



Toledo Talent Alignment Strategy

Supplemental Reports: Labor Shed Analysis & Occupational Profiles

January 2019

01

Labor Shed Analysis

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Labor Shed Analysis Overview

In an era of low unemployment, the availability of talent has emerged as a key determinant of regional economic success. Without access to workers, local employers cannot effectively compete in an increasingly fierce global market place. By capturing the full dynamism of the Toledo region's labor shed—which extends beyond the four-county region of Fulton, Lucas, Ottawa, and Wood counties—this report can be used to understand the true breadth of talent available to local companies.

Existing and prospective employers concerned about the availability of labor within the Toledo region, for example, should be heartened by the availability of additional workers living in the larger regional labor shed, as well as the presence of tens of thousands of local residents currently leaving the region for jobs. At the same, fully leveraging the labor capacity of the broader labor shed will likely require a greater promotion of exiting employment opportunities and possibly more compelling wages, at least for select high-demand occupations.

Ultimately, this Labor Shed Analysis can help economic development professionals and local employers better understand existing and potential sources of labor within the Toledo region. The examination calculates the number of workers within the four-county Toledo region, the number of existing residents employed outside of the region, and the number of non-residents that commute into the region for work. The labor shed geography is then calculated based on commute patterns in and out of the four-county region. Important demographic and economic characteristics of local and commuting workers is provided.

Summary of Key Findings

The Toledo region is an Importer and Exporter of Talent

Each day, employers in the Toledo region (Fulton, Lucas, Ottawa, and Wood counties) attract tens of thousands of workers from neighboring communities. Approximately 27% of all jobs in the Toledo region are filled by workers commuting in from outside the region. At the same time, 24% of Toledo region residents commute outside of the region for jobs. Thousands of individuals living in the Toledo region commute long distances too – over 9,000 workers drive more than 60 minutes. In fact, data shows that Toledo is a net exporter of workers to Detroit, Ann Arbor, Dayton, and Cleveland. **This outgoing commuter base reflects an untapped source of potential labor for Toledo's employers.**

The Toledo region's Labor Shed is Home to Thousands of Additional Workers

Employers in the Toledo region attract workers from communities throughout northern Ohio, creating a labor shed that extends across parts of 9 counties beyond the formal boundaries of the four-county region. The labor shed substantially increases talent availability within the Toledo region. While employment in the Toledo region totals 300,000 jobs, the broader labor shed is home to approximately 525,000 workers. During the past 5 years, the number of workers residing in the labor shed increased by more than 25,000.

Summary of Key Findings

The Diversity of Toledo's Employment Opportunities Attracts Workers of All Types

On a net basis, the Toledo region attracts workers across all age groups and earnings levels. From young workers to seasoned professionals, workers of all experience levels can access a greater variety of employment opportunities within the Toledo region relative to neighboring communities. The same dynamic holds true across earnings levels.

Workers in Toledo's Labor Shed Respond to Higher Wages

Construction and manufacturing workers commute into the Toledo region at much higher levels than workers in other industries. These two occupations also feature some of the largest differences in wages between the Toledo region and its broader labor shed. Construction workers in the Toledo region, for example, earn approximately 10% higher wages than their counterparts in living in the labor shed. A greater wage premium in the Toledo region across additional occupations would help offset commuting costs and encourage people to reengage with the local economy, dynamics that are likely to yield a larger commuter workforce in the long run.

A Significant Workforce in Manufacturing, Health Care, Logistics and Technology is Available in the Labor Shed

Manufacturers have the most to gain by drawing on workers in the labor shed, which has 2.6 times the production workforce than is needed by jobs within the four-county region. Other clusters with high ratios of labor shed workforce to local jobs are Engineering, Medical, IT/Computer, and Logistics. Of course, attracting these workers across the labor shed to commute into the Toledo region will depend greatly on transportation costs and wage differentials.

Labor Shed Analysis Context & Methodology

The Toledo Labor Shed Analysis examines existing and potential sources of labor for local employers. The analysis begins with a look at those already working within the Toledo region, including Toledo residents and individuals who commute into Toledo from other communities. The analysis then explores the size and skills possessed by individuals who reside within Toledo's labor shed. Next, the analysis examines current Toledo residents who work outside of the community.

