

Long Term Industry Projections Manufacturing Industry



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Executive Summary

The Silver State's long-term projections cover the period 2020 to 2030. This report summarizes long-term employment projections for the manufacturing industry produced by the Research & Analysis Bureau of Nevada's Department of Employment, Training, and Rehabilitation. These projections are funded by the U.S. Department of Labor, Employment and Training Administration through the Workforce Information Grants to States.

The employment level for all total industries in Nevada is expected to rise from 1.3 million in 2020 to 1.6 million jobs in 2030. That is about 19.7% increase during the ten-year period.

In Nevada the manufacturing industry employment declined from 59,290 in 2019 to 45,232 in 2020. This represents a 23.7 percent decline over the year. In 2019 the manufacturing industry represented 4.2 percent of all total industries in the Silver State, declining to 3.3 percent of all total industries in 2020.

As the recovery from the COVID-19 pandemic continues, the employment level for manufacturing industry is expected to rise from 45,232 in 2020 to 50,016 in 2030. That is about 10.6% increase during the ten-year period. By 2030 it is expected that this industry will make up 3.1 percent of all total industries in Nevada.

The manufacturing industries with highest employment growth in the Silver State from 2020 to 2030 include:

1. Miscellaneous mft NAICS 339 (2,632 or 41.8% employment growth over ten-year period)
2. Nonmetallic mineral product mft NAICS 327 (454 or 12.9% employment growth)
3. Printing and related support activities mft NAICS 323 (382 or 10.6% employment growth)
4. Computer and electronic product mft NAICS 334 (348 or 10.5% employment growth)
5. Chemical mft NAICS 325 (342 or 15.1% employment growth)
6. Plastics and rubber products mft NAICS 326 (290 or 8.3% employment growth)
7. Primary metal mft NAICS 331 (288 or 31.2% employment growth)
8. Food mft NAICS 311 (221 or 3.7% employment growth)
9. Wood product mft NAICS 321 (213 or 14.9% employment growth)
10. Textile product mills NAICS 314 (196 or 30.2% employment growth)
11. Paper mft NAICS 322 (166 or 17.9% employment growth)

The occupations with largest employment absolute change in manufacturing industry from 2020 to 2030 include: 1. Industrial production managers (298 jobs increase) 2. Computer user support specialists (578 jobs increase) 3. General and operations managers (67 jobs increase) 4. Computer and information systems managers (54 jobs increase) 5. Sales managers (53 jobs increase) 6. Financial managers (47 jobs increase) 7. Computer systems analysts (38 jobs increase) 8. All other computer occupations (26 jobs increase) 9. Marketing managers (11 jobs increase) 10. Network and computer systems administrators (10 jobs increase)

The occupations with highest employment growth in manufacturing industry from 2020 to 2030 include: 1. Sales managers (73.6% growth) 2. Computer system analysts (61.3% growth) 3. Industrial production managers (56.3% growth) 4. Computer user support specialists (56.9% growth) 5. Financial managers (58.6% growth) 6. Purchasing managers (46.2% growth) 7. Networks and computer systems administrators (45.5% growth) 8. Web and digital interface designers (45.5% growth) 9. Computer and information systems managers (45.4% growth) 10. Marketing managers (44% growth)

The information technology occupations with largest employment absolute change in manufacturing industry from 2020 to 2030 include: 1. Web and digital interface designers (303 jobs increase) 2. Computer systems analysts (61 jobs increase) 3. Computer user support specialists (34 jobs increase) 4. All other computer occupations (58 jobs increase) 5. Network and computer systems administrators (10 jobs increase) 6. Computer network architects (6 jobs increase)

Manufacturing Industry in Nevada

Projection Period

Nevada's long-term projections cover the period 2020 to 2030. The base year 2020 reflects in part the negative impact on employment caused by the shutdown of nonessential business in the state to contain the spread of the COVID-19 pandemic. The COVID-19 recession lasted two months from February to April 2020.

Industry Classification

Industries are classified according to the North American industrial Classification System (NAICS). NAICS uses a hierarchical structure. A "hierarchy" is the relationship of one item to a particular category. Industry projections are done at the three-digit NAICS level, the first two digits of the code designate the sector, the third digit designates the subsector. The projections estimation process does not go to deeper levels in order to avoid introducing additional error to the projections estimates. For example, fine line distinctions between industries are made where less detailed data would be available to support any conclusions.

Projected Jobs Change in Manufacturing

The employment level for all total industries in Nevada is expected to rise from 1.3 million in 2020 to 1.6 million jobs in 2030. That is about 19.7% increase during the ten-year period.

This section examines the actual and projected change in the numbers of jobs, specifically for the manufacturing industry. The manufacturing industry includes the NAICS codes: food manufacturing 31, wood manufacturing 32 and primary metal manufacturing 33. In order to account for the COVID-19 recession negative impacts, this report incorporates data from 2019 to show the job loss from 2019 to 2020, and the job gains/loss from 2020 to 2030.

The manufacturing industry employment declined from 59,290 in 2019 to 45,232 in 2020 (23.7% decline over the year).

As the economy recovers, it is expected that this industry will continue to improve through 2030. The long-term projections indicate that, the employment level in manufacturing is expected to rise from 45,232 in 2020 to 50,016 in 2030. That is about 10.6 percent increase during the ten-year period.

The charts below show actual and projected employment change across the 2019 to 2030 period. The 2019 to 2020 impact appears in red and the 2020 to 2030 impact in blue. The black dot represents the combined 2019 to 2030 value.

