STATE OF IOWA
LABORSHED ANALYSIS

A STUDY OF WORKFORCE CHARACTERISTICS

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In Partnership:

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STATEWIDE LABORSHED ANALYSIS

The purpose of this analysis is to measure the availability and characteristics of workers within the State of Iowa using Iowa Workforce Development's Laborshed Survey. The data generated will aid state and local development officials in their facilitation of industry expansion and recruitment and their service to existing industry in the State. All such entities require detailed data describing the characteristics of the available labor force including current/desired wage rates and benefits; job qualifications and skills; age cohorts; residence/work location; employment requirements/obstacles; and the distances individuals are willing to travel for employment.

Community Laborshed analyses are a valuable and unique resource for local economic development. Regional Laborshed analyses are an aggregation of individual Laborshed areas into a defined region. Regional Laborshed reports assist businesses, developers and site selectors in identifying the strengths of a region. This information is then used for retaining or expanding their existing businesses or attracting prospective new employers into the area.

This statewide analysis is composed of 6,000 online/telephone survey responses of individuals in the State of Iowa. These responses were extracted from the statewide Laborshed database of 8,947 surveys conducted between January 2024 to December 2024. Surveys were conducted in each ZIP code based on a random sample of the population between 18 and 64 years of age and weighted by the total number of households in each ZIP code (**Appendix A**).

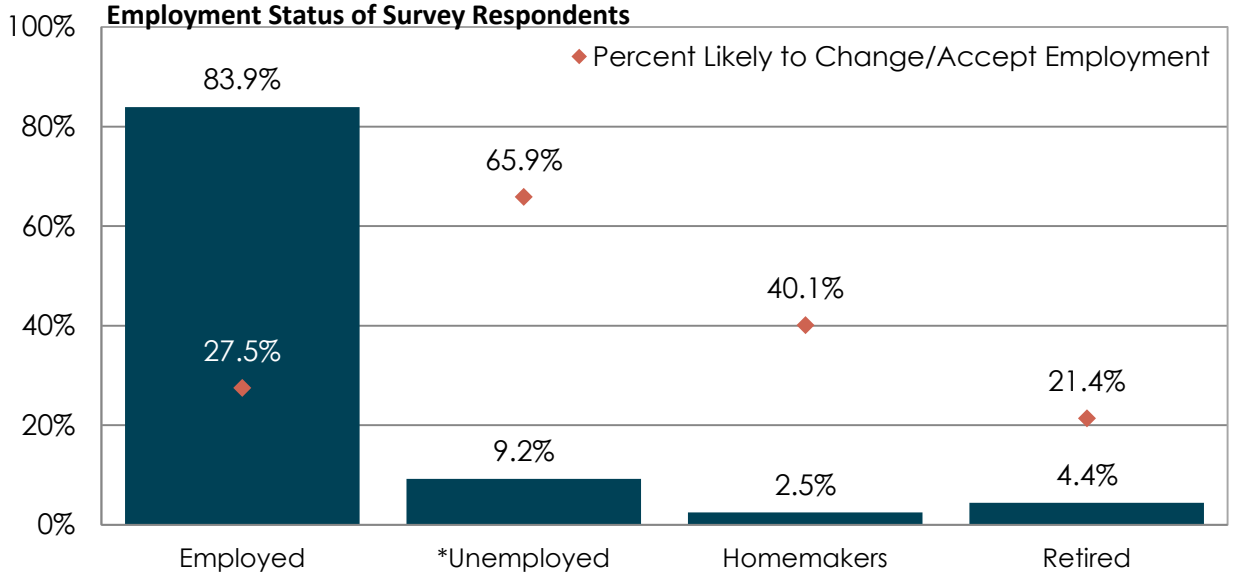
The following sections of this report summarize the results of the Laborshed surveys that were conducted across the state. Due to the magnitude of the survey results, it is not practical to review each set of variables. Iowa Workforce Development (IWD) has focused on the factors that have been found to be the most valuable to existing and future businesses. However, upon request, IWD will conduct additional analyses for further review of specific variable(s) or sets of responses.

WORKFORCE CHARACTERISTICS

EMPLOYMENT STATUS

The results of the statewide survey show that 83.9 percent of all respondents identified themselves as being employed at the time they were contacted (**Figure 1**). Over four-fifths (89.9%) of the employed are working in positions that are considered full-time (**Figure 2**).

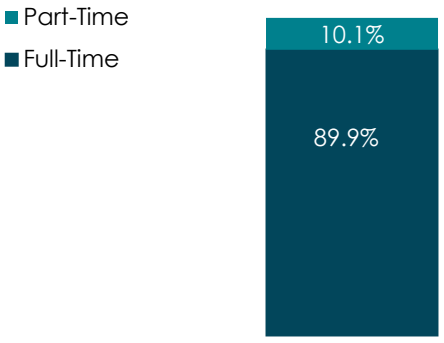
Figure 1
Employment Status of Survey Respondents



unemployment rate published by the U.S. Bureau of Labor Statistics, which applies a stricter definition.

Nearly one-fifth (15.4%) of the employed respondents are self-employed.

Figure 2
Type of Employment



Only responses that indicated a type of employment are included in calculation.

INDUSTRIES OF THE EMPLOYED

To provide consistency with other labor market information, the industrial categories identified in this analysis follow a similar format to the 2017 North American Industry Classification System (NAICS).

Survey respondents were asked to identify the industry in which they are currently working. **Figure 3**, on the next page, reflects the percentage of employed respondents by industry. The top industries in Iowa are wholesale and retail trade (15.6%); healthcare and social services (14.3%); manufacturing (11.5%); and construction (9.5%).

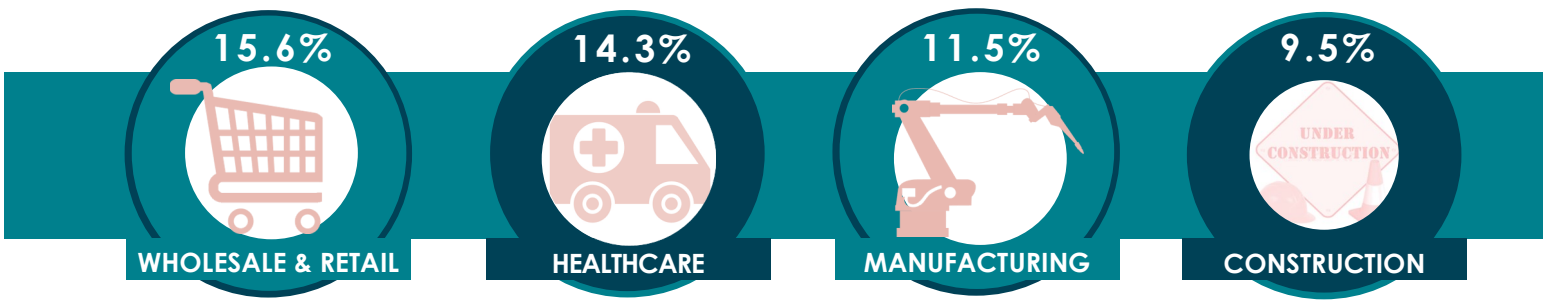
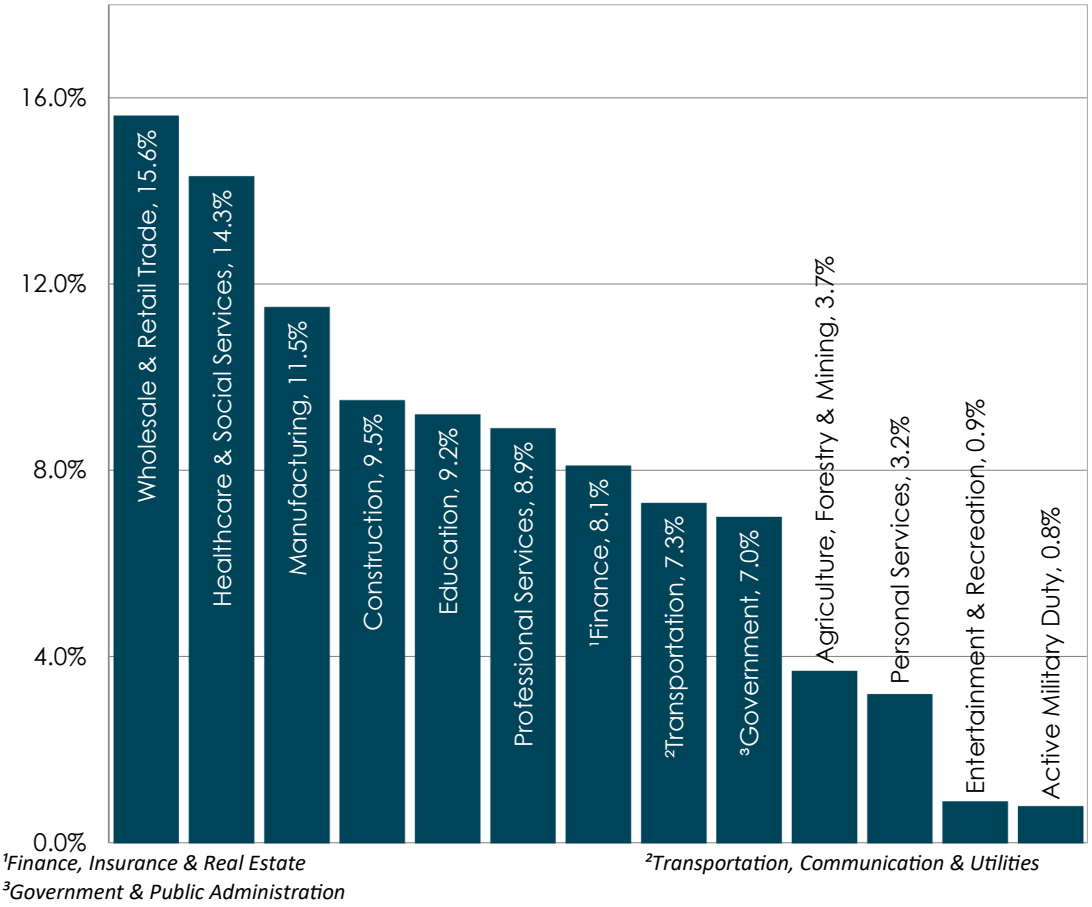


Figure 3
Industries of the Employed



[1]Finance, Insurance & Real Estate
[2]Transportation, Communication & Utilities
[3]Government & Public Administration

OCCUPATIONS OF THE EMPLOYED

To remain consistent with other available occupational data, IWD recodes job titles into groupings based on the Standard Occupational Code (SOC) system. **Figure 4** shows the percentage employed within the State of Iowa by occupational classification grouping. The greatest percentage of respondents are employed in management (20.0%) followed by office & administrative support (8.6%) occupations.

Figure 4
Occupations of the Employed

Occupation	% Employed	Occupation	% Employed
Management	20.0%	Architecture & Engineering	2.4%
Office & Administrative Support	8.6%	Community & Social Services	2.4%
Business & Financial Operations	7.4%	Healthcare Support	2.4%
Sales & Related	6.8%	Life, Physical & Social Science	2.0%
Transportation & Material Moving	6.6%	Building/Grounds Cleaning & Maintenance	1.6%
Installation, Maintenance & Repair	6.0%	Protective Services	1.6%
Healthcare Practitioner & Technical	5.8%	Arts, Design, Entertainment & Sports	1.5%
Production	5.4%	Personal Care & Services	1.5%
Education, Training & Library	5.2%	Legal	0.7%
Construction & Extraction	5.1%	Military Specific	0.6%
Computer & Mathematical Science	3.4%	Farming, Fishing & Forestry	0.5%
Food Preparation & Serving Related	2.5%	**Total**	**100%**

DEMOGRAPHICS OF THE EMPLOYED

The gender breakdown of those respondents who are employed is 56.2 percent male and 43.6 percent female. The average age of the employed is 42 years old. A small portion (2.3%) of employed respondents reported a language, other than English, as their primary language. Of those respondents, 53.4 percent speak Spanish.

EDUCATION & TRAINING

Slightly under four-fifths (79.3%) of the employed respondents within the State have some level of education/training beyond high school. **Figure 5**, to the right, breaks down these respondents' education/training by degree level. Slightly under two-fifths (39.7%) have a bachelor's degree or higher.

Figure 6, below, provides an overview of the educational fields of study of those who are currently employed living in the State of Iowa.

Figure 5
Education Level

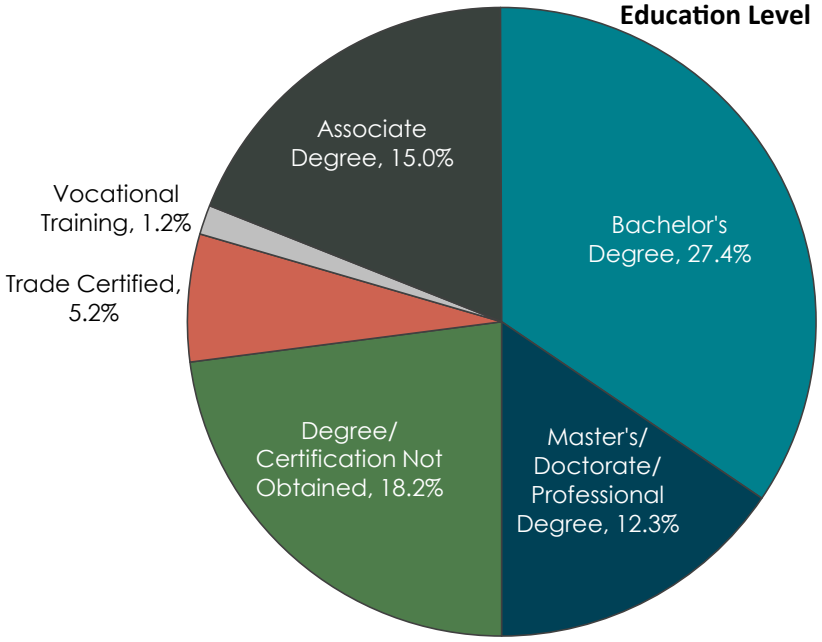


Figure 6
Educational Fields of Study

19.2% | Business, Public Administration & Marketing
14.7% | Social Sciences
12.4% | Healthcare/Medical Studies
9.0% | Math & Science
8.4% | Education
7.7% | Vocational Trades
6.2% | General Studies/Liberal Arts
5.3% | Engineering & Architecture
4.9% | Business Administrative Support
4.8% | Computer Applications/Programming/Technology
4.4% | Agricultural Studies
3.0% | Visual/Performing Arts & Design

OCCUPATIONS & EXPERIENCES

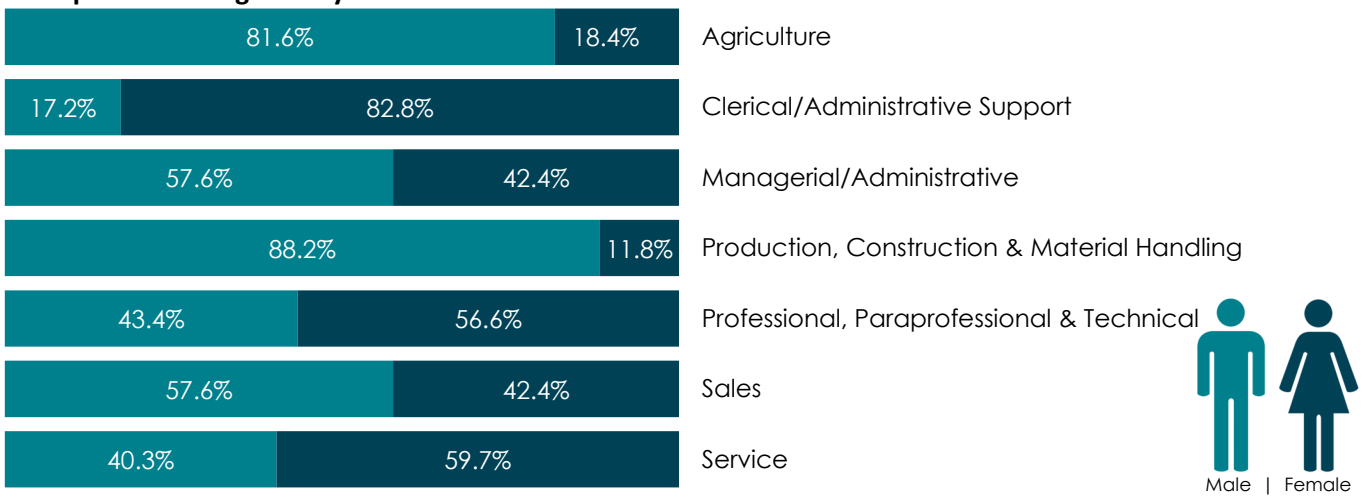
Iowa Workforce Development recodes the respondents' actual occupations into one of the seven Occupational Employment & Wages Statistics (OEWS) categories. The occupational categories represent a variety of specific occupations held by the respondents (see OEWS Category Structure - **Appendix D**). Classifying the employed by occupational group, **Figure 7** shows that the largest concentration of the workforce are employed within the professional, paraprofessional & technical occupational category. The agricultural occupational category represents the smallest sector of workers who are currently employed.

Figure 7
Percent of Workforce by Occupational Category

	% of Employed
Professional, Paraprofessional & Technical	30.8%
Production, Construction & Material Handling	24.0%
Managerial/Administrative	18.4%
Service	9.2%
Clerical/Administrative Support	8.2%
Sales	6.6%
Agriculture	2.8%
Total	**100%**

Figure 8, below, provides a comparison of the gender distribution within each occupational category.

Figure 8
Occupational Categories by Gender

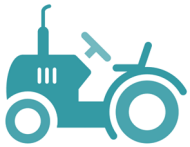


Top Male Dominated Occupational Categories

88.2%

PRODUCTION

81.6%



AGRICULTURE

Top Female Dominated Occupational Categories

82.8%

CLERICAL

59.7%

SERVICE

WAGE REQUIREMENTS

Respondents are asked if they are paid on either an hourly or salaried basis; hourly wages are not converted to annual salaries. The breakdown of respondents who indicated a type of compensation is as follows: 48.6 percent state they are currently receiving an hourly wage, followed by 39.8 percent that receive an annual salary, 3.2 percent indicated they are paid on an alternative basis, and 8.5 percent are paid on commission. The current median hourly wage of those who are employed is $23.00 and the median salary is $76,000 per year.

Figure 9 provides the current median wages and salaries by industry of the respondents. This wage information is a statewide overview of all employed without regard to occupational categories or likeliness to change employment. If businesses are in need of wage rates within a defined Laborshed area, the survey data can be queried by various attributes to provide additional analysis of the available labor supply. The actual wage levels required by prospective workers will vary between individuals, occupational categories, industries and economic cycles.

Figure 9
Median Wages & Salaries by Industry

Figure 10
Median Wages & Salaries by Occupational Category

	Hourly Wage	Annual Salary
Agriculture	$ 21.00	$ 70,000
Clerical/Administrative Support	$ 21.00	$ 54,500
Managerial/Administrative	$ 25.00	$ 88,000
Production, Construction & Material Handling	$ 26.50	$ 75,000
Professional, Paraprofessional & Technical	$ 26.00	$ 80,000
Sales	$ 16.68	$ 75,000
Service	$ 18.00	$ 51,000

Figure 10 illustrates current wage rates of those who are currently employed within each defined occupational category.

Wages differ by gender in the State of Iowa. The current median hourly wage of employed females in the State is $21.00 per hour while the current median hourly wage of employed males is $25.50 per hour. This $4.50 per hour wage difference has females in the State receiving an hourly wage of 17.6 percent less than males. Females who are receiving an annual salary also experience gender wage disparity ($18,650 per year). Currently females are making a median annual salary of $65,350 while males are making a median salary of $84,000 a year. This results in a 22.2 percent difference in annual salaries.

EMPLOYMENT BENEFITS

There are a variety of benefit packages offered to employees within the State in addition to wages received. Current benefits of those employed full-time are shown in **Figure 11**. Over four-fifths (83.1%) of the respondents employed full-time in the State of Iowa state they are currently sharing the premium costs of health/medical insurance with their employer, 10.9 percent indicate their employer covers the entire cost of insurance premiums, while 6.0 percent indicate that their employer does not pay any health/medical insurance premiums. **Figure 12** shows how health/medical insurance premium costs are covered for the full-time employed by industry.