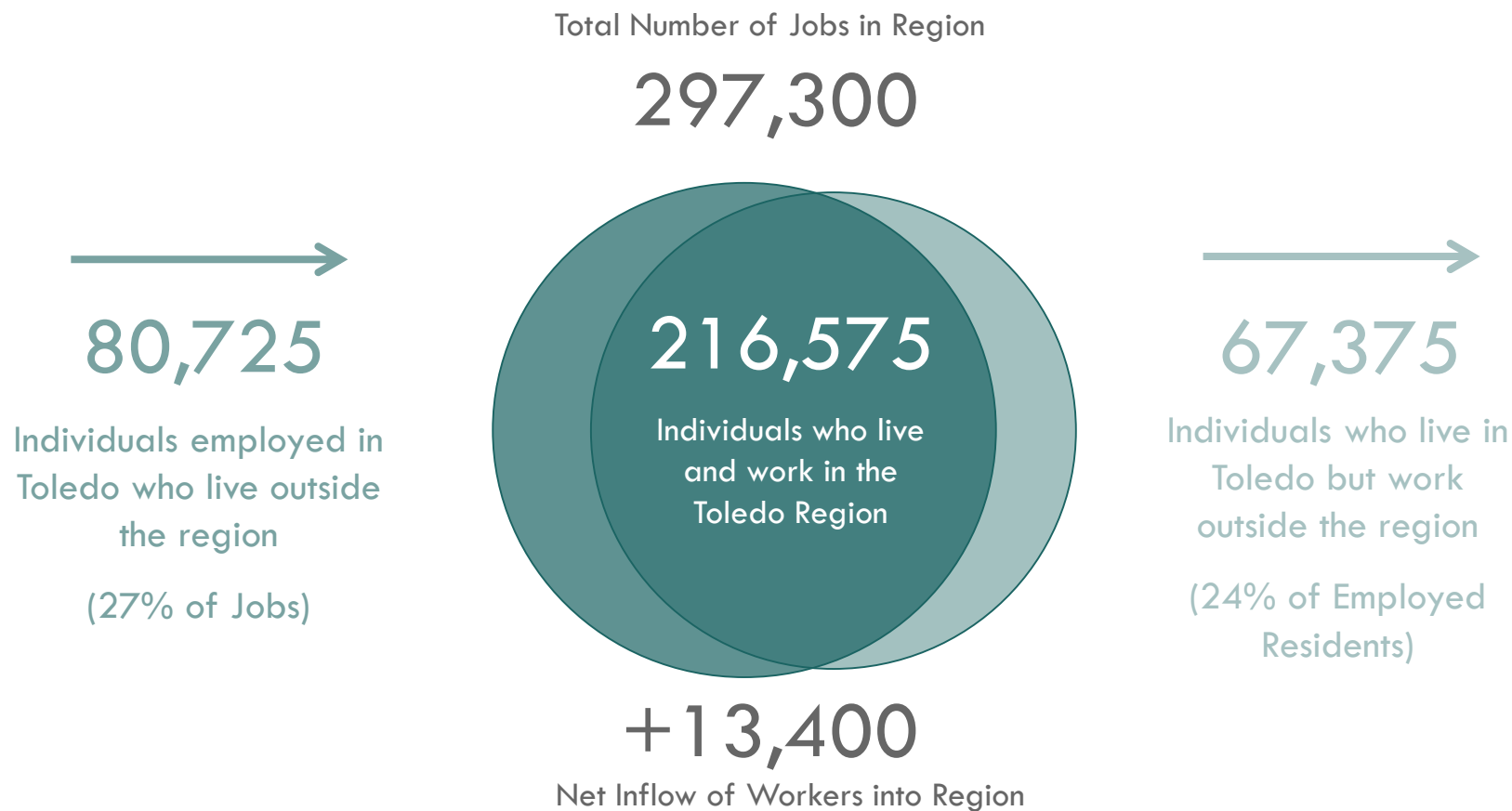


The labor shed is based on data from the US Census Bureau's Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employment Statistics (LODES) program. LODES provides annual employment statistics linking home and work locations at the census block-level. As a result, this data can be used to establish where workers in a community live and where residents of a community are employed. Labor sheds encompass zip codes in which a critical mass of workers reside. Thresholds for inclusion are dependent on the overall size of an origin community's workforce as well as the number of workers employed within the destination geography. Zip codes that fall below the determined threshold may also be added to create a single contiguous labor shed.