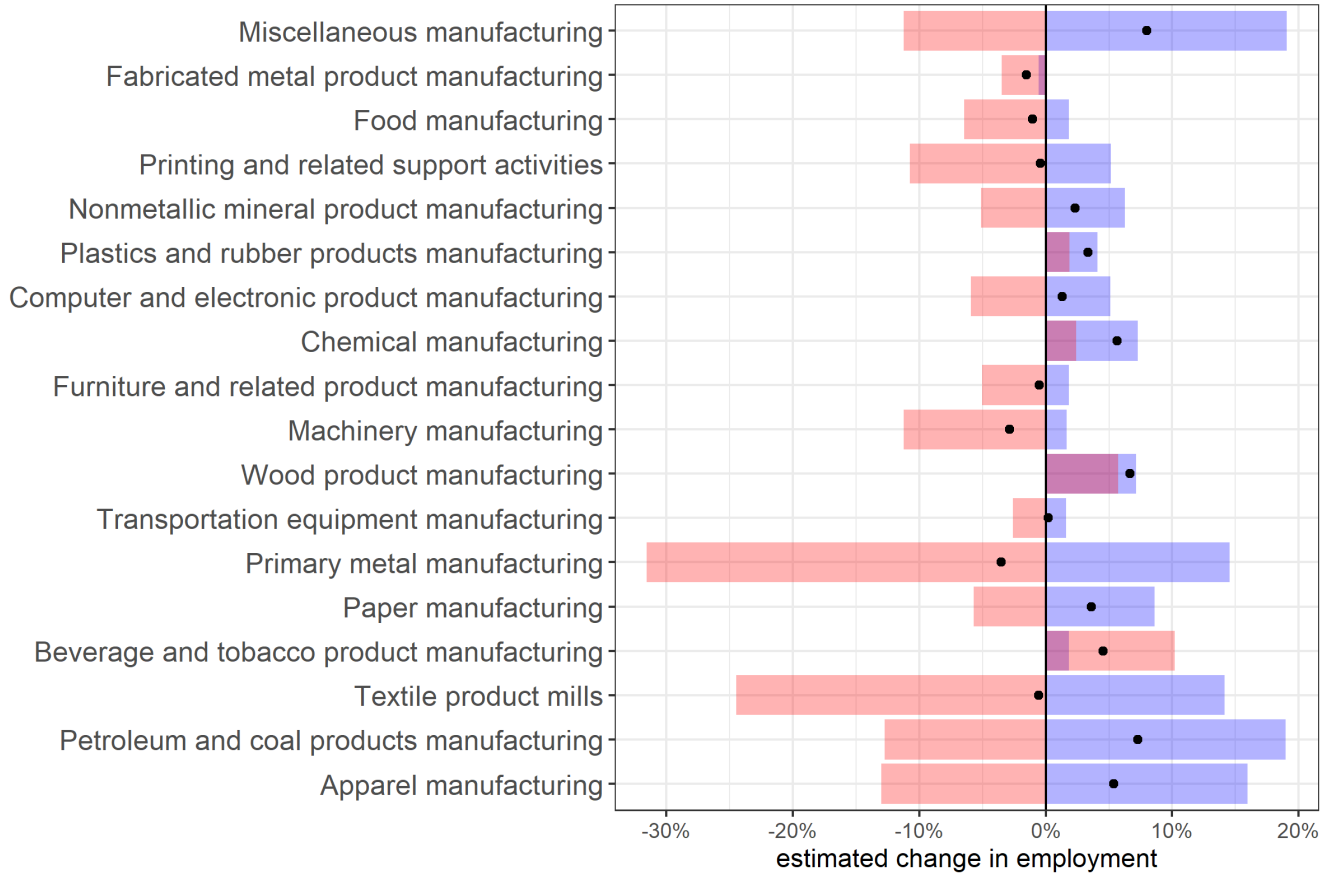
Manufacturing Industry

Red shows 2019 to 2020 change;
blue shows projected 2020 to 2030 change



Manufacturing Industries

Red shows 2019 to 2020 change;
blue shows projected 2020 to 2030 change



Manufacturing Industries with Largest Projected and Actual Declines

The total change in jobs allows to see where the broad economy is heading. The table below shows the manufacturing industries that lost more jobs from 2019 to 2020. However, the long-term projections indicate that only the fabricated metal product mft is expected to see a decline in employment from 2020 to 2030.

Table 1. Greatest Declines	Employment			Employment Change		
	2019	2020	2030	2019 to 2020	2020 to 2030	2019 to 2030
Fabricated metal product manufacturing	6,671	6,440	6,366	-231	-74	-305
Food manufacturing	6,466	6,048	6,269	-418	221	-197
Machinery manufacturing	1,982	1,759	1,817	-223	58	-165
Primary metal manufacturing	1,347	922	1,210	-425	288	-137
Printing and related support activities	4,044	3,610	3,992	-434	382	-52
Furniture and related product manufacturing	1,870	1,776	1,841	-94	65	-29

Projected Relative Change in Jobs in Manufacturing

Another way to examine projected changes is to look at the relative change. Looking at jobs with a large relative change in manufacturing employment helps to determine which areas of this industry are expected to experience the most rapid changes. For comparison, all changes in jobs are presented as an annual change rate.

Nevada’s long-term projections, indicate that the manufacturing subsectors with the largest employment change from 2020 to 2030 include:

1. Miscellaneous mft NAICS 339 (2,632 jobs or 41.8% employment growth over ten-year period).
2. Nonmetallic mineral product mft NAICS 327 (454 jobs or 12.9% employment growth).
3. Printing and related support activities mft NAICS 323 (382 jobs or 10.6% employment growth).
4. Computer and electronic product mft NAICS 334 (348 jobs or 10.5% employment growth).
5. Chemical mft NAICS 325 (342 jobs or 15.1% employment growth).
6. Plastics and rubber products mft NAICS 326 (290 jobs or 8.3% employment growth).
7. Primary metal mft NAICS 331 (288 jobs or 31.2% employment growth).
8. Food mft NAICS 311 (221 jobs or 3.7% employment growth).
9. Wood product mft NAICS 321 (213 jobs or 14.9% employment growth).
10. Textile product mills NAICS 314 (196 jobs or 30.2% employment growth).
11. Paper mft NAICS 322 (166 jobs or 17.9% employment growth).

