Introduction to Wyoming's Occupational Staffing Patterns and Wages 2003

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| A few que | stions the data described in this document allow you to answer. |
|-----------------------|---|
| Table 1 - Question 1) | I am an out-of-state entrepreneur interested in starting a small (100 employees) Computer Manufacturing company in the Northeast Region of Wyoming. What are the typical types of occupations I need to staff my company? How many of each? |
| Table 1 - Question 2) | What are the estimated costs associated with staffing my Computer Manufacturing company? |
| Table 1 - Question 3) | What are the chances of acquiring the labor with the skills I need in the Northeast Region of Wyoming? |
| Table 2 - Question 1) | As the prospective entrepreneur from the questions in T1-Q1 to Q3 relative to the jobs I need to fill from data in Table 1. What industries can I recruit Electrical Engineers from? How much will I have to pay? |
| Table 2 - Question 2) | I recently graduated with a Bachelors degree in Electrical Engineering. What industries employ Electrical Engineers and How much do they pay? |
| Table 3 - Question 1) | As the prospective entrepreneur from the questions in T1-Q1 to Q3 relative to the jobs I need to fill from data in Table 1. What other states can I recruit Electrical Engineers from? How much will I have to pay? |
| Table 3 - Question 2) | As a recent Electrical Engineering graduate would I be better off, with respect to wages, moving to Colorado? Idaho? Montana? |
| | ded above as they reference the Question & Answers format in this document. For example, the first question 1-Q1 and the corresponding answer is T1-A1 (Table 1 – Answer 1). |

This is Research and Planning's third release of the Customized Staffing Patterns and Wages. The initial staffing patterns were developed to assist communities, firms, educators, and counselors in identifying the labor needs and costs associated with recruiting and/or establishing new businesses. The updated staffing patterns add tools for prospective employers and job seekers to explore industry and geographic variations in employment and wages by occupation. This round, I have developed techniques whereby confidentiality issues are addressed allowing a more detailed and representative release of data than in the past.

This document begins by describes the changes between this release and the two previous versions, and introduces the three data sources used in the creation of Wyoming's Customized Staffing Patterns and Wages 2003. An example of each table is provided with a discussion of the variable names and a question-answer format demonstrating a practical application. Lastly, the brave-hearted may review the technical documentation in Appendix IV, describing

the masking procedures used to determine the level of wages disclosed and the percent distributions of employment.

Release Changes

The first release of staffing patterns used the Occupational Employment Statistics (OES; 750 occupations) classification and Standard Industrial Classification (SIC; 72 two digit industries) codes. The second release used the Standard Occupational Classification (SOC; 820 occupations) in place of the OES definitions and retained the two-digit SIC. The current release retains SOC for occupations and is adapted to the new industry standard, the North American Industrial Classification System (NAICS; 100 three-digit industries). By changing occupational and industrial classification systems we have increased from 750 to 820 possible occupations and from 72 to 100 industries. These changes have created problems with data confidentiality and reliability by distributing employment throughout a more detailed matrix and led to the development of the masking methodology outlined in Appendix IV.

Data Sources

The staffing patterns are primarily a repackaging of data from several Bureau of Labor Statistics (BLS) programs. The first of these are Wyoming's confidential level Occupational Employment Statistics (OES) program data at the six-digit SOC, three-digit NAICS statewide, as well as, the six-digit SOC by sub-state region. Secondly, the BLS national data at the six-digit SOC by three-digit NAICS and six-digit SOC by state are available at http://stats.bls.gov/oes/tables. Lastly, a typical education/experience field relating to the specific SOC was added using data produced by the BLS. These three data sources combined produced the tables of Wyoming's Customized Staffing Patterns and Wages 2003 (available for download in Excel format).

Tables: Variables, Descriptions, and Applications

Table 1 – Wyoming's Staffing Patterns and Wages 2003, Occupations within Industry

Table 1 is a brief excerpt from the full table in Appendix I and shows several variables for the occupations found in the designated industry. In this example, the industry selected (NAICS –

Table 1: Wyoming's Staffing Patterns and Wages 2003, Occupations Within Industry (an excerpt form full table in Appendix I).

NAICS & Title 334000 – Computer and Electronic Product Manufacturing

Enter Your Estimated Employment Below

| SOC & Title | Typical Ed. | Wage Source | WY Emp | WY Hourly | WY Annual | WY Percent | US Emp | US Hourly | US Annual | US Percent | 100 |
|--|----------------|----------------|-----------|--------------|-----------|---------------|---------|--------------|-----------|---------------|-----|
| 51-2092 – Team Assemblers | Mod OJT | WYXAgg | 0 | \$9.90 | \$20,580 | 11.82 | 65,880 | \$11.67 | \$24,260 | 5.13 | 12 |
| 41-4011 – Sales Represent. | Mod OJT | WYXInd | 25 | \$39.96 | \$76,870 | 6.75 | 15,300 | \$33.91 | \$70,540 | 1.19 | 7 |
| 42-2094 – Electronics Repairers | PS | WYXAgg | 0 | \$23.48 | \$48,830 | 6.06 | 7,760 | \$20.13 | \$41,870 | 0.60 | 6 |
| 51-2022 - Electronic Assemblers | Short OJT | WYXAgg | 0 | \$11.47 | \$23,860 | 5.06 | 138,310 | \$12.15 | \$25,280 | 10.76 | 5 |
| 51-2023 – Electromechanical Assemblers | Short OJT | USXInd | 0 | \$12.55 | \$26,100 | 4.57 | 20,140 | \$12.55 | \$26,100 | 1.57 | 5 |
| 11-1021 – General Managers | BA/BS + | WYXInd | 15 | \$49.48 | \$102,920 | 3.97 | 18,510 | \$61.05 | \$126,990 | 1.44 | 4 |
| 53-7064 - Packers | Short OJT | WYXAgg | 0 | \$6.86 | \$14,270 | 3.58 | 5,780 | \$10.17 | \$21,150 | 0.45 | 4 |
| 13-1023 – Purchasing Agents | Rel Exp | WYXInd | 12 | \$23.41 | \$48,690 | 3.28 | 19,050 | \$25.87 | \$53,800 | 1.48 | 3 |
| 17-2071 – Electrical Engineers | BA/BS | WYXInd | 11 | \$39.36 | \$81,870 | 3.08 | 35,340 | \$36.42 | \$75,750 | 2.75 | 3 |

Title) is "334000 - Computer and Electronic Product Manufacturing." The Excel version of this table features a drop down list with a selection of 88 NAICS codes – title combinations. Referring to Table 1, the most predominate occupation (SOC – Title) is "51-2092 – Team Assemblers," which represents an estimated 11.82 percent (WY Percent) of the employment followed by "41-4011 - Sales Representative" with 6.75 percent of the employment within the specific industry in Wyoming. The variables appearing in Table 1 and the remainder of the tables in this paper are described in the Variable List below.

In Table 1 we see (referring to the Variable List) that four of the top five occupations in this industry require either Moderate or Short term On-the-Job-Training (Mod OJT, Short OJT) and one of the occupations "42-2094 – Electronic Assemblers" requires a Postsecondary vocational award. Of the occupations in this industry, General Managers earn the highest wage (\$49.48/hour) followed by Sales Representatives (\$39.96/hour), Electronics Repairers (\$23.48/hour), and Electromechanical Assemblers (\$12.55/hour). We also see the three highest paying occupations in the industry have a higher average hourly wage in Wyoming than in the US (41-4011 - Sales Representatives, 42-2094 - Electronic Repairers, and 17-2071 - Electrical Engineers).

Variable List: Variables and Descriptions for Tables of Wyoming's Staffing Patterns and Wages 2003.

| Variable | Description | |
|------------------|---|--|
| NAICS & Title | North American Industrial Clas | sification System number and associated industry title. |
| SOC & Title | Standard Occupational Classif | ication Number and associated occupational title. |
| Typical Ed. | Mod OJT Mode Long OJT Long- Rel Exp Expe PS Posts AS / AA Assor BS / BA Bach BS / BA + Bach MA / MS Maste PhD Docto | nce Level of the occupationterm on-the-job training rate-term on-the-job training term on-the-job training rience in a related occupation econdary vocational award ciate degree elor's degree elor's plus work experience er's degree oral degree oral degree |
| Wage Source | SSXAgg Sub-5 WYXInd Wyor WYXAgg Wyor USXInd Natio | Hourly and Annual Wages State Region by 3-Digit NAICS State Region by Across All Industries Ining Statewide by 3-Digit NAICS Ining Statewide by Across All Industries |
| WY Emp | Wyoming estimated employment | ent. Non-disclosable where WY Emp equals 0 and the WY Percent is greater than 0. |
| WY Hourly | Average hourly wage at Wage | Source level. |
| WY Annual | Average annual wage at Wage | Source Level. |
| WY Percent | Estimated / Adjusted percent of | of employment in the occupation in the specific industry (See Appendix 4). |
| US Emp | US estimated employment. | |
| US Hourly | Average hourly wage US. | |
| US Annual | Average annual wage US | |
| US Percent | Percent of US employment in | the occupation in the specific industry |
| Enter Estimated | Box in which users can type a employment needed by occup | n estimated total employment, hit enter and the Excel file fills the column with the ation |
| State | Two letter abbreviation of the | state. |
| Sub-state Region | Central Southeast Albany Cheyenne Laram Northeast Camp Northwest Big Ho | tions. In County In County In Carbon, Converse, Goshen, Niobrara, and Platte Counties In County In Crook, Johnson, Sheridan, and Weston Counties In Fremont, Hot Springs, Park, and Washakie Counties In Sublette, Sweetwater, Teton, and Uinta Counties |

Questions & Answers for Table 1 & Full Table in Appendix I: Wyoming's Staffing Patterns and Wages 2003, Occupations Within Industry.

- T1-Q1) I am an out-of-state entrepreneur interested in starting a small (100 employees)

 Computer Manufacturing company in the Northeast Region of Wyoming. What are the typical types of occupations I need to staff my company? How many of each?
 - T1-A1) The far right column of Table 1 represents the estimated number of jobs by occupation you would have to fill in this particular industry. The worksheet of the Excel file has a yellow box like the one appearing in Table 1 that allows you to enter your prospective number of employees. The numbers below the yellow box are automatically filled in with the number of jobs by occupation.
- T1-Q2) What are the estimated costs associated with staffing my Computer Manufacturing company?
 - T1-A2) After reviewing the estimated number of jobs by occupations needed and refining the estimates based on your personal experiences in the industry, the associated wages "WY Hourly" is multiplied by the estimated/adjusted employment. For example, 12 Team Assemblers at \$9.90/hour equals \$118.80/hour plus 7 Sales Reps at \$39.96/hour equals \$279.72/hour plus 6 Electronic Repairers at \$23.48/hour equals \$140.88/hour, and so on (the total is approximately \$2,600/hour).
- T1-Q3) What are the chances of acquiring the labor with the skills I need in the Northeast Region of Wyoming?
 - T1-A3) Combining the total employment of Campbell County (available on our Internet site) with the aggregate industry "000000 Total All Industries" from Table 1 you can create a countywide staffing pattern. For example Campbell County's average employment for third quarter of 2003 is 21,083. Placing 21,083 in the yellow box of the industry aggregate staffing pattern and finding the first occupation of our prospective company 51-2092 we see that there should be approximately 31 Team Assemblers in Campbell County. Follow the same procedure for all occupations of interest.