Toledo Region Commuting Flows

The Toledo region is both an exporter *and* importer of talent. The Toledo region, which includes Fulton, Lucas, Ottawa, and Wood counties, was home to more than 297,000 jobs in 2015. Three-fourths (73%) of all jobs in the Toledo region are filled by residents. Employers also rely on workers living outside of the Toledo region too — nearly 81,000 individuals living elsewhere are employed in the Toledo region. These commuters fill 27% of all jobs in the Toledo region. At the same time, nearly one in four employed residents living in the Toledo region commute to jobs elsewhere. **The outflow of workers—totaling more than 67,000 individuals—represents an available workforce that could be tapped by local employers.**

TOLEDO REGION COMMUTING PATTERNS - 2015



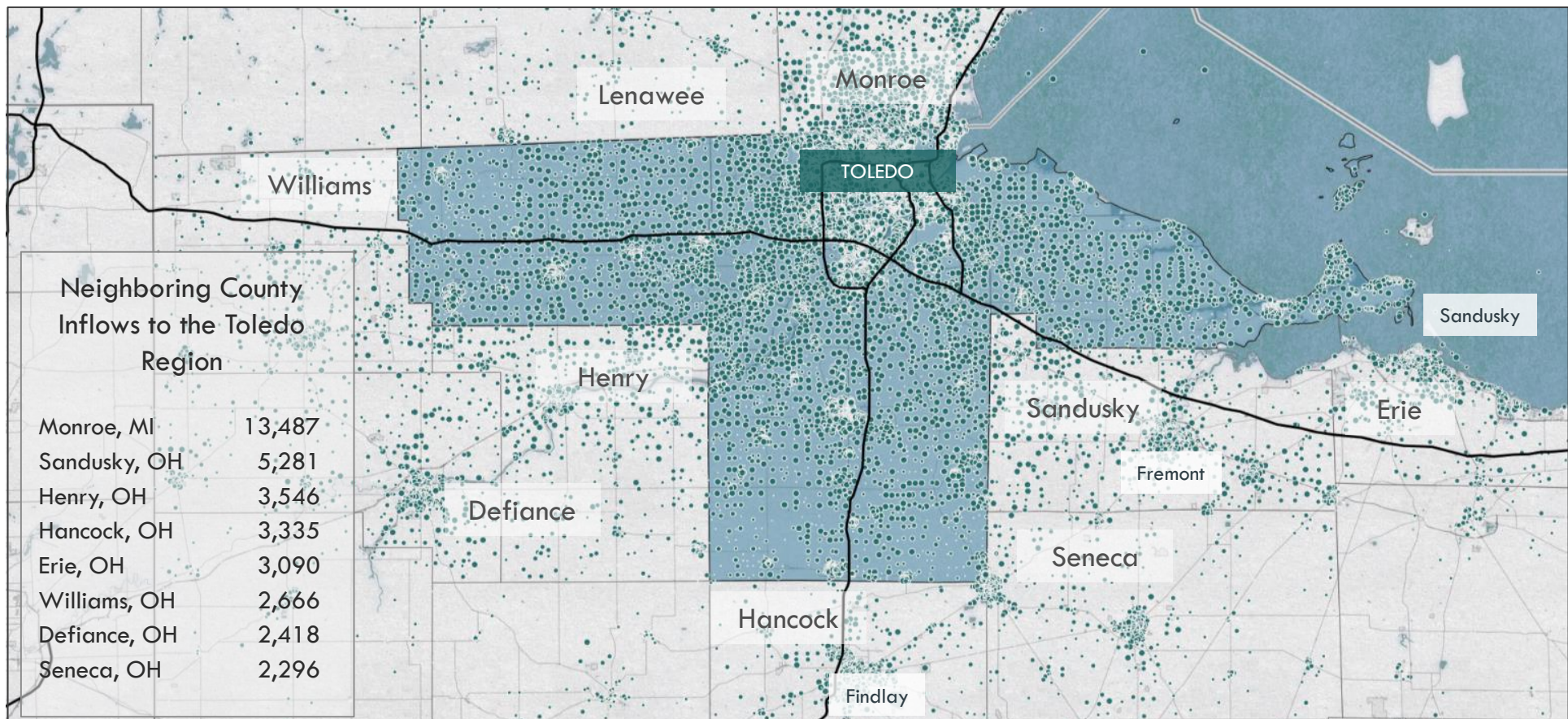
SOURCE: AVALANCHE CONSULTING / US CENSUS BUREAU