Figure 11
Current Benefits of the Full-Time Employed

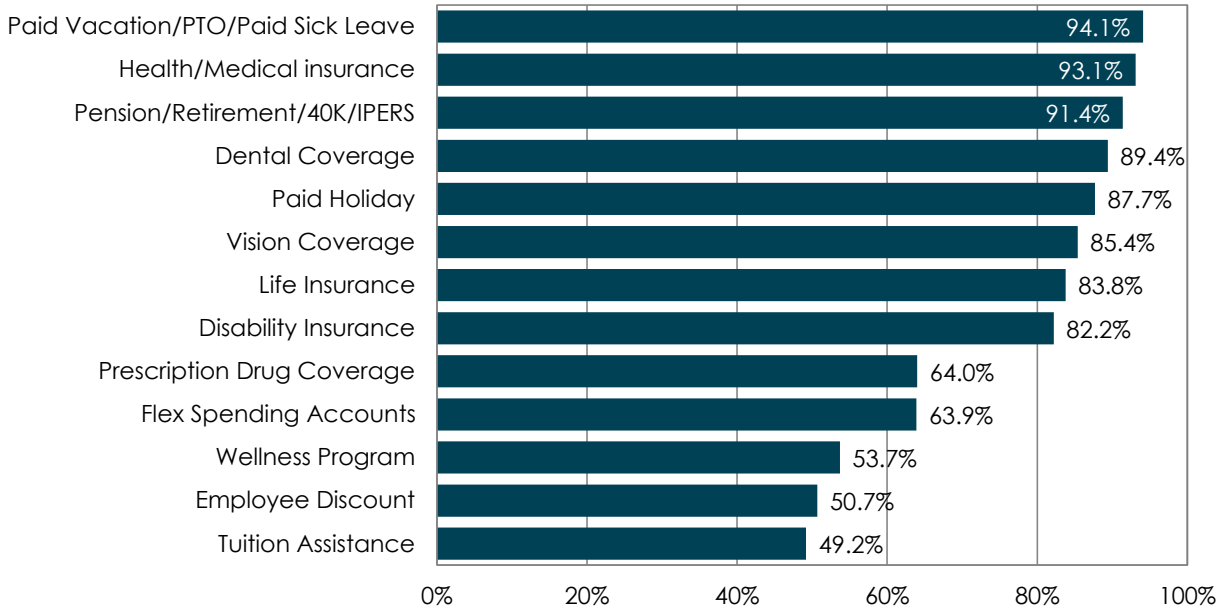
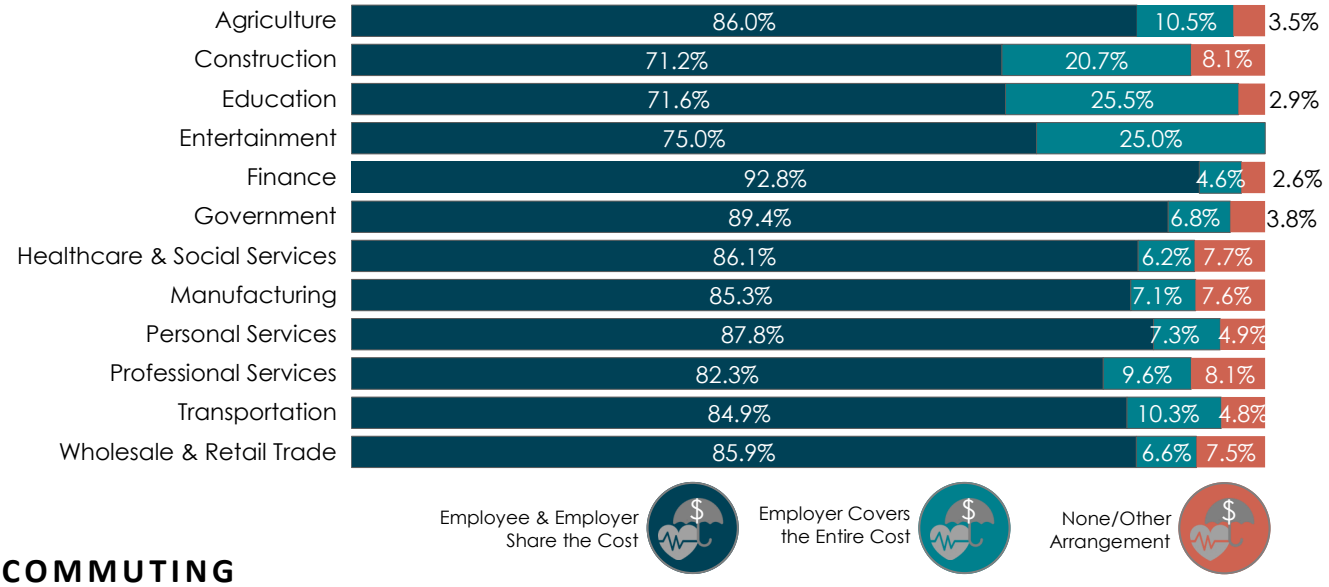


Figure 12
Health/Medical Insurance Premium Coverage by Industry



COMMUTING

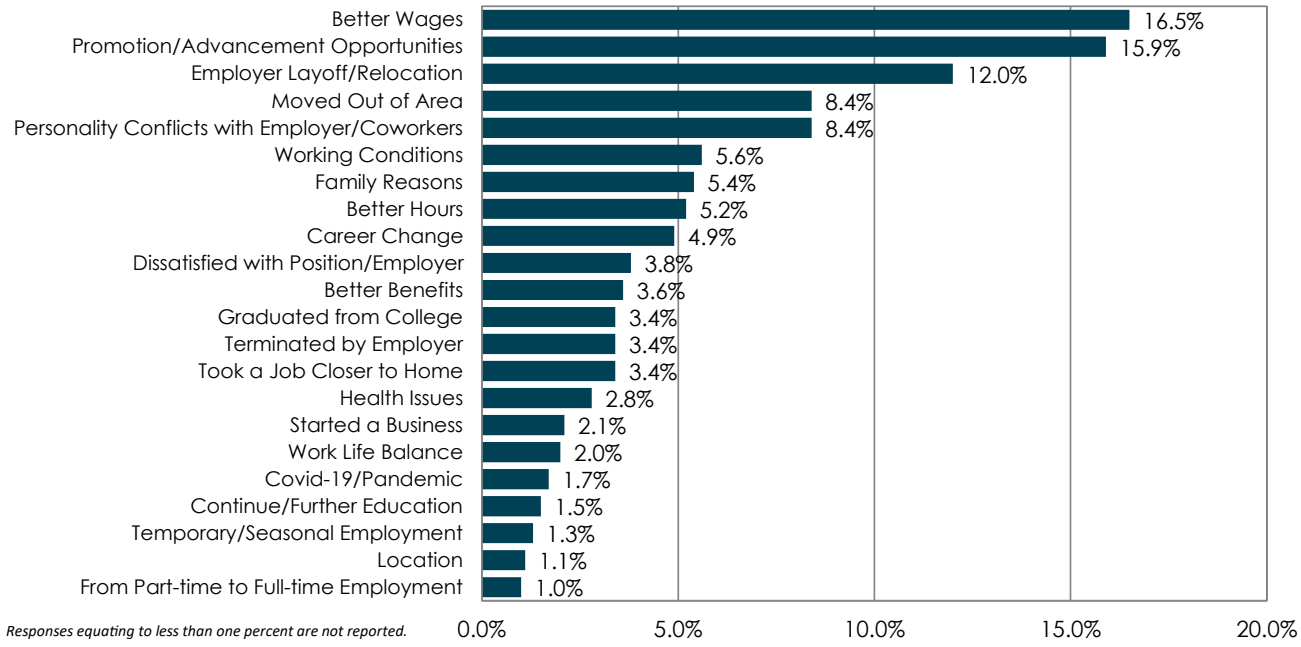
Commuting data collected by the Laborshed survey helps developers and employers understand how far employed residents are willing to commute for employment. Overall, individuals across the State are currently commuting an average of 14 miles one-way for employment opportunities. Respondents were also asked how much time (in minutes) they spend commuting. Overall, individuals across the State are currently spending an average of 19 minutes commuting one-way to work. It is important to keep in mind that when analysis is performed for local Laborshed nodes the average number of miles individuals are currently and/or are willing to commute can fluctuate significantly from one location to another.

EMPLOYED LIKELY TO CHANGE EMPLOYMENT

Analyzing the employed based on their likeliness to change employment creates a profile of individuals interested in changing from their current position. Survey data shows that 27.5 percent of the employed stated that they are either "very likely" or "somewhat likely" to change employers or positions if presented with the right job opportunity.

Figure 13 details the primary reasons given by those who are currently employed for considering changing employment.

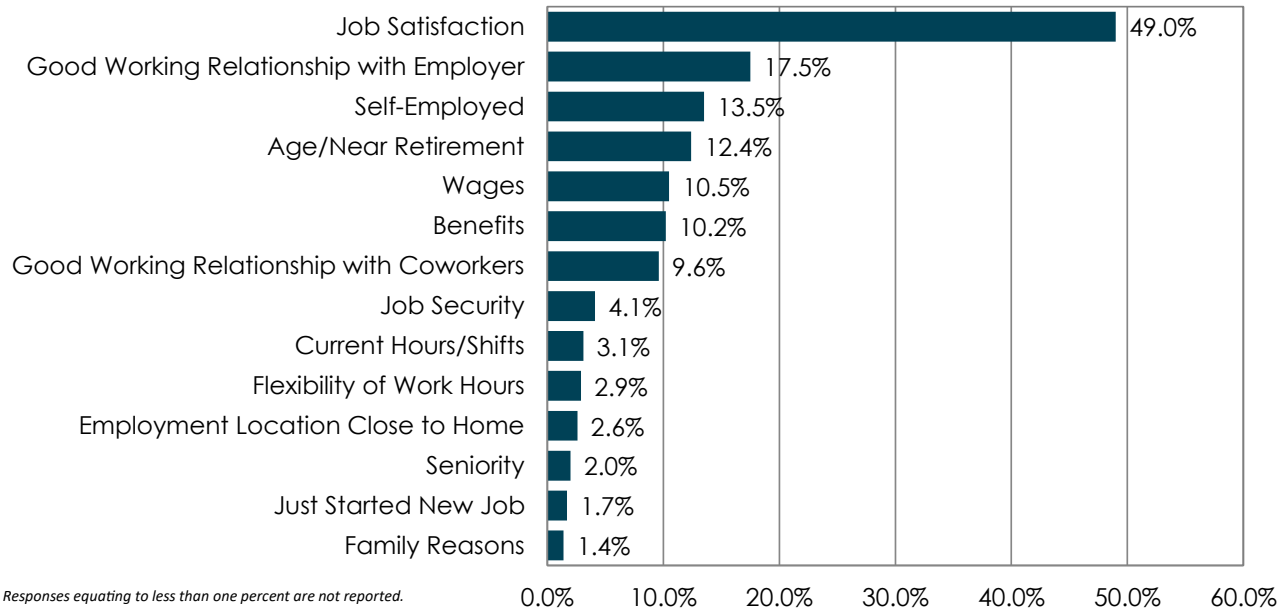
Figure 13
Primary Reasons for Changing Jobs



Responses equating to less than one percent are not reported.

Conversely, those that are currently employed that indicated they are unlikely to change employers gave the following reasons for not considering a change in employment (**Figure 14**).

Figure 14
Reasons Not to Change Employment



Responses equating to less than one percent are not reported.

Over one-tenth (14.7%) of those who are employed likely to change employment are working two or more jobs. This group may prefer to work full-time hours for one employer versus working for multiple employers to accomplish full-time employment. Those who are employed likely to change are currently working an average of 42 hours per week. Over one-tenth (13.7%) would consider employment offers that require them to work more hours.

Less than one-tenth (6.1%) of those employed and likely to change their employment situation are currently self-employed.

AGE AND GENDER

The gender breakdown of those likely to change employment is distributed 46.6 percent female and 53.4 percent male.

The average age of those likely to change employment is 40 years of age. **Figure 15** provides a breakdown by age range of employed respondents who are likely to change employment.

Figure 15
Age Range Distribution

	% of All Employed Likely to Change by Age Range	% of Employed Likely to Change within Each Age Range
18 to 24	11.9%	42.1%
25 to 34	22.8%	29.0%
35 to 44	26.8%	28.4%
45 to 54	23.9%	26.8%
55 to 64	14.6%	20.0%
Total	**100%**	-

EDUCATION & TRAINING

Survey results show that 76.9 percent of the respondents likely to change employment have some level of education/training beyond high school. **Figure 16**, below, breaks down these respondents' education/training by degree level. As with other segments of this study, education levels vary by industrial and occupational categories, gender and age groups.

Figure 16
Education Level of Employed Likely to Change

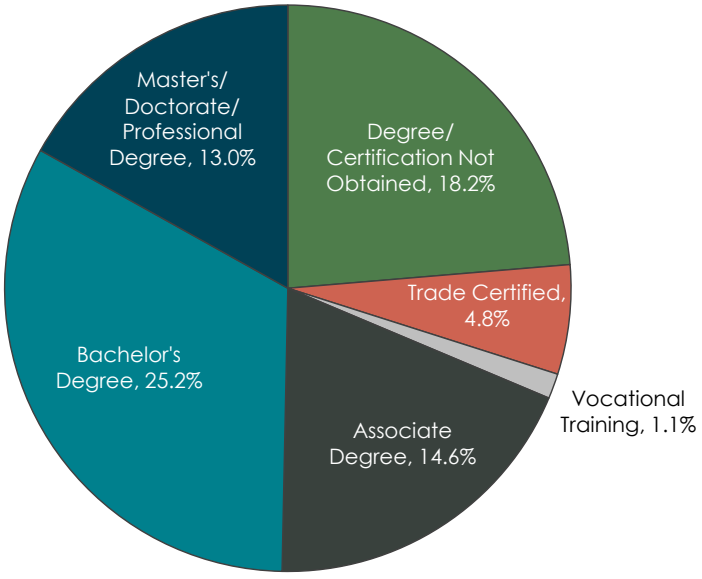
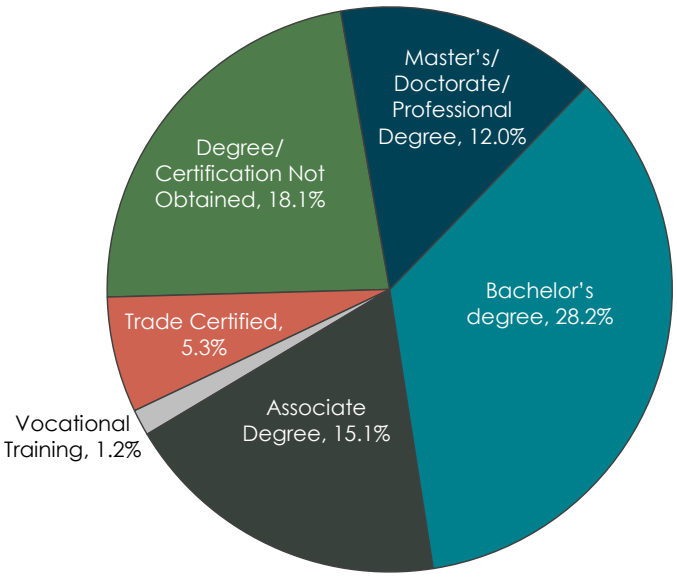
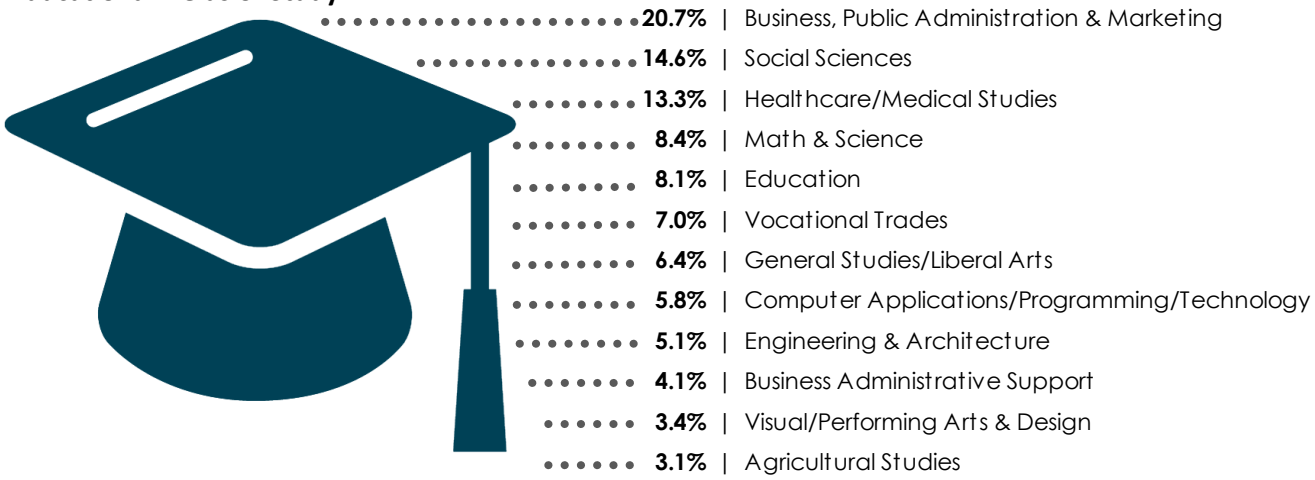


Figure 17
Education Level of Employed Unlikely to Change



The distribution of respondents by education level that are employed and *likely* to change employment is similar to those that are employed *unlikely* to change (**Figure 17**, on the previous page). **Figure 18**, below, provides an overview of the educational fields of study for those who are employed and likely to change employment.

Figure 18
Educational Fields of Study



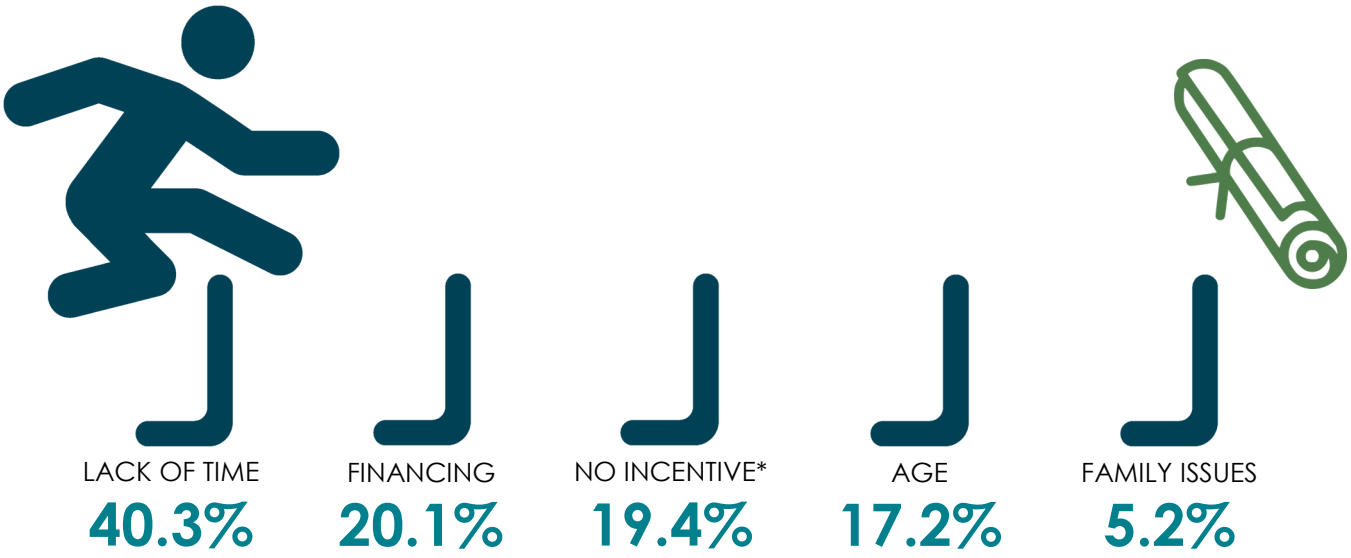
Nearly one-fifth (18.0%) of those who are employed and likely to change employment are currently receiving training or education to be promoted in their job or to obtain a higher paying job.

Just under two-fifths (38.4%) of the employed likely to change employment realize that to make a successful transition to new employment or be promoted within their current organization, they will need additional education/training.

More than three-fifths (63.0%) reported that they are likely to seek additional training/education within the next year.

The primary obstacles preventing respondents from meeting their educational/training needs are listed in **Figure 19**, below. The most highly reported obstacle is lack of time (40.3%).

Figure 19
Obstacles to Training and Education



**No career advancement or financial incentive*

OCCUPATIONS & EXPERIENCES

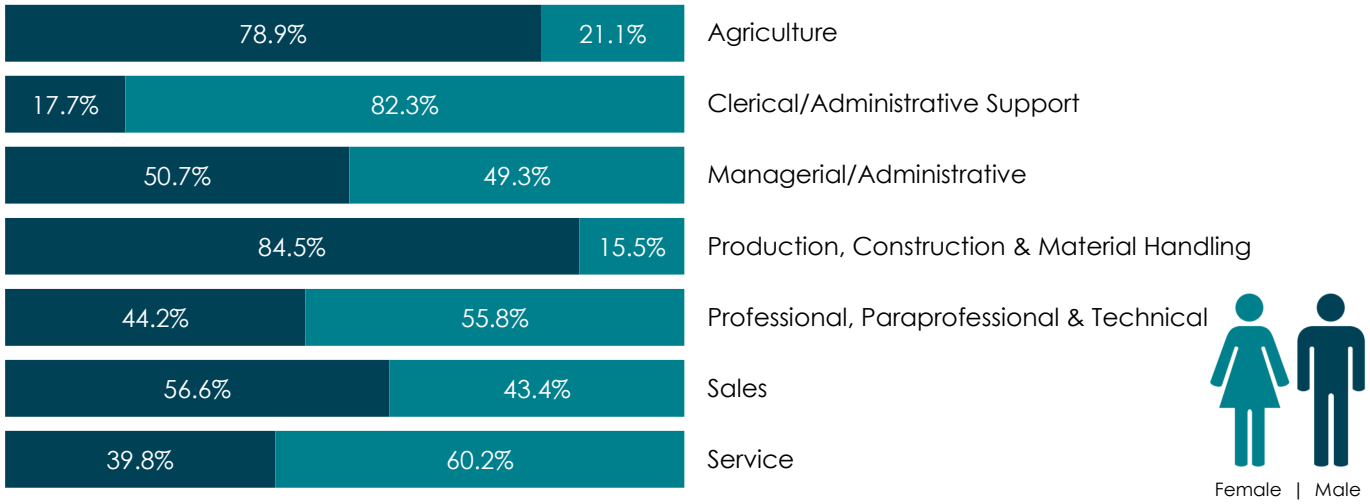
IWD recodes the respondents' actual occupations into one of the seven Occupational Employment & Wages Statistics (OEWS) categories. The occupational categories represent a variety of specific occupations held by the respondents (see OEWS Category Structure - **Appendix D**). **Figure 20** shows that the largest concentration of potential available labor is employed within the professional, paraprofessional & technical occupational category. The agricultural occupational category represents the smallest sector of workers likely to change employment.

Figure 20
Percent of Workforce by Occupational Category

	% of All Employed Likely to Change by Occupational Category	% of Employed Likely to Change within Each Occupational Category
Professional, Paraprofessional & Technical	31.3%	27.9%
Production, Construction & Material Handling	23.7%	27.2%
Managerial/Administrative	15.3%	23.0%
Service	12.6%	37.7%
Clerical/Administrative Support	8.4%	28.0%
Sales	7.3%	30.2%
Agriculture	1.4%	14.0%
Total	**100%**	**-**

Figure 21 provides a comparison of those likely to change employment by gender within the various occupational categories. The State of Iowa has a higher percentage of males who are employed likely to change than females (53.4% and 46.6%, respectively). Employers within the State looking to fill positions can utilize this information to more efficiently focus their recruitment efforts based on the occupational categories for which they plan to hire. The occupational categories encompass a wide variety of individual occupations in which workers throughout the State are employed.

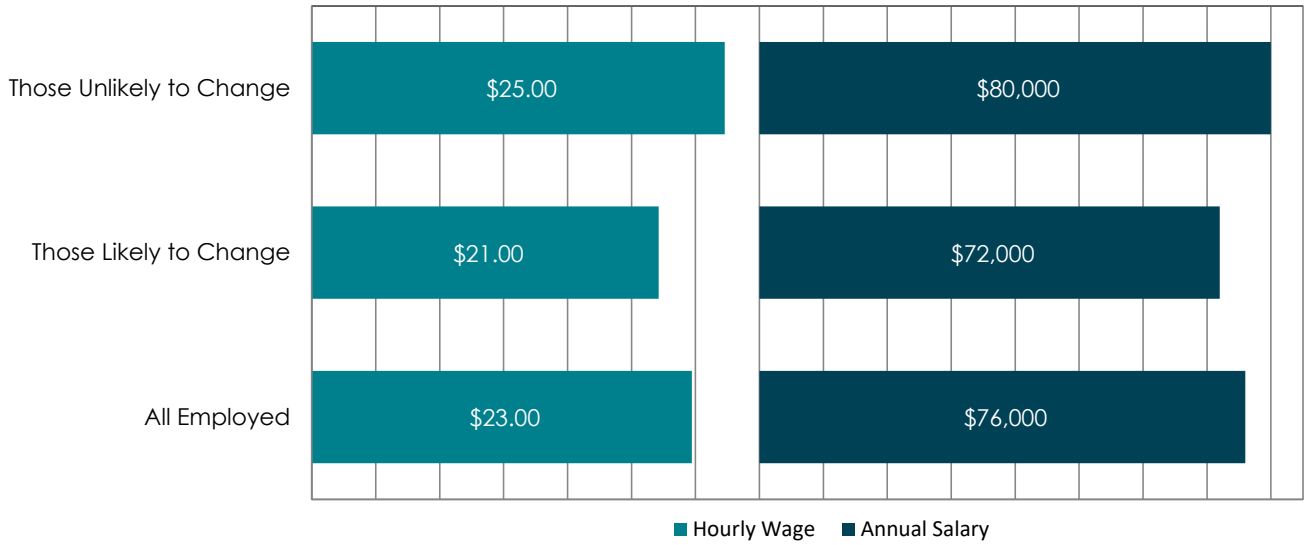
Figure 21
Breakout by Gender of Those Likely to Change Employment per Occupational Category



WAGE REQUIREMENTS

Figure 22 provides data concerning the employed respondents' current median wages and salaries, by their likeliness to change employment. Additional data from the survey can be analyzed to provide businesses a benchmark for determining wage rates in the State of Iowa. The actual wage levels required by prospective workers will vary between individuals, occupational categories, industries and economic cycles. The breakdown of respondents employed and likely to change employment, who indicated a type of compensation is as follows: 57.7 percent state they are currently receiving an hourly wage, followed by 36.2 percent receive an annual salary, 4.2 percent that are on commission, and 1.9 percent are paid on an alternative basis.

Figure 22
Comparison of Current Wage Data



There is a disparity between the median hourly wages and median annual salaries of respondents likely to change employment and those content with their current position ($4.00/hr and $8,000/yr).

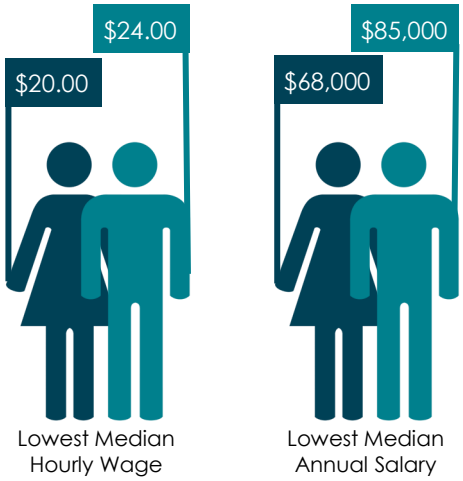
The wage threshold (wage range required to attract 66 percent to 75 percent of applicants) of employed residents who are "very likely" or "somewhat likely" to change employment is estimated to be $25.00 to $28.00 per hour regardless of industry. Salaried employees likely to change employment have a threshold of $92,660 to $100,000 per year.

Figure 23 reflects those who are currently employed likely to change and the estimated wage threshold for hourly wage applicants by industry.

Figure 23
Wage Threshold by Industry

	Wage Threshold Hourly Wage	Wage Threshold Annual Salary
Agriculture	$ 27.64 - $ 29.00	$ 91,600 - $ 100,000
Construction	$ 33.00 - $ 35.00	$ 84,200 - $ 100,000
Education	$ 20.56 - $ 23.75	$ 80,294 - $ 90,000
Finance & Professional Services	$ 27.00 - $ 30.00	$ 107,600 - $ 125,000
Government	$ 30.00 - $ 32.25	$ 94,000 - $ 99,000
Healthcare & Social Services	$ 25.00 - $ 27.00	$ 90,000 - $ 100,000
Manufacturing	$ 27.24 - $ 30.00	$ 100,000 - $ 120,000
Personal Services & Entertainment	$ 25.00 - $ 29.00	$ 57,200 - $ 70,250
Transportation, Communication & Utilities	$ 29.93 - $ 30.00	$ 90,000 - $ 92,500
Wholesale & Retail Trade	$ 20.00 - $ 23.00	$ 86,000 - $ 100,000

Figure 24
Lowest Wages Considered by Gender



Another comparison to consider is the employed respondents' lowest wages considered based on gender (**Figure 24**).

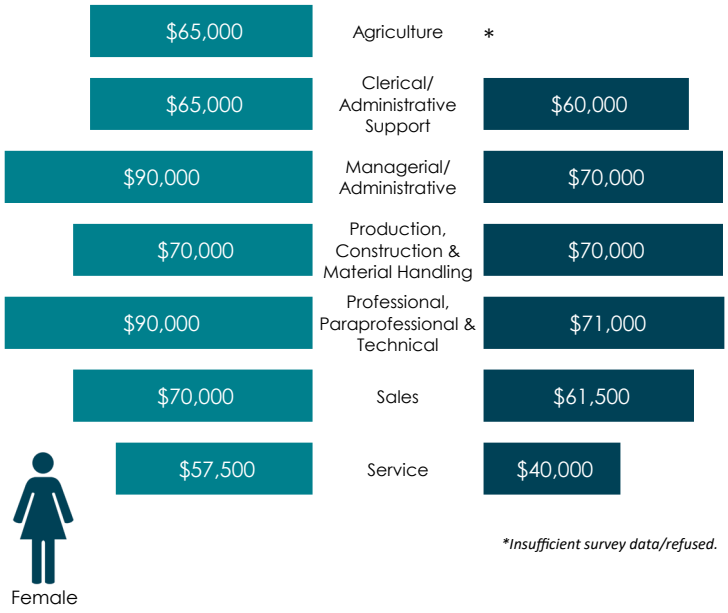
In many Laborshed areas, there is a discrepancy between the lowest wages considered by males and females. On the whole, this is true in the State as well when looking at hourly wage rates of those who are likely to change employment without regard to specific industry or occupation. The lowest median hourly wage that females would consider is 16.7 percent less than that of males. Likewise, the median salary females would consider is 20.0 percent less than that of males. Some of the disparity may be explained by the differences in the occupational and industrial categories of the respondents, nevertheless discrepancies still exist.

Figures 25 and **26** further explore the differences between the lowest median hourly wages and annual salaries considered by respondents that are employed likely to change employment based on gender and delineated by occupational category.

Figure 25
Lowest Median Hourly Wage by Occupational Category

Insufficient survey data/refused.

Figure 26
Lowest Median Annual Salary by Occupational Category



Insufficient survey data/refused.

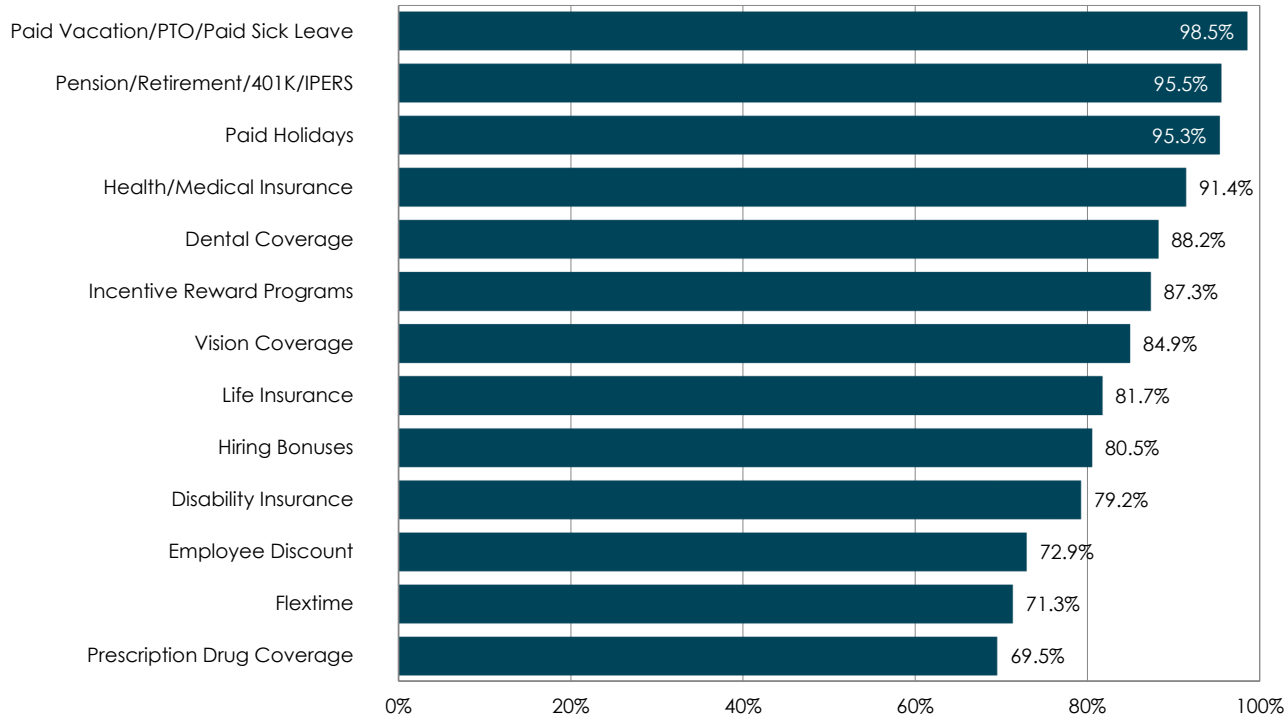
EMPLOYMENT BENEFITS

The survey provides the respondents an opportunity to identify employment benefits that would influence their decision to change employment. Desired benefits are shown in **Figure 27**, on the next page. For some respondents, benefits offered in lieu of higher wages can be the driving force to change employment. Some respondents assume that particular benefits, such as health/medical insurance, would be incorporated into most standard employment packages; therefore, they may not select health/medical as an influential benefit option.

When contemplating a change in employment, around half (50.6%) of those surveyed would prefer to look for offers where the employer covers all the premium costs of health/medical insurance while (48.6%) would be willing to share the cost of premiums for health/medical insurance with their employer.

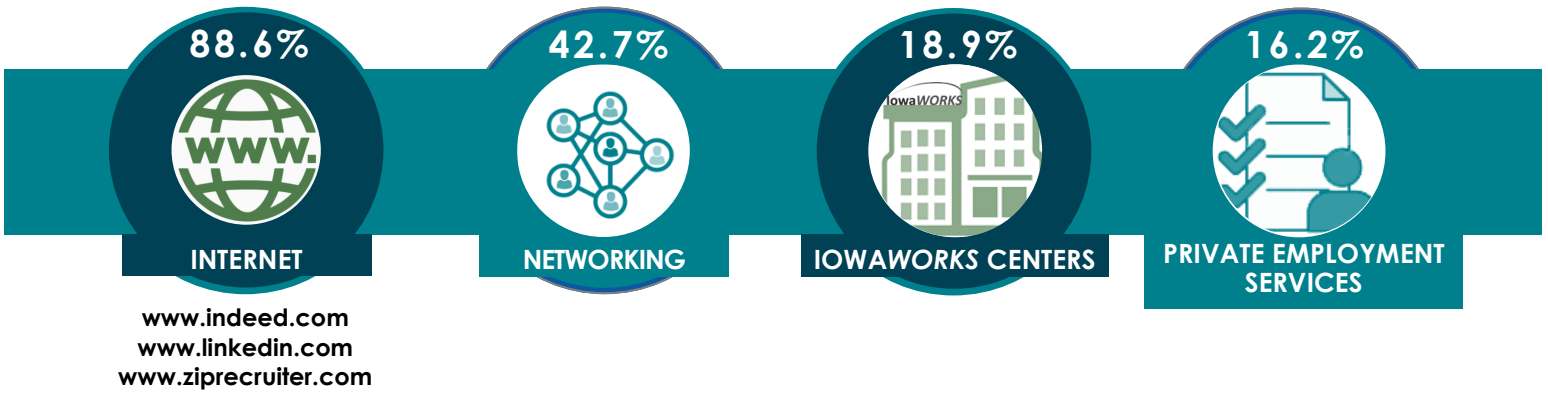
Over four-fifths (81.7%) of those who are employed likely to change state they are currently sharing the premium costs of health/medical insurance with their employer and 9.6 percent indicate their employer is covering the entire cost of health/medical insurance. In the majority of cases the data shows that the cost sharing of medical insurance premiums is an influential benefit option for those considering employment offers.

Figure 27
Desired Benefits



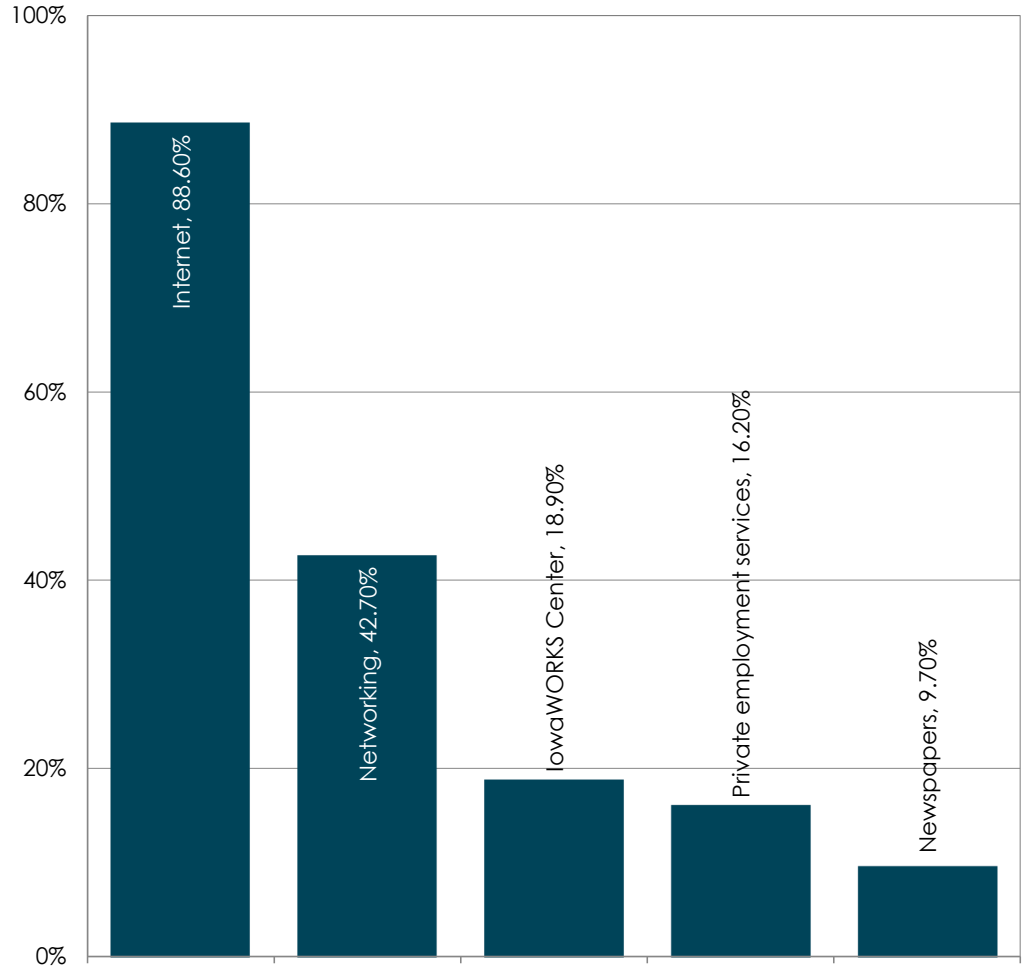
JOB SEARCH RESOURCES

Among the employed and likely to change employment 30.6 percent stated that they are actively seeking new employment. Employers who have a clear understanding of the job search resources used by workers will improve their ability to maximize their effectiveness and efficiency in attracting qualified applicants. Residents living in the State of Iowa are undoubtedly exposed to numerous sources by which employers communicate job openings and new hiring. Therefore, it is important to understand what sources potential workers rely on when looking for jobs. The most frequently identified job search resources of the employed, and likely to change employment, are identified in detail within **Figure 28**, on the next page. However, the top four resources reported are illustrated below.



www.indeed.com
www.linkedin.com
www.ziprecruiter.com

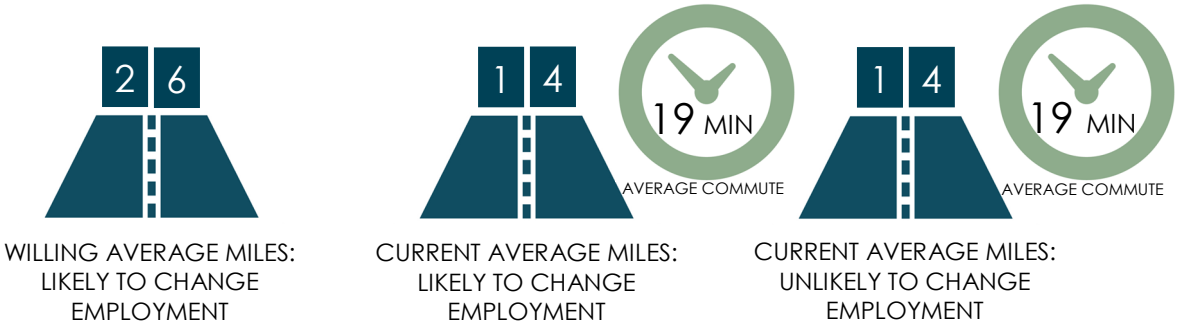
Figure 28
Job Search Resources Used



COMMUTING

Overall, across the State, respondents that are employed likely to change report that they would commute an average of 26 miles one-way for employment opportunities. Currently, those employed likely to change employment are commuting 14 miles one-way for employment while those that are employed but unlikely to change are also traveling 14 miles one-way to work. Respondents were also asked how much time (in minutes) they spend commuting. Currently, those employed likely to change employment spend an average of 19 minutes commuting one-way to work while those that are employed but unlikely to change are spending an average of 19 minutes commuting one-way for employment.

It is important to keep in mind that when analysis is performed for specific Laborshed nodes the average number of miles individuals are currently and/or are willing to commute can fluctuate significantly.



ESTIMATED UNDEREMPLOYED

Underemployment is a recent point of interest in popular literature, but it has actually been an issue studied and addressed by economists for nearly 20 years. While there is no one widely accepted definition of underemployment, for the purpose of this analysis, underemployment is defined in the following three ways:

1. **Inadequate hours worked** - individuals working less than 35 hours per week and desiring more hours.
2. **Mismatch of skills -** workers are denoted as "mismatched" if their completed years of education are above the number needed for their current occupational group, they have significant technical skills beyond those currently being utilized or if they have held previous jobs with a higher wage or salary.
3. **Low income** - individuals working 35 or more hours per week at wages insufficient enough to keep them above the poverty level.

Each of these categories of underemployment can be very difficult to estimate; however, elements of each of these categories exist in the State of Iowa.

It is important to note that underemployment applies only to respondents that indicated they were employed likely to change employment. Respondents are not considered underemployed if they are unlikely to accept new employment opportunities that could improve their situation.

UNDEREMPLOYED DUE TO INADEQUATE HOURS WORKED

In order to determine the percentage of those affected by underemployment due to inadequate hours worked, tabulations of the employed likely to change employment and working less than 35 hours per week, desiring more hours, were analyzed. The survey data shows that underemployment due to inadequate hours is estimated to be 1.3 percent within the State.

The gender breakout of those who are considered to be underemployed due to low hours is 53.8 percent female and 46.3 percent male. The average age of those who are underemployed due to inadequate hours is 36 years.