Manufacturing Industries with Largest Projected and Actual Relative Gains

Table 2. Fastest Growth	Employment			Employment Change		
	2019	2020	2030	2019 to 2020	2020 to 2030	2019 to 2030
Miscellaneous manufacturing	7,096	6,299	8,931	-11.2%	19.1%	8.0%
Petroleum and coal products manufacturing	243	212	300	-12.8%	19.0%	7.3%
Wood product manufacturing	1,361	1,439	1,652	5.7%	7.1%	6.7%
Chemical manufacturing	2,217	2,270	2,612	2.4%	7.3%	5.6%
Apparel manufacturing	100	87	117	-13.0%	16.0%	5.4%
Beverage and tobacco product manufacturing	864	952	987	10.2%	1.8%	4.5%
Paper manufacturing	983	927	1,093	-5.7%	8.6%	3.6%
Plastics and rubber products manufacturing	3,419	3,483	3,773	1.9%	4.1%	3.3%
Nonmetallic mineral product manufacturing	3,709	3,519	3,973	-5.1%	6.3%	2.3%

Manufacturing Industries with Largest Projected and Actual Relative Declines

Table 3. Fastest Decline	Employment			Employment Change		
	2019	2020	2030	2019 to 2020	2020 to 2030	2019 to 2030
Primary metal manufacturing	1,347	922	1,210	-31.6%	14.6%	-3.5%
Machinery manufacturing	1,982	1,759	1,817	-11.3%	1.6%	-2.9%
Fabricated metal product manufacturing	6,671	6,440	6,366	-3.5%	-0.6%	-1.5%
Food manufacturing	6,466	6,048	6,269	-6.5%	1.8%	-1.0%
Textile product mills	858	648	844	-24.5%	14.1%	-0.5%
Furniture and related product manufacturing	1,870	1,776	1,841	-5.0%	1.8%	-0.5%
Printing and related support activities	4,044	3,610	3,992	-10.7%	5.2%	-0.4%
Transportation equipment manufacturing	1,573	1,532	1,582	-2.6%	1.6%	0.2%
Computer and electronic product manufacturing	3,518	3,309	3,657	-5.9%	5.1%	1.3%

Occupations Projections in Manufacturing

Because the manufacturing industry was negatively impacted by the COVID-19 recession, it is important to see how this situation affected the occupational projections from 2020 to 2030 in this industry. This section presents the occupations with the largest expected employment change in the manufacturing subsectors with the largest expected employment change.

I. Occupations in Miscellaneous Manufacturing

Industries in the miscellaneous manufacturing subsector make a wide range of products that cannot be classified in specific NAICS subsectors in manufacturing. Processes used by these establishments vary significantly, both among and within industries.

The long-term projections indicate that the occupations with largest employment change in miscellaneous manufacturing from 2020 to 2030 include:

1.1. Web and digital interface designers (SOC 15-1255) employment in miscellaneous mft is expected to rise from 360 jobs in 2020 to 604 in 2030. That is 67.8 percent growth over the ten-year period. Most of these occupations require a four-year bachelor's degree, but some do not. Employees usually need several years of work-related experience, on-the-job training, and/or vocational training. The hourly mean wage for these occupations is \$39.43 and the

annual mean salary \$82,000. Nevada offers ten training programs for these occupations, for detail see table below:

Table 2. Nevada: Training for Web and digital interface designers

Program	School	Degree
General Computer and Information Sciences	Truckee Meadows Community College	Less than one year certificate
Computer Programming/Programmer, General	College of Southern Nevada	Associate's degree
Graph Design	College of Southern Nevada	Associate's degree
Computer and Information Sciences, General	Western Nevada College	Associate's degree
Web/Multimedia Management and Webmaster	College of Southern Nevada	Associate's degree
Graph Design	University of Nevada-Reno	Bachelor's degree
Design and Visual Communications, General	Great Basin College	Bachelor's degree
Computer Science	University of Nevada-Las Vegas	Bachelor's degree, Master's degree, Doctor's degree
General Computer and Information Sciences	University of Nevada-Reno	Bachelor's degree, Master's degree, Doctor's degree
Design and Visual Communications, General	Sierra Nevada University	Master's degree

1.2. Hand laborers and freight, stock, and material movers (SOC 53.7062) employment in miscellaneous mft is expected to rise from 135 jobs in 2020 to 239 in 2030. That is 77 percent growth over the ten-year period. These occupations usually require a high school diploma. Employees need anywhere from a few months to one year of working with experienced employees. The hourly mean wage for these occupations is \$16.78 and the annual mean salary \$34,910.

1.3. First-line supervisors of production and operating workers (SOC 51.1011) employment in miscellaneous mft is expected to rise from 131 jobs in 2020 to 229 in 2030. That is 74.8 percent growth over the ten-year period. Most of these occupations require training in vocational schools, related on-the-job experience, or an associate's degree. Employees usually need one or two years of training involving both on-the-job experience and informal training with experienced workers. The hourly mean wage for these occupations is \$30.61 and the annual mean salary \$63,680. The University of Nevada-Las Vegas offers a Bachelor's degree and a Doctor's degree in Operations Management and Supervision.

1.4. Coin, vending, and amusement machine servicers and repairers (SOC 49.9091) employment in miscellaneous mft is expected to rise from 138 jobs in 2020 to 216 in 2030. That is 56.2 percent growth over the ten-year period. These occupations usually require a high school diploma. Employees need anywhere from a few months to one year of working with experienced employees. The hourly mean wage for these occupations is \$19.51 and the annual mean salary \$40,580.

1.5. Special effects artists and animators (SOC 27.1014) employment in miscellaneous mft is expected to rise from 128 jobs in 2020 to 199 in 2030. That is 55.5 percent growth over the ten-year period. Most of these occupations require a four-year bachelor's degree, but some do not. Employees usually need several years of work-related experience, on-the-job training, and/or vocational training. The hourly mean wage for these occupations is \$40.87 and the annual mean salary \$85,010.

The long-term projections indicate that the occupations with highest employment growth in miscellaneous manufacturing from 2020 to 2030 include:

Industrial machinery mechanics (SOC 49.9041): 100% growth.

Market research analysts and marketing specialists (SOC 13-1161): 94.1% growth.

Financial managers (SOC 11.3031): 91.3% growth.

Industrial machinery mechanics (SOC 49-9041): 83.3% growth.

First-line supervisors of mechanics, installers, and repairers (SOC 49.1011): 81.5% growth.

II. Occupations in Nonmetallic Mineral Product Manufacturing

The nonmetallic mineral product manufacturing subsector transforms mined or quarried nonmetallic minerals, such as sand, gravel, stone, clay, and refractory materials, into products for intermediate or final consumption.

The long-term projections indicate that the occupations with largest employment change in nonmetallic mineral product manufacturing from 2020 to 2030 include:

II.1. Molders, shapers, and casters, except metal and plastic (SOC 51-9195) employment in nonmetallic mineral product mft is expected to rise from 455 jobs in 2020 to 648 in 2030. That is 42.4 percent growth over the ten-year period. These occupations usually require a high school diploma. Employees need anywhere from a few months to one year of working with experienced employees. The hourly mean wage for these occupations is \$17.54 and the annual mean salary \$36,490.

II.2. Heavy and tractor-trailer truck drivers (SOC 53-3032) employment in nonmetallic mineral product mft is expected to rise from 74 jobs in 2020 to 108 in 2030. That is 45.9 percent growth over the ten-year period. These occupations usually require a high school diploma. Employees need anywhere from a few months to one year of working with experienced employees. The hourly mean wage for these occupations is \$24.45 and the annual mean salary \$50,860.

II.3. Industrial machinery mechanics (SOC 49-9041) employment in nonmetallic mineral product mft is expected to rise from 106 jobs in 2020 to 139 in 2030. That is 31.3 percent growth over the ten-year period. Most of these occupations require training in vocational schools, related on-the-job experience, or an associate's degree. Employees usually need one or two years of training involving both on-the-job experience and informal training with experienced workers. The hourly mean wage for these occupations is \$29.35 and the annual mean salary \$61,050. The Great Basin College in Elko offers a less than one year certificate and a one but less than two years certificate in Industrial Mechanics and Maintenance Technology/Technician.

II.4. Hand laborers and freight, stock, and material movers (SOC 53-7062) employment in nonmetallic mineral product mft is expected to rise from 135 jobs in 2020 to 239 in 2030. That is 77 percent growth over the ten-year period. These occupations usually require a high school diploma. Employees need anywhere from a few months to one year of working with experienced employees. The hourly mean wage for these occupations is \$16.78 and the annual mean salary \$34,910.

II.5. First-line supervisors of production and operating workers (SOC 51-1011) employment in nonmetallic mineral product mft is expected to rise from 131 jobs in 2020 to 229 in 2030. That is 74.8 percent growth over the ten-year period. Most of these occupations require training in vocational schools, related on-the-job experience, or an associate's degree. Employees usually need one or two years of training involving both on-the-job experience and informal training

with experienced workers. The hourly mean wage for these occupations is \$30.61 and the annual mean salary \$63,680. The University of Nevada-Las Vegas offers a Bachelor's degree and a Doctor's degree in Operations Management and Supervision.

The occupations with highest employment growth in nonmetallic mineral product manufacturing from 2020 to 2030 include:

Financial managers (SOC 11.3031): 91.3% growth.

Heavy and tractor-trailer truck drivers (SOC 53.3032): 45.9% growth.

Molders, shapers, and casters, except metal and plastic (SOC 51.9195): 42.4% growth.

Excavating and loading machine and dragline operators, surface mining (SOC 47.5022): 41% growth.

Industrial machine mechanics (SOC 49-9041): 31.3% growth.

III. Occupations in Printing and Related Support Activities Manufacturing

The printing and related support activities manufacturing subsector prints products, such as newspapers, books, labels, business cards, stationery, business forms, and other materials, and perform support activities, such as data imaging, platemaking services, and bookbinding.

The long-term projections indicate that the occupations with largest employment change in printing and related support activities manufacturing from 2020 to 2030 include:

III.1. Printing press operators (SOC 51-5112) employment in printing and related support activities mft is expected to rise from 874 jobs in 2020 to 997 in 2030. That is 14.1 percent growth over the ten-year period. These occupations require a high school diploma. Employees need a few months to one year of working with experienced employees. The hourly mean wage is \$18.33 and the annual mean salary \$38,120.

III.2. First-line supervisors of production and operating workers (SOC 51.1011) employment in printing and related support activities mft is expected to rise from 189 jobs in 2020 to 215 in 2030. That is 13.8 percent growth over the ten-year period. Most of these occupations require training in vocational schools, related on-the-job experience, or an associate's degree. Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers. The hourly mean wage is \$30.61 and the annual mean salary \$63,680. The University of Nevada-Las Vegas offers a Bachelor's degree and a Doctor's degree in Operations Management and Supervision.