Where do Toledo Workers Live?

More than one in four Toledo workers live outside of the region. The largest inflow of workers comes from Monroe County, MI to the north – 13,500 workers commute into the region. Sandusky County to the southeast of the region ships in the next-highest number of workers, at 5,300. The Toledo region also attracts thousands of workers from smaller communities primarily located along interstates 75 and 80, including communities in the Ohio counties of Erie, Defiance, Henry, Sandusky, Seneca, and Williams as well as Lenawee and Monroe counties in Michigan. Most workers entering the region come from these neighboring counties.

TOLEDO WORKERS – PLACE OF RESIDENCE
2015

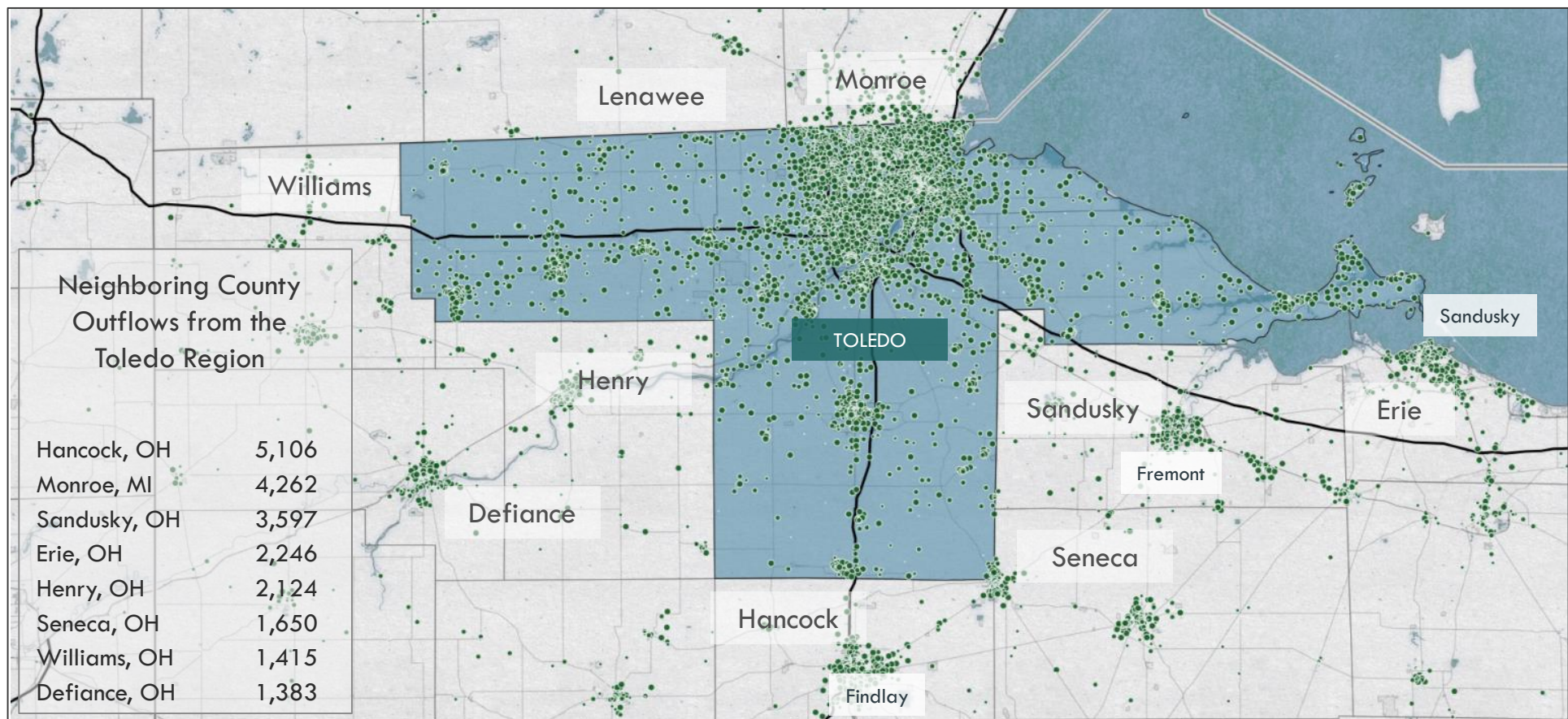


SOURCE: AVALANCHE CONSULTING / US CENSUS BUREAU

Where do Toledo Residents Work?

