

# Employer Survey 2004

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**WASHINGTON STATE**

WASHINGTON STATE  
**Workforce Training and Education Coordinating Board**

**Our Vision**

Washington’s Workforce Training and Education Coordinating Board is an active and effective partnership of labor, business, and government leaders guiding the best workforce development system in the world.

**Our Mission**

We shape strategies to create and sustain a high-skill, high-wage economy.

To fulfill this Mission, the Board will:

- Advise the Governor, Legislature, and other policymakers on workforce development policy and innovative practice.
- Promote a seamless workforce development system that anticipates and meets the lifelong learning and employment needs of our current and future workforce.
- Advocate for the training and education needed for success in the 75–80 percent of jobs that do not require a baccalaureate degree
- Ensure quality and accountability by evaluating results, and supporting high standards and continuous improvement.

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# Washington State Employers' Workforce Training Needs and Practices

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## 2004



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Workforce Training and Education Coordinating Board**

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# Survey Highlights

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*Survey Instrument*

Roughly 3,000 Washington State employers responded to our survey during the summer and fall of 2003. We asked about their needs during the previous 12 months, a period when the state economy was struggling to recover from the recession. What did we learn?

We learned that even in a weak labor market, many employers had difficulty finding qualified job applicants.

- Fewer employers reported hiring new employees compared to previous surveys conducted when the labor market was much stronger. Still, the majority of firms attempted to fill positions. Fifty-five percent of firms reported hiring new employees in the last 12 months, compared with sixty-five percent in 2001.

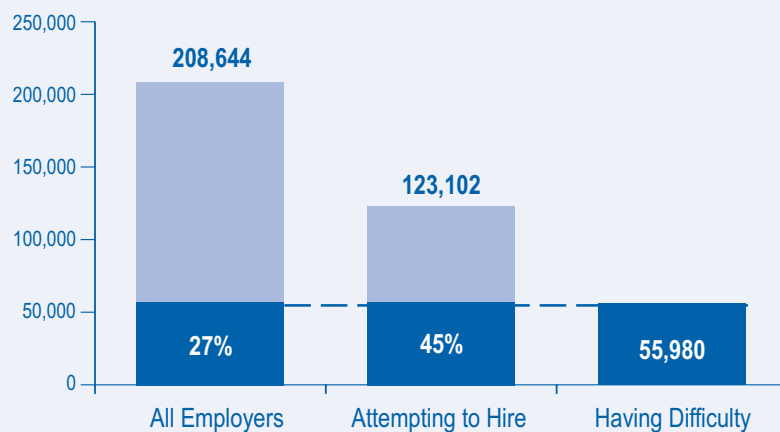
- Fewer employers reported having difficulty filling these positions than did so during previous surveys conducted during the economic expansion. The problem of skill shortages, however, has persisted. Among firms attempting to hire, 45 percent reported difficulty finding qualified job applicants, compared with 60 percent two years ago.
- Extrapolating from the survey results, an estimated 55,980 Washington employers—about one in every four—had difficulty finding qualified job applicants during the past year.

Why is there a skill shortage during a recession? We learned that employers were looking for skills that many of the unemployed workers and new labor market entrants did not have. The shortage is greatest for jobs requiring postsecondary education, especially for vocationally trained workers from our community colleges, apprenticeship programs, and private career schools.

- Among employers attempting to hire workers with postsecondary vocational training, 67 percent reported difficulty finding qualified applicants. In contrast, among employers attempting to hire workers with only a high school diploma, 24 percent reported difficulty.

FIGURE 1

**Washington State Employers, Those Attempting to Hire, and Those Having Difficulty Finding Qualified Applicants**



We learned that employers most frequently had difficulty finding job applicants with specific occupational skills.

- Among employers reporting difficulty finding qualified job applicants, 91 percent had difficulty finding applicants with occupation-specific skills (e.g., they wanted to hire a registered nurse but had trouble finding one).
- About 85 percent had difficulty finding applicants with problem-solving skills, communication skills, or positive work habits and attitudes. Fewer employers had difficulty finding applicants with basic math (62 percent), writing (63 percent), or reading skills (38 percent).

We learned from employers that this shortage is damaging; it reduces productivity, sales, and the quality of products and services.

- Among firms reporting difficulty finding qualified job applicants, 70 percent indicated that the difficulty finding qualified applicants lowered output or sales, and 56 percent said it reduced product quality.

# Background

Every two years, the Workforce Training and Education Coordinating Board (Workforce Board) surveys Washington State employers. The Workforce Board uses the survey responses to identify employers' workforce needs and practices and their satisfaction with workforce programs. The Workforce Board shares the information with policymakers and program administrators in order to improve the workforce development system's responsiveness to employer needs. This report summarizes the survey results. The survey information on employer satisfaction with the skills of program participants is published as part of a separate evaluation of the state's workforce programs, *Workforce Training Results*.

The Workforce Board administered the survey during the summer and fall of 2003. The Association of Washington Business assisted by encouraging employers to respond, and 25 percent or 2,968 employers did. This is a good response rate for a mass mail survey of this length, and an increase from the 20 percent response rate two years ago. The margin of error is 1.8 percent at the 95 percent confidence level for statewide analysis. The sample was stratified by firm size, region of the state, and industry. Sample weights were used to make the reported statistics representative of all employers in the state.

Appendix A provides definitions of industry sectors and the distribution of survey responses by workforce development area, firm size, and industry. Appendix B provides industry analysis, and Appendix C contains the short form of the survey instrument.

FIGURE 2

Distribution of Survey Responses by Industry Sector\*

Industry	# of Responses
Agriculture and Food Processing .....	455
Construction .....	338
High-Tech .....	261
Manufacturing .....	534
Services .....	488
Trade .....	434
Other: Finance, Insurance, and Real Estate (F.I.R.E); Transportation; Utilities; and Government .....	458
All Industries .....	2,968

\*See Appendix, Figure A-4 for definitions of industry sectors.