III.3. Hand laborers and freight, stock, and material movers (SOC 53-7062) employment in printing and related support activities mft is expected to rise from 158 jobs in 2020 to 180 in 2030. That is 14 percent growth over the ten-year period. These occupations require a high school diploma. Employees need a few months to one year of working with experienced employees. The hourly mean wage is \$16.78 and the annual mean salary \$34,910.

III.4. Hand packers and packagers (SOC 53.7064) employment in printing and related support activities mft is expected to rise from 102 jobs in 2020 to 116 in 2030. That is 14 percent growth over the ten-year period. These occupations usually require a high school diploma. Employees need anywhere from a few months to one year of working with experienced employees. The hourly mean wage is \$15.86 and the annual mean salary \$32,980.

III.5. Sales representatives of services, except advertising, insurance, financial services, and travel (SOC 41.3091) employment in printing and related support activities mft is expected to rise from 86 jobs in 2020 to 98 in 2030. That is 14 percent growth over the ten-year period. These occupations require a high school diploma. Employees need a few months to one year of working with experienced employees. The hourly mean wage is \$28.87 and the annual mean salary \$60,040.

IV. Occupations in Computer and Electronic Product Manufacturing

The computer and electronic product manufacturing subsector manufactures computers, computer peripherals, communications equipment, and similar electronic products, and manufactures components for such products.

The long-term projections indicate that the occupations with largest employment change in computer and electronic product manufacturing from 2020 to 2030 include:

IV.1. Electromechanical equipment assemblers (SOC 51.2023) employment in computer and electronic product mft is expected to rise from 932 jobs in 2020 to 1,060 in 2030. That is 13.7 percent growth over the ten-year period. These occupations require a high school diploma. Employees need a few months to one year of working with experienced employees. The hourly mean wage is \$18.25 and the annual mean salary \$37,970.

IV.2. Web and digital interface designers (SOC 15-1255) employment in computer and electronic product mft is expected to rise from 91 jobs in 2020 to 121 in 2030. That is 32.9 percent growth over the ten-year period. These occupations require a four-year bachelor's degree, but some do not. Employees need several years of work-related experience, on-the-job training, and/or vocational training. The hourly mean wage is \$39.43 and the annual mean salary \$82,000. Nevada offers ten training programs for these occupations, for detail see table 2 on page 10.

IV.3. Electronics engineers, except computer (SOC 17.2072) employment in computer and electronic product mft is expected to rise from 110 jobs in 2020 to 135 in 2030. That is 22.7 percent growth over the ten-year period. These occupations require a four-year bachelor's degree, but some do not. Employees need several years of work-related experience, on-the-job training, and/or vocational training. The hourly mean wage is \$53.60 and the annual mean salary \$111,490. The University of Nevada-Reno offers a Bachelor's degree and a Doctor's degree in Electrical and Electronics Engineering. The University of Nevada-Las Vegas also offers Bachelor's degree, Master's degree, and Doctor's degree in this program.

IV.4. Industrial Engineers (SOC 17.2112) employment in computer and electronic product mft is expected to rise from 82 jobs in 2020 to 103 in 2030. That is 25.6 percent growth over the ten-year period. These occupations require a four-year bachelor's degree, but some do not. Employees need several years of work-related experience, on-the-job training, and/or vocational training. The hourly mean wage is \$48.09 and the annual mean salary \$100,020.

IV.5. Sales representatives, wholesale and manufacturing, except technical and scientific products (SOC 41.4012) employment in computer and electronic product mft in computer and electronic product mft is expected to rise from 74 jobs in 2020 to 85 in 2030. That is 14.8 percent growth over the ten-year period. These occupations require a four-year bachelor's degree, but some do not. Employees need several years of work-related experience, on-the-job training, and/or vocational training. The hourly mean wage is \$36.10 and the annual mean salary \$75,100. The

College of Southern Nevada offers an Associate's degree in General Sales, Distribution, and Marketing Operations.

V. Occupations in Chemical Manufacturing

The chemical manufacturing subsector is based on the transformation of organic and inorganic raw materials by a chemical process and the formulation of products.

The long-term projections indicate that the occupations with largest employment change in chemical manufacturing from 2020 to 2030 include:

V.1. Packaging and filling machine operators and tenders (SOC 51.9111) employment in chemical mft is expected to rise from 279 jobs in 2020 to 328 in 2030. That is 17.6 percent growth over the ten-year period. These occupations require a high school diploma. Employees need a few months to one year of working with experienced employees. The hourly mean wage is \$17.35 and the annual mean salary \$36,090.

V.2. Mixing and blending machine setters, operators, and tenders (SOC 51.9023) employment in chemical mft is expected to rise from 240 jobs in 2020 to 281 in 2030. That is 17.1 percent growth over the ten-year period. These occupations require a high school diploma. Employees in these occupations need from a few months to one year of working with experienced employees. The hourly mean wage is \$22.03 and the annual mean salary \$45,820.

V.3. Industrial Machinery Mechanics (SOC 49.9041) employment in chemical mft is expected to rise from 52 jobs in 2020 to 74 in 2030. That is 42.3 percent growth over the ten-year period. Most of these occupations require training in vocational schools, related on-the-job experience, or an associate's degree. Employees need one or two years of training involving both on-the-job experience and informal training with experienced workers. The hourly mean wage is \$29.35 and the annual mean salary \$61,050. The University of Nevada-Reno offers a Bachelor's degree and a Doctor's degree in Electrical and Electronics Engineering. The Great Basin College in Elko, offers a less than one year certificate and one but less than two years certificate in Industrial Mechanics and Maintenance Technology/Technician.

V.4. Hand packers and packagers (SOC 53.7064) employment in chemical mft is expected to rise from 103 jobs in 2020 to 121 in 2030. That is 17.5 percent growth over the ten-year period. These occupations require a high school diploma. Employees need several years of work-related experience, on-the-job training, and/or vocational training. The hourly mean wage is \$15.86 and the annual mean salary \$32,980.