While the region imports workers from neighboring counties, it also exports workers to adjacent communities. Most employed Toledo residents who work outside of the region commute to nearby cities such as Defiance, Fremont, Findlay, and Sandusky. While not shown on the map, data shows that Toledo is a net exporter of workers to Detroit, Ann Arbor, Dayton, and Cleveland.

TOLEDO RESIDENTS – PLACE OF EMPLOYMENT
2015

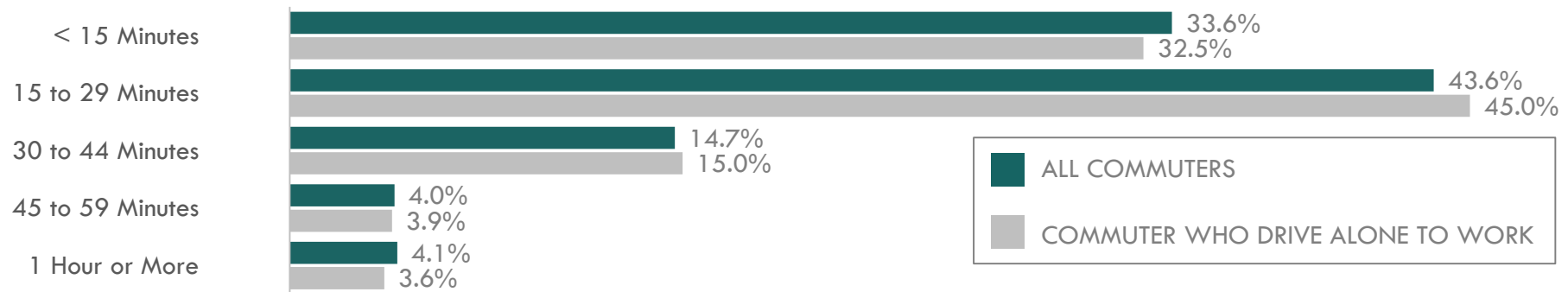


SOURCE: AVALANCHE CONSULTING / US CENSUS BUREAU

Commute Times

Most than 75% of workers in the Toledo region have average commutes of 29 minutes or less. Another 15% of employed residents commute 30 to 44 minutes to work each way. The remaining 8% of workers, which includes more than 20,000 individuals—have average commutes of at least 45 minutes.

AVERAGE COMMUTE FOR TOLEDO REGION RESIDENTS
2017

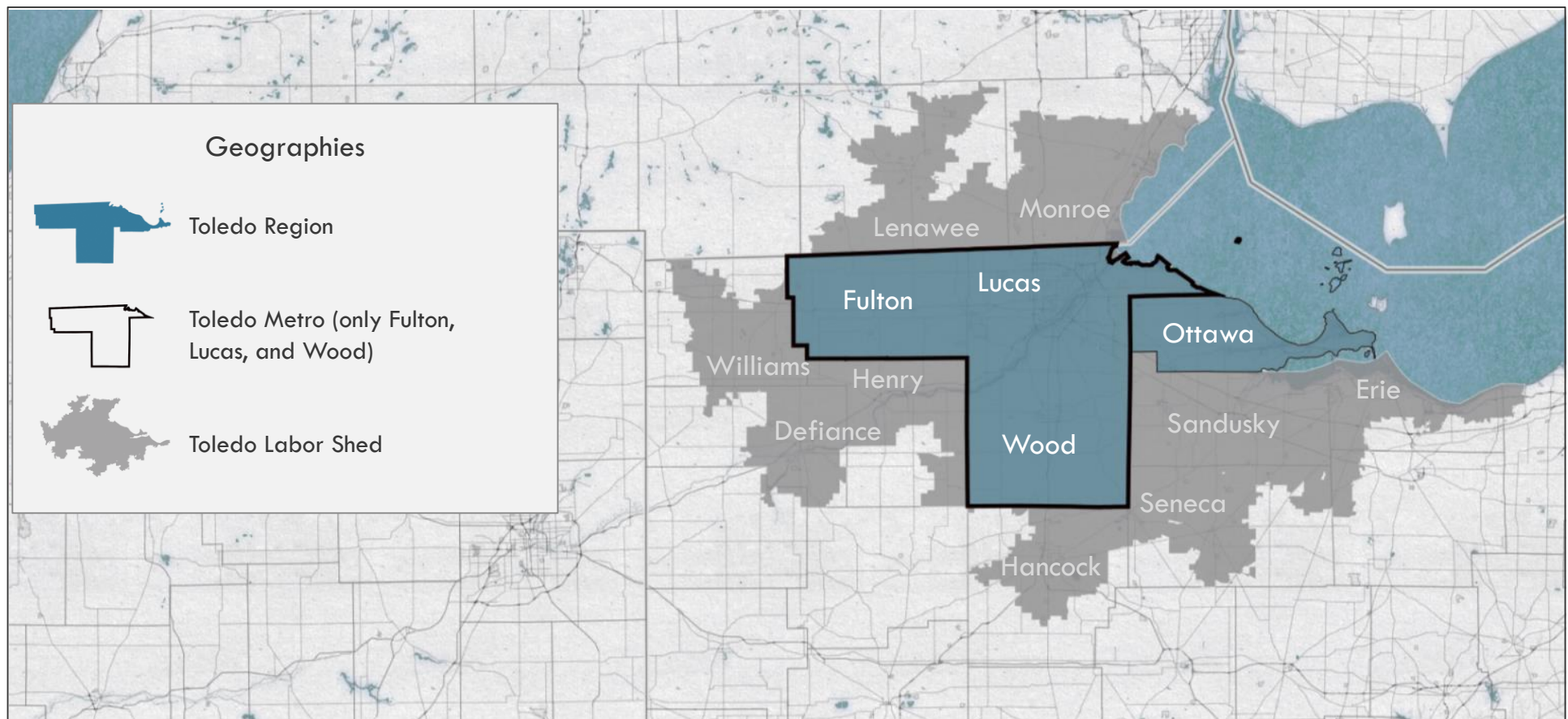


	Total	Drive Alone to Work	Other Modes of Transport
Total	289,194	252,204	36,990
Less than 10 minutes	49,355	40,539	8,816
10 to 14 minutes	47,905	41,538	6,367
15 to 19 minutes	53,115	47,347	5,768
20 to 24 minutes	51,389	46,501	4,888
25 to 29 minutes	21,648	19,644	2,004
30 to 34 minutes	30,388	26,811	3,577
35 to 44 minutes	12,063	10,951	1,112
45 to 59 minutes	11,531	9,788	1,743
60 or more minutes	11,800	9,085	2,715

SOURCE: AVALANCHE CONSULTING / US CENSUS BUREAU

Defining the Labor Shed

Considering the commute patterns from areas outside the region, Toledo's full labor shed is large and growing. Today, the labor shed represents nearly 525,000 workers and grew by more than 25,000 workers over the last five years. This labor shed estimate is 75% larger than the number of jobs in the Toledo region. To the north, the labor shed extends into the Michigan counties of Monroe and Lenawee. To the west, it extends into Henry, Williams, and Defiance Counties. The Toledo region attracts relatively few workers from the northwest (due relatively low populations in these areas) and southwest (many of these communities are located closer to Ft. