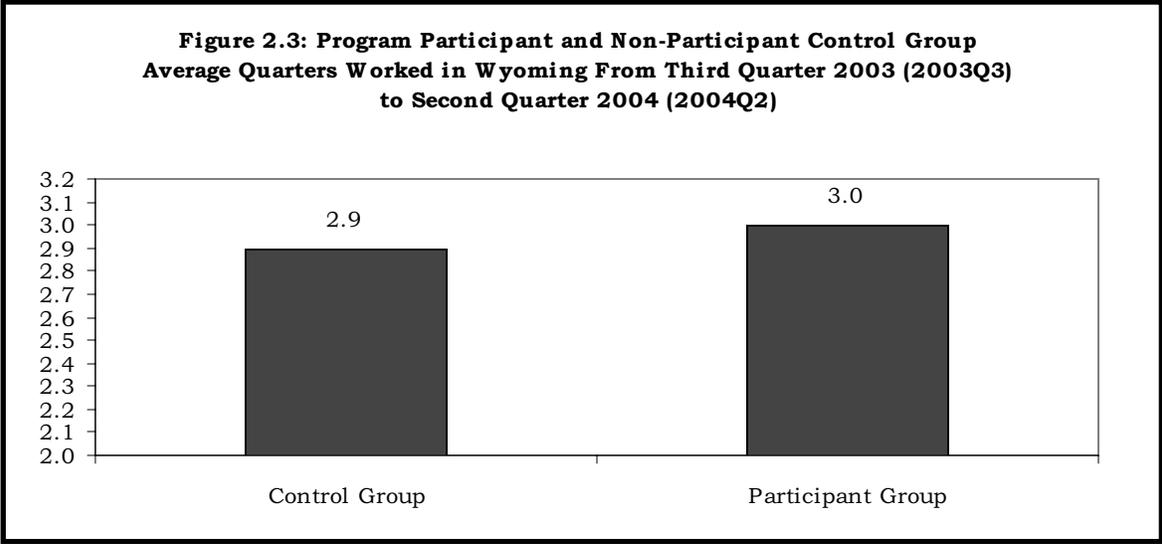
**Figure 2.2: Average Quarterly Wage for Wyoming Jobs Held by Participants by Firm Size, Second Quarter 2004**



Note: A participant or employer was included more than once if they worked for more than one employer or employed more than one participant, respectively, in the quarter.

participants with similar demographic characteristics. Second quarter 2004 approximates 1 year after the end of WHAM training. Participants worked slightly more quarters (0.1 on average) in Wyoming from 2003Q3 to 2004Q2 than did non-participants.

Participants were more likely to sustain their employment in Wyoming than non-participants. Figure 2.4 shows the percent of participants and non-participants by the number of quarters worked from 2003Q3 to 2004Q2. More participants worked three (17.2%) or four (54.8%) quarters in Wyoming following training than did non-participants (15.8% and 47.9%, respectively). Conversely the percent of non-participants who worked one (10.7%) and two



(19.1%) quarters following the training period was higher than the percent of participants that worked one (9.7%) or two (11.8%) quarters.

Figures 2.3 and 2.4 suggest that the WHAM program may help retain youth in Wyoming. A longer-term study of their tenure with the state would help to determine if this is in fact the case, as well as shed light on the true nature of career development.

## **Participant Research Using Control Groups**

### *Control Group Methodology*

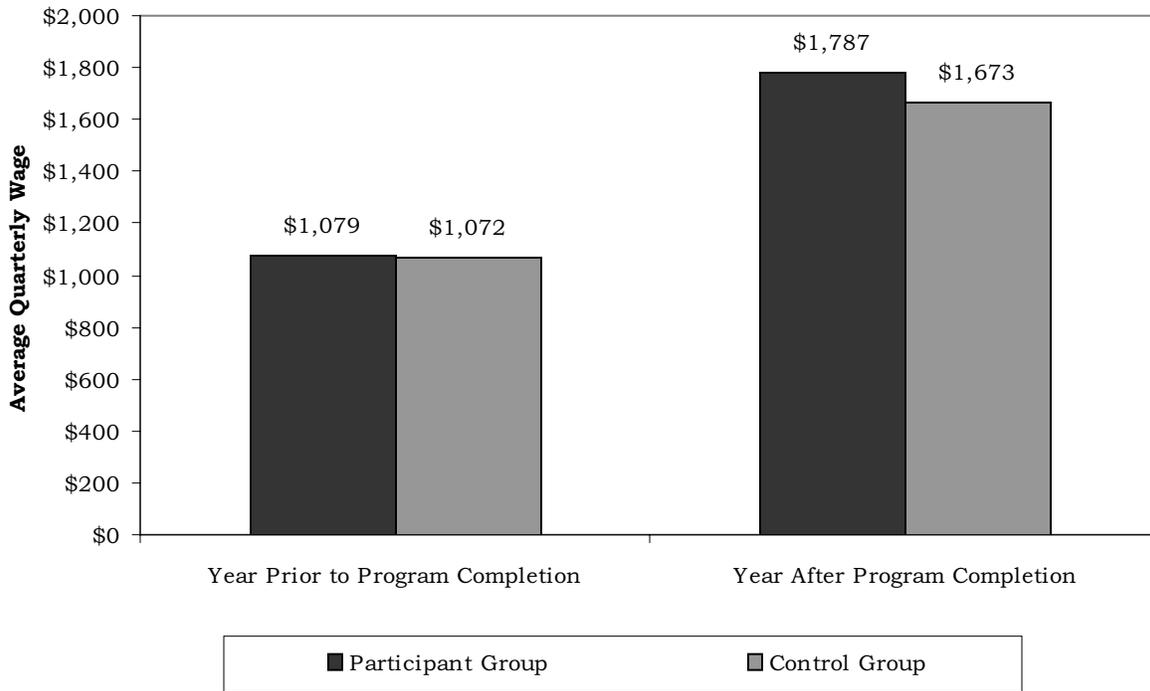
The purpose of control group evaluation is to show whether particular labor market outcomes (e.g., wage progression or labor retention) experienced by participants also occurs for individuals who do not receive training. If non-trainees also experience similar outcomes then training may not cause the subsequent outcome, rather another factor produces the result (e.g., wage growth in the economy that affects both the participant and non-participant groups.)