Figure 29
Occupational Categories of Underemployed Due to Inadequate Hours

	% of Employed
Agriculture	-
Clerical/Administrative Support	7.8%
Managerial/Administrative	7.8%
Production, Construction & Material Handling	22.1%
Professional, Paraprofessional & Technical	18.2%
Sales	11.7%
Service	32.4%
Total	**100%**

Figure 29 details the current occupational categories of those who are underemployed due to inadequate hours. These respondents are currently seeking employment opportunities within the service (32.4%); production, construction & material handling (22.1%); professional, paraprofessional & technical (18.2%); sales (11.7%); clerical (7.8%); or managerial (7.8%) occupational categories. This group is willing to commute an average of 23 miles one-way for the right employment opportunity. Over three-fifths (65.0%) of the respondents who are underemployed due to inadequate hours have an education beyond high school. Businesses may want to look inside their own organizations for potential candidates when looking to fill openings requiring full-time employment status.

UNDEREMPLOYED DUE TO MISMATCH OF SKILLS

Underemployment may also be calculated by examining individuals that are employed in positions that do not maximize their previous experience, skills and education or that do not adequately compensate them based on their qualifications. Iowa Workforce Development's survey attempts to provide the best estimate of this "mismatch" of skills by asking respondents if they believe that they are underemployed and if so, why. Respondents first answered the question, "Are you qualified for a better job?" Individuals answering "yes" are then asked to classify why they are qualified based on the following categories: previously held job required more skill and education; acquired additional job training and education at current job; current job does not

require attained level of training or education; and received greater pay at previous job. Respondents selected all descriptors that applied to their situation. The choices provided on the survey are not an exhaustive list of explanations of why the respondent is overqualified, but a collection of the most likely responses based on prior surveys and research.

Iowa Workforce Development then conducts a second method of validating whether or not underemployment by mismatch of skills actually exists. Each time a respondent lists a reason for why he or she is qualified for a better job, other survey questions are analyzed to estimate whether the person is truly underemployed or simply overstating their skills and education or underestimating the requirements of the labor market. For example, if a respondent states that they are underemployed because they previously held a job that required more skill and education, IWD evaluates the person's occupation type, skills unused at their current position, age, employment status, education, years in current position and the type of job they would consider to see if they are consistent with the person's underemployment.

In 2024, 9.0 percent of respondents were identified as underemployed due to mismatch of skills. If a respondent is determined to be underemployed due to mismatch of skills for more than one of the four previously stated reasons, that individual is only counted once.

Over half (55.2%) of those who are considered to be underemployed due to mismatch of skills in the State are male. The education level obtained compared to occupation previously held provides the greatest discrepancy when looking at mismatch of skills. Over four-fifths (83.7%) have some education beyond high school: 21.1 percent have some education beyond high school but did not obtain a degree/certification; 4.6 percent are trade certified; 0.7 percent have vocational training; 15.2 have an associate degree; 26.4 percent have a bachelor's degree; and 15.7 percent have a master's/doctorate/professional degree.

UNDEREMPLOYED DUE TO LOW INCOME

A total of 3.5 percent of respondents answering the household income question fall below the 2024 federal poverty thresholds based on their household income and number of members living in the household (i.e., based on a family of four, the annual household income guideline is $31,200). However, only 0.4 percent of respondents are considered underemployed due to low income within the Laborshed area. To be considered underemployed due to low income, in addition to their household income falling below the poverty level, the respondent must be employed, likely to change employment and be working 35 or more hours per week.

TOTAL ESTIMATED UNDEREMPLOYED

All three measures of underemployment result in a statewide estimated total underemployment rate of 9.9 percent (**Figure 30**). It is important to emphasize that these underemployment percentages are only estimates; however, IWD has filtered the data to eliminate double counting of respondents within and between the three categories. A person underemployed due to inadequate hours, mismatch of skills and low income is only counted once.

Figure 30
Total Estimated Underemployed

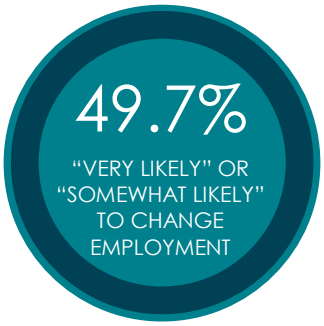
% Underemployed by Inadequate Hours	% Underemployed by Mismatched Skills	% Underemployed by Low Income	% Estimated Total Underemployment
1.3%	9.0%	0.4%	9.9%

The wage threshold (wage range required to attract 66 percent to 75 percent of applicants) for the underemployed is $23.00 to $25.00 per hour with a lowest median considered wage of $20.00 per hour. When looking for employment opportunities the underemployed primarily use the internet (88.7%); networking through friends, family and/or acquaintances (44.8%); local Iowa*WORKS* centers (23.4%) and private employment services (17.8%) as the preferred job search resources.

NOT EMPLOYED

The BLS defines unemployed persons as individuals who are currently not employed but that are actively seeking employment. Using only this definition overlooks sources of potential labor, specifically the homemakers and retirees who, though currently not employed, would consider entering or accepting the workforce if the right opportunity arose. Iowa Workforce Development uses an alternative definition of "not employed" for its Laborshed studies which includes the unemployed, homemakers and retirees as subsets of the category. The survey asks the respondents to identify whether they are unemployed, a homemaker or retired.

The inclusion of these subset groups into the analysis provides a more accurate assessment of the potential labor force in the State of Iowa. Of the respondents surveyed, 16.1 percent reported that they are "not employed". By questioning these respondents about their likeliness to accept a job offer, the survey identified 49.7 percent who stated they are "very likely" or "somewhat likely" to accept employment.



Each of the "not employed" subsets (the unemployed, homemakers, and the retired) has their own unique characteristics that define their contribution to the State. Recognizing and understanding these factors will aid in efforts to target and tap into this often unrecognized and underutilized labor resource. The following sections provide a profile of the unemployed, homemakers and retired respondents.

UNEMPLOYED LIKELY TO ACCEPT EMPLOYMENT

Of those who responded as unemployed, 65.9 percent are "very likely" or "somewhat likely" to accept employment if the right opportunity arose.

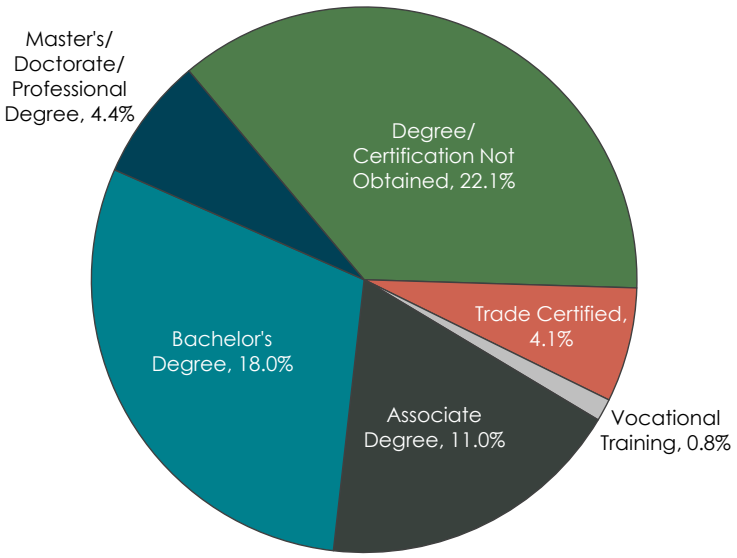
DEMOGRAPHICS OF THE UNEMPLOYED

The average age of this group is 40 years old. The unemployed respondents are distributed among all of the age range groups, 18 to 24 (18.0%), 25 to 34 (21.8%), 35 to 44 (21.8%), 45 to 54 (21.8%) and 55 to 64 (16.6%). The gender breakdown of those unemployed is 56.1 percent male and 43.9 percent female.

EDUCATION & TRAINING

Around three-fifths (60.5%) of the respondents who are unemployed and likely to accept employment have some post high school education. **Figure 31** breaks down these respondents' education/training by degree level.

Figure 31
Education Level



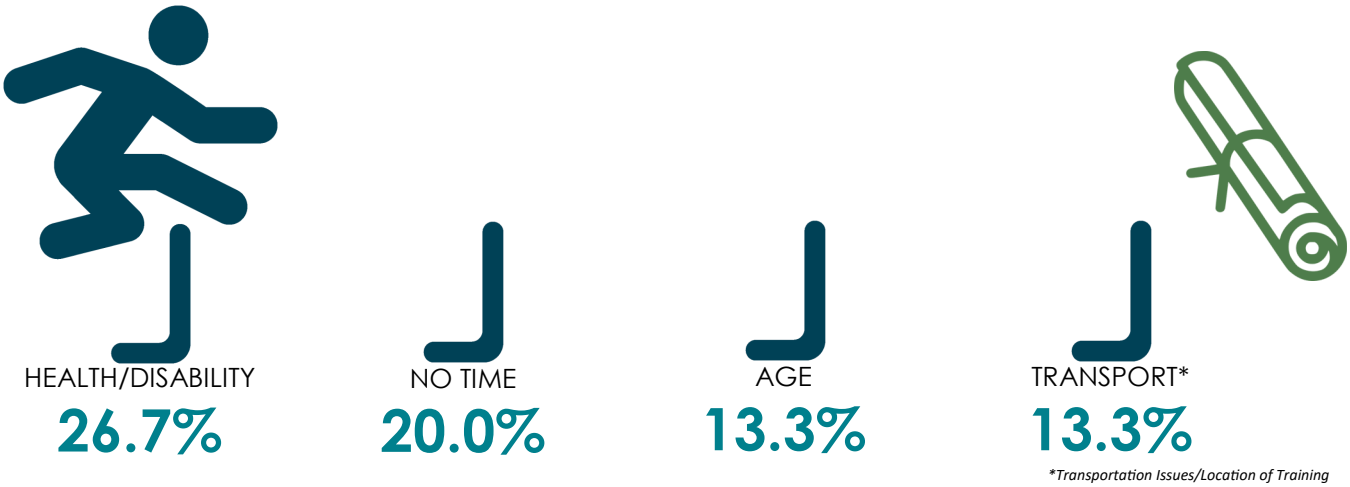
Nearly one-fifth (18.7%) of those who are unemployed and likely to accept employment are currently receiving training/education to improve/increase their skills and hire-ability.

Nearly one-third (30.0%) of the unemployed likely to accept employment realize that to make a successful transition to new employment they will need additional education/training.

Over four-fifths (81.1%) reported that they are likely to seek additional training/education within the next year.

The primary obstacles preventing respondents from meeting their educational/training needs are listed in **Figure 32**, on the next page. The most highly reported obstacle is health/disability issues (26.7%).

Figure 32
Obstacles to Training and Education



**Transportation Issues/Location of Training*

WORK EXPERIENCE

Nearly four-fifths (77.3%) of these respondents became unemployed within the last year. Among the unemployed, likely to accept employment, the majority (78.8%) held full-time positions, while 21.2 percent held part-time positions in their previous employment. These individuals have diverse work experiences. The majority held positions within the production, construction & material handling (38.2%); professional, paraprofessional & technical (23.3%); service (14.6%); sales (10.5%); clerical (7.0%); managerial (6.1%); or agriculture (0.3%) occupational categories. A variety of explanations were given as to why the respondents are unemployed at this time. The most frequently mentioned responses are shown in **Figure 33.**

Figure 33
Reasons for Being Unemployed

	% of Unemployed
Health/Disability Reasons	24.4%
Employer Layoff, Downsizing, Relocation or Closing	20.2%
Terminated by Employer	14.9%
Continue/Further Education	9.5%
Family Reasons	8.9%
Lack of Employment Opportunities	6.8%
Quit Previous Employment	5.4%
Personality Conflicts with Employer/Co-workers	5.1%
Moved Out of Area	4.5%
Transportation Issues	2.4%
Contract Concluded	2.1%
Job Requirements	2.1%
Temporary/Seasonal Employment	1.5%
Covid-19/Pandemic	1.2%

Responses equating to less than one percent are not reported.

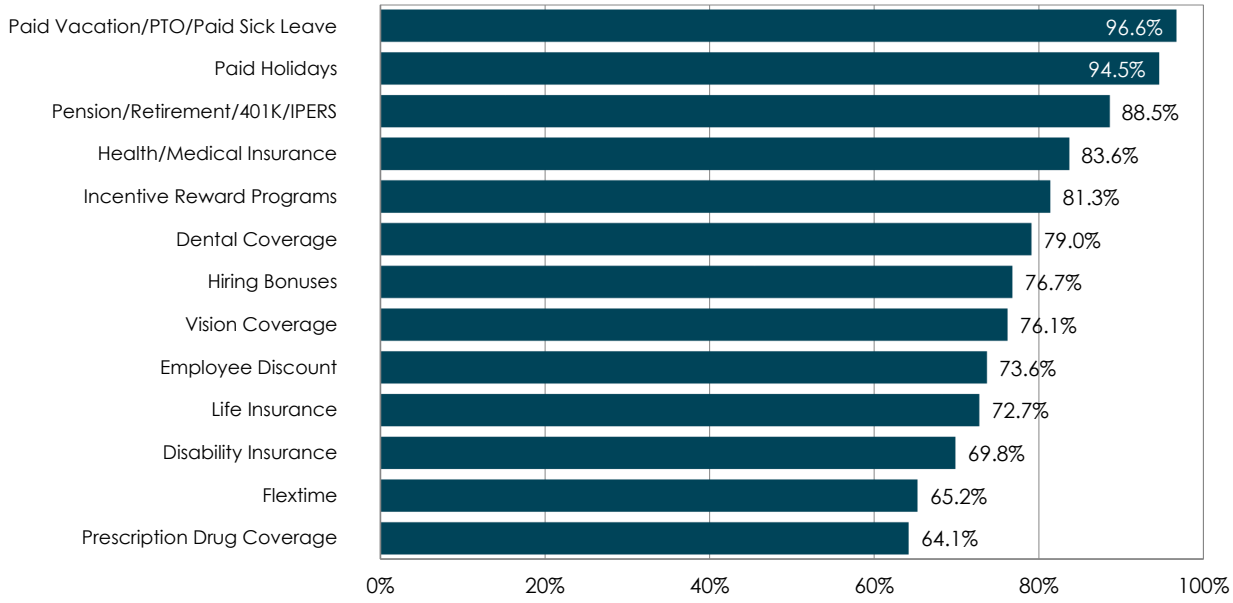
These respondents reported that at their previous primary job they worked an average of 38 hours per week. Additionally, 1.7 percent of this group had been self-employed.

WAGES & BENEFITS

Wage levels, hours available and employee benefits are important factors for unemployed individuals. The estimated wage threshold for the unemployed likely to accept employment is $19.00 to $20.00 per hour. This threshold illustrates the wage range required to attract 66 to 75 percent of applicants. The lowest median hourly wage that unemployed respondents are willing to accept is $17.00 per hour. At their prior employment, the unemployed received a median hourly wage of $17.50 per hour.

In addition to salary/wages and hours, some of the unemployed could be influenced by certain benefits. Those benefits most frequently mentioned are identified in **Figure 34**.

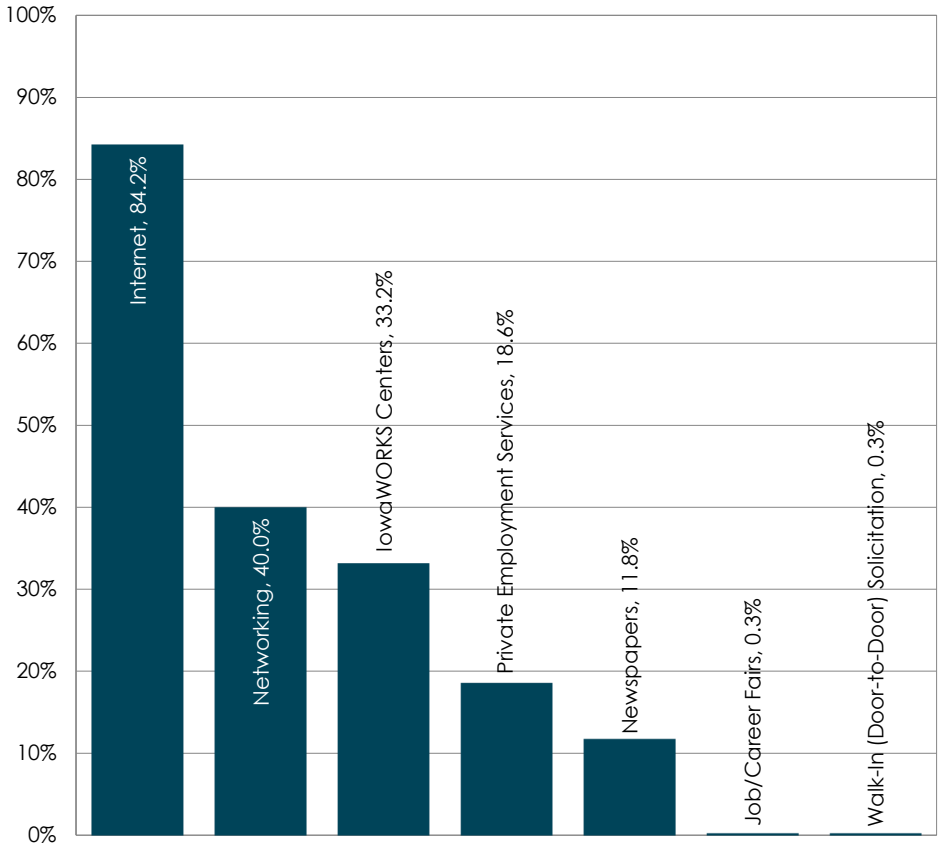
Figure 34
Desired Benefits



JOB SEARCH RESOURCES

Among the unemployed and likely to accept employment 72.9 percent stated that they are actively seeking new employment. The top job search resources used by this group are detailed in **Figure 35**, to the right. The top job resource is the internet, of which the most commonly used websites are: indeed.com and linkedin.com.

Figure 35
Job Search Resources Used



COMMUTING

Overall, respondents across the State report they are willing to commute an average of 23 miles one-way for employment opportunities. It is important to keep in mind that when analysis is performed for specific Laborshed nodes the average number of miles individuals are currently and/or are willing to commute can fluctuate significantly.

HOMEMAKERS LIKELY TO ACCEPT EMPLOYMENT

Of those who identified themselves as a homemaker, 40.1 percent are "very or somewhat likely" to accept employment if given the right opportunity. Among these, 26.2 percent stated that they are actively seeking new employment. This group may represent a quality source of potential available labor in the State for certain businesses looking to fill non-traditional work arrangements. The remainder of this section examines this group.

DEMOGRAPHICS OF HOMEMAKERS LIKELY TO ACCEPT EMPLOYMENT

The average age of this group is 43 years old. Homemaker respondents are distributed among all of the age range groups, 18 to 24 (3.3%), 25 to 34 (24.6%), 35 to 44 (29.5%), 45 to 54 (24.6%) and 55 to 64 (18.0%). The gender breakdown of those within this group is 80.3 percent female and 19.7 percent male.

EDUCATION & TRAINING

Nearly four-fifths (78.7%) of homemaker respondents in the State have some post high school education: 19.7 percent have some education beyond high school but did not obtain a degree/certification; 4.9 percent are trade certified; 19.7 percent have an associate degree; 29.5 percent have a bachelor's degree; and 4.9 percent have a master's/doctorate/professional degree.

Less than one-tenth (6.7%) of those who are homemakers and likely to accept employment are currently receiving training or education to transition back into the workforce.

Nearly one-third (30.0%) of homemakers who are likely to accept employment realize that to make a successful transition to new employment they will need additional education/training.

Around two-thirds (66.7%) reported that they are likely to seek additional training/education within the next year.

The primary obstacles preventing respondents from meeting their educational/training needs are: childcare (40.0%), financial issues (40.0%), family issues (20.0%), health/disability issues (20.0%), and no time (20.0%).

WORK EXPERIENCE

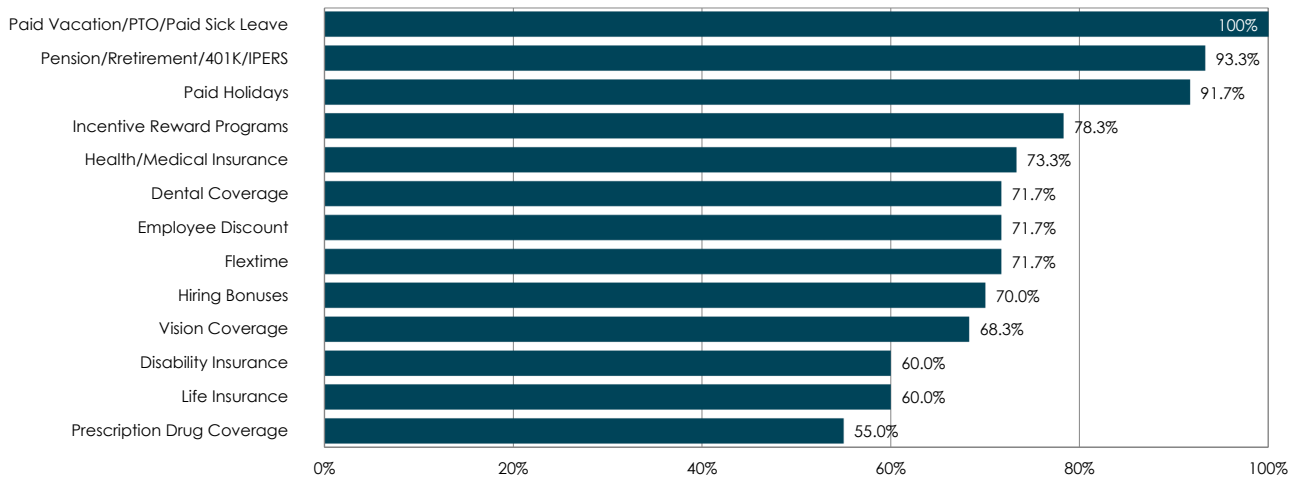
Around one-third (33.3%) of the respondents became a homemaker within the last year. Among all homemakers who are likely to accept employment, over two-thirds (68.3%) held full-time positions, 31.7 percent held part-time positions. These individuals have diverse work experiences; the majority held positions within the professional, paraprofessional & technical (24.1%); service (22.4%); clerical (19.0%); production, construction & material handling (12.1%); sales (12.1%); and managerial (6.9%) occupational categories.

Respondents reported that at their previous primary job they worked an average of 38 hours per week.

BENEFITS & WAGES

Some homemakers would be influenced by certain benefits when it comes to accepting a job offer. The benefits most frequently mentioned are identified in **Figure 36**.

Figure 36
Desired Benefits



In some situations, benefits offered will play a deciding factor in whether homemakers accept a position. One such example would be companies that offer cost sharing of medical insurance benefits. Nearly two-fifths (38.6%) of those seeking to return to the workforce would prefer employment offers that include medical insurance where the employer and employee share the cost of the premiums.

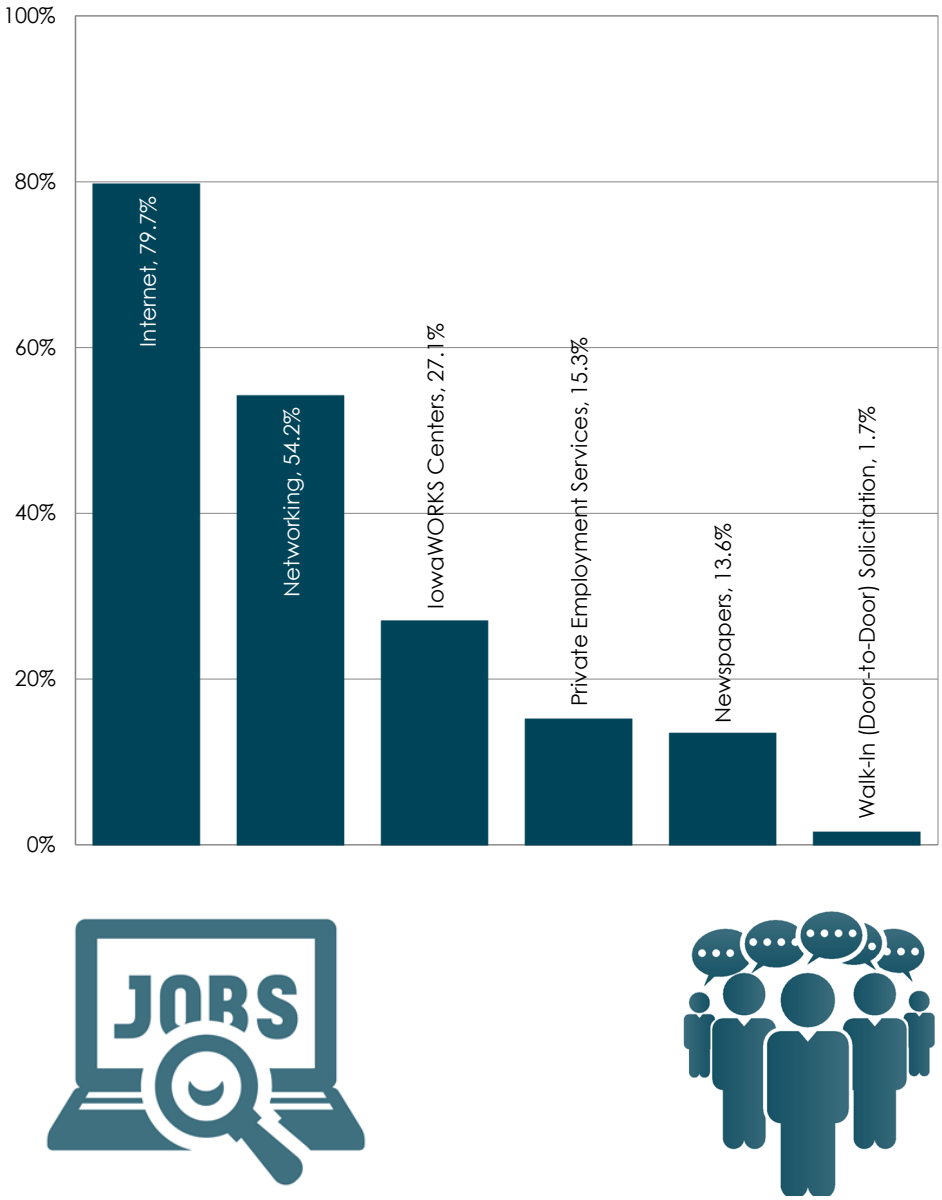
The estimated wage threshold for homemakers likely to accept employment is $17.38 to $20.00 per hour.

This threshold shows the wage range required to attract 66 to 75 percent of applicants. The lowest median hourly wage that homemaker respondents are willing to accept is $15.00 per hour. At their prior employment, this group received a median hourly wage of $13.93 per hour.

JOB SEARCH RESOURCES

The most frequently identified job search resources are delineated in **Figure 37**.

Figure 37
Job Search Resources Used



RETIRED LIKELY TO ACCEPT EMPLOYMENT

Retired individuals (18-64 years of age) represent an underutilized and knowledgeable pool of workers. In the State, 21.4 percent of respondents that stated they were retired are likely to accept employment in some capacity. Among these, 10.7 percent stated that they are actively seeking new employment.

DEMOGRAPHICS OF THE RETIRED

The average age of this group is 59 years old. The retired respondents are distributed between three age range groups, 35 to 44 (1.8%), 45 to 54 (17.9%) and 55 to 64 (80.4%). The gender breakdown of retirees is 55.4 percent male and 44.6 percent female.

EDUCATION & TRAINING

Four-fifths (80.4%) of the retired respondents in the State have some post high school education: 21.4 percent have some education beyond high school but did not obtain a degree/certification; 7.1 percent are trade certified; 3.6 percent have vocational training; 10.7 percent have an associate degree; 17.9 percent have a bachelor's degree; and 19.6 percent have a master's/doctorate/professional degree.

Nearly one-tenth (7.1%) of those who are retirees and likely to accept employment are currently receiving training or education to transition back into the workforce.

Nearly one-fifth (17.9%) of retirees who are likely to accept employment realize that to make a successful transition to new employment they will need additional education/training.

Two-fifths (40.0%) reported that they are likely to seek additional training/education within the next year.

The primary obstacles preventing respondents from meeting their educational/training needs are: age (60.0%), childcare (20.0%), health/disability issues (25.0%).

WORK EXPERIENCE

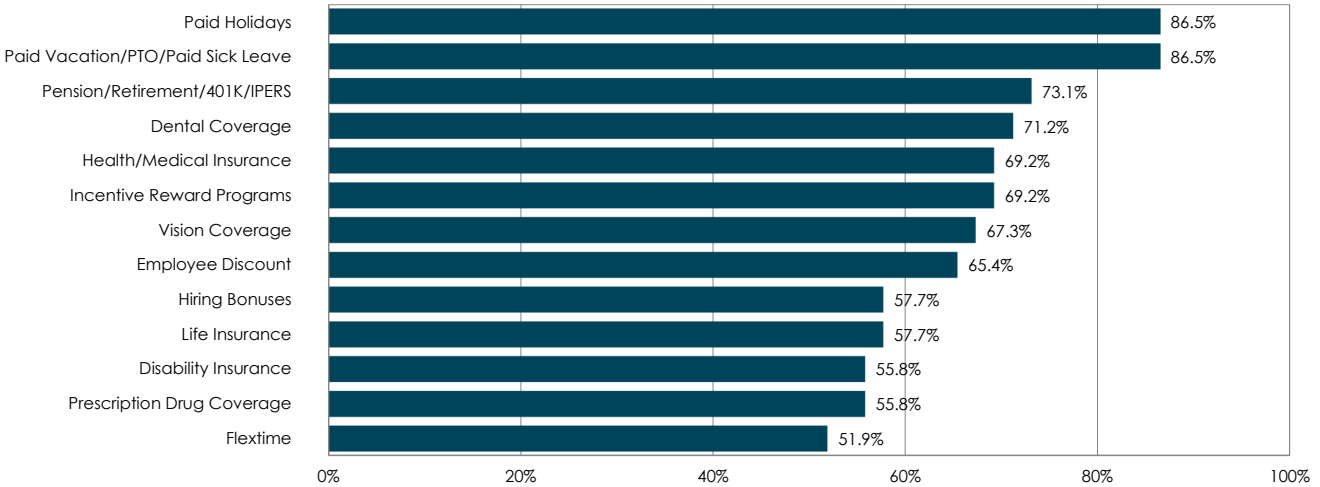
Over one half (53.6%) of retired respondents retired within the last year. Among this group, retirees likely to accept employment, the majority (85.7%) held full-time positions and 14.3 percent held part-time positions in their previous employment. These individuals have diverse work experiences; the majority held positions within the professional, paraprofessional & technical (35.2%); service (24.1%); production, construction & material handling (16.7%); sales (9.3%); managerial (7.4%); clerical (5.6%); and agricultural (1.9%) occupational categories.

Respondents reported that at their previous primary job they worked an average of 44 hours per week.

BENEFITS & WAGES

Some retirees would be influenced by certain benefits when it comes to accepting a job offer. The benefits most frequently mentioned are identified in **Figure 38**.

Figure 38
Desired Benefits



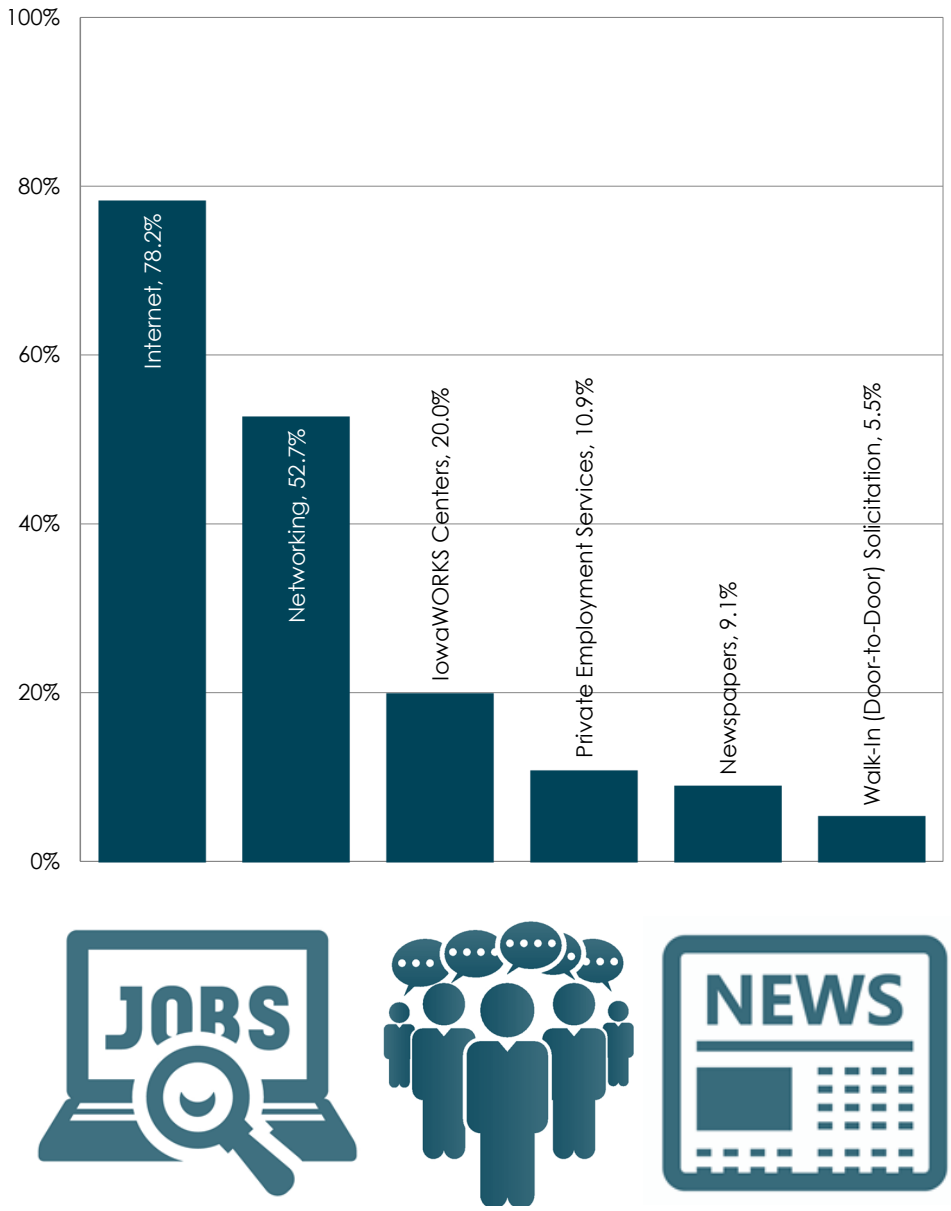
In some situations, benefits offered will play a deciding factor in whether retirees will accept a position. One such example would be companies that offer cost sharing of medical insurance benefits. Two-thirds (66.7%) of those seeking to return to the workforce would prefer employment offers that include medical insurance where the employer and employee share the cost of the premiums. This is followed by 33.3 percent who would like to see the employer to pay 100 percent of the medical insurance premiums.

The estimated wage threshold for the retired likely to accept employment is $25.00 to $30.00 per hour. This threshold illustrates the wage required to attract 66 to 75 percent of applicants. The lowest median hourly wage that retired respondents are willing to accept is $20.00 per hour. At their prior employment, retirees received a median hourly wage of $23.00 per hour.

JOB SEARCH RESOURCES

The most frequently identified job search resources are delineated in **Figure 39**.

Figure 39
Job Search Resources Used



TOP INDUSTRIES

WHOLESALE & RETAIL TRADE

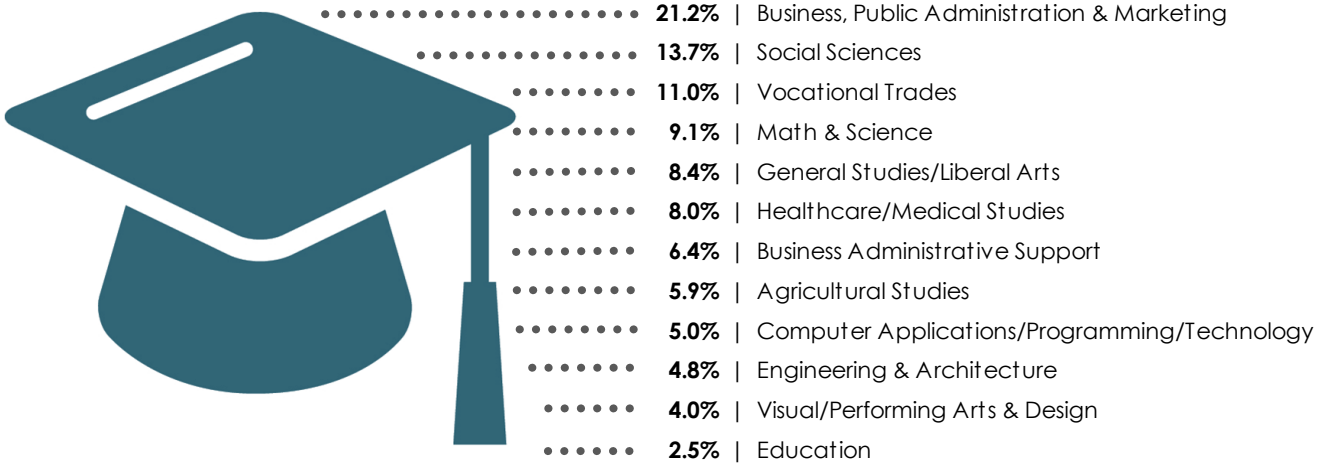
Nearly one-fifth (15.6%) of employed respondents across the State indicated that they were working in the wholesale and retail trade industry. The greatest portion of employed respondents in the State identified this industry as their area of employment. Among all respondents that have current or previous experience within the wholesale and retail trade industry, nearly four-fifths (80.3%) are employed and of those nearly two-fifths (35.4%) are likely to change employment if presented with the right opportunity. Nearly one-fifth (13.5%) are unemployed and 72.0 percent of that group are likely to accept employment. Less than one-tenth (2.7%) are homemakers and 61.5 percent of those indicated a likeliness to accept employment. Less than one-tenth (3.5%) identified themselves as retirees with 17.6 percent of them expressing interest in accepting employment.

Of those currently employed in the wholesale and retail trade industry, 13.4 percent are working two or more jobs. Those working multiple jobs hold one job in the wholesale and retail trade industry and may hold their other job(s) in a different industry or similar occupation to supplement income or gain experience for future career options. A multitude of reasons are given for changing/leaving jobs in the past year. Those most often cited include: better wages (21.4%), employer layoff/downsizing/closing (11.8%), moved from area (9.9%), personality conflicts/negative comments/other employees (9.7%), and started their own business (7.8%).

EDUCATION

Over two-thirds (66.9%) of those employed or previously employed within the wholesale and retail trade industry possess some level of education/training beyond high school: 25.8 percent have some education beyond high school but did not obtain a degree/certification; 3.7 percent are trade certified; 0.9 percent have completed vocational training; 13.9 percent have an associate degree; 19.5 percent have a bachelor's degree; and 3.1 percent have a master's/doctorate/professional degree. **Figure 40** provides an overview of the educational fields of study of those likely to change/accept employment within the wholesale and retail trade industry.

Figure 40
Educational Fields of Study - Wholesale & Retail Trade



Nearly one-fifth (16.0%) of those who are employed or who were formerly employed in the wholesale and retail trade industry are currently receiving training or education in order to be promoted in their current job, seek a higher paying job, or transition back into the workforce.

Over one-fourth (27.9%) of respondents employed or formerly employed in the wholesale and retail industry realize that in order to be promoted, obtain a higher paying job, or be offered employment they will need to pursue additional education and/or training.

Slightly over three-fifths (64.5%) reported that they are likely to seek additional training/education within the next year.

Lack of time (scheduling conflicts) (38.3%), no financial/career advancement incentive (18.3%), financing (15.0%), age (13.3%), health/disability issues (11.7%), and childcare (10.0%) are the primary obstacles preventing them from achieving their educational goals.

OCCUPATIONS & EXPERIENCE

Iowa Workforce Development recodes job titles into groupings based on the SOC system. **Figure 41** shows the percent within the State of each occupational classification grouping for those employed in the wholesale and retail trade industry.

Figure 41
Occupational Categories - Wholesale & Retail Trade

Occupation	% Employed	Occupation	% Employed
Sales & Related	26.5%	Computer & Mathematical Science	1.1%
Management	21.2%	Farming, Fishing & Forestry	0.8%
Food Preparation & Serving Related	11.9%	Building/Grounds Cleaning & Maintenance	0.6%
Transportation & Material Moving	10.8%	Protective Services	0.6%
Office & Administrative Support	7.9%	Construction & Extraction	0.5%
Installation, Maintenance & Repair	5.9%	Healthcare Practitioner & Technical	0.5%
Business & Financial Operations	4.0%	Community & Social Services	0.2%
Production	2.6%	Legal	0.2%
Arts, Design, Entertainment, Sports & Related	1.6%	Healthcare Support	0.1%
Life, Physical & Social Science	1.6%	Personal Care & Services	0.1%
Architecture & Engineering	1.3%	**Total**	**100%**

These occupational categories encompass a wide variety of individual occupations in which workers in the area are employed. Such occupations include, but are not limited to, buyer, cashier, driver, pharmacist, purchasing agent, salesperson and stock clerk.

WAGE & BENEFIT REQUIREMENTS

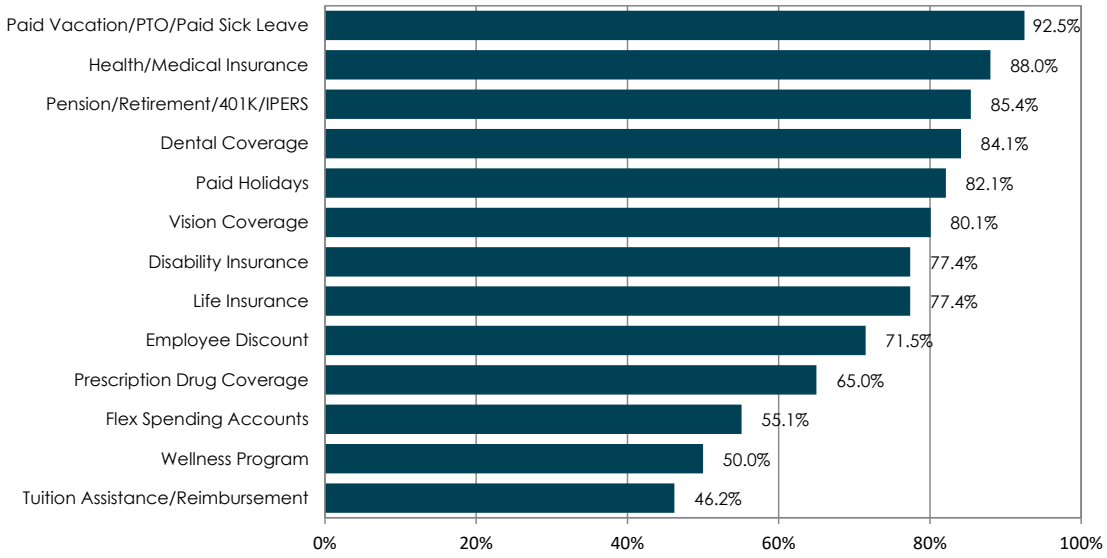
Slightly less than three-fifths (58.6%) of those employed in this industry are paid an hourly wage, while 31.0 percent earn an annual salary and 10.4 percent earn a commission or are paid on and alternative basis. **Figure 42** provides a comparison of the current hourly wages, annual salaries and the wage threshold based on all of those in the industry, those likely to change/accept employment and those who are unlikely to change. A wage threshold represents the wage level at which employers should have success attracting 66 to 75 percent of the applicants to new positions. These thresholds can be viewed as guides in assessing wage rates. The actual wage levels required by prospective workers will vary between individuals, occupational categories and economic cycles. This information can assist businesses in their retention efforts.

Figure 42
Comparison of Wages & Salaries - Wholesale & Retail Trade

	Entire Industry	Those Likely to Change	Those Unlikely to Change
Current Median Wage (per hour)	$17.50	$17.00	$18.50
Current Median Salary (per year)	$75,000	$64,000	$77,900

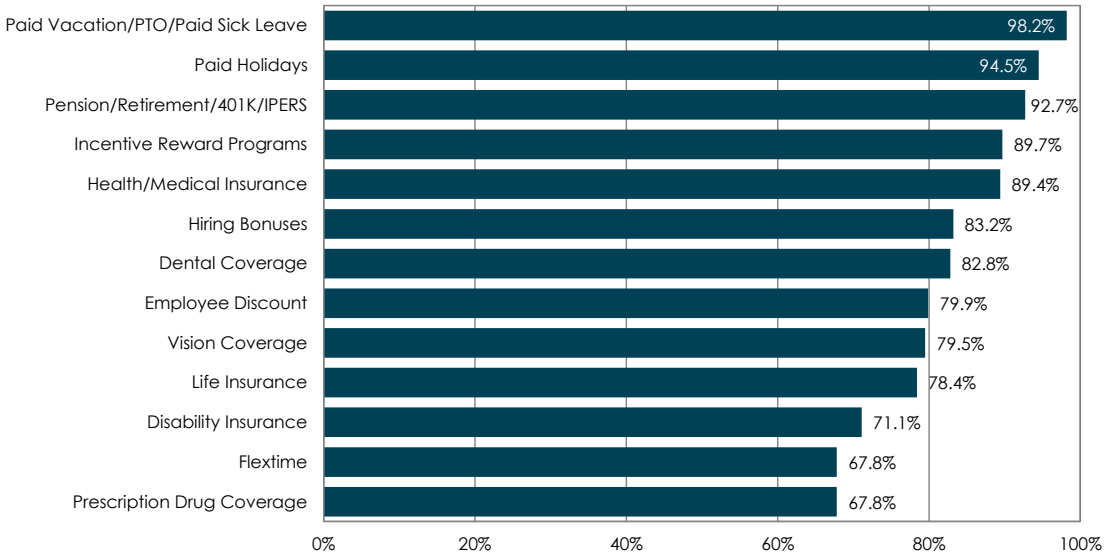
	Entire Industry	Those Likely to Change	Those Unlikely to Change
Wage Threshold	$20.00 - $22.50	$19.17 - $20.16	$21.92 - $24.00
Salary Threshold	$99,140 - $105,000	$89,700 - $102,000	$100,000 - $105,500

Figure 43
Current Benefits of the Full-Time Employed - Wholesale & Retail Trade



The employers in the wholesale and retail trade industry offer a variety of benefit packages in addition to wages. Current benefits of those employed full-time are shown in **Figure 43** Over four-fifths (85.9%) of respondents state they are currently sharing the cost of premiums with their employer. However, 6.6 percent indicate their employer pays the entire cost of insurance premiums.

Figure 44
Desired Benefits - Wholesale & Retail Trade



Those looking to change employment in the industry could be influenced by certain benefits. Those benefits most frequently mentioned are identified in **Figure 44**. Nearly three-fifths (59.8%) would take cost sharing of health/medical premiums into consideration when contemplating a new employment opportunity and just under two-fifths (38.5%) would prefer an employment offer where the employer pays all the costs associated with health/ medical insurance premiums.

JOB SEARCH RESOURCES

Employers who have a clear understanding of the job search resources used by workers in the wholesale and retail trade industry will improve their ability to maximize their effectiveness and efficiency in attracting qualified applicants. Understanding and utilizing traditional and non-traditional advertising outlets will provide employers a more focused and effective recruitment tool. Residents living in the State are undoubtedly exposed to numerous sources by which employers communicate job openings. Therefore, it is important to understand what sources potential workers rely on when looking for jobs in the education industry.

The most frequently identified job search resources are: the internet (79.3%); networking through friends, family & acquaintances (42.8%); local Iowa*WORKS* centers (17.6%); private employment services (13.3%); and newspapers (9.1%).

HEALTHCARE & SOCIAL SERVICES

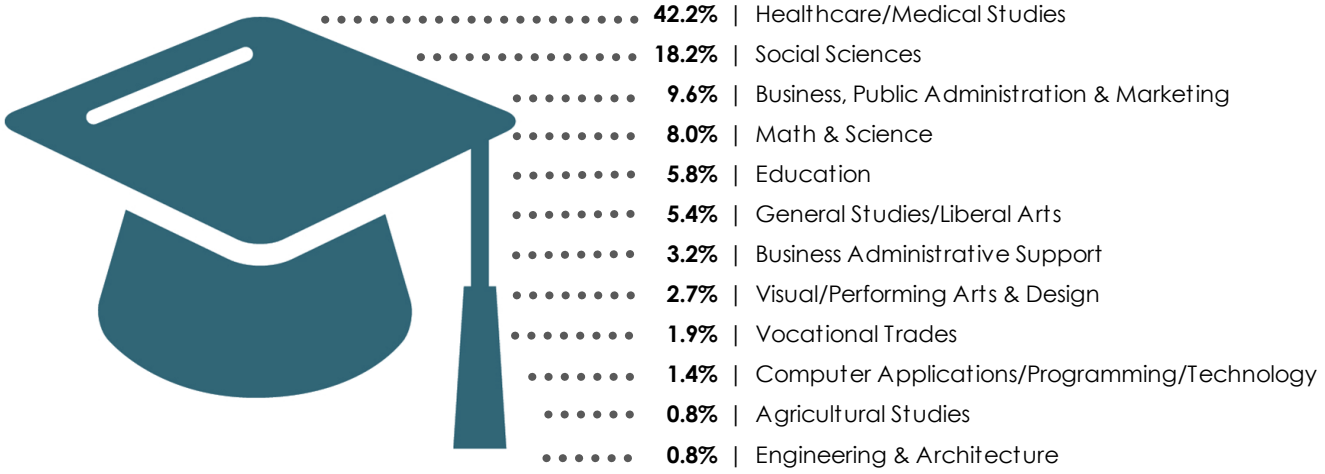
Nearly one-fifth (14.3%) of employed respondents stated that they were working in the healthcare and social services industry. Among all respondents that have current or previous experience within the healthcare and social services industry, over four-fifths (84.4%) are employed and of those over one-third (29.9%) of them are likely to change employment if presented with the right opportunity. Less than one-tenth (7.6%) are unemployed and of that group 66.2 percent are likely to accept employment. Less than one-tenth (3.6%) are classified as homemakers and 26.7 percent of those would have an interest in accepting employment. Retirees account for 4.4 percent with 7.9 percent of them likely to accept employment provided the right opportunity presented itself.

Of those currently employed in the healthcare and social services industry, 14.8 percent are employed in two or more jobs. Those working multiple jobs currently hold one job in the healthcare and social services industry and their other job(s) may be in a different industry or a similar occupation to supplement income or gain experience for future career options. A multitude of reasons are given for changing/leaving jobs in the past year, but the primary reasons are: better wages (15.9%), moved from area (13.8%), employer downsizing/ closure/layoff (10.3%), better hours (9.0%), and family reasons (8.7%).

EDUCATION

Over four-fifths (88.2%) of those employed or previously employed within the healthcare and social services industry possess some level of education/training beyond high school: 16.0 percent have some education beyond high school but did not obtain a degree/certification; 3.7 percent are trade certified; 1.2 percent have completed vocational training; 20.1 percent have an associate degree; 28.3 percent have a bachelor's degree; and 18.8 percent have a master's/doctorate/professional degree. **Figure 45** provides an overview of the educational fields of study of those within the industry.

Figure 45
Educational Fields of Study - Healthcare & Social Services



Over one-tenth (16.0%) of those who are employed or who were formerly employed in the healthcare and social services industry are currently receiving training or education in order to be promoted in their current job, seek a higher paying job, or transition back into the workforce.

Nearly one-third (31.2%) of respondents employed or formerly employed in the healthcare and social services industry realize that in order to be promoted, obtain a higher paying job, or be offered employment they will need to pursue additional education and/or training.

Nearly two-thirds (65.2%) reported that they are likely to seek additional training/education within the next year.

Lack of time (scheduling conflicts) (35.0%), no financial/career advancement incentive (21.7%), financial issues (18.3%), family issues (16.7%), age (15.0%), and childcare (10.0%) are the primary obstacles preventing them from achieving their educational goals.

OCCUPATIONS & EXPERIENCE

Iowa Workforce Development recodes job titles into groupings based on the SOC system. **Figure 46** shows the percent within the State of each occupational classification grouping for those employed in the healthcare and social services industry.

Figure 46
Occupational Categories - Healthcare & Social Services

Occupation	% Employed	Occupation	% Employed
Healthcare Practitioner & Technical	30.0%	Life, Physical & Social Science	1.9%
Management	16.7%	Computer & Mathmatical Science	1.7%
Healthcare Support	14.3%	Building & Grounds Cleaning & Maintenance	1.3%
Community & Social Services	11.4%	Production	0.8%
Office & Administrative Support	7.7%	Sales & Related	0.8%
Business & Financial Operations	4.0%	Arts, Design, Entertainment, Sports, & Related	0.5%
Personal Care & Service	3.5%	Installation, Maintenance & Repair	0.5%
Education, Training & Library	2.0%	Transportation & Material Moving	0.5%
Food Preparation & Serving Related	2.0%	Construction & Extraction	0.4%
		Total	**100%**

These occupational categories encompass a wide variety of individual occupations in which workers in the area are employed. Such occupations include, but are not limited to, dental hygienist, dietician, housekeeper, human resources coordinator, nurse's aide/assistant, pharmacist, physical therapist, registered nurse, secretary, social worker, supervisor and veterinarian.

WAGE & BENEFIT REQUIREMENTS

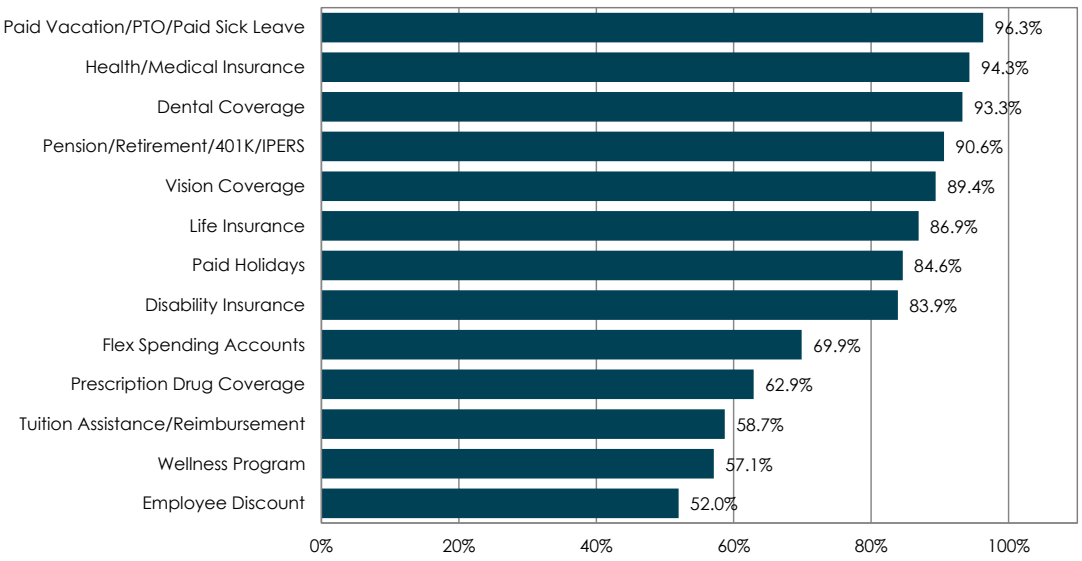
Nearly three-fifths (58.7%) of those who are experienced in the healthcare and social services industry are/were paid an hourly wage whereas 35.7 percent are/were salaried wage earners and 5.6 percent earn a commission or are paid on an alternative basis. **Figure 47** provides the current hourly wage, annual salary and the wage threshold based on all of those in the industry, those likely to change/accept employment and those who are unlikely to change within the industry. A wage threshold represents the wage level at which employers should have success attracting 66 to 75 percent of the applicants to new positions. These thresholds can be viewed as guides in assessing wage rates. The actual wage levels required by prospective workers will vary between individuals, occupational categories and economic cycles. This information can assist businesses in their retention efforts.

Figure 47
Comparison of Wages & Salaries - Healthcare & Social Services

	Entire Industry	Those Likely to Change	Those Unlikey to Change
Current Median Wage (per hour)	$22.00	$20.00	$24.00
Current Median Salary (per year)	$72,000	$69,000	$75,000

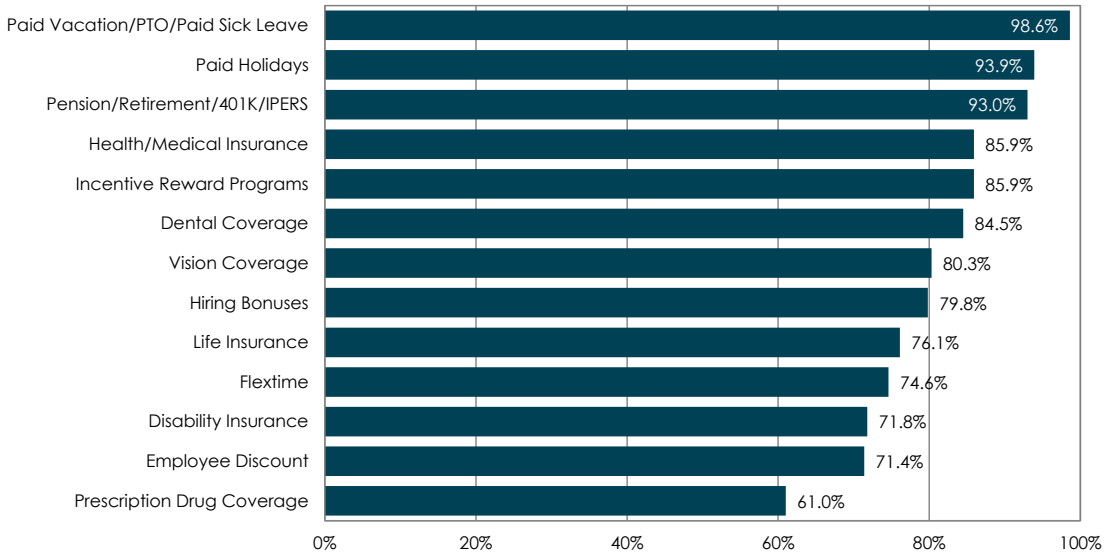
	Entire Industry	Those Likely to Change	Those Unlikely to Change
Wage Threshold	$27.00 - $29.88	$22.39 - $26.52	$28.00 - $30.25
Salary Threshold	$86,600 - $101,500	$78,540 - $92,500	$90,161 - $109,500

Figure 48
Current Benefits of the Full-Time Employed - Healthcare & Social Services



The employers in the healthcare and social services industry offer a variety of benefit packages in addition to wages. Current benefits of those employed full-time are shown in **Figure 48**. Over four-fifths (86.1%) of respondents state they are currently sharing the cost of premiums with their employer. However, 6.2 percent indicate their employer pays the entire cost of insurance premiums.

Figure 49
Desired Benefits - Healthcare & Social Services



Those looking to change employment in the industry could be influenced by certain benefits. Those benefits most frequently mentioned are identified in **Figure 49**. Over half (51.4%) would take cost sharing of health/ medical premiums into consideration when contemplating a new employment opportunity and nearly half (48.1%) would prefer an employment offer where the employer pays all the costs associated with health/medical insurance premiums.

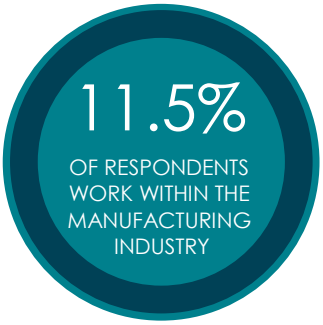
JOB SEARCH RESOURCES

Employers who have a clear understanding of the job search resources used by workers in the healthcare and social services industry will improve their ability to maximize their effectiveness and efficiency in attracting qualified applicants. Understanding and utilizing traditional and non-traditional advertising outlets will provide employers a more focused and effective recruitment tool. Residents living in the State are undoubtedly exposed to numerous sources by which employers communicate job openings. Therefore, it is important to understand what sources potential workers rely on when looking for jobs in the education industry.

The most frequently identified job search resources are: the internet (86.4%); networking through friends, family & acquaintances (40.2%); local Iowa*WORKS* centers (17.4%); private employment services (13.2%); and newspapers (7.6%).

MANUFACTURING

The manufacturing industry makes up 11.5 percent of the State's overall industry composition of the employed. However, among all respondents who have current or previous experience within the manufacturing industry, over four-fifths (82.4%) are employed and of those slightly less than one-third (31.2%) are likely to change employment if presented the right opportunity. Just over one-tenth (11.5%) are unemployed and 66.7 percent of that group are likely to accept employment. Homemakers account for the smallest group within this industry (1.3%) though 55.6 percent are likely to accept employment if given the right opportunity. Less than one -tenth (4.8%) are retired and 29.4 percent of those would accept employment if the right opportunity became available.

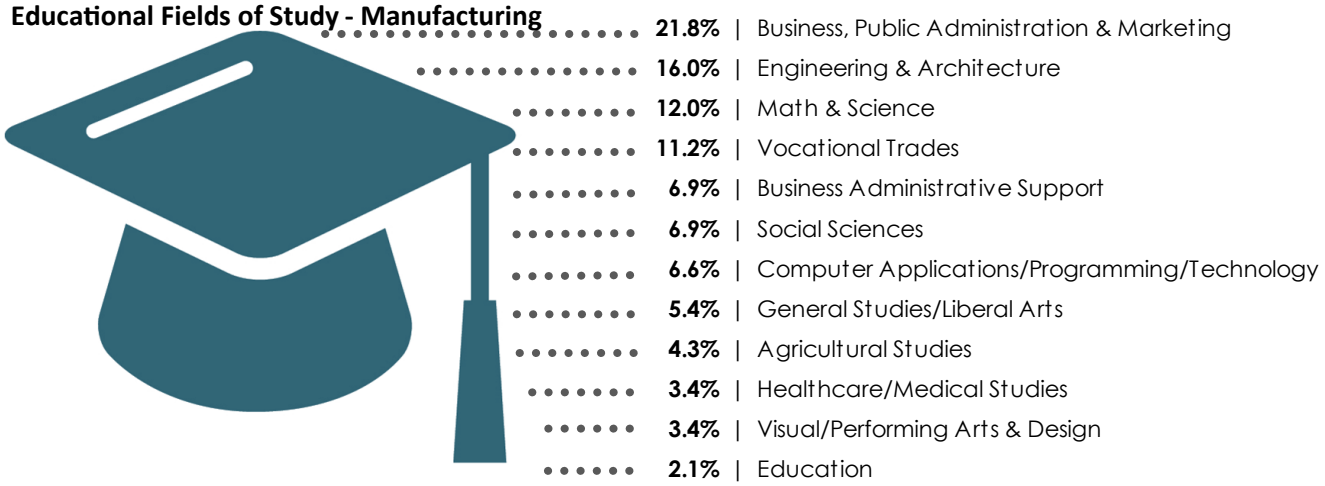


Of those currently employed in the manufacturing industry, 5.8 percent are working two or more jobs. Those working multiple jobs, currently hold one job in the manufacturing industry and their other job(s) may be in a different industry or similar occupation to supplement income or gain experience for future career options. A multitude of reasons are given for changing/leaving jobs in the past year. The reasons most often stated include: better wages (30.7%), employer layoff/downsizing/relocation (13.1%), personality conflicts/negative comments/other employees (10.1%), career change (8.7%), and family reasons (7.8%).

EDUCATION

Over two-thirds (68.9%) of those employed or previously employed within the manufacturing industry possess some level of education/training beyond high school: 17.9 percent have some education beyond high school but did not obtain a degree/certification; 5.5 percent are trade certified; 0.9 percent have vocational training; 14.6 percent have an associate degree; 23.2 percent have a bachelor's degree; and 6.8 percent have a master's/doctorate/professional degree. **Figure 50** provides an overview of the educational fields of study of those within the industry.

Figure 50
Educational Fields of Study - Manufacturing



Nearly one-fifth (15.9%) of those who are employed or who were formerly employed in the manufacturing industry are currently receiving training or education in order to be promoted in their current job, seek a higher paying job, or transition back into the workforce.

Over one-fourth (26.7%) of respondents employed or formerly employed in the manufacturing industry realize that in order to be promoted, obtain a higher paying job, or be offered employment they will need to pursue additional education and/or training.

Over three-fifths (61.7%) reported that they are likely to seek additional training/education within the next year.

Lack of time (scheduling conflicts) (21.7%), financing (19.6%), no financial/career advancement incentive (19.6%), family issues (17.4%) and age (17.4%) are the primary obstacles preventing them from achieving their educational goals.

OCCUPATIONS & EXPERIENCE

Iowa Workforce Development recodes job titles into groupings based on the SOC system. **Figure 51** shows the percent within the State of each occupational classification grouping for those employed in the manufacturing industry.

These occupational categories encompass a wide variety of individual occupations in which workers in manufacturing are employed. Such occupations include, but are not limited to, engineer, forklift operator, machinist, marketing analyst, packager, production manager, production worker, sales representative and welder.

Figure 51
Occupational Categories - Manufacturing

Occupation	% Employed	Occupation	% Employed
Production	35.4%	Computer & Mathematical Science	2.9%
Management	16.8%	Construction & Extraction	2.2%
Architecture & Engineering	9.0%	Sales & Related	2.2%
Installation, Maintenance & Repair	7.8%	Arts, Design, Entertainment, Sports & Related	1.3%
Business & Financial Operations	6.3%	Healthcare Practitioner & Technical	1.3%
Transportation & Material Moving	5.4%	Building/Grounds Cleaning & Maintenance	0.5%
Office & Administrative Support	4.9%	Farming, Fishing & Forestry	0.4%
Life, Physical & Social Science	3.4%	Food Preparation & Serving Related	0.2%
		Total	**100%**

WAGE & BENEFIT REQUIREMENTS

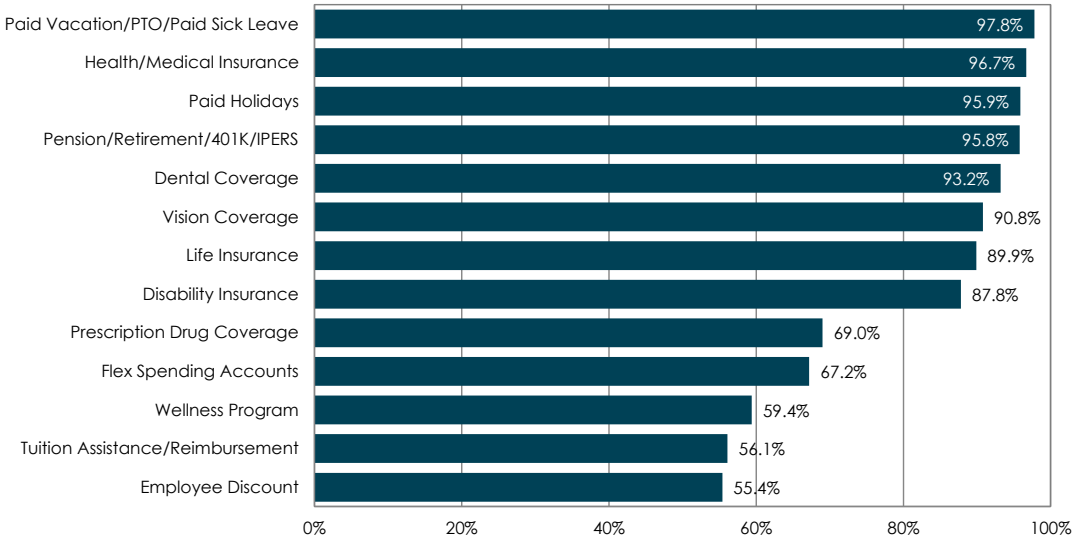
Slightly under three-fifths (59.6%) of those employed in the manufacturing industry are paid an hourly wage whereas 36.8 percent earn an annual salary and 3.6 percent earn a commission or are paid on an alternative basis. **Figure 52** provides the current hourly wage, annual salary and the wage threshold based on all of those in the industry, those likely to change/accept employment and those who are unlikely to change. A wage threshold represents the wage level at which employers should have success attracting 66 to 75 percent of the applicants to new positions. These thresholds can be viewed as guides in assessing wage rates. The actual wage levels required by prospective workers will vary between individuals, occupational categories and economic cycles. This information can assist businesses in their retention efforts.

Figure 52
Comparison of Wages & Salaries - Manufacturing

	Entire Industry	Those Likely to Change	Those Unlikey to Change
Current Median Wage (per hour)	$25.63	$24.25	$26.00
Current Median Salary (per year)	$100,000	$90,000	$100,000

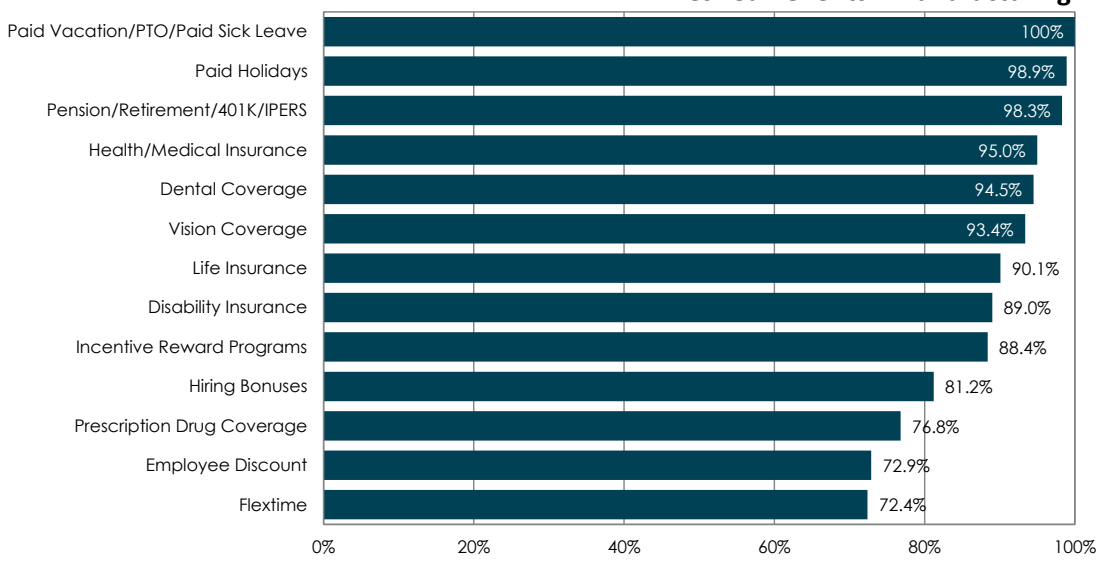
	Entire Industry	Those Likely to Change	Those Unlikely to Change
Wage Threshold	$28.49 - $30.00	$28.00 - $29.81	$29.41 - $30.50
Salary Threshold	$115,750 - $125,500	$110,000 - $115,000	$120,000 - $130,000

Figure 53
Current Benefits of the Full-Time Employed - Manufacturing



The employers in the manufacturing industry offer a variety of benefit packages in addition to wages. Current benefits of those employed full-time are shown in **Figure 53**. Over four-fifths (85.3%) of respondents state they are currently sharing the cost of premiums with their employer. However, 7.1 percent indicate their employer pays the entire cost of insurance premiums.

Figure 54
Desired Benefits - Manufacturing



Those looking to change employment in the industry could be influenced by certain benefits. Those benefits most frequently mentioned are identified in **Figure 54**. Over two-fifths (44.2%) would take cost sharing of health/ medical premiums into consideration when contemplating a new employment opportunity and over half (54.7%) would prefer an employment offer where the employer pays all the costs associated with health/medical insurance premiums.

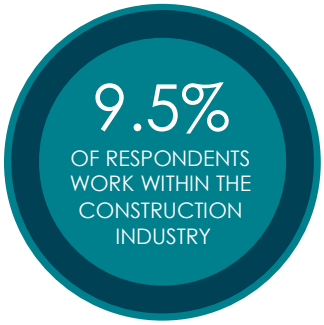
JOB SEARCH RESOURCES

Employers who have a clear understanding of the job search resources used by workers in the manufacturing industry will improve their ability to maximize their effectiveness and efficiency in attracting qualified applicants. Understanding and utilizing traditional and non-traditional advertising outlets will provide employers with a more focused and effective recruitment tool. Residents living in the State are undoubtedly exposed to numerous sources by which employers communicate job openings. Therefore, it is important to understand what sources potential workers rely on when looking for jobs in the manufacturing industry.

The most frequently identified job search resources are the internet (81.9%); networking through friends, family & acquaintances (38.9%); local Iowa*WORKS* centers (24.3%); private employment services (18.0%); and newspapers (10.8%).

CONSTRUCTION

Nearly one-tenth (9.5%) of employed respondents across the State indicated that they were working in the construction industry. The greatest portion of employed respondents in the State identified this industry as their area of employment. Among all respondents that have current or previous experience within the construction industry, nine-tenths (90.0%) are employed and of those nearly two-fifths (18.1%) are likely to change employment if presented with the right opportunity. Nearly one-tenth (7.8%) are unemployed and 65.9 percent of that group are likely to accept employment. Less than one percent (0.1%) are homemakers and there is an insufficient amount of survey data to report the "likeliness to accept employment" statistic for the homemaker category. Less than one-tenth (2.1%) identified themselves as retirees with 9.1 percent of them expressing interest in accepting employment.

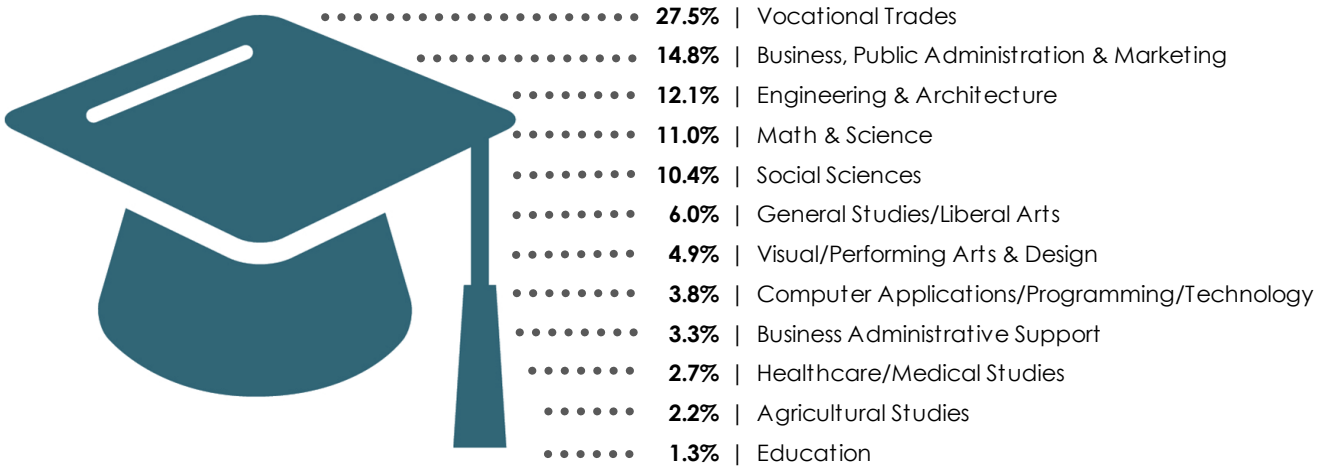


Of those currently employed in the construction industry, 13.9 percent are working two or more jobs. Those working multiple jobs hold one job in the construction industry and may hold their other job(s) in a different industry or similar occupation to supplement income or gain experience for future career options. A multitude of reasons are given for changing/leaving jobs in the past year. Those most often cited include: better wages (24.9%), started own business (19.6%), employer layoff/downsizing/closing (12.1%), career change (10.3%), and personality conflicts/negative comments/other employees (9.3%).

EDUCATION

Three-fifths (60.2%) of those employed or previously employed within the construction industry possess some level of education/training beyond high school: 19.7 percent have some education beyond high school but did not obtain a degree/certification; 10.8 percent are trade certified; 2.3 percent have completed vocational training; 10.6 percent have an associate degree; 14.8 percent have a bachelor's degree; and 2.1 percent have a master's/doctorate/professional degree. **Figure 40** provides an overview of the educational fields of study of those likely to change/accept employment within the construction industry.

Figure 40
Educational Fields of Study - Construction



Nearly one-fifth (18.5%) of those who are employed or who were formerly employed in the construction industry are currently receiving training or education in order to be promoted in their current job, seek a higher paying job, or transition back into the workforce.

Over one-fourth (25.9%) of respondents employed or formerly employed in the construction industry realize that in order to be promoted, obtain a higher paying job, or be offered employment they will need to pursue additional education and/or training.

Slightly over two-thirds (67.9%) reported that they are likely to seek additional training/education within the next year.

Lack of time (scheduling conflicts) (37.5%), age (25.0%), no financial/career advancement incentive (25.0%), financing (12.5%), and health/disability issues (6.3%) are the primary obstacles preventing them from achieving their educational goals.

OCCUPATIONS & EXPERIENCE

Iowa Workforce Development recodes job titles into groupings based on the SOC system. **Figure 41** shows the percent within the State of each occupational classification grouping for those employed in the wholesale and retail trade industry.

Figure 41
Occupational Categories - Construction

Occupation	% Employed	Occupation	% Employed
Construction & Extraction	39.9%	Production	2.2%
Management	26.8%	Life, Physical & Social Science	1.6%
Installation, Maintenance & Repair	8.7%	Sales & Related	1.1%
Business & Financial Operations	7.4%	Building/Grounds Cleaning & Maintenance	0.5%
Office & Administrative Support	4.9%	Arts, Design, Entertainment, Sports & Related	0.3%
Transportation & Material Moving	4.1%	Personal Care & Services	0.3%
Architecture & Engineering	2.2%	**Total**	**100%**

These occupational categories encompass a wide variety of individual occupations in which workers in the area are employed. Such occupations include, but are not limited to, buyer, cashier, driver, pharmacist, purchasing agent, salesperson and stock clerk.

WAGE & BENEFIT REQUIREMENTS

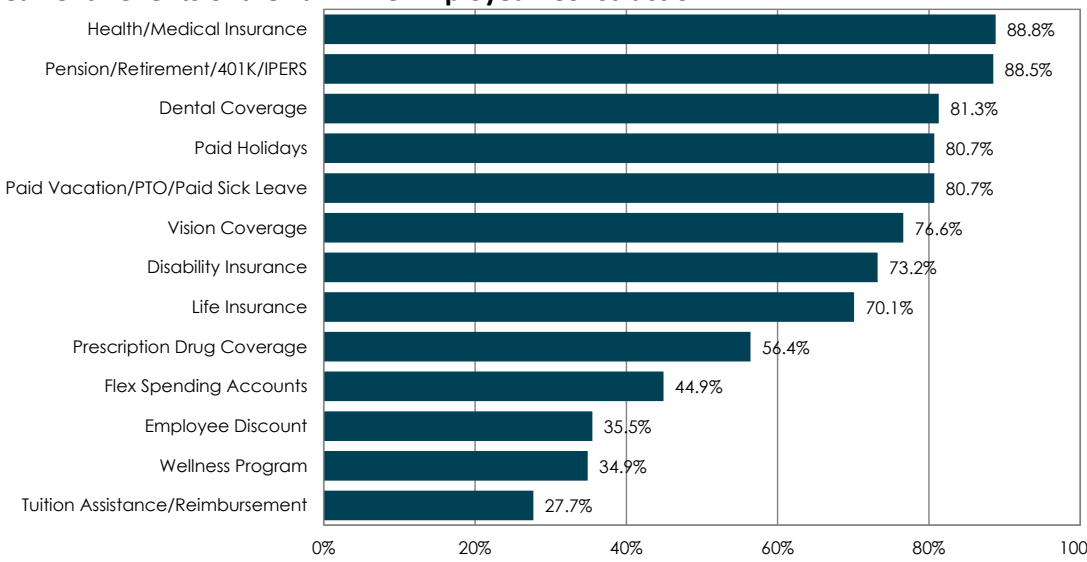
Slightly less than three-fifths (58.1%) of those employed in this industry are paid an hourly wage, while 27.4 percent earn an annual salary and 14.5 percent earn a commission or are paid on and alternative basis. **Figure 42** provides a comparison of the current hourly wages, annual salaries and the wage threshold based on all of those in the industry, those likely to change/accept employment and those who are unlikely to change. A wage threshold represents the wage level at which employers should have success attracting 66 to 75 percent of the applicants to new positions. These thresholds can be viewed as guides in assessing wage rates. The actual wage levels required by prospective workers will vary between individuals, occupational categories and economic cycles. This information can assist businesses in their retention efforts.

Figure 42
Comparison of Wages & Salaries - Construction

	Entire Industry	Those Likely to Change	Those Unlikey to Change
Current Median Wage (per hour)	$30.00	$28.50	$30.13
Current Median Salary (per year)	$75,000	$70,000	$75,000

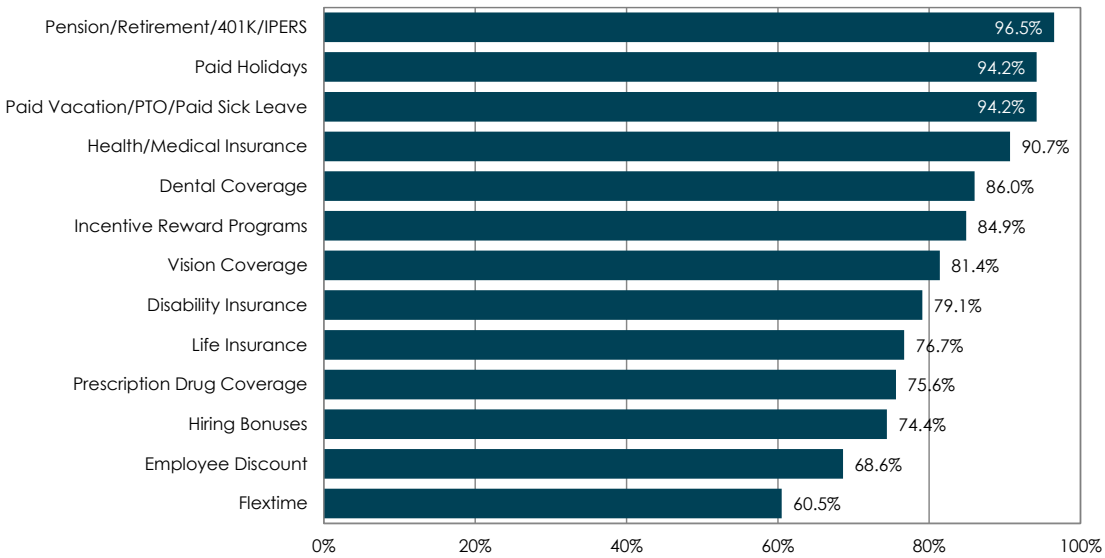
	Entire Industry	Those Likely to Change	Those Unlikely to Change
Wage Threshold	$35.00 - $37.38	$33.00 - $35.00	$35.00 - $37.88
Salary Threshold	$85,300 - $100,000	$84,000 - $120,000	$87,600 - $100,000

Figure 43
Current Benefits of the Full-Time Employed - Construction



The employers in the construction industry offer a variety of benefit packages in addition to wages. Current benefits of those employed full-time are shown in **Figure 43** Over two-thirds (71.2%) of respondents state they are currently sharing the cost of premiums with their employer. However, 20.7 percent indicate their employer pays the entire cost of insurance premiums.

Figure 44
Desired Benefits - Construction



Those looking to change employment in the industry could be influenced by certain benefits. Those benefits most frequently mentioned are identified in **Figure 44**. Over one-third (34.6%) would take cost sharing of health/medical premiums into consideration when contemplating a new employment opportunity and over three-fifths (62.8%) would prefer an employment offer where the employer pays all the costs associated with health/ medical insurance premiums.

JOB SEARCH RESOURCES

Employers who have a clear understanding of the job search resources used by workers in the construction industry will improve their ability to maximize their effectiveness and efficiency in attracting qualified applicants. Understanding and utilizing traditional and non-traditional advertising outlets will provide employers a more focused and effective recruitment tool. Residents living in the State are undoubtedly exposed to numerous sources by which employers communicate job openings. Therefore, it is important to understand what sources potential workers rely on when looking for jobs in the education industry.

The most frequently identified job search resources are: the internet (62.8%); networking through friends, family & acquaintances (51.0%); local Iowa*WORKS* centers (16.3%); private employment services (10.6%); and newspapers (5.9%).

APPENDICES

SURVEY BACKGROUND AND METHODOLOGY

In early 1998, the Institute for Decision Making (IDM) at the University of Northern Iowa (UNI) completed the first pilot Laborshed study. The Laborshed approach and methodology was developed to meet the specific needs of economic development groups trying to understand and detail the unique characteristics of their area labor force. From 1998 to June, 2001, IDM completed 24 Laborshed studies for Iowa communities and gained national attention for its innovative approach. Beginning in 1999, Laborshed studies were completed in partnership with the Iowa Economic Development Authority (IEDA) and Iowa Workforce Development (IWD) for communities that met specific criteria and for "immediate opportunities" (expansion projects or prospects).

During the 2000 legislative session, the General Assembly mandated that as of July 1, 2001, IWD would assume the responsibilities for conducting Laborshed studies for Iowa communities. The IDM staff worked with members of IWD to train them in IDM's Laborshed process and methodology. Beginning in July, 2001, IWD assumed all responsibilities for scheduling and conducting all future Laborshed projects in Iowa.

Previously faced with historically low unemployment rates—and the incorrect assumption that economic growth cannot occur within the state because the communities in Iowa had reached full employment—local economic development officials throughout Iowa needed access to obtain timely and tailored data to help define their available labor force and its characteristics. In today's economy, employers desire a higher skilled, educated worker. Often employers do not have the excess resources to blanket an area for employment opportunity recruitment. The Laborshed study addresses both of these issues and more to assist employers and communities with expansion efforts.

The discrepancy between the assumptions and the reality of employment measures indicates that a problem exists in the way unemployment data is defined, measured, reported and used. When unemployment statistics are utilized as the sole method for determining labor availability, they appear to lead to inaccurate conclusions regarding the potential available labor supply within a "Laborshed" or sub-labor market area (sub-LMA). A Laborshed area is defined as the actual geographical area from which a city, county or region draws its commuting workers. This Laborshed area has been found to extend beyond the confines of county and state boundaries typically used to delineate labor information.