Table 2 – Wyoming's Staffing Patterns and Wages 2003, Occupations by Industry

Table 2 lists all industries in Wyoming in which the selected occupation "17-2071 – Electrical Engineers" is found. Referring to Table 2, the industry with the largest number of Electrical Engineering jobs is "561000 – Administrative and Support Services" with 17.73 of Wyoming's Employment followed closely by "541000 – Professional, Scientific, and Technical Services" with 16.08 percent. The industry with the highest average wage for Electrical Engineers is "334000 - Computer and Electronic Product Manufacturing" (same industry discussed in Table 1) at \$39.36/hour followed by "541000 – Professional, Scientific, and Technical Services" at \$34.65/hour.

Table 2: Wyoming's Staffing Patterns and Wages 2003, Occupations by Industry (an excerpt form full table in Appendix II).

SOC & Title 17-2071 - Electrical Engineers

| NAICS & Title | Typical Ed. | Wage Source | WY Emp | WY Hourly | WY Annual | WY Percent | US Emp | US Hourly | US Annual | US Percent |
|---|-------------|----------------|-----------|--------------|-----------|---------------|--------|--------------|-----------|---------------|
| 561000 – Administrative and Support Services | BA/BS | WYXAgg | 0 | \$32.11 | \$66,790 | 17.73 | 3,120 | \$34.84 | \$72,460 | 2.19 |
| 541000 – Professional, Scientific, and Technical Services | BA/BS | WYXInd | 0 | \$34.65 | \$72,070 | 16.08 | 42,050 | \$35.52 | \$73,870 | 29.54 |
| 551000 – Management of Companies and Enterprises | BA/BS | WYXAgg | 0 | \$32.11 | \$66,790 | 14.18 | 3,610 | \$35.12 | \$73,040 | 2.54 |
| 211000 - Oil and Gas Extraction | BA/BS | WYXInd | 21 | \$32.67 | \$67,950 | 11.58 | 200 | \$35.82 | \$74,500 | 0.14 |
| 999000 – Federal, State, and Local Government (OES Designation) | BA/BS | WYXInd | 17 | \$30.10 | \$62,620 | 8.51 | 7,860 | \$33.28 | \$69,230 | 5.52 |
| 334000 – Computer and Electronic Product Manufacturing | BA/BS | WYXInd | 11 | \$39.36 | \$81,870 | 6.38 | 35,340 | \$36.42 | \$75,750 | 24.83 |
| 325000 – Chemical Manufacturing | BA/BS | WYXAgg | 0 | \$32.11 | \$66,790 | 5.20 | 1,070 | \$35.17 | \$73,160 | 0.75 |
| 811000 – Repair and Maintenance | BA/BS | WYXAgg | 0 | \$32.11 | \$66,790 | 4.73 | 850 | \$31.75 | \$66,030 | 0.60 |
| 324000 – Petroleum and Coal Products Manufacturing | BA/BS | WYXAgg | 0 | \$32.11 | \$66,790 | 3.78 | 260 | \$36.37 | \$75,650 | 0.18 |
| 486000 – Pipeline Transportation | BA/BS | WYXAgg | 0 | \$32.11 | \$66,790 | 3.31 | 280 | \$32.37 | \$67,330 | 0.20 |

Questions & Answers for Table 2 & Full Table in Appendix II: Wyoming's Staffing Patterns and Wages 2003, Occupations within Industry.

- T2-Q1) As the prospective entrepreneur from the questions in T1-Q1 to Q3 relative to the jobs I need to fill from data in Table 1. What industries can I recruit Electrical Engineers from? How much will I have to pay?
 - Using the data in Table 2 we see that there are five industries in Wyoming T2-A1) employing more Electrical Engineers than Computer and Electronic Product Manufacturing this creates our recruitment pool. All pay less than the entrepreneur is expecting to pay.
- T2-Q2) I recently graduated with a Bachelors degree in Electrical Engineering. What industries employ Electrical Engineers and how much do they pay? Table 2 lists the data necessary to start looking for a career along with the Average Wages currently paid.

Table 3 Wyoming's Staffing Patterns and Wages 2003, Occupations by State, Wyoming Substate Region, Wages and Wage Rank.

Table 3 lists the average hourly and annual wages for the occupation "17-2071 Electrical Engineers" by state and Wyoming sub-state Region. The full Excel worksheet consists of a drop down menu to select the desired SOC & Title combination and lists the employment, wages, and ranks by state. For simplicity, several states in Table 3 were removed and only the US Total, Wyoming Border States, and Wyoming with sub-state Region appears in Table 3 (the complete table is attached in Appendix III). A review of Table 3 shows that Wyoming is ranked 33rd nationally with an average hourly wage of \$32.11/hour. Wyoming has a higher average wage than Nebraska (Rank 40, \$31.25/hour), South Dakota (Rank 50, \$27.28/hour), and Montana (Rank 51, \$25.91/hour) and a lower average wage than Colorado (Rank 19,

Table 3: Wyoming's Staffing Patterns and Wages 2003, Occupations by State, Wyoming Sub-state Region, Wages, and Wage Rank (an excerpt form full table in Appendix III).

| SOC & | 17-2071 – Electrical Engineers |
|-------|--------------------------------|
| Title | _ |

| Typical Education | | state | Sub-State Region | Wage Source | Location Emp | Location Hourly | Location Annual | Wage Rank |
|----------------------|--------------|-------|---------------------|-------------|--------------|-----------------|-----------------|--------------|
| BA/BS | US | | Total | USXAgg | 146,150 | \$34.66 | \$72,090 | |
| | Idaho | | Total | IDXAgg | 1,050 | \$34.78 | \$72,350 | 13 |
| | Utah | | Total | UTXAgg | 880 | \$34.73 | \$72,230 | 14 |
| | Colorado | | Total | COXAgg | 5,090 | \$34.01 | \$70,740 | 19 |
| | Wyoming | | Total | WYXAgg | 160 | \$32.11 | \$66,790 | 33 |
| | | | Casper | SSXAgg | 20 | \$31.31 | \$65,130 | 33 |
| | | | Cheyenne | SSXAgg | 21 | \$37.51 | \$78,020 | 33 |
| | | | C-SE | WYXAgg | 0 | \$27.80 | \$57,830 | 33 |
| | | | NE | SSXAgg | 13 | \$31.10 | \$64,690 | 33 |
| | | | NW | SSXAgg | 21 | \$29.48 | \$61,320 | 33 |
| | | | SW | WYXAgg | 0 | \$35.11 | \$73,020 | 33 |
| | Nebraska | | Total | NEXAgg | 820 | \$31.25 | \$65,000 | 40 |
| | South Dakota | | Total | SDXAgg | 120 | \$27.28 | \$56,740 | 50 |
| | Montana | | Total | MTXAgg | 340 | \$25.91 | \$53,890 | 51 |

\$34.01/hour), Utah (Rank 14, \$34.73/hour), and Idaho (Rank 13, \$34.78/hour). The Cheyenne M.S.A. of Wyoming has a highest average wage for Electrical Engineers appearing in Table 3. Referring to Appendix III we see that the wage for Electrical Engineers in the Cheyenne (\$37.51/hour) ranks between New Mexico (Rank = 4, \$37.53/hour) and the District of Columbia (Rank = 5, \$37.33/hour).

Questions & Answers for Table 3 & Full Table in Appendix III: Wyoming's Staffing Patterns and Wages 2003, Occupations by State, Wyoming Sub-state Region, Wages, and Wage Rank.

- T3-Q1) As the prospective entrepreneur from the questions in T1-Q1 to Q3 relative to the jobs I need to fill from data in Table 1. What other states can I recruit Electrical Engineers from? How much will I have to pay?
 - T3-A1) Using the data in Table 3 we see the number of Electrical Engineers employed in other states and the regional our recruitment pool. All pay less than the entrepreneur expects to pay based on the wages in Table 1.

- T3-Q2) As a recent Electrical Engineering graduate would I be better off, with respect to wages, moving to Colorado? Idaho? Montana?
 - T3-A2) There are other factors to consider beside wages Cost of Living, Working Environment, Personal Preference, and Family to name a few. Considering wages only you would be paid more on average in Colorado (\$34.01/hour) and Idaho (\$34.78/hour) and less in Montana (\$25.91/hour).

Enter Your Estimated

Table 1: Wyoming's Staffing Patterns and Wages 2003 - Occupations within Industry

NAICS & 334000 - Computer and Electronic Title **Product Manufacturing**

Employment in Box Below Source WY US US Typical WY of Percent **SOC & Occupation Title** Education Wages WY Emp Hourly WY Annual **US Emp** US Annual Percent 100 Source Hourly R&P 51-2092 - Team assemblers Mod O.IT WYXAgg 0 \$9.90 \$20.580 11.82 65.880 \$11.67 \$24.260 5.13 12 41-4011 - Sales representatives, wholesale and manufacturing, technical Mod OJT 7 WYXInd 25 \$36.96 \$76,870 6.75 15,300 \$33.91 \$70,540 1.19 and scientific products 49-2094 - Flectrical and electronics PS WYXAgg \$23.48 6.06 \$20.13 6 repairers, commercial and industrial 0 \$48,830 7,760 \$41,870 0.60 51-2022 - Electrical and electronic Short OJT WYXAgg \$11.47 \$23,860 5.06 138,310 \$12.15 \$25,280 10.76 5 equipment assemblers 51-2023 - Electromechanical Short OJT **USXInd** 0 \$12.55 \$26,100 4.57 20,140 \$12.55 \$26,100 1.57 5 equipment assemblers 11-1021 - General and operations BS / BA + WYXInd 15 \$49.48 \$102,920 3.97 18,510 \$61.05 \$126,990 1.44 4 managers 53-7064 - Packers and packagers, Short OJT WYXAgg 0 \$6.86 \$14,270 3.58 5,780 \$10.17 \$21,150 0.45 4 13-1023 - Purchasing agents, except Rel Exp WYXInd 12 \$23.41 \$48,690 3.28 19,050 \$25.87 \$53,800 1.48 3 wholesale, retail, and farm products 17-2071 - Electrical engineers BS / BA WYXInd 11 \$39.36 \$81.870 3.08 35.340 \$36.42 \$75,750 2.75 3 BS / BA + WYXAgg 3 11-9041 - Engineering managers \$34.57 \$71.910 2.88 26.870 \$55.43 \$115,280 2.09 0 51-1011 - First-line Rel Exp WYXAgg \$24.05 \$50.030 2.78 32,160 \$51,140 3 supervisors/managers of production 0 \$24.59 2.50 and operating workers 17-2072 - Electronics engineers, BS / BA WYXAgg \$32.15 \$66,880 2.58 35,710 \$35.93 \$74,740 2.78 3 except computer 17-3024 - Electro-mechanical AS / AA 2 WYXAgg \$0.00 \$0 2.38 7,270 \$19.05 \$39,620 0.57 technicians 11-3051 - Industrial production WYXAgg BS / BA 0 \$34.44 \$71,630 2.18 13,700 \$41.49 \$86,310 1.07 2 managers 17-2141 - Mechanical engineers BS / BA WYXAgg \$27.73 \$57,690 2.09 20,470 \$33.22 \$69,110 1.59 2 15-1032 - Computer software BS / BA WYXAgg 0 \$30.54 \$63,530 2.09 37.670 \$39.66 \$82,500 2.93 2 engineers, systems software 43-4051 - Customer service Mod OJT WYXAgg 0 \$10.71 \$22,270 1.99 14,690 \$18.26 \$37,980 1.14 2 representatives 51-9061 - Inspectors, testers, sorters,