To be included in the control group analysis, participants were matched with non-participants based upon wage and demographic data. Specifically, both participants and non-participants must have been found in Unemployment Insurance (UI) Wage Records for at least 2 quarters in the year prior to training. Wage Records utilized for this study include those from Colorado, Idaho, Montana, Nebraska, New Mexico, Oklahoma, South Dakota, Texas, Utah, and Wyoming. Participants and non-participants were matched on age and gender to obtain similar demographic distributions. Of the 173 WHAM participants, 93 had sufficient wage and demographic data (i.e., known age at program completion and gender) to be included in the analysis. Using methodology developed by Glover (2002), 215 non-participants were selected from an available non-participant pool of 779 individuals for comparative purposes. The 215 matched non-participants are referred to as control group members.

### *Results*

As shown in Figure 2.5 (see page 17), WHAM participants and control group members had similar average quarterly wages the year before training (\$1,079 and \$1,072, respectively). Average quarterly wages increased approximately \$700 for participants and \$600 for non-participants between the year prior to program completion to the year after program completion. However, on average, participants earned \$114 more per quarter (\$456 on an annual basis) than control group members (this analysis does not take into account the number of hours worked).

**Figure 2.5: Program Participant and Non-Participant Control Group Average Quarterly Wage**



Note: Interstate Wage Records utilized in the comparison included Colorado, Idaho, Montana, Nebraska, New Mexico, Oklahoma, South Dakota, Texas, and Utah. Program ended second quarter 2003. Based on 93 participants and 215 matched control group members. Control group members matched on age, gender, prior wage, and work history.

For illustrative purposes, quarterly earnings were converted to estimated average hourly wage comparisons and are shown in Table 2.5 and Figure 2.6 (see page 18). Wages are calculated the quarter prior to the end of training (January through March 2003) and one quarter after training (during summer break 2003) and are limited to the sub-set of participants and control group members with wages during the specified quarters. Because hours worked are not collected in the Wage Records database, for comparative purposes we mathematically forced the 16- to 17-year-old participant group to minimum hourly wages during the quarter from January through March 2003 (see Table 2.5, page 18) and used whatever hours it took to accomplish this (14.7 hours per week) as the measure of weekly hours worked for all four groups. This same procedure was used during the quarter from July through September 2003 (27.2 hours per week in this case). The estimates of hours worked seem reasonable given that they approximate a winter quarter during the school

(Text continued on page 19)

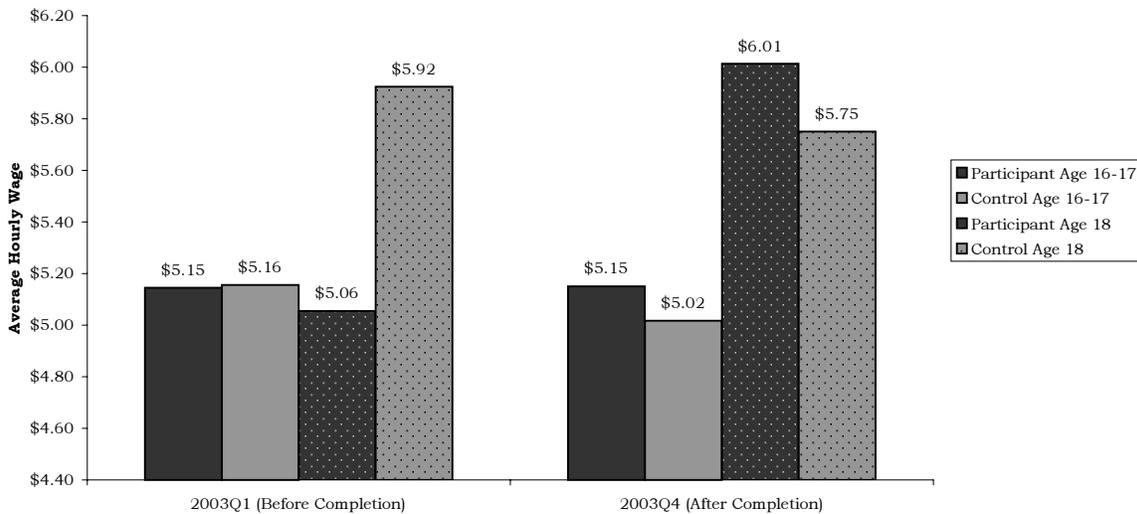
**Table 2.5: Average Hourly Wage for Program Participants and Non-Participant Control Group Members, First Quarter 2003 (2003Q1) and Third Quarter 2003 (2003Q3)**

	Age Group	2003Q1 (January Through March)			2003Q3 (July Through September)		
		Total Wages	Number Working	Average Hourly Wage <sup>a</sup>	Total Wages	Number Working	Average Hourly Wage
<b>Control Group</b>	16 to 17	\$76,699	78	\$5.16	\$156,117	88	\$5.02
<b>Participant Group</b>	years-old	\$33,363	34	\$5.15	\$67,384	37	\$5.15
<b>Control Group</b>	18 years-	\$106,210	94	\$5.92	\$191,136	94	\$5.75
<b>Participant Group</b>	old <sup>b</sup>	\$36,636	38	\$5.06	\$97,809	46	\$6.01

<sup>a</sup>Because hours worked were not collected, for comparative purposes we forced the 16- to 17-year-old participant group to minimum hourly wages during the quarter from January through March 2003 and then used whatever hours it took to accomplish this (i.e., 14.7 hours per week) for the other groups. This same procedure was used during the quarter from July through September 2003 (27.2 hours per week).