Individual Laborshed analyses are conducted on demand for specific communities. Typically, three employment zones surrounding the target community are determined based on upon current commuting patterns. A total of 405 interviews are usually commissioned for the community study (this sample size varies based on the size of the node community; however, 405 is the smallest sample size used). The resulting data are used to analyze the potential labor force for existing and prospective businesses. While satisfying local needs, this program has some important limitations.

Even after more than 80 community studies and several thousand interviews, data is often not collected for all parts of the State. This left holes in IWD's statewide dataset. In addition, some of the data becomes too old to be useful for contemporary analysis.

A statewide rolling survey with over-sampling for community studies has had several advantages over the community-only strategy:

1. Data were continuously available for constructing a snapshot of the entire state's Laborshed characteristics, including the size of the actual workforce by occupational category and estimates of the number and percent underemployed, likely to change employment, willing to commute, their skills and experience, wage and salary requirements and flexibility and adaptability in the workplace. This information is used to promote the state as a whole at any one time.

2. Data for specific community studies is available more quickly. The statewide survey is continuously producing data that is current and available for use in specific community studies. This would reduce the time needed to collect data for that study, thus reducing the time needed to complete a community study.
3. Costs for Laborsheds are more predictable. Since the statewide survey has a constant cost, part of the Laborshed enterprise is known in advance of any community oversample effort.

According to US census data, 935 zip codes are assigned to Iowa, containing 1,273,941 households with a total population of 3,193,079. In the following table the proportion of Iowa households within each zip code area has been calculated and used to estimate the number of completed interviews that fall proportionately into each zip code area under various sampling assumptions. This can be summarized for the state as follows:
The more ambitious scenario shown assumes 500 interviews are completed statewide each month. This would

Time/Sample	500/month	S.E.	250/month	S.E.
6 months	3000	+/-1.8%	1500	+/-2.6%
12 months	6000	+/-1.3%	3000	+/-1.8%
18 months	9000	+/-1.1%	4500	+/-1.5%
24 months	12000	+/-0.9%	6000	+/-1.3%

result in the state having a valid, self-representing sample of 3,000 cases within six months of the beginning of data collection. Such a sample would have a sampling error of +/- 1.8%. Within 12 months, statewide data would be available for 6,000 cases with a sampling error of +/-1.3% and so forth into the future. This scenario is normally used for the statewide analysis.

Survey administrators posed questions to people between the ages of 18 to 64 to determine the respondents' gender, age, education level, place of residence and current employment status. Employed respondents also identified the location of their employer, employer type, occupation, years of employment in their occupation, employment status, current salary or wage, additional education/skills possessed, number of jobs currently held, distance traveled to work and the hours worked per week. Employed respondents were then asked how likely they were to change employers or employment, how far they would be willing to travel for employment, the wage required for them to change employment and the benefits desired for new employment. Underemployment was estimated by examining those employees that work less than 35 hours per week desiring more hours than offered in their current position; those who stated they possess additional education/ skills that they do not utilize in their current position and/or earned more at their previous job; and those that earn wages insufficient enough to keep them above the poverty level but are working 35 or more hours per week.

Respondents identifying themselves as unemployed, a homemaker or retired were asked a series of questions to determine what job characteristics and benefits were most important to them when considering employment, the reasons for unemployment, obstacles to employment and how far they would be willing to travel to accept employment. Information on previous employers and skills was also gathered for these sectors. Once completed, the results of the survey were compiled and cross-tabulated to determine the relationship between the variables.

Documenting and analyzing Laborshed survey results by occupation and industry, as well as overall, provides new insight into the labor force that is currently unavailable in any other form.

CURRENT METHODS OF ESTIMATING EMPLOYMENT AND UNEMPLOYMENT

The federal government and the State of Iowa estimate an area's labor force by drawing from the portion of the civilian population that is non-institutionalized, 16 years of age or older and currently employed or unemployed (*BLS Handbook of Methods*, Chapter 1, p. 5). The Bureau of Labor Statistics (BLS) defines employed persons in the following two ways:

1. Did any work at all as paid employees, for their own business or profession or on their own farm, or worked 15 hours or more as unpaid workers in a family-operated enterprise (*BLS Handbook of Methods,* Chapter 1, p. 5).
2. Did not work but had jobs or businesses from which they were temporarily absent due to illness, bad weather, vacation, childcare problems, labor dispute, maternity or paternity leave, or other family or personal obligations -- whether or not they were paid by their employers for the time off and whether or not they are seeking other jobs (*BLS Handbook of Methods,* Chapter 1, p. 5).

Each employed person is counted only once, even if he or she holds more than one job. Included in the total are employed citizens of foreign countries who are residing in the United States, but who are not living on the premises of an embassy. Excluded are persons whose only activity consisted of work around their own home (such as housework, painting, repairing, and so forth) or volunteer work for religious, charitable, and similar organizations (*BLS Handbook of Methods*, Chapter 1, p.5).

Unemployed persons are defined as those individuals that were not employed on a given reference week prior to questioning and who made an effort to find work by contacting prospective employers. These individuals identified that they are ready to work with the exception of inability due to a temporary illness. Individuals are also classified as unemployed if they have been laid off and are awaiting recall back to their positions (*BLS Handbook of Methods,* Chapter 1, p. 5). The unemployed are grouped into four classifications: 1) *job losers*, (both temporarily and permanently laid off); 2) *job leavers*, quit/terminated and looking for work; 3) *reentrants* to the job market after an extended absence; and 4) *new entrants* that have never worked (*BLS Handbook of Methods,* Chapter 1, p. 5).

Those individuals that are not classified as employed or unemployed are not considered to be part of the labor force by BLS. The non-working designation may be due to a variety of reasons; however, the underlying factor is that the individuals have not sought employment within the past four weeks (*BLS Handbook of Methods,* Chapter 1, p. 6).

Because the BLS utilizes a multiple step process to estimate employment and underemployment statistics on a monthly basis, this process cannot be described in only a few paragraphs. A complete summary of the process used to generate national estimates and an outline of the process used to generate state and sub-state projections is available through Iowa Workforce Development.

METHODS FOR ESTIMATING EMPLOYMENT

The BLS uses the employed and unemployed persons to calculate the civilian labor force, the unemployment rate and labor force participation rate.

The labor force is:

employed + unemployed = labor force

The labor force participation rate is:

labor force / non-institutionalized citizens 16+ years of age = LFPR

The unemployment rate is the percentage of the civilian labor force that is unemployed:

unemployed / total labor force = unemployment rate (*BLS Handbook of Methods,* Chapter 1, p. 5)

A proper interpretation of the unemployment **rate** requires an understanding of the processes used to generate the data on which the calculations are based. The BLS uses the monthly Current Population Survey (CPS) to collect data from a sample of about 72,000 households, taken from 754 sample areas located throughout the country. The purpose of the survey is to collect information on earnings, employment, hours of work, occupation, demographics, industry and socio-economic class. The data is obtained through personal and telephone interviews. Of the 72,000 households, only about 60,000 are generally available for testing. The 60,000 households generate information on approximately 110,000 individuals (*BLS Handbook of Methods*, Chapter 1, p. 8). Each household is interviewed for two, four-month periods, with an eight-month break between the periods. The pool of respondents is divided into 8 panels, with a new panel rotated in each month *(BLS Handbook of Methods*, Chapter 1, p. 10).

The 754 sample areas from which the households are selected represent 3,141 counties and cities broken into 2,007 population sample units (PSU's). A PSU can consist of a combination of counties, urban and rural areas or entire metropolitan areas that are contained within a single state. The PSU's for each state are categorized into the 754 sample groups of similar population, households, average wages and industry. The 754 sample areas consist of 428 PSU's that are large and diverse enough to be considered an independent PSU and 326 groupings of PSU's (*BLS Handbook of Methods*, Chapter 1, p. 9).

The sample calculates an unemployment estimate with a 1.9 percent coefficient of co-variation. This is the standard error of the estimate divided by the estimate, expressed as a percentage. This translates into a 0.2 percent change in unemployment being significant at the 90 percent confidence level. The respondent's information is weighted to represent the group's population, age, race, sex and the state from which it originates. Using a composite estimation procedure minimizes the standard of error for the estimate. This estimate is based on the two-stage rotation estimate on data obtained from the entire sample for the current month and the composite estimate for the previous month, adjusted by an estimate of the month-to-month change based on the six rotation groups common to both months (*BLS Handbook of Methods*, Chapter 1, p. 8). The estimates are also seasonally adjusted to minimize the influence of trends in seasonal employment.

IOWA & SUB-STATE UNEMPLOYMENT RATES

The Current Population Survey (CPS) produces reliable national unemployment estimates; however due to the small sample size of the CPS survey, BLS applies a Time Series Model to increase reliability. The regression techniques used in the model are based on historical and current relationships found within each state's economy. The primary components of the state estimation models are the results from state residents' responses to the household survey (CPS), the current estimate of nonfarm jobs in the state via Current Employment Statistics (CES) and the number of individuals filing claims for Unemployment Insurance (UI). Iowa's Labor Market Area consists of nine metropolitan areas, 15 micropolitan areas and 62 small labor market areas. For further definition of counties included in micropolitan statistical areas, visit: https://iwd-lmi.maps.arcgis.com/apps/webappviewer/index.html?id=d3b0f39e8bcb4300820372314c31b551 and for counties included in metropolitan statistical areas (MSA), visit: https://iwd-lmi.maps.arcgis.com/apps/webappviewer/index.html?id=2b2c3d336ad941438d18685a780b5147.

A time series model is used to estimate state labor force statistics and a Handbook method is used for sub-state projections. The state unemployment estimates are based on a time series to reduce the high variability found in the CPS estimates caused by small sample size. The time series combines historical relationships in the monthly CPS estimates along with UI and CES data. Each State has two models designed for it that measure the employment to work ratio and the unemployment rate (*BLS Handbook of Methods*, Chapter 4, p. 37).

The CES is a monthly survey of employers conducted by the BLS and state employment agencies. Employment, hours/overtime and earning information for 400,000 workers are obtained from employer payroll records. Annually, the monthly unemployment estimates are benchmarked to the CPS estimate so that the annual average of the final benchmarked series equals the annual average and to preserve the pattern of the model series (*BLS Handbook of Methods*, Chapter 4, p. 38).

The sub-state unemployment estimates are calculated by using the *BLS Handbook of Methods* method. The *Handbook* method accounts for the previous status of the unemployed worker and divides the workers into two categories: those who were last employed in industries covered by State Unemployment Insurance (UI) laws and workers who either entered the labor force for the first time or reentered after a period of separation (*BLS Handbook of Methods*, Chapter 4, p. 38).

Individuals considered covered by UI are those currently collecting UI benefits and those that have exhausted their benefits. The data for those that are insured is collected from State UI, Federal and Railroad programs. The estimate for those who have exhausted their funds is based on the number who stopped receiving benefits at that time and an estimate of the individuals who remain unemployed (*BLS Handbook of Methods,* Chapter 4, p. 39).

New entrants and reentrants into the labor force are estimated based on the national historical relationship of entrants to the experienced unemployed and the experienced labor force. The Department of Labor states that the Handbook estimate of entrants into the labor force is a function of (1) the month of the year, (2) the level of the experienced unemployed, (3) the level of the experienced labor force and (4) the proportion of the working age population *(BLS Handbook,* Chapter 4, p. 39). The total entrants are estimated by:

$$ENT = A(X+E)+BX$$

where:

ENT = total entrant unemployment

E = total employment

X = total experienced unemployment

A,B = synthetic factors incorporating both seasonal variations and the assumed relationship between the proportion of youth in the working-age population and the historical relationship of entrants, either the experienced unemployed or the experienced labor force (*BLS Handbook*, Chapter 4, p. 39).

Total employment (E) estimates represent the total number of paid employees in non-farm industries. The estimates are based on various sources, including the CES survey and state designed surveys of establishments. These figures are combined with a weighted factor accounting for historic employment relationships found in the Census. The resulting estimate is combined with standard estimates for agricultural workers, non-farm self-employed and unpaid family workers and private household workers to compute the total Handbook employment (*BLS Handbook*, Chapter 4, p. 39). Total unemployment for the sub-state/LMA is estimated by the formula:

$$Ua(t) = Us(t) * UHBa(t)$$

Where:

U = total unemployment

UHB = Handbook unemployment

a = area

s = state

t = time

Unemployment estimates for portions of the LMAs are calculated by one of two methods, (1) the population-claims method or (2) the Census-share method. The population-claims method is the preferred method according to the BLS. Where available, resident based UI claims data for the sub-LMA area are used to find the ratio of the claims to the total number of UI claims within the LMA. This figure is used to analyze the estimate of experienced unemployed in the area. The number of unemployed entrants is based on the Census distribution of adult and teenage population groups. The employment is estimated using current population distributions prepared by the Census Bureau and weighted by each area's Census relative share of employment to population. The Census-share method is used if UI claims data for the sub-LMA area is unavailable. Instead, the decennial Census data from the county in which the area is located is divided into a portion consistent with the size of the area. The Census-share method is less accurate than the population-claims method (*BLS Handbook*, Chapter 4, p. 40).

LIMITATIONS

Since the State, LMA & sub-LMA data are not directly obtained from a survey; the estimates calculated are subject to a level of error. These errors can occur due to improper estimations and insufficient data sources. Unfortunately, a universal level of error cannot be easily computed because of the wide variety of sources and methods used. The CPS information used to calculate the national estimates and to benchmark the state figures is subject to sampling and non-sampling error. Non-sampling errors in the CPS, such as those due to respondent bias and question interpretation, are minimized through re-interviewing respondents and rotating the panels of respondents. Sampling errors in the CPS over time show that 68 percent of the intervals are within 1 standard deviation, 90 percent are within 1.6 standard deviations and 95 percent of the intervals are within 2 standard deviations of the mean (*BLS Handbook*, Chapter 1, p. 14).

STANDARD OCCUPATIONAL CODES (SOC)

11-0000 – 11-9199 MANAGEMENT OCCUPATIONS
- General and Operations Managers
- Industrial Production Managers
- Education Administrators

13-0000 – 13-2099 BUSINESS AND FINANCIAL OPERATIONS OCCUPATIONS
- Employment, Recruitment and Placement Specialists
- Management Analysts
- Financial Specialists

15-0000 – 15-2041 COMPUTER AND MATHEMATICAL OCCUPATIONS
- Computer Programmers
- Actuaries
- Statisticians

17-0000 – 17-3031 ARCHITECTURE AND ENGINEERING OCCUPATIONS
- Surveyors
- Engineers
- Mechanical Drafters

19-0000 – 19-4099 LIFE, PHYSICAL AND SOCIAL SCIENCE OCCUPATIONS
- Soil and Plant Scientists
- Market Research Analysts
- Clinical, Counseling and School Psychologists

21-0000 – 21-2099 COMMUNITY AND SOCIAL SERVICES OCCUPATIONS
- Child, Family and School Social Workers
- Social and Human Service Assistants
- Clergy

23-0000 – 23-2099 LEGAL OCCUPATIONS
- Lawyers
- Paralegals and Legal Assistants
- Title Examiners, Abstractors and Searchers

25-0000 – 25-9099 EDUCATION, TRAINING AND LIBRARY OCCUPATIONS
- Elementary School Teachers
- Secondary School Teachers
- Librarians

27-0000 – 27-4099 ARTS, DESIGN, ENTERTAINMENT, SPORTS AND MEDIA OCCUPATIONS
- Graphic Designers
- Public Relations Specialists
- Photographers

29-0000 – 29-9099 HEALTHCARE PRACTITIONERS AND TECHNICAL OCCUPATIONS
- Pharmacists
- Family and General Practitioners
- Registered Nurses

31-0000 – 31-9099 HEALTHCARE SUPPORT OCCUPATIONS
- Nursing Aides, Orderlies and Attendants
- Dental Assistants
- Veterinary Assistants and Laboratory Animal Caretakers

33-0000 – 33-9099 PROTECTIVE SERVICE OCCUPATIONS
- Fire Fighters
- Police and Sheriff's Patrol Officers
- Security Guards

35-0000 – 35-9099 FOOD PREPARATION AND SERVING-RELATED OCCUPATIONS
- Cooks
- Waiters and Waitresses
- Dishwashers

37-0000 – 37-3019 BUILDING AND GROUNDS CLEANING AND MAINTENANCE OCCUPATIONS
- Janitors and Cleaners
- Maids and Housekeeping Cleaners
- Landscaping and Groundskeeping Workers

39-0000 – 39-9099 PERSONAL CARE AND SERVICE OCCUPATIONS
- Hairdressers, Hairstylists and Cosmetologists
- Child Care Workers
- Recreation Workers

41-0000 – 41-9099 SALES AND RELATED OCCUPATIONS
- Cashiers
- Retail Salespersons
- Telemarketers

43-0000 – 43-9199 OFFICE AND ADMINISTRATIVE SUPPORT OCCUPATIONS
- Customer Service Representatives
- Secretaries
- Office Clerks

45-0000 – 45-4023 FARMING, FISHING AND FORESTRY OCCUPATIONS
- Agricultural Equipment Operators
- Farmworkers, Farm and Ranch Animals
- Forest and Conservation Workers

47-0000 – 47-5099 CONSTRUCTION AND EXTRACTION OCCUPATIONS
- Carpenters
- Construction Laborers
- Highway Maintenance Workers

49-0000 – 49-9099 INSTALLATION, MAINTENANCE AND REPAIR OCCUPATIONS
- Telecommunications Equipment Installers and Repairers
- Automotive Service Technicians and Mechanics
- Millwrights

51-0000 – 51-9199 PRODUCTION OCCUPATIONS

Team Assemblers
Slaughterers and Meat Packers
Welders, Cutters, Solderers and Brazers

53-0000 – 53-7199 TRANSPORTATION AND MATERIAL MOVING OCCUPATIONS

Truck Drivers
Industrial Truck and Tractor Operators
Packers and Packagers, Hand

OCCUPATIONAL EMPLOYMENT & WAGES STATISTICS (OEWS) CATEGORY STRUCTURE

Managerial/Administrative Occupations

- Administrative Services
- General Operations Managers
- Human Resources Occupations
- Training & Development Occupations

Professional, Paraprofessional & Technical Occupations

- Business Support
- Computer, Mathematical and Operations Research
- Engineers
- Health Practitioners
- Natural Scientists
- Social Scientists
- Teachers
- Writers, Artists, Entertainers and Athletes

Sales Occupations

- Market Research Analysts
- Purchasing Agents
- Sales Agents
- Sales Representatives
- Salespersons
- Wholesale & Retail Buyers

Clerical/Administrative Support Occupations

- Electronic Data Processing
- Office Clerks
- Office Support Workers
- Secretarial

Service Occupations

- Cleaning and Building Service
- Food and Beverage
- Health Service
- Personal Service
- Protective Service

Agricultural Occupations

- Agricultural Equipment Operators
- Agricultural Workers
- Farmers & Ranchers
- Farmworkers & Laborers

Production, Construction, Operating, Maintenance & Material Handling Occupations

- Construction Trades and Extraction
- Hand Working Occupations
- Helpers, Laborers and Material Movers, Hand
- Machine Setters, Set-Up Operators, Operators and Tenders
- Plant and System
- Precision Production
- Transportation and Material Moving

LABOR MARKET INFORMATION WEB RESOURCES

Labor Market Information Division:

Labor Market Information Division (IWD): *Iowa's premier source for labor market information.*
- https://workforce.iowa.gov/labor-market-information

Laborshed Studies: *Current local, regional and statewide Laborshed executive summaries.*
- https://workforce.iowa.gov/laborshed

Workforce Needs Assessment: *Data regarding level of employment and job vacancies as reported by employers.*
- https://workforce.iowa.gov/labor-market-information/industry-employers/workforce-needs-assessment

Current Employment Statistics (CES): *Detailed industry data on employment, hours and earnings of nonfarm workers.*
- https://workforce.iowa.gov/labor-market-information/indicators/ces/data(Iowa)
- http://www.bls.gov/ces/home.htm (National)

Iowa Industry Projections: *Expected job growth and decline by industry, both long-term and short-term.*
- https://workforce.iowa.gov/labor-market-information/industry-employers/industry-projections/data

Iowa Licensed Occupations: *Occupations in Iowa that require license, certificate or commission issued at the state level.*
- https://workforce.iowa.gov/labor-market-information/occupations/licensed-occupations

Iowa Occupational Projections: *Expected job growth or decline by major occupational categories.*
- https://workforce.iowa.gov/labor-market-information/occupations/occupational-projections

Labor Force, Employment & Unemployment Summaries: *Current and historical data by city, county and statewide.*
- https://workforce.iowa.gov/labor-market-information/indicators/local

Occupational Employment & Wages Statistics (OEWS) Survey and Iowa Wage Report: *Employment and wage estimates.*
- https://workforce.iow.gov/labor-market-information/occupations/wage-report/data (Iowa)
- http://www.bls.gov/oes/home.htm (National)

Quarterly Census of Employment and Wages (QCEW): *Data on industry employment, wages and number of establishments.*
- https://workforce.iowa.gov/labor-market-information/industry-employers/qcew(Iowa)
- http://www.bls.gov/cew/home.htm (National)

Additional Information:

Iowa*WORKS*: *IWD's one-stop resource for Iowa businesses to find workforce information and solutions.*
- https://www.iowaworks.gov

Local Employment Dynamics (LED): *Data on employment and earnings by industry and for various demographic groups.*
- http://lehd.did.census.gov

O*NET On-line (Occupational Information Network): *An interactive application for exploring and searching occupations.*
- http://www.onetonline.org

OnTheMap: *An online interface for creating workforce related maps, demographic profiles and reports.*
- http://onthemap.ces.census.gov

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TOP INDUSTRIES

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