V.5. First-line supervisors of production and operating workers (SOC 51.1011) employment in chemical mft is expected to rise from 93 jobs in 2020 to 109 in 2030. That is 17.2 percent growth over the ten-year period. Most of these occupations require training in vocational schools, related on-the-job experience, or an associate's degree. Employees usually need one or two years of training involving both on-the-job experience and informal training with experienced workers. The hourly mean wage is \$30.61 and the annual mean salary \$63,680. The University of Nevada-Las Vegas offers a Bachelor's degree and Doctor's degree in Operations Management and Supervision.

VI. Occupations in Plastics and Rubber Products Manufacturing

The plastics and rubber products manufacturing subsector makes goods by processing plastics materials and raw rubber.

The long-term projections indicate that the occupations with largest employment change in plastics and rubber products manufacturing from 2020 to 2030 include:

VI.1. Industrial Machinery Mechanics (SOC 49.9041) employment in plastics and rubber products mft is expected to rise from 117 jobs in 2020 to 158 in 2030. That is 35 percent growth over the ten-year period. These occupations require training in vocational schools, related on-the-job experience, or an associate's degree. Employees need one or two years of training involving both on-the-job experience and informal training with experienced workers. The hourly mean wage is \$29.35 and the annual mean salary \$61,050. The University of Nevada-Reno offers a Bachelor's degree and a Doctor's degree in Electrical and Electronics Engineering. The Great Basin College in Elko offers a less than one year certificate and one but less than two years certificate in Industrial Mechanics and Maintenance Technology/Technician.

VI.2. Hand packers and packagers (SOC 53.7064) employment in plastics and rubber products mft is expected to rise from 207 jobs in 2020 to 234 in 2030. That is 13 percent growth over the ten-year period. These occupations require a high school diploma. Employees need several years of work-related experience, on-the-job training, and/or vocational training. The hourly mean wage is \$15.86 and the annual mean salary \$32,980.

VI.3. First-line supervisors of production and operating workers (SOC 51.1011) employment in plastics and rubber products mft is expected to rise from 179 jobs in 2020 to 202 in 2030. That is 12.8 percent growth over the ten-year period. These occupations require training in vocational schools, related on-the-job experience, or an associate's degree. Employees need one or two years of training involving both on-the-job experience and informal training with experienced workers. The hourly mean wage is \$30.61 and the annual mean salary \$63,680. The University of Nevada-Las Vegas offers a Bachelor's degree and Doctor's degree in Operations Management and Supervision.

VI.4. General maintenance and repair workers (SOC 49.9071) employment in plastics and rubber products mft is expected to rise from 47 jobs in 2020 to 59 in 2030. That is 25.5 percent growth over the ten-year period. The occupations require training in vocational schools, related on-the-job experience, or an associate's degree. Employees need one or two years of training involving both on-the-job experience and informal training with experienced workers. The hourly mean wage is \$21.43 and the annual mean salary \$44,570.

VI.5. Industrial truck and tractor operators (SOC 53.7051) employment in plastics and rubber products mft is expected to rise from 45 jobs in 2020 to 57 in 2030. That is 26.6 percent growth over the ten-year period. These occupations require a high school diploma. Employees

need a few months to one year of working with experienced employees. The hourly mean wage for these occupations is \$20.15 and the annual mean salary \$41,910.

VII. Occupations in Primary Metal Manufacturing

The primary metal manufacturing subsector smelt and/or refine ferrous and nonferrous metals from ore, pig or scrap, using electrometallurgical and other process metallurgical techniques.

The long-term projections indicate that the occupations with largest employment change in primary metal manufacturing from 2020 to 2030 include:

VII.1. First-line supervisors of production and operating workers (SOC 51.1011) employment in primary metal mft is expected to rise from 40 jobs in 2020 to 54 in 2030. That is 35 percent growth over the ten-year period. Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree. Employees need one or two years of training involving both on-the-job experience and informal training with experienced workers. The hourly mean wage is \$30.61 and the annual mean salary \$63,680. The University of Nevada-Las Vegas offers a Bachelor's degree and Doctor's degree in Operations Management and Supervision.

VII.2. General maintenance and repair workers (SOC 49.9071) employment in primary metal mft is expected to rise from 29 jobs in 2020 to 40 in 2030. That is 37.9 percent growth over the ten-year period. Most of these occupations require training in vocational schools, related on-the-job experience, or an associate's degree. Employees need one or two years of training involving both on-the-job experience and informal training with experienced workers. The hourly mean wage is \$21.43 and the annual mean salary \$44,570.

VII.3. Inspectors, testers, sorters, samplers, and weighers (SOC 51.9061) employment in primary metal mft is expected to rise from 54 jobs in 2020 to 61 in 2030. That is 13 percent growth over the ten-year period. These occupations require a high school diploma. Employees need a few months to one year of working with experienced employees. The hourly mean wage for these occupations is \$24.41 and the annual mean salary \$50,780.

VII.4. All other production workers (SOC 51.9199) employment in primary metal mft is expected to rise from 14 jobs in 2020 to 20 in 2030. That is 42.9 percent growth over the ten-year period. The hourly mean wage for these occupations is \$18.10 and the annual mean salary \$37,650.

VII.5. Industrial production managers (SOC 11.3051) employment in primary metal mft is expected to rise from 12 jobs in 2020 to 17 in 2030. That is 41.6 percent growth over the ten-year period. Most of these occupations require a four-year bachelor's degree, but some do not. Employees need several years of work-related experience, on-the-job training, and/or vocational training. The hourly mean wage for these occupations is \$46.94 and the annual mean salary \$97,630.

VIII. Occupations in Food Manufacturing

The food manufacturing subsector transforms livestock and agricultural products into products for intermediate or final consumption. The industry groups are distinguished by the raw materials (generally of animal or vegetable origin) processed into food products.

The long-term projections indicate that the occupations with largest employment change in food manufacturing from 2020 to 2030 include:

VIII.1. Bakers (SOC 51.3011) employment in food mft is expected to rise from 570 jobs in 2020 to 615 in 2030. That is 7.9 percent growth over the ten-year period. These occupations require a high school diploma. Employees need a few months to one year of working with experienced employees. The hourly mean wage is \$16.36 and the annual mean salary \$34,040. The Truckee Meadows Community College offers one but less than two years certificate in Baking and Pastry Arts/Baker/Pastry Chef.

VIII.2. Food batchmakers (SOC 51.3092) employment in food mft is expected to rise from 823 jobs in 2020 to 864 in 2030. That is five percent growth over the ten-year period. These occupations require a high school diploma. Employees need a few months to one year of working with experienced employees. The hourly mean wage for these occupations is \$16.92 and the annual mean salary \$35,190.

VIII.3. Industrial Machinery Mechanics (SOC 49.9041) employment in food mft is expected to rise from 130 jobs in 2020 to 160 in 2030. That is 23.1 percent growth over the ten-year period. These occupations require a high school diploma. Employees need anywhere from a few months to one year of working with experienced employees. The hourly mean wage is \$29.35 and the annual mean salary \$61,050. The University of Nevada-Reno offers a Bachelor's degree and a Doctor's degree in Electrical and Electronics Engineering. The Great Basin College in Elko offers a less than one year certificate and one but less than two years certificate in Industrial Mechanics and Maintenance Technology/Technician.

VIII.4. Packaging and filling machine operators and tenders (SOC 51.9111) employment in food mft is expected to rise from 528 jobs in 2020 to 550 in 2030. That is 4.2 percent growth over the ten-year period. These occupations require a high school diploma. Employees need a few months to one year of working with experienced employees. The hourly mean wage for these occupations is \$17.35 and the annual mean salary \$36,090.

VIII.5. Hand packers and packagers (SOC 53.7064) employment in food mft is expected to rise from 252 jobs in 2020 to 266 in 2030. That is 5.6 percent growth over the ten-year period. These occupations require a high school diploma. Employees in these occupations need a few months to one year of working with experienced employees. The hourly mean wage for these occupations is \$15.86 and the annual mean salary \$32,980.

IX. Occupations in Wood Product Manufacturing

The wood product manufacturing subsector manufactures wood products, such as lumber, plywood, veneers, wood containers, wood flooring, wood trusses, manufactured homes (i.e., mobile homes), and prefabricated wood buildings.

The long-term projections indicate that the occupations with largest employment change in wood product manufacturing from 2020 to 2030 include:

IX.1. Woodworking machine setters, operators, and tenders, except sawing (SOC 51.7042) employment in wood product mft is expected to rise from 475 jobs in 2020 to 564 in 2030. That is 18.7 percent growth over the ten-year period. These occupations require a high school diploma. Employees need a few months to one year of working with experienced employees. The hourly mean wage for these occupations is \$19.41 and the annual mean salary \$40,370.

IX.2. First-line supervisors of production and operating workers (SOC 51.1011) employment in wood product mft is expected to rise from 54 jobs in 2020 to 65 in 2030. That is 20.4 percent growth over the ten-year period. Most of these occupations require training in vocational schools, related on-the-job experience, or an associate's degree. Employees need one or two years of training involving both on-the-job experience and informal training with experienced workers. The hourly mean wage is \$30.61 and the annual mean salary \$63,680. The University of Nevada-Las Vegas offers a Bachelor's degree and Doctor's degree in Operations Management and Supervision.

IX.3. General maintenance and repair workers (SOC 49.9071) employment in wood product mft is expected to rise from 49 jobs in 2020 to 59 in 2030. That is 20.4 percent growth over the ten-year period. Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree. Employees need one or two years of training involving both on-the-job experience and informal training with experienced workers. The hourly mean wage for these occupations is \$21.43 and the annual mean salary \$44,570.

IX.4. Heavy and tractor-trailer truck drivers (SOC 53-3032) employment in wood product mft is expected to rise from 36 jobs in 2020 to 43 in 2030. That is 19.4 percent growth over the ten-year period. These occupations require a high school diploma. Employees need a few months to one year of working with experienced employees. The hourly mean wage for these occupations is \$24.45 and the annual mean salary \$50,860.

IX.5. Industrial truck and tractor operators (SOC 53.7051) employment in wood product mft is expected to rise from 45 jobs in 2020 to 57 in 2030. That is 26.6 percent growth over the ten-year period. These occupations require a high school diploma. Employees need a few months to one year of working with experienced employees. The hourly mean wage for these occupations is \$20.15 and the annual mean salary \$41,910.

X. Occupations in Textile Product Mills Manufacturing

The textile product mills subsector group establishments make textile products (except apparel). With a few exceptions, processes used in these industries are generally cut and sew (i.e., purchasing fabric and cutting and sewing to make nonapparel textile products, such as sheets and towels).

The long-term projections indicate that the occupations with largest employment change in textile product mills manufacturing from 2020 to 2030 include:

X.1. Textile, apparel, and furnishings workers (SOC 5160) employment in textile product mills mft is expected to rise from 372 in 2020 to 499 jobs in 2030. That is 34.1 percent growth over the ten-year period. Some of these occupations may require a high school diploma or GED certificate. Employees need a few days to a few months of training. Usually, an experienced worker could show how to do the job. The hourly mean wage for these occupations is \$15.03 and the annual mean salary \$31,260.