<sup>b</sup>Likely graduating seniors.

**Figure 2.6: Wyoming Hospitality Alliance Mentoring (WHAM) Program Participant and Non-Participant Control Group Average Hourly Wage Before and After Training Ended**



Note: Because hours worked are not collected, for comparative purposes we forced the 16- to 17-year-old participant group to minimum hourly wages during the quarter from January through March 2003 and then used whatever hours it took to accomplish this (i.e., 14.67 hours per week) for the other groups. This same procedure was used during the quarter from July through September 2003 (27.2 hours per week).

year (14.7 hours weekly) and the summer break (27.2 hours weekly). It is likely that many of the youth in this study worked in industries where employers paid wait staff \$2.13 per hour or were being paid below-minimum training wages of \$4.25 an hour during the first 90 days of training (Minimum Wage Rates, 2005).

Program participants in both the younger (16- to 17-year-olds) and older (18-year-olds) groups have lower estimated hourly wages prior to the end of training and higher hourly wages than control group members during the quarter after training (see Figure 2.6, page 19). The change in relative standing between pre- and post-wages is most dramatic for 18-year-olds.

### *Control Group Summary*

Results presented here indicate that participants earned more than a matched control group after completion of the WHAM program when examining both quarterly and estimated hourly wage rates. Because Wage Records does not include hours worked, the results for hourly rate changes must be interpreted with caution. Differences in wages between participants and control group members may be due to working more hours rather than having higher hourly wages. If the assumptions about average weekly hours worked are correct, then the results are sound. Capturing hours worked as part of Wage Records would improve estimates of hourly wage rates and would make outcome results more reliable.

### **Administrative Data Summary**

WHAM participants achieve positive outcomes in a wide variety of settings. These include employment with in- and out-of-state private firms as well as public sector employers (Public Administration entities and the military). While many WHAM participants put their knowledge and skills to work in the Leisure & Hospitality industry, others apply their abilities in other types of firms. Additionally, many attended college during or following high school. Stability in the labor market appears to be enhanced by training, at least within 4 quarters of the end of instruction. The control group analysis shows that the WHAM training has an earnings payoff. Based on administrative data, it appears that the WHAM program is accomplishing its mission from the perspective of participant earnings and the types of firms in which participants gain employment.

### **References**

Glover, W. (2002). Compared to what? The purpose and method of control group selection. *Wyoming Labor Force Trends*, 39(6), 9-16. Retrieved February 11, 2005, from <http://doe.state.wy.us/LMI/0602/a2.htm>

Minimum Wage Rates, 27 Wyo. Stat. §§ 27-4-202 (2005).

## Chapter 3 – Results Using Survey Data

Although administrative data sources provide a great deal of information, they are not without limitations. Among data not included are compensation rates (hourly wages and benefits), hours worked, occupation, skills requirements, employer satisfaction with the participant, and employer satisfaction with the labor supply. To compensate for these missing elements in administrative data, R&P conducted a mail survey of firms employing WHAM participants during the study period. In this chapter we review the results of the survey.

### Survey Response Summary

By matching participant SSNs to the Wyoming UI Wage Records database, we determined that 102 unique participants worked for 114 different Wyoming employers in 2004Q2. The match of participant records with Wage Records yielded 136 employer/employee combinations. Employers received a questionnaire (see Appendix, page 35) pertaining to each participant who worked for them. Table 3.1 summarizes the survey results. The number of questionnaires mailed is higher than either the number of unique participants or employers because a participant may work for multiple employers or a firm may employ multiple participants. Throughout this chapter the relatively small number of responses may yield results unique to the particular group being discussed rather than overall WHAM program performance.

**Table 3.1: Summary of Participant Employer Survey Responses**

	Survey Responses	
	Number <sup>a</sup>	%
<b>Total Surveys Mailed to Participant Employers</b>	<b>136</b>	<b>100.0%</b>
Employer Returned Survey With at Least One Useable Response	88	64.7%
Employer Reports That Participant Did Not Work for Them in Second Quarter 2004	9	6.6%
Employer Did Not Return Survey	39	28.7%
Participants Not Found in Wage Records	71	34.3%
<b>Grand Total</b>	<b>207</b>	<b>100.0%</b>

<sup>a</sup>A participant or employer is included more than once if they worked for more than one employer or employed more than one participant, respectively, in the quarter.

Of the surveys sent, 97 were returned for a raw response rate of 71.3%; 39 surveys were not returned. Nine employers reported that the participant did not work for them in second quarter 2004. A total of 88 surveys with at least one useable response were used for the analysis.