# Survey Responses

*In some cases, responses are compared with previous surveys. Appendix B shows additional breakdowns of survey responses by industry sector.*

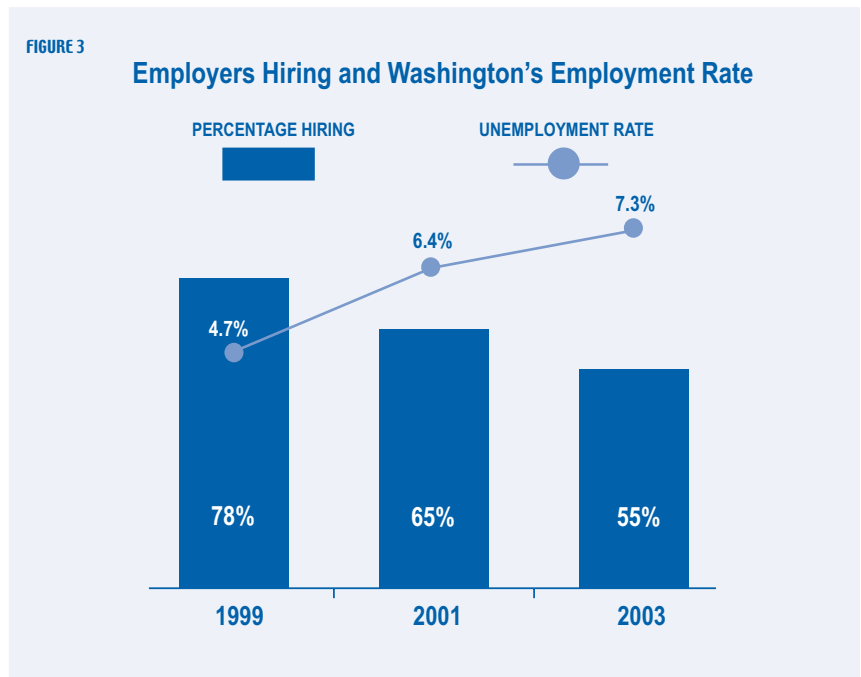
## Number of employers who hired new employees

### Question

*Has your firm/organization hired any new employees in the last 12 months? (Q1 on survey)*

- The most recent survey asked employers about their needs during a period when the state was still in the midst of the economic downturn. Not surprisingly, fewer firms reported hiring new employees compared to previous surveys conducted when the labor

market was much stronger. Still, the majority of firms attempted to fill positions. Fifty-five percent of firms reported hiring new employees in the last 12 months.



# Scarcity of skilled job applicants

## Question

*In the last 12 months, did your firm/organization have any difficulty finding qualified applicants for any of the jobs you were trying to fill? (Q3 on survey)*

- Among firms attempting to hire workers during the last 12 months, 45 percent reported difficulty finding qualified job applicants, compared with 60 percent in 2001. While fewer employers reported shortages of skilled labor, the shortages still affected a large number of firms. An estimated 55,980 employers had difficulty finding qualified job applicants. When the labor market does become stronger, the problem is likely to become even more intense.
- The difficulty in finding qualified job applicants was most severe in the construction and high-tech industries.
- Employers in all parts of Washington reported difficulty finding qualified applicants, but the highest incidences

were in the Olympic, Seattle-King County, and Eastern Washington workforce development areas (WDAs). The recent recession was felt strongest in Western Washington, and employers in this region were less likely to report difficulty hiring compared to two years ago.

**FIGURE 4**  
Employers Attempting to Hire and Having Difficulty Finding Qualified Job Applicants



**FIGURE 5**  
Employers Reporting Difficulty Finding Qualified Job Applicants by Industry Sector,\* Among Those Attempting to Hire

Industry	2001	2003
Agriculture and Food Processing	66%	44%
Construction	48%	65%
High-Tech	47%	54%
Manufacturing	60%	49%
Services	63%	38%
Trade	58%	51%
Other: F.I.R.E., Transportation, Utilities, and Government	61%	42%
<i>All Industries</i>	60%	45%

\*See Appendix, Figure A-4 for definitions of industry sectors.

**FIGURE 6**  
Employers Reporting Difficulty Finding Qualified Job Applicants by WDA,\* Among Those Attempting to Hire

WDA	2001	2003
Olympic	61%	56%
Seattle-King County	71%	54%
Eastern Washington Partnership	54%	53%
Tri-County	51%	46%
Northwest	43%	46%
North Central	42%	45%
Benton-Franklin	61%	44%
Snohomish County	61%	42%
Spokane Area	47%	41%
Pacific Mountain	69%	38%
Tacoma-Pierce County	54%	30%
Southwest Washington	54%	28%
<i>Statewide</i>	60%	45%

\*See Appendix, Figure A-1, for the counties included in each WDA.

## Economic costs of skill shortages

### Question

How did your firm/organization respond to the difficulty finding qualified applicants?  
(Q4 on survey)

- Faced with a shortage of qualified applicants, firms increased recruiting efforts, hired less qualified workers, and left openings unfilled. Among firms having difficulty, the responses to skill shortages were similar to those reported two years ago.

FIGURE 7

### Employer Response to the Shortage of Qualified Applicants

Response	Among Employers Who Had Difficulty	Among All Employers
Increased recruiting efforts .....	72%	15%
Hired a less qualified applicant .....	62%	13%
Increased overtime for employees .....	50%	10%
Did not fill the opening .....	41%	9%
Increased wages to attract applicants .....	34%	7%
Outsourced work to another firm* .....	28%	5%

\*This does not necessarily involve outsourcing overseas; the other firms could be in Washington or another state.

### Question

Which of the following has resulted from your firm's difficulty in finding qualified applicants?  
(Q8 on survey)

- Employers believed skill shortages were hurting their businesses by limiting output or sales, lowering productivity, and reducing product quality. Among all firms, impacts on productivity, output, and service quality were less pervasive than in 2001 when the labor market was tighter and more firms were attempting to hire.

FIGURE 8

### Economic Impacts of Skill Shortages

Impact	Among Employers Who Had Difficulty	Among All Employers
Reduced production output or sales .....	70%	16%
Lowered overall productivity .....	69%	16%
Reduced product or service quality .....	56%	13%
Prevented firm from expanding its facilities .....	31%	8%
Prevented firm from developing new products/services .....	31%	7%
Caused firm to move some operations out of state .....	4%	1%

## Difficulty finding applicants by level of education

### Question

*In general, how much difficulty has your firm/organization experienced in the last 12 months finding qualified applicants with different education levels? (Q6 on survey)*

- The problem is a scarcity of workers with postsecondary training, as opposed to a general shortage. Among employers attempting to hire workers with a vocational associate degree or a baccalaureate degree, for example, about 67 percent reported difficulty finding qualified applicants. In contrast, among employers attempting to hire workers with only a high school diploma, only 24 percent reported difficulty.
- Given hiring patterns across firms and levels of reported difficulty, the scarcity of workers with postsecondary vocational training affected more firms than were affected by shortages of other workers. An estimated 17,000 employers had difficulty finding applicants with vocational certificates, and 16,600 employers had difficulty finding applicants with vocational associate degrees.
- An estimated 12,700 employers had difficulty finding applicants with baccalaureate degrees.
- Compared with 2001 responses, fewer firms were attempting to hire, and the percentage of all firms reporting difficulty hiring across all educational levels has declined as well.

FIGURE 9

Employer Difficulty Finding Applicants by Educational Level

Educational Level	Among Employers Attempting to Hire at That Level	Estimated # of Firms	Among All Employers
Neither a high school diploma or GED	19%	4,200	2%
High school diploma or GED	24%	9,300	4%
Some college course work	35%	11,300	5%
Vocational certificate	53%	17,000	8%
Vocational associate degree	67%	16,600	8%
Academic associate degree	60%	10,800	5%
Baccalaureate degree	68%	12,700	6%
Master's, doctoral, or professional degree	68%	7,300	3%

## Difficulty finding workers with certain abilities/skills

### Question

*How much difficulty has your firm/organization had finding employees with the following skills? (Q7 on survey)*

- Firms had the most difficulty finding applicants with occupation-specific skills.
- Firms also found it difficult to find applicants with problem-solving or critical thinking skills, communication skills, and positive work habits.
- Fewer firms had difficulty in finding workers with the basic skills of reading, writing, and math.

FIGURE 10

### Employers Reporting Difficulty Finding Qualified Applicants With Specific Skills and Abilities

Type of Skill or Ability	Among Employers Who Had Difficulty	Among All Employers
Occupational-specific skills .....	91%	21%
Problem-solving or critical thinking skills .....	87%	18%
Positive work habits and attitudes .....	83%	21%
Communication skills .....	83%	20%
Ability to adapt to changes in duties and responsibilities .....	79%	17%
Team work skills .....	75%	16%
Computer skills .....	72%	14%
Ability to accept supervision .....	69%	16%
Writing skills .....	63%	14%
Math skills .....	62%	14%
Reading skills .....	38%	8%

## Employer-provided classroom training

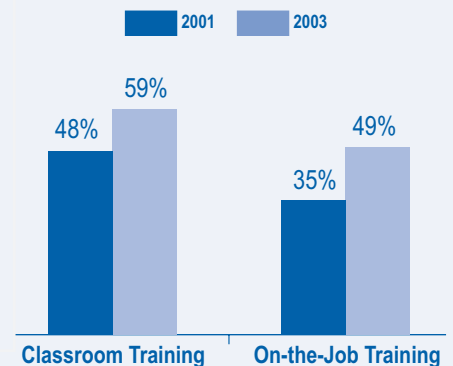
### Question

*Did your firm/organization provide or pay for any classroom training, workshops, or seminars (lasting at least 4 hours) for any employees in the last 12 months? (Q11 on survey)*

- The majority of firms (59 percent) provided or paid for some classroom training, compared with 48 percent of firms in 2001.
- There are three broad categories of classroom training—training in work place practices, basic skills training (reading, writing, math, and English language skills), and training in job-specific skills. Among the firms that provided classroom training, 74 percent provided such training in job-specific skills, 67 percent provided it for work place practices, and 13 percent provided it for basic skills.
- Forty-one percent of firms reported that the percentage of their workers who received classroom training increased during the past three years. Firms increased classroom training for a number of reasons—changes in technology, the need to improve worker productivity, and an effort to develop a more flexible workforce were most often cited.
- Among employers who provided classroom training, 35 percent had tuition reimbursement programs for their employees. This represents about 21 percent of all firms.
- The proportion receiving classroom training varied by occupation. It was especially high among managerial and technical staff and lower among production workers.

FIGURE 11

### Proportion of All Employers Providing Classroom Training and On-the-Job Training During the Last 12 Months



*Note: Training must have lasted at least four hours; on-the-job training must have had a written plan or agreement.*

## Employer-provided on-the-job training

### Question

*Did your firm/organization provide at least 4 hours of on-the-job training that was described in a written plan or agreement for any employee during the past 12 months? (Q13 on survey)*

- Forty-nine percent of firms provided at least four hours of On-the-Job Training (OJT) described in a written plan or agreement. This is up considerably from the 35 percent reported two years ago.
- The incidence of OJT also varied by occupation, though less so than did classroom training. Employers offered OJT more frequently than classroom training to their administrative support staff and production workers.

## Training in workforce development programs

### Question

We would also like to know if anyone in your firm/organization who was hired in the last 12 months attended, or received training from, one of the following six types of institutions or programs. (Q15 on survey)

- Among employers who hired during the past 12 months, 32 percent hired workers who had at any time attended a community or technical college job preparatory program. This represents an estimated 33,426 employers.
- Among those hiring, 17 percent hired former secondary career and technical education students and 14 percent hired former private career school students.

FIGURE 12

**Proportion Hiring Workers Trained in the Following Programs, Among Employers Who Hired During the Last 12 Months**

Training Institution or Program	Hiring	Estimated Employers
Secondary career and technical education	17%	17,752
Community or technical college vocational training	32%	33,426
Workforce Investment Act or WorkSource	8%	7,824
Private career schools	14%	14,545
Apprenticeship programs	8%	8,123
Adult basic skills such as GED, literacy, and English-as-a-second language	9%	9,139

## Future needs—increasing skill requirements

### Question

How will your firm's need for employees with each of the types of education listed? (Q9 on survey)

- Forty-eight percent of firms reported that the skills required to adequately perform production or support jobs had increased over the last three years.
- One reason skill requirements increased is the use of computers has become more common. Employers reported 51 percent of nonsupervisory employees used computers in their jobs.
- Another factor that increased skill requirements is the adoption of high-performance work organization practices—85 percent of firms cross-trained employees to do a number of jobs, 68 percent organized regular meetings with workers to discuss ways to improve practices, 59 percent linked pay to performance, and 47 percent compared their performance with that of other firms (benchmarking).
- Skill requirements will continue to increase. As a result, about a third of all firms reported their need for workers with postsecondary training would increase over the next five years.
- Employer projections of skill requirements are similar to those made in 2001.

FIGURE 13

**Employer Expectations of Future Employment Needs by Educational Level**

Educational Level	Increase	Stay About the Same	Decrease
Neither a high school diploma or GED	12%	70%	18%
High school diploma or GED	17%	77%	6%
Some college course work	27%	70%	3%
Vocational certificate	35%	64%	2%
Vocational associate degree	30%	68%	2%
Academic associate degree	30%	68%	2%
Baccalaureate degree	34%	64%	2%
Master's, doctoral, or professional degree	24%	68%	8%



## Appendix A—Additional Information on Survey Sample

**Figure A-1** Washington's 12 WDAs with counties

• Benton-Franklin—Benton and Franklin counties • Eastern Washington Partnership—Asotin, Columbia, Ferry, Garfield, Lincoln, Pend Oreille, Stevens, Walla Walla, and Whitman counties • North Central—Adams, Chelan, Douglas, Grant, and Okanogan counties • Northwest—Island, San Juan, Skagit, and Whatcom counties • Olympic—Clallam, Jefferson, and Kitsap counties • Pacific Mountain—Grays Harbor, Mason, Thurston, Lewis, and Pacific counties • Seattle-King County—King County • Snohomish County—Snohomish County • Southwest Washington—Wahkiakum, Clark, Cowlitz, and Skamania counties • Spokane Area—Spokane County • Tacoma-Pierce County—Pierce County • Tri-County—Kittitas, Klickitat, and Yakima counties

**Figure A-2** Number of survey responses by WDA and firm size

WDA	FIRM SIZE—NUMBER OF EMPLOYEES				WDC Count
	1-4	5-19	20-99	100 or More	
Benton-Franklin	51	99	71	32	253
Eastern Washington Partnership	65	93	76	24	258
North Central	60	81	63	42	246
Northwest	33	75	77	53	238
Olympic	47	86	48	36	217
Pacific Mountain	36	78	70	75	259
Seattle-King County	39	37	80	100	256
Snohomish County	44	74	79	64	261
Southwest Washington	37	84	71	54	246
Spokane Area	43	72	81	56	252
Tacoma-Pierce County	40	67	78	44	229
Tri-County	47	94	64	48	253
Statewide	542	940	858	628	2,968

Note: Response rate for 2003 is 25 percent compared with 20 percent for 2001 survey. Number of employers in the state—211,612

**Figure A-3** Number of survey responses by WDA and industry

WDA	Ag.-Food 2003	Const. 2003	High- Tech 2003	F.I.R.E., Trans., Manuf. 2003	Wrhs., Util., Gov. 2003	Services 2003	Trade 2003	All Industries 2003
Benton-Franklin	29	42	11	35	48	50	38	253
Eastern Washington Partnership	31	34	20	34	54	47	38	258
North Central	44	21	22	40	36	46	37	246
Northwest	42	32	21	33	33	42	35	238
Olympic	28	23	21	37	31	45	32	217
Pacific Mountain	41	28	23	31	63	46	27	259
Seattle-King County	53	28	33	59	32	32	19	256
Snohomish County	38	24	27	58	33	30	51	261
Southwest Washington	28	37	28	44	35	38	40	252
Spokane Area	44	33	18	44	35	38	40	252
Tacoma-Pierce County	35	14	22	59	26	26	47	229
Tri-County	42	22	15	60	33	44	37	253
Statewide	455	338	261	534	458	488	434	2,968



**Figure A-4** *Definition of industry sectors*

<b>SIC*</b>	<b>INDUSTRY</b>	<b>MAJOR SUBGROUPS (AT 2 DIGIT SIC)</b>
01	Agriculture-Food	Agricultural Production Crops
02	Agriculture-Food	Agricultural Production Livestock
07	Agriculture-Food	Agricultural Services
08	Agriculture-Food	Forestry
09	Agriculture-Food	Fishing, Hunting, and Trapping
20	Agriculture-Food	Food and Kindred Products
10	Construction	Metal Mining
12	Construction	Coal Mining
13	Construction	Oil and Gas Extraction
14	Construction	Nonmetallic Minerals, Except Fuels
16	Construction	Heavy Construction, Ex. Building
17	Construction	Special Trade Contractors
28	High-Tech	Chemicals and Allied Products
35	High-Tech	Industrial Machinery and Equipment
36	High-Tech	Electronic and Other Electric Equipment
38	High-Tech	Instruments and Related Products
48	High-Tech	Communication
73	High-Tech	Business Services
87	High-Tech	Engineering and Management Services
22	Manufacturing	Textile Mill Products
23	Manufacturing	Apparel and Other Textile Products
24	Manufacturing	Lumber and Wood Products
25	Manufacturing	Furniture and Fixtures
26	Manufacturing	Paper and Allied Products
27	Manufacturing	Printing and Publishing
28	Manufacturing	Chemicals and Allied Products
29	Manufacturing	Petroleum and Coal Products
30	Manufacturing	Rubber and Miscellaneous Plastics Products
31	Manufacturing	Leather and Leather Products
32	Manufacturing	Stone, Clay, and Glass Products
33	Manufacturing	Primary Metal Industries
34	Manufacturing	Fabricated Metal Products
35	Manufacturing	Industrial Machinery and Equipment
37	Manufacturing	Transportation Equipment
39	Manufacturing	Miscellaneous Manufacturing Industries
41	Other	Local and Interurban Passenger Transit
42	Other	Trucking and Warehousing
44	Other	Water Transportation

\*Standard Industrial Classification

45	Other	Transportation by Air
46	Other	Pipelines, Except Natural Gas
47	Other	Transportation Services
49	Other	Electric, Gas, and Sanitary Services
60	Other	Depository Institutions
61	Other	Nondepository Institutions
62	Other	Security and Commodity Brokers
63	Other	Insurance Carriers
64	Other	Insurance Agents, Brokers, and Service
65	Other	Real Estate
67	Other	Holding and Other Investment Offices
70	Services	Hotels and Other Lodging Places
72	Services	Personal Services
73	Services	Business Services
75	Services	Auto Repair Services and Parking
76	Services	Miscellaneous Repair Services
78	Services	Motion Pictures
79	Services	Amusement and Recreation Services
80	Services	Health Services
81	Services	Legal Services
82	Services	Educational Services
83	Services	Social Services
84	Services	Museums, Botanical, and Zoological Gardens
86	Services	Membership Organizations
87	Services	Engineering and Management Services
89	Services	Services, (not elsewhere classified)
50	Trade	Wholesale Trade Durable Goods
51	Trade	Wholesale Trade Nondurable Goods
52	Trade	Building Materials and Garden Supplies
53	Trade	General Merchandise Stores
54	Trade	Food Stores
55	Trade	Auto Dealers and Service Stations
56	Trade	Apparel and Accessory Stores
57	Trade	Furniture and Home Furnishing Stores
58	Trade	Eating and Drinking Places
59	Trade	Miscellaneous Retail

*Note: Boeing was grouped in manufacturing rather than high-tech.*

## Appendix B—Additional Tables by Industry Sectors

**Q3** *In the last 12 months, the percentage of employers attempting to hire who had difficulty finding qualified applicants*

	2001	2003	Number of Firms Looking	
			2001	2003
Benton-Franklin	61%	44%	4,576	3,777
Eastern Washington Partnership	54%	53%	4,467	3,690
North Central	42%	45%	6,258	6,625
Northwest	43%	46%	10,359	8,282
Olympic	61%	56%	8,812	5,972
Pacific Mountain	69%	38%	10,342	8,898
Seattle-King County	71%	54%	52,509	41,998
Snohomish County	61%	42%	11,035	9,036
Southwest Washington	45%	28%	8,034	7,958
Spokane Area	47%	41%	11,408	9,050
Tacoma-Pierce County	54%	30%	14,684	11,241
Tri-County	51%	46%	7,205	6,572
Statewide	60%	45%	149,690	123,102

*In the last 12 months, the percentage of all employers having difficulty finding qualified applicants*

	2001	2003	TOTAL NUMBER OF EMPLOYERS	
			2001	2003
Benton-Franklin	44%	29%	6,345	5,776
Eastern Washington Partnership	31%	30%	7,678	6,382
North Central	27%	32%	9,885	9,420
Northwest	29%	25%	15,459	14,969
Olympic	42%	29%	12,678	11,558
Pacific Mountain	42%	21%	16,950	15,716
Seattle-King County	49%	32%	76,106	71,596
Snohomish County	42%	24%	15,911	15,513
Southwest Washington	28%	17%	12,939	12,989
Spokane Area	33%	26%	16,501	14,563
Tacoma-Pierce County	40%	18%	19,519	18,744
Tri-County	35%	31%	10,610	9,774
Statewide	41%	27%	220,580	206,999

*Among employers attempting to hire, the percentage having difficulty finding qualified applicants*

	FIRM SIZE—NUMBER OF EMPLOYEES				WDC Average
	1-2	5-19	20-99	100 or More	
Benton-Franklin	50%	35%	50%	53%	44%
Eastern Washington Partnership	52%	49%	67%	63%	53%
North Central	49%	34%	52%	51%	45%
Northwest	47%	40%	56%	57%	46%
Olympic	45%	69%	46%	63%	56%
Pacific Mountain	30%	43%	43%	48%	38%
Seattle-King County	71%	31%	65%	47%	54%
Snohomish County	39%	43%	46%	55%	42%
Southwest Washington	22%	30%	45%	45%	28%
Spokane Area	37%	48%	35%	51%	41%
Tacoma-Pierce County	28%	25%	49%	39%	30%
Tri-County	55%	30%	51%	67%	46%
All firms that size	50%	37%	54%	49%	45%

# Q4

## Employer response to shortage of qualified applicants among employers who had difficulty

	Ag/ Food	Const.	High- Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Did not fill opening	46%	33%	45%	53%	36%	52%	26%	41%
Hired a less qualified applicant	72%	71%	87%	66%	44%	79%	63%	62%
Outsourced the work/service	15%	41%	77%	46%	24%	27%	18%	28%
Increased overtime for employees	42%	52%	52%	62%	42%	60%	52%	50%
Increased recruiting efforts	64%	56%	76%	64%	78%	63%	86%	72%
Increased wages to attract applicants	30%	33%	15%	33%	35%	39%	31%	34%

### Employer response to shortage of qualified applicants among all employers

	Ag/ Food	Const.	High- Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Did not fill opening	10%	9%	13%	9%	7%	15%	5%	9%
Hired a less qualified applicant	15%	24%	21%	13%	8%	16%	14%	13%
Outsourced the work/service	3%	11%	20%	8%	4%	4%	4%	5%
Increased overtime for employees	9%	16%	14%	12%	8%	12%	10%	10%
Increased recruiting efforts	14%	16%	18%	12%	15%	12%	18%	15%
Increased wages to attract applicants	6%	10%	4%	5%	6%	7%	6%	7%

# Q6a

## Among all employers

Level of Difficulty Finding Applicants Without High School/GED Diploma	Ag/ Food	Const.	High- Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	0.1%	0.1%	0.1%	0.7%	0.3%	2%	0%	0.8%
Some difficulty	2%	1%	0.3%	2%	0.8%	2%	0.9%	1%
No difficulty	10%	10%	4%	9%	8%	9%	6%	8%
Did not hire/respond	81%	83%	93%	78%	84%	79%	88%	83%

### Among employers having difficulty

Level of Difficulty Finding Applicants Without High School/GED Diploma	Ag/ Food	Const.	High- Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	2%	1%	3%	6%	4%	17%	0%	8%
Some difficulty	17%	10%	8%	17%	9%	12%	14%	11%
No difficulty	82%	88%	89%	77%	87%	70%	86%	81%

# Q6b

## Among all employers

Level of Difficulty Finding Applicants With High School/GED Diploma	Ag/ Food	Const.	High- Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	1%	1%	0%	1%	0%	1%	3%	1%
Some difficulty	4%	9%	0%	4%	3%	3%	3%	4%
No difficulty	9%	8%	12%	9%	12%	20%	13%	14%
Did not hire/respond	79%	73%	79%	73%	73%	62%	69%	69%

### Among employers having difficulty

Level of Difficulty Finding Applicants With High School/GED Diploma	Ag/ Food	Const.	High- Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	6%	3%	2%	5%	2%	3%	14%	5%
Some difficulty	28%	53%	4%	31%	19%	14%	14%	19%
No difficulty	66%	44%	94%	64%	79%	83%	72%	76%

## Q6c *Among all employers*

Level of Difficulty Finding Applicants With Some College, No Degree	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	0%	1%	0%	1%	1%	2%	1%	1%
Some difficulty	3%	6%	2%	3%	4%	4%	6%	4%
No difficulty	2%	1%	10%	5%	9%	16%	9%	10%
Did not hire/respond	92%	88%	78%	83%	77%	66%	74%	75%

### *Among employers having difficulty*

Level of Difficulty Finding Applicants With Some College, No Degree	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	9%	14%	4%	15%	7%	10%	4%	8%
Some difficulty	61%	75%	14%	34%	27%	17%	38%	27%
No difficulty	30%	12%	82%	51%	66%	72%	58%	65%

## Q6d *Among all employers*

Level of Difficulty Finding Applicants With Vocational Certificate	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	5%	9%	0%	2%	2%	1%	3%	3%
Some difficulty	3%	2%	2%	3%	7%	5%	4%	5%
No difficulty	1%	1%	9%	3%	4%	15%	5%	7%
Did not hire/respond	87%	81%	79%	84%	77%	66%	79%	75%

### *Among employers having difficulty*

Level of Difficulty Finding Applicants With Vocational Certificate	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	54%	71%	4%	26%	15%	6%	27%	17%
Some difficulty	33%	17%	17%	37%	55%	25%	29%	36%
No difficulty	12%	12%	79%	36%	30%	69%	44%	47%

## Q6e *Among all employers*

Level of Difficulty Finding Applicants With Vocational Certificate	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	1%	7%	1%	2%	1%	1%	3%	2%
Some difficulty	2%	1%	3%	2%	6%	11%	1%	6%
No difficulty	1%	0%	2%	2%	4%	6%	3%	4%
Did not hire/respond	94%	86%	89%	89%	81%	73%	88%	81%

### *Among employers having difficulty*

Level of Difficulty Finding Applicants With Vocational Certificate	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	26%	84%	15%	27%	11%	5%	45%	16%
Some difficulty	52%	13%	45%	32%	52%	63%	19%	51%
No difficulty	23%	3%	40%	41%	37%	33%	36%	33%

## Q6f *Among all employers*

Level of Difficulty Finding Applicants With Academic Associate Degree	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	1%	1%	1%	1%	2%	1%	3%	1%
Some difficulty	1%	1%	13%	1%	4%	3%	4%	4%
No difficulty	1%	0%	2%	3%	3%	4%	6%	3%
Did not hire/respond	96%	97%	71%	89%	84%	87%	80%	86%

### *Among employers having difficulty*

Level of Difficulty Finding Applicants With Academic Associate Degree	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	33%	39%	7%	25%	19%	8%	25%	17%
Some difficulty	27%	49%	79%	19%	49%	38%	29%	42%
No difficulty	40%	12%	14%	56%	32%	55%	46%	40%

## Q6g *Among all employers*

Level of Difficulty Finding Applicants With BA/BS Degree	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	1%	1%	2%	2%	2%	1%	4%	2%
Some difficulty	0%	1%	14%	3%	4%	4%	3%	4%
No difficulty	1%	1%	7%	3%	3%	3%	5%	3%
Did not hire/respond	97%	96%	60%	86%	84%	87%	79%	85%

### *Among employers having difficulty*

Level of Difficulty Finding Applicants With BA/BS Degree	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	30%	24%	8%	21%	22%	12%	34%	21%
Some difficulty	23%	54%	60%	40%	50%	56%	26%	46%
No difficulty	48%	22%	32%	39%	29%	32%	39%	32%

## Q6h *Among all employers*

Level of Difficulty Finding Applicants With MA/Ph.D/ Professional Degree	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	1%	0%	6%	1%	3%	1%	5%	2%
Some difficulty	2%	0%	11%	0%	1%	1%	1%	1%
No difficulty	1%	0%	1%	3%	2%	2%	1%	2%
Did not hire/respond	95%	98%	68%	92%	90%	94%	89%	92%

### *Among employers having difficulty*

Level of Difficulty Finding Applicants With MA/Ph.D/ Professional Degree	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	21%	13%	33%	32%	49%	26%	70%	45%
Some difficulty	51%	42%	63%	5%	13%	31%	15%	22%
No difficulty	27%	45%	4%	63%	37%	42%	15%	32%

## Q7a *Among all employers*

Level of Difficulty Finding Applicants With Sufficient Reading Skills	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	1%	7%	0%	1%	0%	3%	0%	1%
Some difficulty	6%	8%	11%	8%	6%	7%	3%	6%
No difficulty	14%	16%	17%	10%	11%	9%	20%	12%
Did not hire/respond	79%	69%	72%	82%	83%	80%	77%	80%

### *Among employers having difficulty*

Level of Difficulty Finding Applicants With Sufficient Reading Skills	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	5%	22%	1%	3%	0%	16%	1%	7%
Some difficulty	30%	27%	40%	43%	34%	38%	13%	31%
No difficulty	65%	51%	59%	54%	66%	47%	86%	62%

## Q7b *Among all employers*

Level of Difficulty Finding Applicants With Sufficient Writing Skills	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	1%	7%	12%	1%	0%	3%	1%	2%
Some difficulty	7%	9%	8%	8%	13%	17%	8%	12%
No difficulty	12%	13%	8%	9%	7%	7%	14%	8%
Did not hire/respond	80%	71%	72%	81%	80%	73%	78%	77%

### *Among employers having difficulty*

Level of Difficulty Finding Applicants With Sufficient Writing Skills	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	6%	24%	41%	7%	1%	11%	4%	8%
Some difficulty	37%	33%	29%	45%	65%	63%	35%	55%
No difficulty	58%	43%	30%	48%	34%	26%	61%	37%

## Q7c *Among all employers*

Level of Difficulty Finding Applicants With Sufficient Math Skills	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	2%	10%	0%	2%	0%	4%	3%	3%
Some difficulty	9%	7%	16%	11%	9%	18%	7%	11%
No difficulty	8%	14%	7%	5%	9%	5%	10%	8%
Did not hire/respond	81%	70%	77%	81%	81%	73%	80%	78%

### *Among employers having difficulty*

Level of Difficulty Finding Applicants With Sufficient Math Skills	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	9%	31%	2%	13%	1%	15%	16%	12%
Some difficulty	48%	22%	69%	58%	49%	66%	34%	50%
No difficulty	43%	47%	29%	29%	50%	19%	51%	38%

## Q7d *Among all employers*

Level of Difficulty Finding Applicants With Sufficient Job-Specific Skills	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	12%	20%	3%	11%	9%	18%	10%	12%
Some difficulty	11%	14%	24%	9%	8%	8%	9%	9%
No difficulty	1%	1%	2%	2%	1%	3%	5%	2%
Did not hire/respond	76%	66%	71%	79%	82%	71%	76%	76%

### *Among employers having difficulty*

Level of Difficulty Finding Applicants With Sufficient Job-Specific Skills	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	50%	58%	12%	50%	49%	63%	41%	53%
Some difficulty	47%	39%	82%	42%	44%	28%	38%	38%
No difficulty	3%	3%	6%	8%	7%	9%	20%	9%

## Q7e *Among all employers*

Level of Difficulty Finding Applicants With Sufficient Computer Skills	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	0%	7%	0%	1%	1%	11%	4%	4%
Some difficulty	7%	1%	21%	8%	13%	6%	8%	9%
No difficulty	2%	12%	7%	4%	4%	5%	8%	5%
Did not hire/respond	90%	80%	71%	87%	82%	78%	80%	81%

### *Among employers having difficulty*

Level of Difficulty Finding Applicants With Sufficient Computer Skills	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	4%	33%	1%	9%	5%	49%	18%	23%
Some difficulty	75%	7%	73%	62%	76%	28%	40%	49%
No difficulty	21%	61%	25%	29%	20%	22%	42%	28%

## Q7f *Among all employers*

Level of Difficulty Finding Applicants With Sufficient Team Work Skills	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	5%	9%	10%	2%	1%	4%	2%	3%
Some difficulty	8%	18%	10%	11%	13%	15%	9%	13%
No difficulty	7%	7%	6%	6%	5%	3%	9%	5%
Did not hire/respond	79%	66%	73%	81%	81%	78%	80%	78%

### *Among employers having difficulty*

Level of Difficulty Finding Applicants With Sufficient Team Work Skills	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	25%	26%	39%	11%	7%	16%	10%	14%
Some difficulty	40%	54%	37%	59%	65%	70%	46%	61%
No difficulty	35%	21%	24%	31%	28%	13%	43%	25%



## Q7g *Among all employers*

Level of Difficulty Finding Applicants With Sufficient Problem-Solving Skills	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	9%	12%	11%	6%	7%	7%	7%	7%
Some difficulty	10%	15%	14%	10%	8%	13%	15%	11%
No difficulty	3%	5%	3%	3%	3%	1%	2%	3%
Did not hire/respond	78%	68%	71%	81%	82%	79%	77%	79%

### *Among employers having difficulty*

Level of Difficulty Finding Applicants With Sufficient Problem-Solving Skills	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	39%	37%	40%	32%	36%	34%	28%	34%
Some difficulty	47%	46%	51%	54%	46%	60%	63%	53%
No difficulty	14%	17%	9%	14%	19%	6%	8%	13%

## Q7h *Among all employers*

Level of Difficulty Finding Applicants With Sufficient Communication Skills	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	4%	7%	10%	3%	2%	4%	2%	3%
Some difficulty	15%	16%	13%	15%	14%	24%	15%	17%
No difficulty	4%	9%	5%	3%	3%	2%	7%	4%
Did not hire/respond	77%	68%	71%	79%	81%	69%	77%	76%

### *Among employers having difficulty*

Level of Difficulty Finding Applicants With Sufficient Communication Skills	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	19%	23%	36%	13%	9%	14%	7%	13%
Some difficulty	63%	50%	47%	72%	73%	79%	64%	71%
No difficulty	18%	27%	17%	15%	18%	7%	29%	17%

## Q7i *Among all employers*

Level of Difficulty Finding Applicants With Good Work Habits	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	8%	15%	11%	7%	7%	9%	4%	8%
Some difficulty	12%	11%	13%	12%	10%	19%	12%	13%
No difficulty	3%	9%	5%	3%	4%	2%	6%	4%
Did not hire/respond	77%	68%	71%	77%	79%	70%	77%	75%

### *Among employers having difficulty*

Level of Difficulty Finding Applicants With Good Work Habits	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	36%	44%	37%	32%	34%	31%	19%	32%
Some difficulty	49%	31%	46%	55%	46%	62%	53%	51%
No difficulty	15%	25%	17%	13%	20%	7%	28%	17%

## Q7j *Among all employers*

Level of Difficulty Finding Applicants With Sufficient Ability to Accept Supervision	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	4%	9%	0%	2%	1%	4%	4%	3%
Some difficulty	11%	13%	22%	13%	9%	21%	11%	13%
No difficulty	8%	14%	6%	7%	8%	5%	7%	7%
Did not hire/respond	77%	65%	71%	79%	82%	70%	78%	76%

### *Among employers having difficulty*

Level of Difficulty Finding Applicants With Sufficient Ability to Accept Supervision	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	18%	24%	2%	8%	8%	15%	18%	14%
Some difficulty	48%	36%	76%	61%	47%	69%	49%	55%
No difficulty	33%	40%	22%	31%	45%	16%	33%	31%

## Q7k *Among all employers*

Level of Difficulty Finding Applicants With Sufficient Ability to Adapt to Change	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	7%	10%	1%	2%	4%	4%	1%	4%
Some difficulty	11%	13%	22%	14%	10%	16%	18%	14%
No difficulty	6%	9%	6%	4%	5%	3%	3%	5%
Did not hire/respond	76%	67%	71%	79%	80%	78%	78%	78%

### *Among employers having difficulty*

Level of Difficulty Finding Applicants With Sufficient Ability to Adapt to Change	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Much difficulty	30%	31%	3%	12%	21%	16%	5%	18%
Some difficulty	46%	40%	78%	68%	51%	72%	83%	62%
No difficulty	25%	29%	19%	20%	28%	12%	13%	21%

## Q8 *Economic impact of skill shortages for employers having difficulty finding qualified applicants*

	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Lowered overall productivity	73%	70%	76%	68%	66%	74%	65%	69%
Reduced product or service quality	63%	43%	34%	55%	60%	53%	66%	56%
Reduced production output or sales	60%	80%	50%	79%	70%	67%	72%	70%
Prevented expanding facilities	26%	47%	73%	34%	38%	18%	21%	31%
Prevented developing new products/services	29%	27%	71%	35%	38%	23%	27%	31%
Caused to move some operations out of state	1%	16%	1%	7%	1%	5%	1%	4%