X.2. General office clerks (SOC 43.9061) employment in textile product mills mft is expected to rise from 62 jobs in 2020 to 75 in 2030. That is 21 percent growth over the ten-year period. These occupations usually require a high school diploma. Employees need a few months to one year of working with experienced employees. The hourly mean wage for these occupations is \$19.17 and the annual mean salary \$39,870. The Great Basin College in Elko offers an Associate's degree in General Office Occupations and Clerical Services. The Nevada Career Institute in Las Vegas offers one but less than two years certificate in this program.

X.3. Management occupations (SOC 11.0000) employment in textile product mills mft is expected to rise from 27 jobs in 2020 to 40 in 2030. That is 48.1 percent growth over the ten-year period. Most of the occupations require a four-year bachelor's degree, but some do not. Employees need several years of work-related experience, on-the-job training, and/or vocational training. The hourly mean wage for these occupations is \$47.19 and the annual mean salary \$98,140.

X.4. First-line supervisors of production and operating workers (SOC 51.1011) employment in wood production mft is expected to rise from 22 jobs in 2020 to 33 in 2030. That is 50 percent growth over the ten-year period. Most of these occupations require training in vocational schools, related on-the-job experience, or an associate's degree. Employees need one or two years of training involving both on-the-job experience and informal training with experienced workers. The hourly mean wage for these occupations is \$30.61 and the annual mean salary \$63,680. The University of Nevada-Las Vegas offers a Bachelor's degree and a Doctor's degree in Operations Management and Supervision.

XI. Occupations in Paper Manufacturing

The paper manufacturing subsector make pulp, paper, or converted paper products. The manufacturing of these products is grouped together because they constitute a series of vertically connected processes. More than one is often carried out in a single establishment.

The long-term projections indicate that the occupations with largest employment change in paper manufacturing from 2020 to 2030 include:

XI.1. All other production workers (SOC 51.9199) employment in paper mft is expected to rise from 142 jobs in 2020 to 167 in 2030. That is 17.6 percent growth over the ten-year period. The hourly mean wage for these occupations is \$18.10 and the annual mean salary \$37,650.

XI.2. First-line supervisors of production and operating workers (SOC 51.1011) employment in paper mft is expected to rise from 60 jobs in 2020 to 71 in 2030. That is 18.3 percent growth over the ten-year period. Most of these occupations require training in vocational schools, related on-the-job experience, or an associate's degree. Employees usually need one or two years of training involving both on-the-job experience and informal training with experienced workers. The hourly mean wage for these occupations is \$30.61 and the annual mean salary \$63,680. The University of Nevada-Las Vegas offers a Bachelor's degree and Doctor's degree in Operations Management and Supervision.

XI.3. Production, planning, and expediting clerks (SOC 43.5061) employment in paper mft is expected to rise from 36 jobs in 2020 to 45 in 2030. That is 25 percent growth over the ten-year period. Most of these occupations require training in vocational schools, related on-the-job experience, or an associate's degree. Employees usually need one or two years of training involving both on-the-job experience and informal training with experienced workers. The hourly mean wage for this occupations is \$21.47 and the annual mean salary \$44,660.

XI.4. Industrial production managers (SOC) employment in paper mft is expected to rise from 20 jobs in 2020 to 24 in 2030. That is 20 percent growth over the ten-year period. Most of these occupations require a four-year bachelor's degree, but some do not. Employees usually need several years of work-related experience, on-the-job training, and/or vocational training. The hourly mean wage for these occupations is \$46.94 and the annual mean salary \$97,630.

XI.5. Paper goods machine setters, operators, and tenders (SOC 51.9196) employment in paper mft is expected to rise from 65 jobs in 2020 to 69 in 2030. That is 6.2 percent growth over the ten-year period. These occupations require a high school diploma. Employees need a few months to one year of working with experienced employees. The hourly mean wage for this occupations is \$21.55 and the annual mean salary \$44,820.

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Data Sources

These projections would not be possible without the participation of Nevada's employers in BLS surveys. Accurate employer information is essential to determining current economic conditions, employee pay, occupational staffing patterns, and much more.

Employment Projections are calculated internally by the Research & Analysis Bureau. Projections data for all states is published at <http://www.projectionscentral.com/>.

Data on 2019 employment levels comes from the Quarterly Census of Employment and Wages (QCEW) program. QCEW data may be found at <http://nevadaworkforce.com> or <https://www.bls.gov/cew/>.

Data on occupational wages comes from the Occupational Employment Statistics (OES) program. Nevada May 2021. OES data may be found at <http://nevadaworkforce.com> or <https://www.bls.gov/oes/>.

Data on occupational education, experience, and training comes from the O*NET OnLine. May be found at <https://www.onetonline.org/>

Definitions on manufacturing subsectors come from the Bureau of Labor Statistics (BLS) and can be found at: https://www.bls.gov/iag/tgs/iag_index_alpha.htm

Data Manipulation and Visualization

This report was prepared with the use of R, RStudio, and RMarkdown. Specific packages used include the following:

[tidyverse](#)¹, [data.table](#)², [scales](#)³, [RODBC](#)⁴, [RODBCDBI](#)⁵, [gt](#)⁶, [rmarkdown](#)⁷, [knitr](#)⁸, [pagedown](#)⁹

Footnotes:

1. <https://www.tidyverse.org/>↵
2. <https://cran.r-project.org/web/packages/data.table/data.table.pdf>↵
3. <https://cran.r-project.org/web/packages/scales/scales.pdf>↵
4. <https://cran.r-project.org/web/packages/RODBC/RODBC.pdf>↵
5. <https://cran.r-project.org/web/packages/RODBCDBI/RODBCDBI.pdf>↵
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9. <https://pagedown.rbind.io/>↵