**Table 3.2: Participants Working in Wyoming by Occupation, Second Quarter 2004**

<b>2-Digit SOC<sup>a</sup> and Title</b>	<b>Number<sup>b</sup></b>	<b>Percent of Subtotal</b>
11 Management	0	0.0%
13 Business & Financial Operations	0	0.0%
15 Computer & Mathematical Science	0	0.0%
17 Architecture & Engineering	ND	ND
19 Life, Physical, & Social Science	0	0.0%
21 Community & Social Services	0	0.0%
23 Legal	0	0.0%
25 Education, Training, & Library	0	0.0%
27 Arts, Design, Entertainment, Sports, & Media	ND	ND
29 Healthcare Practitioner & Technical	0	0.0%
31 Healthcare Support	ND	ND
33 Protective Service	4	5.2%
35 Food Preparation & Serving Related	26	33.8%
37 Building & Grounds Cleaning & Maintenance	6	7.8%
39 Personal Care & Service	6	7.8%
41 Sales & Related	14	18.2%
43 Office & Administrative Support	12	15.6%
45 Farming, Fishing, & Forestry	ND	ND
47 Construction & Extraction	ND	ND
49 Installation, Maintenance, & Repair	0	0.0%
51 Production	ND	ND
53 Transportation & Material Moving	ND	ND
<b>Subtotal</b>	<b>77</b>	<b>--</b>
<i>Survey Nonresponse</i>		
Employer Did Not Report a Value	11	--
Employer Reports That Participant Did Not Work for Them	9	--
Employer Did Not Return Survey	39	--
<b>Total Nonresponse</b>	<b>59</b>	<b>--</b>
<b>Total</b>	<b>136</b>	<b>--</b>

<sup>a</sup>Standard Occupational Classification.

<sup>b</sup>A participant or employer is included more than once if they worked for more than one employer or employed more than one participant, respectively, in the quarter.

ND - Not disclosable due to confidentiality of information.

**Occupation**

Table 3.2 (see page 22) shows participants’ employment by SOC major occupational group. Occupational title and primary job duties of participants were reported by employers. Based on the information provided, occupations were assigned an SOC code with a total of 77 occupations reported.

As anticipated, participants most commonly worked in Food Preparation & Serving Related occupations (26 jobs; 33.8%). Sales & Related and Office & Administrative Support occupations also employed several participants (14 and 12, respectively). The remaining participants were employed in other occupational groups such as Building & Grounds Cleaning & Maintenance and Personal Care & Service with 6 participants each (7.8%).

**Compensation and Hours Worked**

In 2004Q2, participants earned an average of \$6.87 per hour (see Table 3.3). The wage excludes employers who reported wages of less than the Federal minimum wage (\$5.15 per hour). Firms are permitted to pay less than the minimum wage for certain occupations that are usually tipped, provided that the total wage (tips plus wages combined) is equal to or greater than \$5.15 per hour (Wyoming Department of Employment, Labor Standards, n.d.).

**Table 3.3: Average Hourly Wages and Average Hours Worked by Participants Employed in Wyoming Second Quarter 2004**

	Value	Number <sup>a</sup>
Average Hourly Wage <sup>b</sup>	\$6.87	74
Average Hours Worked	27.2	
<i>Survey Nonresponse</i>		
Employer Did Not Report a Value		14
Employer Reports That Participant Did Not Work for Them	N/A	9
Employer Did Not Return Survey		39
<b>Total Nonresponse</b>		<b>62</b>
<b>Total</b>	<b>N/A</b>	<b>136</b>

<sup>a</sup>A participant or employer is included more than once if they worked for more than one employer or employed more than one participant, respectively, in the quarter.  
<sup>b</sup>Excludes reported wages less than the Federal minimum wage of \$5.15 per hour (n=5).  
 N/A - Not applicable.

Workers in Food Preparation & Serving Related occupations commonly fall under this category.

Participants worked an average of 27.2 hours during the quarter. Younger participants still in high school were probably working fewer hours, while older participants who graduated in 2003 were most likely working more hours.

**Table 3.4: Benefits Offered to Participants Employed in Wyoming, Second Quarter 2004**

<b>Benefit Type</b>	<b>Number<sup>a</sup></b>	<b>Percent of Subtotal</b>
At Least One of the Following:	23	31.1%
Paid Holidays	14	18.9%
Paid Vacation	12	16.2%
Paid Sick Leave	11	14.9%
Paid Personal Leave	6	8.1%
Paid Maternity/Paternity Leave	4	5.4%
Child Care	ND	ND
Life Insurance	9	12.2%
Long-Term Disability Insurance	7	9.5%
Short-Term Disability Insurance	7	9.5%
Health Insurance	11	14.9%
Dependent Health Insurance	7	9.5%
Retirement Plan	8	10.8%
Dental Plan	10	13.5%
Vision Plan	9	12.2%
Wellness Plan	ND	ND
Educational Assistance	6	8.1%
Shift Differential	5	6.8%
Hiring Bonus	ND	ND
Other	ND	ND
No Benefits Offered	51	68.9%
<b>Subtotal</b>	<b>74</b>	<b>--</b>
<i>Survey Nonresponse</i>		
Employer Did Not Report a Value	14	--
Employer Reports That Participant Did Not Work for Them	9	--
Employer Did Not Return Survey	39	--
<b>Total Nonresponse</b>	<b>62</b>	<b>--</b>
<b>Total</b>	<b>136</b>	<b>--</b>

<sup>a</sup>Includes multiple responses for employers who reported offering more than one of the listed benefits to one or more employees.

ND - Not disclosable due to confidentiality of information.

Table 3.4 (see page 24) shows benefits offered to participants working in Wyoming. Of the 74 responses to the benefits question, 51 (68.9%) said that no benefits were offered. Of the 23 affirmative responses (31.1%) to the question asking whether benefits were offered to participants, paid holidays were the most common (14 responses; 18.9%), followed by paid vacation leave (12 responses; 16.2%). Eleven responses indicated employers offered paid sick leave and health insurance. For more information on employer-provided benefits, see *Wages and Benefits in Wyoming* located on R&P’s website at <http://doe.state.wy.us/LMI/OESBenPub.pdf>.

**Training and Skills Requirements**

For most jobs, employers require on-the-job training (OJT) from their workers (see Table 3.5). Of the 76 responses, 64 (84.2%) reported OJT as the training requirement. Given participants’ limited work history, the result is not entirely unanticipated. Twelve required work experience in related

**Table 3.5: Training Requirements for Jobs Held by Participants, Second Quarter 2004**

<b>Training Type</b>	<b>Number<sup>a</sup></b>	<b>Percent of Subtotal</b>
At Least One of the Following:	67	88.2%
On-the-Job Training	64	84.2%
Postsecondary Technical Training	0	0.0%
Work Experience in Related Occupations	12	15.8%
Associate's Degree	0	0.0%
Bachelor's Degree	0	0.0%
Master's Degree	0	0.0%
Licensure or Certification	ND	ND
Other	ND	ND
None Required	9	11.8%
<b>Subtotal</b>	<b>76</b>	--
<i>Survey Nonresponse</i>		
Employer Did Not Report a Value	12	--
Employer Reports That Participant Did Not Work for Them	9	--
Employer Did Not Return Survey	39	--
<b>Total Nonresponse</b>	<b>60</b>	--
<b>Total</b>	<b>136</b>	--

<sup>a</sup>Includes multiple responses for employers who reported requiring more than one of the listed training types for one or more employees.  
 ND - Not disclosable due to confidentiality of information.

occupations, while 9 reported that no prior training or skills were required for the job.

**Employer Satisfaction With the Participant**

*Satisfaction Scores*

We asked employers about their overall satisfaction with the participant’s work skills and habits (Question 9). The results are summarized in Table 3.6. On a scale of 1 to 10, where 1 is very dissatisfied and 10 is very satisfied, employers reported an average satisfaction score of 7.7.

By program, the average satisfaction score for ProStart participants was 7.6. The average satisfaction score for participants enrolled in both ProBaking and ProStart programs was 9.1. None of the employers of participants enrolled only in ProBaking reported a score.

Although the average satisfaction score for those who participated in both programs was higher than the score for the ProStart only participants, the relatively few responses (10) regarding ProBaking/ProStart participants may be skewed. More reported scores would help determine whether or not the

**Table 3.6: Average Employer Satisfaction Score<sup>a</sup> With Participants by Participant Program**

*How would you rate your overall satisfaction with the employee's work skills and habits?*

<b>Program</b>	<b>Number of Responses</b>	<b>Average Satisfaction Score</b>
ProStart	49	7.6
ProBaking and ProStart	10	9.1
ProBaking	0	NA
<b>All Participants<sup>b</sup></b>	<b>59</b>	<b>7.7</b>
<i>Survey Nonresponse</i>		
Employer Did Not Report a Value	29	--
Employer Reports that Participant Did Not Work for Them	9	--
Employer Did Not Return Survey	39	--
<b>Total Nonresponse</b>	<b>77</b>	<b>--</b>
<b>Total</b>	<b>136</b>	<b>--</b>

<sup>a</sup>Based on a scale of 1 (very dissatisfied) to 10 (very satisfied).  
<sup>b</sup>Excludes nondisclosable responses.  
 NA - Not available.

higher score is reflective of dual program enrollment or a reflection of participant demographic characteristics.

### *Open-Ended Questions*

To gain a better understanding of the satisfaction scores reported, we asked two additional questions:

- a: What factors contributed to the score given in the previous question?
- b: What would need to change about the individual in order for you to give them a higher score?

Using content analysis, we identified common themes in the responses and then grouped the responses into various categories. A comment was counted more than once if it contained multiple themes (e.g., pleasant to work with and quick learner). A summary of the content analysis is shown in Table 3.7 (see page 28).

Employers generally reported favorably on the participants they employed, with a total of 65 comments identified as positive in response to question a. Content analysis revealed 10 comments identified as negative in response to question a. The remaining eight responses to question a either were of a miscellaneous nature (5) or the intent of the response was unclear (3).

We asked employers what would need to change about the employee for a higher score to be given (question b). The most common response (18 of the 55) indicated that nothing should be changed about the employee's performance. Eight responses indicated a need for more experience, while 7 pointed toward a need for an improved work ethic.

### **Employer Satisfaction With the Labor Supply**

In addition to asking employers about the participant, we also asked employers about their satisfaction with the available labor supply and their satisfaction with the skills of that labor supply. Many of the responses to these questions appeared to pertain to the participant rather than the general labor supply as intended. Because of irregularities in the results, the data from this section were omitted from the analysis.

### **Summary**

Our survey reveals that many participants were working in Food Preparation & Serving Related occupations as intended by the WHAM program. Participants earned, on average, \$1.72 per hour more than the federal minimum wage. At least some participants gained access to benefits

**Table 3.7: Employer Satisfaction With Participants, Content Analysis Categories, and Number of Responses<sup>a</sup> Per Category, 2004**

*How would you rate your overall satisfaction with the employee's work skills and habits?*

*Scale: 1 = very dissatisfied; 10 = very satisfied*

*a: What factors contributed to the score given in question above?*

*b: What would need to change about the individual in order for you to give them a higher score?*

<b>Categories of Responses to Question a</b>	<b>Number of Responses</b>	<b>Categories of Responses to Question b</b>	<b>Number of Responses</b>
<b>Positive Comments</b>		Fabulous! Don't change a thing!	18
On time	8	More experience	8
Great worker/job performance	8	Miscellaneous	8
Dependable, reliable	8	Improve work ethic, habits	7
Good work ethic	7	Better attitude, cooperation	4
Good customer service skills	7	Be more aggressive, take initiative	3
Pleasant to work with	6	Age, maturity	3
Aggressive, taking initiative	6	More education	2
Good attitude	5	Be on time	2
Works well with others	4	<b>Total</b>	<b>55</b>
Quick learner	4		
Detail oriented	2		
<b>Total Positive Comments</b>	<b>65</b>		
<b>Negative Comments</b>			
Less than optimal work ethic	6		
Bad attitude	3		
Not on time	1		
<b>Total Negative Comments</b>	<b>10</b>		
Miscellaneous	5		
Intent of response not clear	3		

<sup>a</sup>A single response to question a or b is included multiple times in the content analysis for the question if the comments fit into multiple categories (e.g., bad attitude and not on time).

such as paid holidays and health insurance. Employers on the whole expressed satisfaction with participants' work performance. Additional research would need to be conducted to determine if the results are unique to the particular pool of participants or if the WHAM program is influencing participant and employer outcomes.

## References

Wyoming Department of Employment, Labor Standards. (n.d.) Tipped employees. *Handy Reference*. Retrieved June 14, 2005, from <http://wydoe.state.wy.us/doe.asp?id=258>

## **Chapter 4 – Study Implications**

In Chapter 1 we described the economic context in which WHAM program participants became engaged with the labor market. Chapter 2 described study results using administrative data sources, while Chapter 3 discussed the survey results. In this chapter we turn our attention to the implications of the research.

### **Turnover and Attachment to Wyoming’s Labor Force**

One issue of concern about youth and young adult employment trends is high turnover relative to other members of the labor force. Further exacerbating the problem is a lack of skills. Holzer and LaLonde (1998, p. 6) found that, “less skilled young adults exhibit less attachment to the employed work force than other workers, and this pattern is maintained as they mature.”

A study using 1997 National Employer Survey (NES) data suggests that employer involvement in local high schools may help reduce turnover among younger labor force members. Iannozzi and Shapiro (1998, p. 6) examined 19 types of employer involvement and found that employers who participated in eight or more activities at local high schools “have a young worker turnover rate that is half the youth turnover rate for employers that do not actively participate with high schools.”

Employer involvement is one of the components of the WHAM program. Shapiro and Iannozzi (1998, p. 6) suggest that “by actively engaging their local education systems, establishments may be helping a future labor force that is more stable, more work-ready, and presumably better-matched to the workplace of the future.” Our initial study of WHAM participants indicates that they have a somewhat stronger attachment to Wyoming’s labor market 4 quarters after the end of training compared to non-participants with similar demographic characteristics. More research is needed to determine if this holds over a longer period of time.

Another issue is the exodus of Wyoming’s youth out of state. Jones (2005) tracked individuals in Wyoming’s labor market who were 18-24 years old in 1993 into 2003. A total of 44,873 individuals in this age group worked in Wyoming in 1993. By 2003, more than half (56.6%) had no wages in the state.

The migration was even more pronounced in the Leisure & Hospitality industry. In 1993, a total of 12,314 individuals ages 18-24 worked in the industry. By 2003, only 15.0% (1,850 workers) had wages in the industry.

## **Reliance on Youth – The Long Term**

Leisure & Hospitality relies more heavily on young workers than do other industries. Over the long term, this could present a problem for the industry. The U.S. Census Bureau (2002) forecasted total growth in the population of individuals 14-24 years-old as only 632 or 1.4% of the total projected Wyoming population growth of 44,959 persons.

Provided that low growth in the 14- to 24-year-old age group occurs relative to the total population in the coming years, Leisure & Hospitality has at least a couple of options with regards to its labor force:

- Work harder to recruit and retain young workers
- Expand their recruitment efforts to older, possibly retired, labor force members

With few young workers on the horizon, firms may need to be creative when it comes to staffing their businesses in the future.

## **Other Issues**

Our objective with this report is to describe the impact of WHAM training on employment outcomes for its participants as well as depict potential career paths. Based on a relatively small number of participants (173), the program appears to be benefiting employers and participants alike. Participants gain employment with higher wages relative to those who do not receive training. Employers benefit from additional skilled workers and lower turnover. Other outcomes including college attendance and military service are occurring among participants.

These outcomes present an opportunity for the Wyoming Lodging & Restaurant Association (WLRA) to demonstrate that its WHAM program is meeting its objectives for both firms and participants. In turn, its success may influence schools that do not currently participate to become involved with the program. Furthermore, student enrollment in the training may increase as students see the potential gains in terms of employment or the chance to earn college scholarships.

Our study affords a snapshot of a very small group of high school students' employment experiences. Obtaining similar information on other high school graduates, especially those who do not seek postsecondary education, would provide the means to analyze the work experiences of a large component of Wyoming's labor force about which data are severely lacking. Using methods similar to the WHAM study and others conducted by R&P, policy makers, teachers, career counselors, and others could use the information to:

- Advance school-to-work programs such as WHAM
- Design targeted training programs
- Support instructional improvement

## Summary

The WHAM program provides opportunities for both program participants and employers in the culinary arts and hospitality management fields. Turnover and low attachment to the labor market represent obstacles to achieving employment stability for youth and young adult workers. Employer involvement in local high schools as well as programs such as WHAM may help mitigate these problems. In the coming years, reducing turnover and increasing attachment among these workers could become especially important to Leisure & Hospitality firms. As the pool of young workers relative to older labor force members shrinks, Leisure & Hospitality may need to develop additional strategies to recruit and retain workers. Further understanding of high school students' labor market outcomes could lead to improved policy and labor market interventions.

## References

- Holzer, H.J. and LaLonde, R. J. (1998, December). *Job change and job stability among less-skilled young workers*. Retrieved June 23, 2005, from [http://www.jcpr.org/wpfiles/Holzer\\_LaLonde.pdf?CFID=6806662&CFTOKEN=38818872](http://www.jcpr.org/wpfiles/Holzer_LaLonde.pdf?CFID=6806662&CFTOKEN=38818872)
- Iannozzi, M. and Shapiro, D. *The benefits to bridging school and work*. Retrieved June 23, 2005, from National Center for Postsecondary Improvement Website: [http://www.stanford.edu/group/ncpi/documents/pdfs/2-09\\_bridging.pdf](http://www.stanford.edu/group/ncpi/documents/pdfs/2-09_bridging.pdf)
- Jones, S. (2005). Labor retention: Out-migration of youth. *Wyoming Labor Force Trends*, 42(6), 1-3.
- U.S. Census Bureau. (2002). *Detailed state projections by single year of age, sex, race, and Hispanic origin: 1995 to 2025*. Retrieved May 16, 2005, from <http://www.census.gov/population/www/projections/stproj.html>



# Appendix - Survey Instrument

THE STATE



OF WYOMING

DAVE FREUDENTHAL  
GOVERNOR

## *Department of Employment*

RESEARCH & PLANNING

P.O. BOX 2760  
CASPER, WY 82602

(307) 235-3200

Employer UI Number:

Employer Name  
ATTN: PERSONNEL/PAYROLL  
Employer Address

RE: Student Name, Social Security Number

Dear Employer:

In cooperation with the Wyoming Lodging and Restaurant Association (WLRA), Research & Planning is conducting a survey of employers of Wyoming Hospitality Alliance Mentoring (WHAM) Program participants. The enclosed questionnaire is designed to produce information needed to make certain that the needs of employers, like yourself, will be met by students, and that students receive the training needed to succeed in Wyoming's labor market.

The payroll information you provide to the Department of Employment indicates that during some or all of the months of April, May, and/or June of 2004, your firm employed the above-named worker who recently participated in the WHAM program. We are requesting information about the characteristics of the position filled by the worker (e.g., wage rate, occupation, benefits). In addition, we are seeking information about employers' satisfaction with the skills workers received. *In order to develop an accurate picture of employer satisfaction, we request when possible that the individual's direct supervisor answer questions 9 through 10b of the form.*

Summary results from the survey will only be made available outside the Research & Planning Section of the Department of Employment in statistical form. Your responses and information about your workers are protected by Wyoming State Statute (WS 27-3-603) and will be held confidential to the extent permitted by law.

We expect this form to take no longer than ten minutes to complete. Please mail the questionnaire by **February 21, 2005** in the self-addressed stamped envelope. Results compiled from the questionnaires will be posted on our website at <http://doe.state.wy.us/LMI/>. To receive a copy of the results, print your name in the area provided, and check the "Yes" box in question 15 at the end of the questionnaire. If you have questions please call Sara Saulcy at (307) 473-3819.

Thank you for your time.

A handwritten signature in black ink that reads "Tom Gallagher".

Tom Gallagher

Enclosure

<b>Survey of Employers of Wyoming Hospitality Alliance Mentoring Program Participants</b>		Rev. 2/2005																								
	Wyoming Department of Employment Research & Planning P.O. Box 2760 Casper, WY 82602 (307) 473-3819 <a href="http://doe.state.wy.us/LMI/">http://doe.state.wy.us/LMI/</a>	Survey Date: February 2005 <b>Please mail form by February 21, 2005.</b>  <i>We expect this form to take no more than 10 minutes to complete</i> Control # _____																								
<b>All data collected must, by Wyoming Employment Security Law 27-3-603, be held in the strictest confidence, with results published only as summary statistics. The information you provide to us will be held confidential to the extent permitted by law.</b>																										
<b>Employee:</b> _____		<b>SSN:</b> _____																								
<b>Work, Pay, and Benefits</b>																										
1. The State of Wyoming's Unemployment Insurance database indicates that the above-named individual was an employee of your business during some or all of the months of April, May, and/or June of 2004. Is that correct? <input type="checkbox"/> Yes <i>(If yes, please continue.)</i> <input type="checkbox"/> No <i>(If no, STOP. Please return this form in the enclosed self-addressed stamped envelope. Thank you.)</i>																										
2. What was this worker's rate of pay as of May 12, 2004? <i>(Please include base rate of pay, tips, commissions, and other monetary compensation.)</i>		<input type="checkbox"/> Hour <input type="checkbox"/> Week <input type="checkbox"/> 2 Weeks <input type="checkbox"/> Month <input type="checkbox"/> Other <i>(specify)</i> _____																								
3. On average how many hours did this employee normally work each week at that time? _____ Hours																										
4. Have any of the following job benefits been offered to the worker? <i>(Please check all that apply.)</i>																										
<table style="width: 100%; border: none;"> <tr> <td><input type="checkbox"/> Paid holidays</td> <td><input type="checkbox"/> Short-term disability insurance</td> <td><input type="checkbox"/> Shift differential</td> </tr> <tr> <td><input type="checkbox"/> Paid vacation</td> <td><input type="checkbox"/> Health insurance</td> <td><input type="checkbox"/> Hiring bonus</td> </tr> <tr> <td><input type="checkbox"/> Paid sick leave</td> <td><input type="checkbox"/> Dependent health insurance</td> <td><input type="checkbox"/> Other <i>(specify; e.g. supplemental insurance)</i> _____</td> </tr> <tr> <td><input type="checkbox"/> Paid personal leave</td> <td><input type="checkbox"/> Retirement plan</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Paid maternity/paternity leave</td> <td><input type="checkbox"/> Dental plan</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Child care</td> <td><input type="checkbox"/> Vision plan</td> <td><input type="checkbox"/> No job benefits offered</td> </tr> <tr> <td><input type="checkbox"/> Life insurance</td> <td><input type="checkbox"/> Wellness plan</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Long-term disability insurance</td> <td><input type="checkbox"/> Educational assistance</td> <td></td> </tr> </table>			<input type="checkbox"/> Paid holidays	<input type="checkbox"/> Short-term disability insurance	<input type="checkbox"/> Shift differential	<input type="checkbox"/> Paid vacation	<input type="checkbox"/> Health insurance	<input type="checkbox"/> Hiring bonus	<input type="checkbox"/> Paid sick leave	<input type="checkbox"/> Dependent health insurance	<input type="checkbox"/> Other <i>(specify; e.g. supplemental insurance)</i> _____	<input type="checkbox"/> Paid personal leave	<input type="checkbox"/> Retirement plan		<input type="checkbox"/> Paid maternity/paternity leave	<input type="checkbox"/> Dental plan		<input type="checkbox"/> Child care	<input type="checkbox"/> Vision plan	<input type="checkbox"/> No job benefits offered	<input type="checkbox"/> Life insurance	<input type="checkbox"/> Wellness plan		<input type="checkbox"/> Long-term disability insurance	<input type="checkbox"/> Educational assistance	
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<input type="checkbox"/> Long-term disability insurance	<input type="checkbox"/> Educational assistance																									
<b>Type of Work</b>																										
5. On May 12, 2004, what was this worker's occupation? <i>(For example, baker, food service supervisor. Please print in the shaded area.)</i> <div style="border: 1px solid black; background-color: #e0e0e0; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; background-color: #e0e0e0; height: 20px; width: 100%;"></div>																										
6. On May 12, 2004, what were this worker's most important activities or duties? <i>(For example, supervising, baking. Please print in the shaded area.)</i> <div style="border: 1px solid black; background-color: #e0e0e0; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; background-color: #e0e0e0; height: 20px; width: 100%;"></div>																										
7. Check the qualifications the type of work described in questions 5 and 6 requires. <i>(Please check all that apply.)</i>																										
<table style="width: 100%; border: none;"> <tr> <td><input type="checkbox"/> On-the-job training</td> <td><input type="checkbox"/> Bachelor's degree</td> <td><input type="checkbox"/> Other <i>(specify; for example, a course in medical terminology)</i> _____</td> </tr> <tr> <td><input type="checkbox"/> Postsecondary technical training</td> <td><input type="checkbox"/> Master's degree</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Work experience in related occupations</td> <td><input type="checkbox"/> Licensure or certification</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Associate's degree</td> <td><input type="checkbox"/> None required</td> <td></td> </tr> </table>			<input type="checkbox"/> On-the-job training	<input type="checkbox"/> Bachelor's degree	<input type="checkbox"/> Other <i>(specify; for example, a course in medical terminology)</i> _____	<input type="checkbox"/> Postsecondary technical training	<input type="checkbox"/> Master's degree		<input type="checkbox"/> Work experience in related occupations	<input type="checkbox"/> Licensure or certification		<input type="checkbox"/> Associate's degree	<input type="checkbox"/> None required													
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<input type="checkbox"/> Work experience in related occupations	<input type="checkbox"/> Licensure or certification																									
<input type="checkbox"/> Associate's degree	<input type="checkbox"/> None required																									
8. Are there any extenuating factors affecting this worker's employment that you would like to comment on? <i>(Specify below; for example, individual is a volunteer, worker was employed for only a few days by the firm.)</i>																										

(Over Please)

<b>Skills, Work Habits, and Worker Availability</b>		
<p><i>For purposes of instructional program improvement, we are seeking information about employer satisfaction with the employee's work skills and habits, as well as labor supply for the position in which the worker is employed. When possible, we request that the individual's direct supervisor complete questions 9 through 11. Thank you.</i></p>		
<p>9. How would you rate your overall satisfaction with the employee's work skills and habits? (For example, cooking, customer service skills; please circle the number on the scale below that most closely describes your views.)</p>		
<p>Very Dissatisfied</p> <p>1 2 3 4 5 6 7 8 9 10</p>	<p>Very Satisfied</p>	<p><input type="checkbox"/> Don't know/Not Familiar With Employee's Work (Please go to question 10.)</p>
<p>9a. What factors contributed to the score given in question 9 above?</p>		
<p>9b. What would need to change about the individual in order for you to give them a higher score in question 9? (Please write NA if score the satisfaction score is a ten.)</p>		
<p>10. How would you rate your overall satisfaction with the available supply and the skills of the available labor supply for the position this worker holds? (Please circle the number on the scale below that most closely describes your views.)</p>		
<p>Very Dissatisfied</p> <p>1 2 3 4 5 6 7 8 9 10</p>	<p>Very Satisfied</p>	<p><input type="checkbox"/> Don't know (Please go to question 11.)</p>
<p>10a. What factors contributed to the score given in question 10 above?</p>		
<p>10b. What would need to change about the labor supply in order for you to give a higher score in question 10? (Please write NA if score the satisfaction score is a ten.)</p>		
<p>11. Please provide any additional comments on the sufficiency of the supply and/or skill of labor for the position.</p>		
<p>12. Contact person name and title. (Please print in the shaded areas below.)</p>		
<p>First Name</p> <p>_____</p>		
<p>Last Name</p> <p>_____</p>		
<p>Title</p> <p>_____</p>		
<p>Phone Number (Please include area code.)</p> <p>_____ - _____ e x t _____</p>		
<p>E-Mail Address</p> <p>_____</p>		
<p>13. Would you like to receive a copy of the statistical report compiled from all of the questionnaire results?</p> <p><input type="checkbox"/> Yes      <input type="checkbox"/> No</p>		

Thank you!