### *Economic impact of skill shortages for all employers*

	Ag/ Food	Const.	High-Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Lowered overall productivity	17%	27%	22%	15%	14%	17%	15%	16%
Reduced product or service quality	15%	16%	10%	12%	13%	12%	15%	13%
Reduced production output or sales	14%	31%	14%	17%	13%	15%	16%	16%
Prevented expanding facilities	6%	18%	21%	7%	8%	6%	5%	8%
Prevented developing new products/services	7%	10%	20%	7%	8%	5%	6%	7%
Caused to move some operations out of state	0%	6%	0%	2%	0%	2%	0%	1%

## Q9a *In the next five years, the percentage of employers needing workers without a high school diploma or GED*

	Ag/ Food	Const.	High- Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Increase .....	14%	30%	3%	11%	7%	11%	18%	12%
Stay same .....	77%	52%	40%	69%	70%	79%	59%	70%
Decrease .....	9%	18%	57%	19%	23%	10%	23%	18%

## Q9b *In the next five years, the percentage of employers needing workers with a high school diploma or GED*

	Ag/ Food	Const.	High- Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Increase .....	16%	31%	15%	14%	14%	18%	14%	17%
Stay same .....	82%	68%	62%	79%	79%	79%	69%	77%
Decrease .....	2%	1%	23%	7%	7%	3%	17%	6%

## Q9c *In the next five years, the percentage of employers needing workers with some college course work*

	Ag/ Food	Const.	High- Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Increase .....	20%	32%	37%	25%	29%	20%	30%	27%
Stay same .....	79%	67%	42%	69%	67%	77%	69%	70%
Decrease .....	2%	1%	21%	6%	4%	3%	1%	3%

## Q9d *In the next five years, the percentage of employers needing workers with vocational certificate*

	Ag/ Food	Const.	High- Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Increase .....	31%	41%	62%	33%	29%	40%	36%	35%
Stay same .....	69%	58%	37%	59%	70%	60%	56%	64%
Decrease .....	1%	1%	2%	8%	1%	0%	8%	2%

## Q9e *In the next five years, the percentage of employers needing workers with a vocational associate degree*

	Ag/ Food	Const.	High- Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Increase .....	27%	17%	44%	23%	29%	43%	18%	30%
Stay same .....	72%	82%	5%	70%	71%	55%	76%	68%
Decrease .....	1%	1%	2%	1%	1%	2%	6%	29%

## Q9f *In the next five years, the percentage of employers needing workers with academic associate degree*

	Ag/ Food	Const.	High- Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Increase .....	20%	12%	33%	19%	30%	40%	24%	30%
Stay same .....	79%	85%	66%	73%	69%	58%	71%	68%
Decrease .....	1%	3%	1%	8%	1%	2%	4%	2%

## Q9g *In the next five years, the percentage of employers needing workers with baccalaureate degree*

	Ag/ Food	Const.	High- Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Increase .....	29%	20%	53%	37%	40%	23%	31%	34%
Stay same .....	69%	77%	47%	58%	59%	74%	69%	64%
Decrease .....	2%	3%	1%	5%	1%	3%	1%	2%

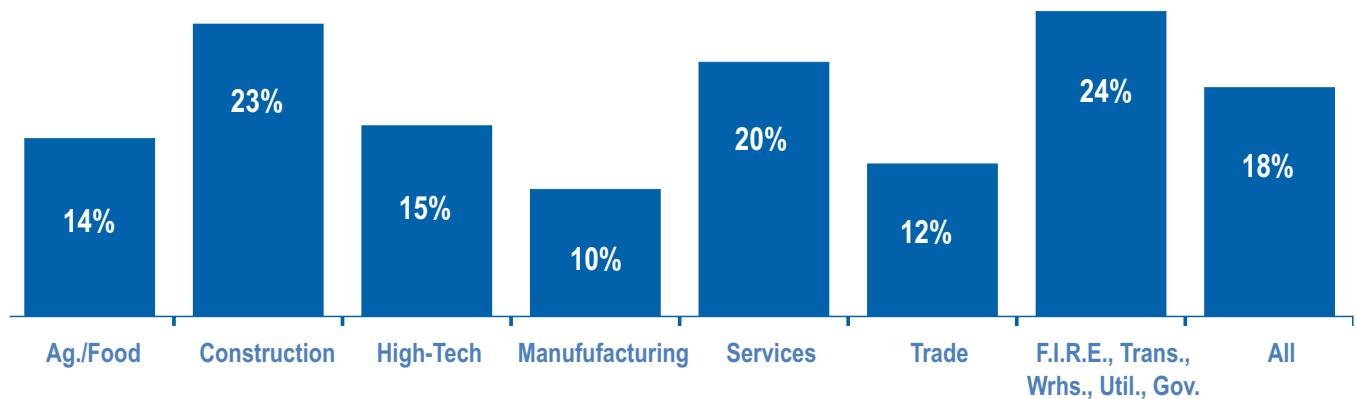
## Q9h *In the next five years, the percentage of employers needing workers with master's, doctorate, or professional degree*

	Ag/ Food	Const.	High- Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Increase .....	29%	3%	51%	16%	33%	8%	15%	24%
Stay same .....	69%	87%	47%	59%	55%	87%	83%	68%
Decrease .....	2%	11%	2%	26%	12%	5%	2%	8%

## Q10 *The percentage of employers responding that in the last three years the skills required to adequately perform production or support jobs increased, decreased, or remained the same*

	Ag/ Food	Const.	High- Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Increase .....	33%	46%	64%	40%	49%	47%	52%	48%
Stay same .....	62%	45%	33%	55%	46%	49%	45%	47%
Decrease .....	3%	10%	2%	4%	4%	4%	3%	4%

## Q13 *Percentage of current employees who need further formal training in community colleges or private vocational schools, by management estimate*



## Q14 *In the last three years, the percentage of employers who received classroom training, workshops, or seminars of some kind increased, decreased, or remained the same*

	Ag/ Food	Const.	High- Tech	Manuf.	Services	Trade	F.I.R.E., Trans., Wrhs., Util., Gov.	All Industries
Increase .....	40%	41%	34%	28%	41%	39%	45%	41%
Stay same .....	53%	54%	51%	59%	55%	58%	49%	55%
Decrease .....	6%	5%	15%	13%	4%	3%	5%	4%