Mod OJT

samplers, and weighers

WYXAgg

0

\$15.47

\$32,180

1.89

38.580

\$14.45

\$30,070

3.00

2

| Source | SOC & Occupation Title | Typical Education | Source of Wages | WY Emp | WY Hourly | WY Annual | WY Percent | US Emp | US Hourly | US Annual | US Percent | N to Fill |
|--------|--|------------------------|-----------------------|--------|--------------|-----------|---------------|--------|--------------|-----------|---------------|-----------|
| | 43-5071 - Shipping, receiving, and traffic clerks | Short OJT | WYXAgg | 0 | \$11.26 | \$23,420 | 1.69 | 19,270 | \$13.07 | \$27,190 | 1.50 | 2 |
| | 43-9061 - Office clerks, general | Short OJT | WYXAgg | 0 | \$9.73 | \$20,230 | 1.59 | 14,590 | \$14.19 | \$29,510 | 1.14 | 2 |
| | 11-2022 - Sales managers | BS / BA + | WYXAgg | 0 | \$36.89 | \$76,730 | 1.49 | 7,440 | \$53.43 | \$111,140 | 0.58 | 1 |
| | 17-3013 - Mechanical drafters | PS | WYXAgg | 0 | \$19.24 | \$40,010 | 1.39 | 3,610 | \$23.14 | \$48,130 | 0.28 | 1 |
| | 43-3021 - Billing and posting clerks and machine operators | Mod OJT | WYXAgg | 0 | \$11.71 | \$24,370 | 1.29 | 1,420 | \$15.31 | \$31,840 | 0.11 | 1 |
| | 17-2061 - Computer hardware engineers | BS / BA | WYXAgg | 0 | \$25.34 | \$52,710 | 1.19 | 33,260 | \$40.08 | \$83,360 | 2.59 | 1 |
| | 37-2011 - Janitors and cleaners, excep maids and housekeeping cleaners | ^t Short OJT | WYXAgg | 0 | \$9.08 | \$18,880 | 1.09 | 4,420 | \$11.63 | \$24,190 | 0.34 | 1 |
| | 41-4012 - Sales representatives, wholesale and manufacturing, except technical and scientific products | Mod OJT | WYXAgg | 0 | \$16.94 | \$35,240 | 0.99 | 9,720 | \$28.78 | \$59,860 | 0.76 | 1 |
| | 11-2021 - Marketing managers | BS / BA + | WYXAgg | 0 | \$26.49 | \$55,090 | 0.89 | 10,130 | \$52.00 | \$108,160 | 0.79 | 1 |
| | 43-6011 - Executive secretaries and administrative assistants | Mod OJT | WYXAgg | 0 | \$14.00 | \$29,120 | 0.89 | 19,080 | \$19.98 | \$41,560 | 1.48 | 1 |
| | 43-5081 - Stock clerks and order fillers | Short OJT | WYXAgg | 0 | \$9.65 | \$20,070 | 0.89 | 11,180 | \$13.37 | \$27,800 | 0.87 | 1 |
| | 43-5061 - Production, planning, and expediting clerks | Short OJT | WYXAgg | 0 | \$16.87 | \$35,090 | 0.89 | 18,360 | \$17.76 | \$36,940 | 1.43 | 1 |
| | 41-9099 - Sales and related workers, all other | N/A | WYXAgg | 0 | \$12.85 | \$26,730 | 0.89 | 0 | \$0.00 | \$0 | 0.00 | 1 |
| | 19-2031 - Chemists | BS / BA | WYXAgg | 0 | \$21.30 | \$44,290 | 0.89 | 1,430 | \$28.31 | \$58,890 | 0.11 | 1 |
| | 11-3031 - Financial managers | BS / BA + | WYXAgg | 0 | \$29.11 | \$60,550 | 0.89 | 9,050 | \$48.46 | \$100,790 | 0.70 | 1 |
| | 15-1071 - Network and computer systems administrators | BS / BA | WYXAgg | 0 | \$21.79 | \$45,320 | 0.89 | 5,360 | \$30.98 | \$64,440 | 0.42 | 1 |
| | 15-1041 - Computer support specialists | AS/AA | WYXAgg | 0 | \$14.61 | \$30,380 | 0.89 | 15,490 | \$25.32 | \$52,660 | 1.21 | 1 |
| | 15-1031 - Computer software engineers, applications | BS / BA | WYXAgg | 0 | \$37.95 | \$78,940 | 0.89 | 36,630 | \$38.45 | \$79,980 | 2.85 | 1 |
| | 49-9042 - Maintenance and repair workers, general | Mod OJT | WYXAgg | 0 | \$14.85 | \$30,880 | 0.79 | 12,250 | \$19.57 | \$40,700 | 0.95 | 1 |
| | 51-4041 - Machinists | Long OJT | WYXAgg | 0 | \$15.58 | \$32,410 | 0.70 | 15,180 | \$17.09 | \$35,540 | 1.18 | 1 |
| | 11-3011 - Administrative services managers | BS / BA + | WYXAgg | 0 | \$21.67 | \$45,080 | 0.60 | 3,830 | \$43.71 | \$90,920 | 0.30 | 1 |
| | 11-3021 - Computer and information systems managers | BS / BA + | WYXAgg | 0 | \$27.24 | \$56,660 | 0.60 | 9,960 | \$51.17 | \$106,430 | 0.77 | 1 |

| Source | SOC & Occupation Title | Typical Education | Source of Wages | WY Emp | WY Hourly | WY Annual | WY Percent | US Emp | US Hourly | US Annual | US Percent | N to Fill |
|--------|---|----------------------|-----------------------|--------|--------------|-----------|---------------|--------|--------------|-----------|---------------|-----------|
| | 43-6014 - Secretaries, except legal, medical, and executive | Mod OJT | WYXAgg | 0 | \$10.34 | \$21,510 | 0.60 | 7,900 | \$15.40 | \$32,040 | 0.61 | 1 |
| | 13-1199 - Business operations specialists, all other | N/A | WYXAgg | 0 | \$20.82 | \$43,310 | 0.60 | 0 | \$0.00 | \$0 | 0.00 | 1 |
| | 13-2011 - Accountants and auditors | BS/BA | WYXAgg | 0 | \$21.45 | \$44,610 | 0.60 | 12,460 | \$27.40 | \$56,980 | 0.97 | 1 |
| | 43-3061 - Procurement clerks | Short OJT | WYXAgg | 0 | \$15.44 | \$32,110 | 0.60 | 2,200 | \$16.07 | \$33,430 | 0.17 | 1 |
| | 43-3051 - Payroll and timekeeping clerks | Mod OJT | WYXAgg | 0 | \$14.39 | \$29,930 | 0.60 | 1,780 | \$17.17 | \$35,710 | 0.14 | 1 |
| | 43-3031 - Bookkeeping, accounting, and auditing clerks | Mod OJT | WYXAgg | 0 | \$11.31 | \$23,520 | 0.60 | 11,600 | \$15.87 | \$33,010 | 0.90 | 1 |
| | 43-2011 - Switchboard operators, including answering service | Short OJT | WYXAgg | 0 | \$9.15 | \$19,030 | 0.60 | 850 | \$12.34 | \$25,680 | 0.07 | 1 |
| | 27-3042 - Technical writers | BS / BA | WYXAgg | 0 | \$24.54 | \$51,040 | 0.60 | 4,400 | \$27.01 | \$56,190 | 0.34 | 1 |
| | 17-3027 - Mechanical engineering technicians | AS / AA | WYXAgg | 0 | \$20.41 | \$42,450 | 0.60 | 8,290 | \$20.61 | \$42,870 | 0.64 | 1 |
| | 13-1051 - Cost estimators | Rel Exp | WYXAgg | 0 | \$21.74 | \$45,230 | 0.60 | 2,020 | \$27.02 | \$56,210 | 0.16 | 1 |
| | 17-3012 - Electrical and electronics drafters | PS | WYXAgg | 0 | \$18.28 | \$38,020 | 0.60 | 6,450 | \$22.23 | \$46,240 | 0.50 | 1 |
| | 13-1072 - Compensation, benefits, and job analysis specialists | BS / BA | WYXAgg | 0 | \$18.71 | \$38,910 | 0.60 | 1,700 | \$27.63 | \$57,460 | 0.13 | 1 |
| | 11-3061 - Purchasing managers | BS/BA+ | WYXAgg | 0 | \$25.19 | \$52,390 | 0.60 | 4,690 | \$40.57 | \$84,390 | 0.36 | 1 |
| | 49-2095 - Electrical and electronics repairers, powerhouse, substation, and relay | PS | WYXAgg | 0 | \$27.41 | \$57,020 | 0.50 | 160 | \$16.85 | \$35,040 | 0.01 | |
| | 51-9198 - Helpers–production workers | Short OJT | WYXAgg | 0 | \$8.84 | \$18,390 | 0.30 | 5,660 | \$10.25 | \$21,320 | 0.44 | |
| | 17-3023 - Electrical and electronic engineering technicians | AS / AA | WYXAgg | 0 | \$20.98 | \$43,640 | 0.10 | 48,130 | \$19.77 | \$41,130 | 3.74 | |
| | 53-7072 - Pump operators, except wellhead pumpers | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 160 | \$11.85 | \$24,640 | 0.01 | |
| | 17-2131 - Materials engineers | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 3,160 | \$33.20 | \$69,060 | 0.25 | |
| | 11-3040 - Human resources managers | BS/BA+ | N/A | 0 | \$0.00 | \$0 | 0.00 | 4,760 | \$43.67 | \$90,840 | 0.37 | |
| | 17-3011 - Architectural and civil drafters | PS | N/A | 0 | \$0.00 | \$0 | 0.00 | 120 | \$18.00 | \$37,440 | 0.01 | |
| | 13-2052 - Personal financial advisors | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 30 | \$42.35 | \$88,100 | 0.00 | |
| | 17-2051 - Civil engineers | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 570 | \$33.10 | \$68,840 | 0.04 | |

| Source | SOC & Occupation Title | Typical Education | Source of Wages | WY Emp | WY Hourly | WY Annual | WY Percent | US Emp | US Hourly | US Annual | US Percent | N to Fill |
|--------|--|----------------------|-----------------------|--------|--------------|-----------|---------------|--------|--------------|-----------|---------------|-----------|
| | 17-3021 - Aerospace engineering and operations technicians | AS / AA | N/A | 0 | \$0.00 | \$0 | 0.00 | 1,100 | \$24.67 | \$51,310 | 0.09 | |
| | 17-3022 - Civil engineering technicians | AS / AA | N/A | 0 | \$0.00 | \$0 | 0.00 | 200 | \$24.50 | \$50,960 | 0.02 | |
| | 17-2112 - Industrial engineers | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 24,310 | \$33.24 | \$69,140 | 1.89 | |
| | 11-3071 - Transportation, storage, and distribution managers | Rel Exp | N/A | 0 | \$0.00 | \$0 | 0.00 | 1,250 | \$39.52 | \$82,210 | 0.10 | |
| | 17-3025 - Environmental engineering technicians | AS / AA | N/A | 0 | \$0.00 | \$0 | 0.00 | 500 | \$18.38 | \$38,240 | 0.04 | |
| | 17-3026 - Industrial engineering technicians | AS / AA | N/A | 0 | \$0.00 | \$0 | 0.00 | 14,730 | \$20.47 | \$42,570 | 1.15 | |
| | 17-2041 - Chemical engineers | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 1,730 | \$36.41 | \$75,740 | 0.13 | |
| | 19-1021 - Biochemists and biophysicists | PhD | N/A | 0 | \$0.00 | \$0 | 0.00 | 50 | \$31.21 | \$64,920 | 0.00 | |
| | 19-2012 - Physicists | PhD | N/A | 0 | \$0.00 | \$0 | 0.00 | 350 | \$43.11 | \$89,660 | 0.03 | |
| | 19-2021 - Atmospheric and space scientists | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 60 | \$24.38 | \$50,720 | 0.00 | |
| | 13-2051 - Financial analysts | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 7,110 | \$32.52 | \$67,630 | 0.55 | |
| | 19-2032 - Materials scientists | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 680 | \$42.69 | \$88,790 | 0.05 | |
| | 19-2041 - Environmental scientists and specialists, including health | MS / MA | N/A | 0 | \$0.00 | \$0 | 0.00 | 30 | \$32.60 | \$67,800 | 0.00 | |
| | 19-2042 - Geoscientists, except hydrologists and geographers | MS / MA | N/A | 0 | \$0.00 | \$0 | 0.00 | 0 | \$26.55 | \$55,230 | 0.00 | |
| | 19-3021 - Market research analysts | MS / MA | N/A | 0 | \$0.00 | \$0 | 0.00 | 8,200 | \$37.66 | \$78,340 | 0.64 | |
| | 19-4021 - Biological technicians | AS / AA | N/A | 0 | \$0.00 | \$0 | 0.00 | 110 | \$18.94 | \$39,400 | 0.01 | |
| | 19-4031 - Chemical technicians | AS / AA | N/A | 0 | \$0.00 | \$0 | 0.00 | 1,240 | \$17.83 | \$37,090 | 0.10 | |
| | 19-4091 - Environmental science and protection technicians, including health | AS / AA | N/A | 0 | \$0.00 | \$0 | 0.00 | 30 | \$22.70 | \$47,220 | 0.00 | |
| | 23-1011 - Lawyers | Prof | N/A | 0 | \$0.00 | \$0 | 0.00 | 1,140 | \$67.59 | \$140,590 | 0.09 | |
| | 23-2011 - Paralegals and legal assistants | AS / AA | N/A | 0 | \$0.00 | \$0 | 0.00 | 270 | \$27.18 | \$56,520 | 0.02 | |
| | 25-4021 - Librarians | MS / MA | N/A | 0 | \$0.00 | \$0 | 0.00 | 80 | \$25.78 | \$53,630 | 0.01 | |
| | 25-4031 - Library technicians | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 40 | \$17.26 | \$35,900 | 0.00 | |

| Source | SOC & Occupation Title | Typical Education | Source of Wages | WY Emp | WY Hourly | WY Annual | WY Percent | US Emp | US Hourly | US Annual | US Percent | N to Fill |
|--------|--|----------------------|-----------------------|--------|--------------|-----------|---------------|--------|--------------|-----------|---------------|-----------|
| | 27-1011 - Art directors | BS / BA + | N/A | 0 | \$0.00 | \$0 | 0.00 | 190 | \$27.41 | \$57,020 | 0.01 | |
| | 27-1013 - Fine artists, including painters, sculptors, and illustrators | Long OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 50 | \$22.20 | \$46,190 | 0.00 | |
| | 27-1014 - Multi-media artists and animators | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 320 | \$21.31 | \$44,320 | 0.02 | |
| | 27-1021 - Commercial and industrial designers | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 890 | \$27.38 | \$56,940 | 0.07 | |
| | 27-1024 - Graphic designers | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 1,030 | \$22.88 | \$47,580 | 0.08 | |
| | 27-2012 - Producers and directors | BS / BA + | N/A | 0 | \$0.00 | \$0 | 0.00 | 40 | \$0.00 | \$69,280 | 0.00 | |
| | 27-3031 - Public relations specialists | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 1,520 | \$31.67 | \$65,860 | 0.12 | |
| | 27-3041 - Editors | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 510 | \$20.67 | \$42,990 | 0.04 | |
| | 17-2031 - Biomedical engineers | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 440 | \$35.92 | \$74,710 | 0.03 | |
| | 27-4011 - Audio and video equipment technicians | Long OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 350 | \$16.19 | \$33,680 | 0.03 | |
| | 27-4012 - Broadcast technicians | AS / AA | N/A | 0 | \$0.00 | \$0 | 0.00 | 40 | \$15.42 | \$32,070 | 0.00 | |
| | 27-4014 - Sound engineering technicians | PS | N/A | 0 | \$0.00 | \$0 | 0.00 | 210 | \$17.19 | \$35,760 | 0.02 | |
| | 27-4021 - Photographers | Long OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 50 | \$22.09 | \$45,950 | 0.00 | |
| | 27-4031 - Camera operators, television, video, and motion picture | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 0 | \$14.78 | \$30,740 | 0.00 | |
| | 27-4032 - Film and video editors | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 400 | \$17.48 | \$36,360 | 0.03 | |
| | 29-1111 - Registered nurses | AS / AA | N/A | 0 | \$0.00 | \$0 | 0.00 | 350 | \$24.09 | \$50,100 | 0.03 | |
| | 29-1121 - Audiologists | MS / MA | N/A | 0 | \$0.00 | \$0 | 0.00 | 70 | \$29.08 | \$60,480 | 0.01 | |
| | 29-9010 - Occupational health and safety specialists and technicians | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 270 | \$26.62 | \$55,370 | 0.02 | |
| | 33-9021 - Private detectives and investigators | Rel Exp | N/A | 0 | \$0.00 | \$0 | 0.00 | 40 | \$28.88 | \$60,060 | 0.00 | |
| | 33-9032 - Security guards | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 1,990 | \$15.01 | \$31,220 | 0.15 | |
| | 35-3021 - Combined food preparation and serving workers, including fast food | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 50 | \$9.91 | \$20,620 | 0.00 | |
| | 37-1011 - First-line supervisors/managers of housekeeping and janitorial workers | | N/A | 0 | \$0.00 | \$0 | 0.00 | 400 | \$21.12 | \$43,940 | 0.03 | |

| Source | SOC & Occupation Title | Typical Education | Source of Wages | WY Emp | WY Hourly | WY Annual | WY Percent | US Emp | US Hourly | US Annual | US Percent | N to Fill |
|--------|--|----------------------|-----------------------|--------|--------------|-----------|---------------|--------|--------------|-----------|---------------|-----------|
| | 13-1073 - Training and development specialists | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 3,840 | \$26.09 | \$54,270 | 0.30 | |
| | 37-3011 - Landscaping and groundskeeping workers | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 280 | \$12.75 | \$26,520 | 0.02 | |
| | 41-1011 - First-line supervisors/managers of retail sales workers | Rel Exp | N/A | 0 | \$0.00 | \$0 | 0.00 | 400 | \$28.07 | \$58,390 | 0.03 | |
| | 41-1012 - First-line supervisors/managers of non-retail sales workers | Rel Exp | N/A | 0 | \$0.00 | \$0 | 0.00 | 3,020 | \$38.99 | \$81,090 | 0.24 | |
| | 41-2011 - Cashiers | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 60 | \$10.31 | \$21,450 | 0.00 | |
| | 41-2022 - Parts salespersons | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 40 | \$13.17 | \$27,400 | 0.00 | |
| | 41-2031 - Retail salespersons | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 440 | \$14.82 | \$30,820 | 0.03 | |
| | 41-3011 - Advertising sales agents | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 200 | \$22.85 | \$47,540 | 0.02 | |
| | 11-2031 - Public relations managers | BS/BA+ | N/A | 0 | \$0.00 | \$0 | 0.00 | 340 | \$51.19 | \$106,480 | 0.03 | |
| | 13-1111 - Management analysts | BS / BA + | N/A | 0 | \$0.00 | \$0 | 0.00 | 4,860 | \$35.04 | \$72,890 | 0.38 | |
| | 41-9011 - Demonstrators and product promoters | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 110 | \$28.01 | \$58,260 | 0.01 | |
| | 41-9031 - Sales engineers | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 7,690 | \$36.05 | \$74,990 | 0.60 | |
| | 41-9041 - Telemarketers | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 700 | \$16.37 | \$34,050 | 0.05 | |
| | 13-2041 - Credit analysts | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 870 | \$24.46 | \$50,890 | 0.07 | |
| | 43-1011 - First-line supervisors/managers of office and administrative support workers | Rel Exp | N/A | 0 | \$0.00 | \$0 | 0.00 | 8,690 | \$26.21 | \$54,520 | 0.68 | |
| | 17-2011 - Aerospace engineers | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 3,240 | \$39.14 | \$81,420 | 0.25 | |
| | 43-3011 - Bill and account collectors | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 440 | \$16.82 | \$34,990 | 0.03 | |
| | 13-1071 - Employment, recruitment, and placement specialists | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 1,350 | \$27.72 | \$57,650 | 0.11 | |
| | 17-1011 - Architects, except landscape and naval | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 60 | \$36.23 | \$75,350 | 0.00 | |
| | 15-2091 - Mathematical technicians | N/A | N/A | 0 | \$0.00 | \$0 | 0.00 | 170 | \$26.43 | \$54,970 | 0.01 | |
| | 15-2041 - Statisticians | MS / MA | N/A | 0 | \$0.00 | \$0 | 0.00 | 80 | \$33.80 | \$70,310 | 0.01 | |
| | 43-4021 - Correspondence clerks | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 130 | \$13.83 | \$28,770 | 0.01 | |

| Source | SOC & Occupation Title | Typical Education | Source of Wages | WY Emp | WY Hourly | WY Annual | WY Percent | US Emp | US Hourly | US Annual | US Percent | N to Fill |
|--------|---|----------------------|-----------------------|--------|--------------|-----------|---------------|--------|--------------|-----------|---------------|-----------|
| | 43-4041 - Credit authorizers, checkers, and clerks | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 130 | \$15.10 | \$31,410 | 0.01 | |
| | 11-9121 - Natural sciences managers | BS/BA+ | N/A | 0 | \$0.00 | \$0 | 0.00 | 140 | \$62.44 | \$129,880 | 0.01 | |
| | 43-4071 - File clerks | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 740 | \$13.67 | \$28,430 | 0.06 | |
| | 43-4151 - Order clerks | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 4,610 | \$15.53 | \$32,300 | 0.36 | |
| | 43-4161 - Human resources assistants, except payroll and timekeeping | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 2,390 | \$18.15 | \$37,750 | 0.19 | |
| | 43-4171 - Receptionists and information clerks | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 3,060 | \$12.76 | \$26,530 | 0.24 | |
| | 43-5021 - Couriers and messengers | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 50 | \$11.60 | \$24,130 | 0.00 | |
| | 43-5032 - Dispatchers, except police, fire, and ambulance | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 60 | \$15.88 | \$33,030 | 0.00 | |
| | 13-2031 - Budget analysts | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 1,150 | \$31.90 | \$66,350 | 0.09 | |
| | 13-1022 - Wholesale and retail buyers, except farm products | Rel Exp | N/A | 0 | \$0.00 | \$0 | 0.00 | 1,110 | \$25.93 | \$53,940 | 0.09 | |
| | 15-2031 - Operations research analysts | s MS / MA | N/A | 0 | \$0.00 | \$0 | 0.00 | 1,670 | \$31.05 | \$64,580 | 0.13 | |
| | 43-5111 - Weighers, measurers, checkers, and samplers, recordkeeping | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 1,070 | \$14.54 | \$30,250 | 0.08 | |
| | 15-1081 - Network systems and data communications analysts | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 4,930 | \$32.22 | \$67,020 | 0.38 | |
| | 43-6012 - Legal secretaries | PS | N/A | 0 | \$0.00 | \$0 | 0.00 | 110 | \$19.38 | \$40,300 | 0.01 | |
| | 15-1011 - Computer and information scientists, research | PhD | N/A | 0 | \$0.00 | \$0 | 0.00 | 1,620 | \$43.54 | \$90,560 | 0.13 | |
| | 43-9011 - Computer operators | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 1,650 | \$16.00 | \$33,280 | 0.13 | |
| | 43-9021 - Data entry keyers | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 1,440 | \$12.54 | \$26,090 | 0.11 | |
| | 43-9022 - Word processors and typists | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 350 | \$14.50 | \$30,160 | 0.03 | |
| | 43-9031 - Desktop publishers | PS | N/A | 0 | \$0.00 | \$0 | 0.00 | 110 | \$23.32 | \$48,500 | 0.01 | |
| | 43-9051 - Mail clerks and mail machine operators, except postal service | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 510 | \$12.21 | \$25,410 | 0.04 | |
| | 15-1061 - Database administrators | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 2,820 | \$29.06 | \$60,440 | 0.22 | |
| | 43-9071 - Office machine operators, except computer | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 270 | \$16.07 | \$33,420 | 0.02 | |

| Source | SOC & Occupation Title | Typical Education | Source of Wages | WY Emp | WY Hourly | WY Annual | WY Percent | US Emp | US Hourly | US Annual | US Percent | N to Fill |
|--------|---|----------------------|-----------------------|--------|--------------|-----------|---------------|--------|--------------|-----------|---------------|-----------|
| | 43-9111 - Statistical assistants | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 270 | \$16.68 | \$34,690 | 0.02 | |
| | 47-1011 - First-line supervisors/managers of construction trades and extraction workers | Rel Exp | N/A | 0 | \$0.00 | \$0 | 0.00 | 210 | \$27.47 | \$57,130 | 0.02 | |
| | 47-2031 - Carpenters | Long OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 310 | \$19.25 | \$40,040 | 0.02 | |
| | 47-2061 - Construction laborers | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 0 | \$11.63 | \$24,190 | 0.00 | |
| | 47-2111 - Electricians | Long OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 1,450 | \$21.23 | \$44,150 | 0.11 | |
| | 47-2141 - Painters, construction and maintenance | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 340 | \$14.96 | \$31,110 | 0.03 | |
| | 47-2152 - Plumbers, pipefitters, and steamfitters | Long OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 340 | \$22.86 | \$47,540 | 0.03 | |
| | 47-2211 - Sheet metal workers | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 1,030 | \$13.72 | \$28,540 | 0.08 | |
| | 47-4011 - Construction and building inspectors | Rel Exp | N/A | 0 | \$0.00 | \$0 | 0.00 | 40 | \$20.43 | \$42,490 | 0.00 | |
| | 49-1011 - First-line supervisors/managers of mechanics, installers, and repairers | Rel Exp | N/A | 0 | \$0.00 | \$0 | 0.00 | 3,150 | \$29.72 | \$61,820 | 0.25 | |
| | 49-2011 - Computer, automated teller, and office machine repairers | PS | N/A | 0 | \$0.00 | \$0 | 0.00 | 2,980 | \$20.26 | \$42,140 | 0.23 | |
| | 49-2021 - Radio mechanics | PS | N/A | 0 | \$0.00 | \$0 | 0.00 | 70 | \$14.68 | \$30,540 | 0.01 | |
| | 49-2022 - Telecommunications equipment installers and repairers, except line installers | Long OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 540 | \$19.84 | \$41,270 | 0.04 | |
| | 49-2091 - Avionics technicians | PS | N/A | 0 | \$0.00 | \$0 | 0.00 | 70 | \$17.96 | \$37,360 | 0.01 | |
| | 49-2092 - Electric motor, power tool, and related repairers | PS | N/A | 0 | \$0.00 | \$0 | 0.00 | 540 | \$18.99 | \$39,490 | 0.04 | |
| | 49-2093 - Electrical and electronics installers and repairers, transportation equipment | PS | N/A | 0 | \$0.00 | \$0 | 0.00 | 290 | \$19.79 | \$41,170 | 0.02 | |
| | 11-2011 - Advertising and promotions managers | BS / BA + | N/A | 0 | \$0.00 | \$0 | 0.00 | 820 | \$42.72 | \$88,870 | 0.06 | |
| | 17-2081 - Environmental engineers | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 570 | \$32.14 | \$66,860 | 0.04 | |
| | 49-2096 - Electronic equipment installers and repairers, motor vehicles | PS | N/A | 0 | \$0.00 | \$0 | 0.00 | 110 | \$13.29 | \$27,640 | 0.01 | |
| | 49-2097 - Electronic home entertainment equipment installers and repairers | PS | N/A | 0 | \$0.00 | \$0 | 0.00 | 880 | \$13.53 | \$28,140 | 0.07 | |
| | 49-2098 - Security and fire alarm systems installers | PS | N/A | 0 | \$0.00 | \$0 | 0.00 | 0 | \$18.25 | \$37,960 | 0.00 | |
| | 49-3023 - Automotive service technicians and mechanics | PS | N/A | 0 | \$0.00 | \$0 | 0.00 | 0 | \$16.40 | \$34,120 | 0.00 | |

| Source | SOC & Occupation Title | Typical Education | Source of Wages | WY Emp | WY Hourly | WY Annual | WY Percent | US Emp | US Hourly | US Annual | US Percent | N to Fill |
|--------|--|----------------------|-----------------------|--------|--------------|-----------|---------------|--------|--------------|-----------|---------------|-----------|
| | 49-9012 - Control and valve installers and repairers, except mechanical door | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 460 | \$13.98 | \$29,070 | 0.04 | |
| | 49-9021 - Heating, air conditioning, and refrigeration mechanics and installers | Long OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 540 | \$22.21 | \$46,200 | 0.04 | |
| | 49-9041 - Industrial machinery mechanics | Long OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 5,040 | \$20.44 | \$42,510 | 0.39 | |
| | 11-9111 - Medical and health services managers | BS / BA + | N/A | 0 | \$0.00 | \$0 | 0.00 | 30 | \$65.87 | \$137,020 | 0.00 | |
| | 49-9043 - Maintenance workers, machinery | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 2,840 | \$18.63 | \$38,750 | 0.22 | |
| | 49-9044 - Millwrights | Long OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 210 | \$20.22 | \$42,070 | 0.02 | |
| | 49-9052 - Telecommunications line installers and repairers | Long OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 260 | \$19.31 | \$40,170 | 0.02 | |
| | 49-9061 - Camera and photographic equipment repairers | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 40 | \$23.85 | \$49,610 | 0.00 | |
| | 49-9062 - Medical equipment repairers | AS / AA | N/A | 0 | \$0.00 | \$0 | 0.00 | 480 | \$16.57 | \$34,460 | 0.04 | |
| | 49-9064 - Watch repairers | Long OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 60 | \$11.84 | \$24,620 | 0.00 | |
| | 49-9091 - Coin, vending, and amusement machine servicers and repairers | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 0 | \$20.60 | \$42,840 | 0.00 | |
| | 49-9098 - Helpersinstallation, maintenance, and repair workers | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 590 | \$14.68 | \$30,530 | 0.05 | |
| | 11-9021 - Construction managers | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 70 | \$41.54 | \$86,410 | 0.01 | |
| | 51-2011 - Aircraft structure, surfaces, rigging, and systems assemblers | Long OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 900 | \$18.39 | \$38,240 | 0.07 | |
| | 51-2021 - Coil winders, tapers, and finishers | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 10,090 | \$10.78 | \$22,420 | 0.79 | |
| | 13-1121 - Meeting and convention planners | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 220 | \$29.32 | \$60,980 | 0.02 | |
| | 13-1041 - Compliance officers, except agriculture, construction, health and safety, and transportation | Long OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 1,070 | \$30.19 | \$62,800 | 0.08 | |
| | 51-2031 - Engine and other machine assemblers | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 660 | \$14.13 | \$29,380 | 0.05 | |
| | 51-2041 - Structural metal fabricators and fitters | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 630 | \$14.11 | \$29,340 | 0.05 | |
| | 11-1011 - Chief executives | BS/BA+ | N/A | 0 | \$0.00 | \$0 | 0.00 | 5,700 | \$86.20 | \$179,290 | 0.44 | |
| | 51-2093 - Timing device assemblers, adjusters, and calibrators | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 1,770 | \$12.68 | \$26,370 | 0.14 | |
| | 51-4011 - Computer-controlled machine tool operators, metal and plastic | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 7,500 | \$13.74 | \$28,570 | 0.58 | |

| Source | SOC & Occupation Title | Typical Education | Source of Wages | WY Emp | WY Hourly | WY Annual | WY Percent | US Emp | US Hourly | US Annual | US Percent | N to Fill |
|--------|--|----------------------|-----------------------|--------|--------------|-----------|---------------|--------|--------------|-----------|---------------|-----------|
| | 51-4012 - Numerical tool and process control programmers | Long OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 970 | \$17.77 | \$36,970 | 0.08 | |
| | 51-4021 - Extruding and drawing machine setters, operators, and tenders, metal and plastic | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 880 | \$13.35 | \$27,760 | 0.07 | |
| | 51-4022 - Forging machine setters, operators, and tenders, metal and plastic | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 560 | \$13.01 | \$27,060 | 0.04 | |
| | 51-4023 - Rolling machine setters, operators, and tenders, metal and plastic | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 500 | \$11.96 | \$24,870 | 0.04 | |
| | 51-4031 - Cutting, punching, and press machine setters, operators, and tenders, metal and plastic | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 5,240 | \$12.47 | \$25,940 | 0.41 | |
| | 51-4032 - Drilling and boring machine tool setters, operators, and tenders, metal and plastic | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 1,990 | \$12.55 | \$26,110 | 0.15 | |
| | 51-4033 - Grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders, metal and plasti | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 1,860 | \$13.13 | \$27,310 | 0.14 | |
| | 51-4034 - Lathe and turning machine tool setters, operators, and tenders, metal and plastic | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 1,110 | \$14.85 | \$30,880 | 0.09 | |
| | 51-4035 - Milling and planing machine setters, operators, and tenders, metal and plastic | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 830 | \$14.15 | \$29,430 | 0.06 | |
| | 15-1021 - Computer programmers | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 11,850 | \$35.39 | \$73,610 | 0.92 | |
| | 51-4051 - Metal-refining furnace operators and tenders | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 70 | \$15.70 | \$32,650 | 0.01 | |
| | 51-4061 - Model makers, metal and plastic | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 240 | \$21.51 | \$44,730 | 0.02 | |
| | 51-4072 - Molding, coremaking, and casting machine setters, operators, and tenders, metal and plastic | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 4,140 | \$12.57 | \$26,140 | 0.32 | |
| | 51-4081 - Multiple machine tool setters, operators, and tenders, metal and plastic | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 4,840 | \$14.67 | \$30,500 | 0.38 | |
| | 51-4111 - Tool and die makers | Long OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 2,700 | \$22.03 | \$45,810 | 0.21 | |
| | 51-4121 - Welders, cutters, solderers, and brazers | Long OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 5,490 | \$13.45 | \$27,970 | 0.43 | |
| | 51-4122 - Welding, soldering, and brazing machine setters, operators, and tenders | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 2,340 | \$13.14 | \$27,340 | 0.18 | |
| | 51-4191 - Heat treating equipment setters, operators, and tenders, metal and plastic | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 250 | \$13.27 | \$27,610 | 0.02 | |
| | 51-4192 - Lay-out workers, metal and plastic | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 270 | \$14.67 | \$30,510 | 0.02 | |
| | 51-4193 - Plating and coating machine setters, operators, and tenders, metal and plastic | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 4,790 | \$12.63 | \$26,280 | 0.37 | |
| | 51-4194 - Tool grinders, filers, and sharpeners | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 230 | \$15.82 | \$32,900 | 0.02 | |
| | 51-5021 - Job printers | Long OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 60 | \$14.57 | \$30,300 | 0.00 | |

| Source | SOC & Occupation Title | Typical Education | Source of Wages | WY Emp | WY Hourly | WY Annual | WY Percent | US Emp | US Hourly | US Annual | US Percent | N to Fill |
|--------|---|----------------------|-----------------------|--------|--------------|-----------|---------------|--------|--------------|-----------|---------------|-----------|
| | 51-5022 - Prepress technicians and workers | Long OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 390 | \$13.13 | \$27,320 | 0.03 | |
| | 51-5023 - Printing machine operators | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 2,130 | \$12.99 | \$27,010 | 0.17 | |
| | 51-6031 - Sewing machine operators | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 80 | \$10.26 | \$21,340 | 0.01 | |
| | 51-7011 - Cabinetmakers and bench carpenters | Long OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 190 | \$11.97 | \$24,910 | 0.01 | |
| | 51-7041 - Sawing machine setters, operators, and tenders, wood | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 120 | \$10.73 | \$22,310 | 0.01 | |
| | 51-7042 - Woodworking machine setters, operators, and tenders, except sawing | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 130 | \$10.73 | \$22,330 | 0.01 | |
| | 51-8021 - Stationary engineers and boiler operators | Long OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 150 | \$25.12 | \$52,240 | 0.01 | |
| | 51-8031 - Water and liquid waste treatment plant and system operators | Long OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 300 | \$24.05 | \$50,030 | 0.02 | |
| | 51-9011 - Chemical equipment operators and tenders | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 1,130 | \$14.41 | \$29,970 | 0.09 | |
| | 51-9012 - Separating, filtering, clarifying, precipitating, and still machine setters, operators, and tenders | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 260 | \$14.96 | \$31,120 | 0.02 | |
| | 51-9021 - Crushing, grinding, and polishing machine setters, operators, and tenders | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 240 | \$11.07 | \$23,030 | 0.02 | |
| | 51-9022 - Grinding and polishing workers, hand | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 360 | \$12.65 | \$26,310 | 0.03 | |
| | 51-9023 - Mixing and blending machine setters, operators, and tenders | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 690 | \$14.62 | \$30,410 | 0.05 | |
| | 51-9031 - Cutters and trimmers, hand | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 0 | \$9.89 | \$20,570 | 0.00 | |
| | 51-9032 - Cutting and slicing machine setters, operators, and tenders | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 320 | \$12.85 | \$26,730 | 0.02 | |
| | 51-9041 - Extruding, forming, pressing, and compacting machine setters, operators, and tenders | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 760 | \$11.52 | \$23,970 | 0.06 | |
| | 51-9051 - Furnace, kiln, oven, drier, and kettle operators and tenders | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 450 | \$13.10 | \$27,240 | 0.04 | |
| | 11-9141 - Property, real estate, and community association managers | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 40 | \$50.35 | \$104,720 | 0.00 | |
| | 51-9082 - Medical appliance technicians | Long OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 60 | \$17.59 | \$36,580 | 0.00 | |
| | 51-9111 - Packaging and filling machine operators and tenders | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 2,790 | \$12.07 | \$25,100 | 0.22 | |
| | 51-9121 - Coating, painting, and spraying machine setters, operators, and tenders | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 2,430 | \$12.58 | \$26,160 | 0.19 | |
| | 51-9122 - Painters, transportation equipment | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 50 | \$17.15 | \$35,670 | 0.00 | |

| Source | SOC & Occupation Title | Typical Education | Source of Wages | WY Emp | WY Hourly | WY Annual | WY Percent | US Emp | US Hourly | US Annual | US Percent | N to Fill |
|--------|--|----------------------|-----------------------|--------|--------------|-----------|---------------|--------|--------------|-----------|---------------|-----------|
| | 51-9123 - Painting, coating, and decorating workers | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 530 | \$13.13 | \$27,310 | 0.04 | |
| | 51-9131 - Photographic process workers | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 100 | \$11.95 | \$24,860 | 0.01 | |
| | 51-9132 - Photographic processing machine operators | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 0 | \$12.70 | \$26,420 | 0.00 | |
| | 51-9141 - Semiconductor processors | AS / AA | N/A | 0 | \$0.00 | \$0 | 0.00 | 47,310 | \$14.13 | \$29,400 | 3.68 | |
| | 51-9191 - Cementing and gluing machine operators and tenders | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 260 | \$11.11 | \$23,110 | 0.02 | |
| | 51-9192 - Cleaning, washing, and metal pickling equipment operators and tenders | I Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 0 | \$10.42 | \$21,680 | 0.00 | |
| | 51-9194 - Etchers and engravers | Long OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 330 | \$11.64 | \$24,210 | 0.03 | |
| | 51-9195 - Molders, shapers, and casters, except metal and plastic | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 760 | \$15.22 | \$31,650 | 0.06 | |
| | 17-2111 - Health and safety engineers, except mining safety engineers and inspectors | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 1,000 | \$32.41 | \$67,420 | 0.08 | |
| | 53-1021 - First-line supervisors/managers of helpers, laborers, and material movers, hand | Rel Exp | N/A | 0 | \$0.00 | \$0 | 0.00 | 1,270 | \$21.57 | \$44,880 | 0.10 | |
| | 53-1031 - First-line supervisors/managers of transportation and material-moving machine and vehicle operators | Rel Exp | N/A | 0 | \$0.00 | \$0 | 0.00 | 640 | \$20.72 | \$43,090 | 0.05 | |
| | 53-2012 - Commercial pilots | PS | N/A | 0 | \$0.00 | \$0 | 0.00 | 50 | \$0.00 | \$97,930 | 0.00 | |
| | 53-3032 - Truck drivers, heavy and tractor-trailer | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 240 | \$15.82 | \$32,900 | 0.02 | |
| | 53-3033 - Truck drivers, light or delivery services | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 720 | \$12.81 | \$26,650 | 0.06 | |
| | 53-6051 - Transportation inspectors | Rel Exp | N/A | 0 | \$0.00 | \$0 | 0.00 | 60 | \$24.82 | \$51,630 | 0.00 | |
| | 53-7011 - Conveyor operators and tenders | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 770 | \$12.53 | \$26,060 | 0.06 | |
| | 53-7021 - Crane and tower operators | Mod OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 40 | \$15.13 | \$31,470 | 0.00 | |
| | 53-7051 - Industrial truck and tractor operators | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 3,010 | \$13.43 | \$27,930 | 0.23 | |
| | 53-7061 - Cleaners of vehicles and equipment | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 50 | \$10.81 | \$22,490 | 0.00 | |
| | 53-7062 - Laborers and freight, stock, and material movers, hand | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 13,960 | \$11.83 | \$24,600 | 1.09 | |
| | 53-7063 - Machine feeders and offbearers | Short OJT | N/A | 0 | \$0.00 | \$0 | 0.00 | 4,320 | \$10.90 | \$22,660 | 0.34 | |
| | 15-1051 - Computer systems analysts | BS / BA | N/A | 0 | \$0.00 | \$0 | 0.00 | 11,150 | \$33.45 | \$69,580 | 0.87 | |

Table 2: Wyoming's Staffing Patterns and Wages 2003 - Occupations by Industry

SOC & Title 17-2071 - Electrical engineers

| Typical Education | NAICS & Industry Title | Source of Wages | WY Emp | WY Hourly | WY Annual | WY Percent | US Emp | US Hourly | US Annual | US Percent |
|----------------------|---|--------------------|--------|--------------|--------------|---------------|--------|--------------|-----------|---------------|
| BS / BA | 561000 - Administrative and Support Services | WYXAgg | 0 | \$32.11 | \$66,790 | 17.73 | 3,120 | \$34.84 | \$72,460 | 2.19 |
| | 541000 - Professional, Scientific, and Technical Services | WYXInd | 0 | \$34.65 | \$72,070 | 16.08 | 42,050 | \$35.52 | \$73,870 | 29.54 |
| | 551000 - Management of Companies and Enterprises | WYXAgg | 0 | \$32.11 | \$66,790 | 14.18 | 3,610 | \$35.12 | \$73,040 | 2.54 |
| | 211000 - Oil and Gas Extraction | WYXInd | 21 | \$32.67 | \$67,950 | 11.58 | 200 | \$35.82 | \$74,500 | 0.14 |
| | 999000 - Federal, State, and Local Government (OES Designation |) WYXInd | 17 | \$30.10 | \$62,620 | 8.51 | 7,860 | \$33.28 | \$69,230 | 5.52 |
| | 334000 - Computer and Electronic Product Manufacturing | WYXInd | 11 | \$39.36 | \$81,870 | 6.38 | 35,340 | \$36.42 | \$75,750 | 24.83 |
| | 325000 - Chemical Manufacturing | WYXAgg | 0 | \$32.11 | \$66,790 | 5.20 | 1,070 | \$35.17 | \$73,160 | 0.75 |
| | 811000 - Repair and Maintenance | WYXAgg | 0 | \$32.11 | \$66,790 | 4.73 | 850 | \$31.75 | \$66,030 | 0.60 |
| | 324000 - Petroleum and Coal Products Manufacturing | WYXAgg | 0 | \$32.11 | \$66,790 | 3.78 | 260 | \$36.37 | \$75,650 | 0.18 |
| | 486000 - Pipeline Transportation | WYXAgg | 0 | \$32.11 | \$66,790 | 3.31 | 280 | \$32.37 | \$67,330 | 0.20 |
| | 221000 - Utilities | WYXAgg | 0 | \$32.11 | \$66,790 | 2.60 | 8,560 | \$34.42 | \$71,590 | 6.01 |
| | 335000 - Electrical Equipment, Appliance, and Component Manufacturing | WYXAgg | 0 | \$32.11 | \$66,790 | 2.36 | 5,330 | \$30.35 | \$63,140 | 3.74 |
| | 423000 - Merchant Wholesalers, Durable Goods | WYXAgg | 0 | \$32.11 | \$66,790 | 1.89 | 5,560 | \$35.55 | \$73,940 | 3.91 |
| | 517000 - Telecommunications | WYXAgg | 0 | \$32.11 | \$66,790 | 1.18 | 5,750 | \$31.92 | \$66,390 | 4.04 |
| | 212000 - Mining (except Oil and Gas) | WYXAgg | 0 | \$32.11 | \$66,790 | 0.47 | 120 | \$34.25 | \$71,230 | 0.08 |
| | 236000 - Construction of Buildings | | 0 | \$0.00 | \$0 | 0.00 | 510 | \$36.59 | \$76,120 | 0.36 |
| | 331000 - Primary Metal Manufacturing | | 0 | \$0.00 | \$0 | 0.00 | 580 | \$31.04 | \$64,570 | 0.41 |
| | 332000 - Fabricated Metal Product Manufacturing | | 0 | \$0.00 | \$0 | 0.00 | 1,130 | \$31.34 | \$65,190 | 0.79 |
| | 333000 - Machinery Manufacturing | | 0 | \$0.00 | \$0 | 0.00 | 7,050 | \$31.46 | \$65,450 | 4.95 |

| Typical Education | NAICS & Industry Title | Source of Wages | WY Emp | WY Hourly | WY Annual | WY Percent | US Emp | US Hourly | US Annual | US Percent |
|----------------------|--|-----------------|--------|--------------|--------------|---------------|--------|--------------|-----------|---------------|
| | 237000 - Heavy and Civil Engineering Construction | | 0 | \$0.00 | \$0 | 0.00 | 700 | \$37.42 | \$77,830 | 0.49 |
| | 313000 - Textile Mills | | 0 | \$0.00 | \$0 | 0.00 | 50 | \$32.53 | \$67,670 | 0.04 |
| | 336000 - Transportation Equipment Manufacturing | | 0 | \$0.00 | \$0 | 0.00 | 4,060 | \$31.18 | \$64,840 | 2.85 |
| | 339000 - Miscellaneous Manufacturing | | 0 | \$0.00 | \$0 | 0.00 | 1,030 | \$30.81 | \$64,080 | 0.72 |
| | 238000 - Specialty Trade Contractors | | 0 | \$0.00 | \$0 | 0.00 | 2,070 | \$31.99 | \$66,550 | 1.45 |
| | 424000 - Merchant Wholesalers, Nondurable Goods | | 0 | \$0.00 | \$0 | 0.00 | 90 | \$31.41 | \$65,340 | 0.06 |
| | 425000 - Wholesale Electronic Markets and Agents and Brokers | | 0 | \$0.00 | \$0 | 0.00 | 500 | \$49.31 | \$102,560 | 0.35 |
| | 443000 - Electronics and Appliance Stores | | 0 | \$0.00 | \$0 | 0.00 | 420 | \$32.82 | \$68,270 | 0.30 |
| | 444000 - Building Material and Garden Equipment and Supplies Dealers | | 0 | \$0.00 | \$0 | 0.00 | 100 | \$29.20 | \$60,730 | 0.07 |
| | 482000 - Rail Transportation | | 0 | \$0.00 | \$0 | 0.00 | 180 | \$32.20 | \$66,980 | 0.13 |
| | 314000 - Textile Product Mills | | 0 | \$0.00 | \$0 | 0.00 | 30 | \$45.24 | \$94,090 | 0.02 |
| | 488000 - Support Activities for Transportation | | 0 | \$0.00 | \$0 | 0.00 | 50 | \$31.58 | \$65,680 | 0.04 |
| | 493000 - Warehousing and Storage | | 0 | \$0.00 | \$0 | 0.00 | 110 | \$28.77 | \$59,850 | 0.08 |
| | 511000 - Publishing Industries (except Internet) | | 0 | \$0.00 | \$0 | 0.00 | 450 | \$38.47 | \$80,010 | 0.32 |
| | 512000 - Motion Picture and Sound Recording Industries | | 0 | \$0.00 | \$0 | 0.00 | 0 | \$32.96 | \$68,550 | 0.00 |
| | 515000 - Broadcasting (except Internet) | | 0 | \$0.00 | \$0 | 0.00 | 0 | \$42.57 | \$88,550 | 0.00 |
| | 326000 - Plastics and Rubber Products Manufacturing | | 0 | \$0.00 | \$0 | 0.00 | 670 | \$29.70 | \$61,780 | 0.47 |
| | 518000 - Internet Service Providers, Web Search Portals, and Data Processing Service | | 0 | \$0.00 | \$0 | 0.00 | 480 | \$34.04 | \$70,800 | 0.34 |
| | 327000 - Nonmetallic Mineral Product Manufacturing | | 0 | \$0.00 | \$0 | 0.00 | 320 | \$31.42 | \$65,340 | 0.22 |
| | 213000 - Support Activities for Mining | | 0 | \$0.00 | \$0 | 0.00 | 140 | \$36.33 | \$75,570 | 0.10 |
| | 322000 - Paper Manufacturing | | 0 | \$0.00 | \$0 | 0.00 | 520 | \$34.32 | \$71,390 | 0.37 |
| | 611000 - Educational Services | | 0 | \$0.00 | \$0 | 0.00 | 920 | \$29.27 | \$60,880 | 0.65 |

| Typical Education | NAICS & Industry Title | Source of Wages | WY Emp | WY Hourly | WY Annual | WY Percent | US Emp | US Hourly | US Annual | US Percent | |
|----------------------|--|--------------------|--------|--------------|--------------|---------------|--------|--------------|-----------|---------------|--|
| | 622000 - Hospitals | | 0 | \$0.00 | \$0 | 0.00 | 90 | \$24.62 | \$51,200 | 0.06 | |
| | 311000 - Food Manufacturing | | 0 | \$0.00 | \$0 | 0.00 | 0 | \$33.81 | \$70,330 | 0.00 | |
| | 813000 - Religious, Grantmaking, Civic, Professional, and Similar Organizations | | 0 | \$0.00 | \$0 | 0.00 | 120 | \$33.43 | \$69,530 | 0.08 | |

Table 3: Wyoming Staffing Patterns and Wages 2003 - Occupations by State, Wyoming Sub-State Region, Wages, and Wage Rank

SOC & Occupation Title 17-2071 - Electrical engineers

| Typical Education | State - Sub-state Region | Source of Wages | Location Emp | Location Hourly | Location Annual | Wage Rank |
|-------------------|--------------------------|-----------------|--------------|-----------------|-----------------|-----------|
| BS / BA | US | USXAgg | 146,150 | \$34.66 | \$72,090 | 0 |
| | Massachusetts | MAXAgg | 7,240 | \$38.91 | \$80,930 | 1 |
| | California | CAXAgg | 22,510 | \$38.88 | \$80,870 | 2 |
| | Alaska | AKXAgg | 240 | \$38.75 | \$80,600 | 3 |
| | New Mexico | NMXAgg | 2,570 | \$37.53 | \$78,060 | 4 |
| | District of Columbia | DCXAgg | 640 | \$37.33 | \$77,640 | 5 |
| | Texas | TXXAgg | 10,100 | \$36.68 | \$76,300 | 6 |
| | New Hampshire | NHXAgg | 730 | \$36.55 | \$76,030 | 7 |
| | Louisiana | LAXAgg | 1,260 | \$36.14 | \$75,170 | 8 |
| | Arizona | AZXAgg | 3,230 | \$35.95 | \$74,770 | 9 |
| | New York | NYXAgg | 8,270 | \$35.88 | \$74,640 | 10 |
| | Nevada | NVXAgg | 450 | \$35.26 | \$73,340 | 11 |
| | Washington | WAXAgg | 3,680 | \$35.21 | \$73,230 | 12 |
| | Idaho | IDXAgg | 1,050 | \$34.78 | \$72,350 | 13 |
| | Utah | UTXAgg | 880 | \$34.73 | \$72,230 | 14 |
| | Hawaii | HIXAgg | 370 | \$34.66 | \$72,090 | 15 |
| | Maryland | MDXAgg | 3,330 | \$34.62 | \$72,010 | 16 |
| | New Jersey | NJXAgg | 4,020 | \$34.43 | \$71,610 | 17 |
| | Vermont | VTXAgg | 290 | \$34.24 | \$71,220 | 18 |
| | Colorado | COXAgg | 5,090 | \$34.01 | \$70,740 | 19 |
| | Connecticut | CTXAgg | 1,970 | \$33.94 | \$70,590 | 20 |
| | Oregon | ORXAgg | 850 | \$33.60 | \$69,880 | 21 |
| | Wisconsin | WIXAgg | 3,700 | \$33.54 | \$69,770 | 22 |
| | Illinois | ILXAgg | 5,020 | \$33.44 | \$69,560 | 23 |
| | Minnesota | MNXAgg | 3,190 | \$33.35 | \$69,370 | 24 |
| | Michigan | MIXAgg | 5,470 | \$33.11 | \$68,870 | 25 |
| | Virginia | VAXAgg | 7,080 | \$32.97 | \$68,580 | 26 |
| | Georgia | GAXAgg | 2,720 | \$32.94 | \$68,520 | 27 |
| | North Carolina | NCXAgg | 3,790 | \$32.91 | \$68,450 | 28 |
| | Florida | FLXAgg | 5,360 | \$32.80 | \$68,210 | 29 |
| | Alabama | ALXAgg | 2,280 | \$32.78 | \$68,180 | 30 |
| | Pennsylvania | PAXAgg | 6,610 | \$32.73 | \$68,080 | 31 |
| | South Carolina | SCXAgg | 1,730 | \$32.38 | \$67,340 | 32 |
| | Wyoming | WYXAgg | 160 | \$32.11 | \$66,790 | 33 |
| | Cheyenne, WY | SSXAgg | 21 | \$37.51 | \$78,020 | 33 |
| | Southwest, WY | WYXAgg | 0 | \$35.11 | \$73,020 | 33 |
| | Casper, WY | SSXAgg | 20 | \$31.31 | \$65,130 | 33 |

| Typical Education | State - Sub-state Region | Source of Wages | Location Emp | Location Hourly | Location Annual | Wage Rank |
|-------------------|--------------------------|-----------------|--------------|-----------------|-----------------|-----------|
| | Northeast, WY | SSXAgg | 13 | \$31.10 | \$64,690 | 33 |
| | Northwest, WY | SSXAgg | 21 | \$29.48 | \$61,320 | 34 |
| | Central Southeast, WY | WYXAgg | 0 | \$27.80 | \$57,830 | 34 |
| | Arkansas | ARXAgg | 500 | \$31.98 | \$66,510 | 34 |
| | Delaware | DEXAgg | 340 | \$31.76 | \$66,070 | 35 |
| | Kansas | KSXAgg | 1,130 | \$31.76 | \$66,060 | 36 |
| | Maine | MEXAgg | 440 | \$31.59 | \$65,720 | 37 |
| | Tennessee | TNXAgg | 2,500 | \$31.37 | \$65,250 | 38 |
| | Oklahoma | OKXAgg | 930 | \$31.27 | \$65,050 | 39 |
| | Nebraska | NEXAgg | 820 | \$31.25 | \$65,000 | 40 |
| | Ohio | OHXAgg | 4,570 | \$30.72 | \$63,900 | 41 |
| | West Virginia | WVXAgg | 360 | \$30.63 | \$63,720 | 42 |
| | North Dakota | NDXAgg | 200 | \$30.59 | \$63,630 | 43 |
| | Iowa | IAXAgg | 1,280 | \$30.33 | \$63,090 | 44 |
| | Kentucky | KYXAgg | 860 | \$29.56 | \$61,480 | 45 |
| | Missouri | MOXAgg | 1,560 | \$29.51 | \$61,390 | 46 |
| | Rhode Island | RIXAgg | 440 | \$28.98 | \$60,280 | 47 |
| | Indiana | INXAgg | 3,270 | \$27.97 | \$58,170 | 48 |
| | Mississippi | MSXAgg | 620 | \$27.70 | \$57,610 | 49 |
| | South Dakota | SDXAgg | 120 | \$27.28 | \$56,740 | 50 |
| | Montana | MTXAgg | 340 | \$25.91 | \$53,890 | 51 |
| | Guam | GUXAgg | 50 | \$23.34 | \$48,540 | 52 |
| | Puerto Rico | PRXAgg | 590 | \$23.10 | \$48,050 | 53 |

Memorandum

To: Tom Gallagher, Mark Harris

From: William (Tony) Glover, Senior Analyst, Research and Planning

Date: 11/05/2004

Subject: Suggested Staffing Pattern Masking Methodology

Tom & Mark,

The following pages illustrate my suggested staffing pattern masking methodology as you requested. The procedures outlined are an attempt to balance issues related to the level of detail presented (the customers always want more specific data) and those of the validity and confidentiality of releasing data with relatively small cell numbers.

Table 1 and Appendix 1 of "Introduction to Wyoming's Staffing Patterns and Wages 2003" shows the staffing pattern with the masking procedures discussed in this memo already in place. The industry "334000 – Computer and Electronic Product Manufacturing" was chosen as it has a large number of occupations that are non-disclosable. The first thing to note from Table 1 is that WY Emp (Wyoming Employment) equals zero for most occupations. We will release an adjusted percent (WY Percent) of employment for the occupation within the industry and the calculations are the subject of this memo. Also note, that while wages were non-disclosable for most of the occupations with suppressed employment the next available wage level is presented and defined by the Wage Source column as follows.

- 1) WYXInd Wyoming and Industry Specific, the wages a person employed in the occupation, in the industry, and in Wyoming averages.
- 2) WYXAgg Wyoming Across Industries, the wages a person employed in the occupation in Wyoming averages.
- 3) USXInd US and Industry Specific, the wages a person employed in the occupation, in the industry, in the US averages.

- 4) USXAgg US Across Industries, the wages a person employed in the occupation in US averages.
- 5) SSXAgg Although not included in demonstration tables provided with this documentation – Sub-State or Wyoming Regional wages for the specific occupation.

The adjusted percents are calculated by ordering the occupations within the industry by their employment descending and averaging the occupations percent of employment with the next two occupations percent of employment (demonstrated in Appendix IV, Table 2. Subsequent to assigning every occupation within the industry the new rolling average percentage the sum of the Adjusted Percent is calculated (Appendix IV, Table 3). Logically, the sum of the rolling average no longer represents 100 percent and an adjustment factor is needed to compensate. This adjustment factor is "what the total should be" 100% minus "what the total is" 86.07% which equals 13.93% divided by what the total is 86.07% for the final adjustment of 16.19%. This adjustment factor is added to the rolling average percent proportional to the occupations rolling average percent. For example, the first occupation's (SOC = 51-2092) rolling percent equals 10.17 or (15.20+9.20+6.11)/3. The adjustment factor outlined in Appendix IV, Table 3 equals 16.19 when applied proportionally the releasable percent for SOC 51-2092 in NAICS 334000 becomes 10.17 % + (16.19 % * 10.17 %) or 11.82 percent.

This procedure was developed in attempt to release a tool, which is applicable at a level specific enough to be useful, and at the same time does not release confidential information. By using the rolling average methodology the validity of the staffing pattern is maintained, whereby the most predominate occupations remain in the correct sequential order and maintain an appropriate magnitude. Questions and concerns should be addressed to me using one of the following contact methods (preferably e-mail).

William (Tony) Glover Senior Analyst Wyoming Department of Employment Research and Planning william.glover@state.wv.us 307.473.3837

Appendix IV, Table 1: Industry Example of Staffing Pattern Masking Procedures

NAICS 334000 - Computer and Electronic Product & Title Manufacturing

| | | | | Source of | Confidential | | Adjusted Add | Release |
|--------|---|---------|--------|--------------|--------------|---------|-----------------|---------|
| Source | SOC & Title | Release | Reason | | Percent | Percent | Factor | Percent |
| R&P | 51-2092 - Team assemblers | No | CQR | WYXAgg | 15.20 | 10.17 | 16.19 | 11.82 |
| | 41-4011 - Sales representatives, wholesale and manufacturing, technical and scientific products | OK | ОК | WYXInd | 9.20 | 5.81 | 16.19 | 6.75 |
| | 49-2094 - Electrical and electronics repairers, commercial and industrial equipment | No | CQ | WYXAgg | 6.11 | 5.21 | 16.19 | 6.06 |
| | 51-2022 - Electrical and electronic equipment assemblers | No | CQ | WYXAgg | 2.12 | 4.36 | 16.19 | 5.06 |
| | 51-2023 - Electromechanical equipment assemblers | No | CQR | USXInd | NE | 3.93 | 16.19 | 4.57 |
| | 11-1021 - General and operations managers | OK | ОК | WYXInd | NE | 3.42 | 16.19 | 3.97 |
| | 53-7064 - Packers and packagers, hand | No | CQR | WYXAgg | NE | 3.08 | 16.19 | 3.58 |

Table Break Inserted (See Appendix I for remainder of occupations)

Notes

Release - OES specific confidentiality flag.

No - Neither Employment or Wages are disclosable.

Wage - Employment suppressed Wages are not.

OK - Both Employment and Wages are OK.

Reason - OES reason for Release code.

C - Confidentiality

Q - Quality

R - Relative Standard Error

Source of Wages - The most detailed level of wages available due to suppression issues. For example, the occupation "51-2092 - Team assemblers" has a Release Code of "No" which means that neither employment or wages are disclosable at the three digit NAICS level. Therefore, the next available Source of Wages level is the WYXAgg or statewide across all industry wages for the occupation "51-2092 - Team assemblers."

WYXInd - Wyoming and Industry Specific, the wages a

person employed in the occupation, in the industry, and in

Wyoming averages.

WYXAgg - Wyoming Across Industries, the wages a person

employed in the occupation in Wyoming averages.

USXInd - US and Industry Specific, the wages a person employed in the occupation, in the industry, in the US

averages

USXAgg - US Across Industries, the wages a person

employed in the occupation in US averages.

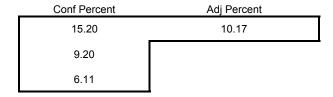
Conf Percent - Percent of employment of the occupation within the three digit NAICS.

Adj Percent - The Adjuted Percent is the average percent of the current and next two occupations within the three digit NAICS (see Stage 1 on next page). For example the most predominate occupation in NAICS 334000 is "51-2092 Team assemblers" at 17.69 % the Adj Percent is (15.20+9.20+6.11)/3 or 10.17 percent.

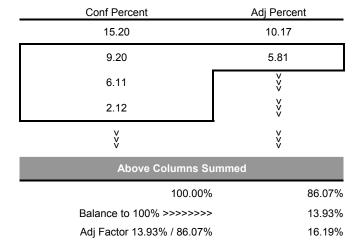
Adj Add Factor - The Adjusted Add Factor is calculated subsequent to determining the average percent of all occupations and is the difference between 100 percent and the sum of the Adj Percent (see Stage 1 on next page). This is used to weight the Adjusted Percent to total 100.00 percent (see Stage 2 on next page).

Release Percent - The final percent that will be released to the public (see Stage 2 on next page).

Appendix IV, Table 2: Three Occupation Running Average and Adjustment Factor Determination.



The Adjusted Percent is the Average of the Current SOC's Percent and the next two SOC's Percents



Appendix IV, Table 3: Applying the Adjustment Factor to Determine Final Release Percent.

| Conf Percent | Adj Percent | Adj Add Factor | Adj Percent + Adj Factor*Adj Percetn | >>>> | Release Percent |
|--------------|-------------|----------------|--------------------------------------|------|-----------------|
| 15.20 | 10.17 | 16.19 | 10.17 + 16.19 * 10.17 | >>>> | 11.82 |
| 9.20 | 5.81 | 16.19 | 5.81 + 16.19 * 5.81 | >>>> | 6.75 |
| 6.11 | 5.21 | 16.19 | 5.21 + 16.19 * 5.21 | >>>> | 6.06 |
| 2.12 | 4.36 | 16.19 | 4.36 + 16.19 * 4.36 | >>>> | 5.06 |
| ND | 3.93 | 16.19 | 3.93 + 16.19 * 3.93 | >>>> | 4.57 |
| ND | 3.42 | 16.19 | 3.42 + 16.19 * 3.42 | >>>> | 3.97 |
| ND | 3.08 | 16.19 | 3.08 + 16.19 * 3.08 | >>>> | 3.58 |
| V V | ¥ | | | | V V |
| | | Above Columns | Summed | | |

100.00% 86.07% 100.00%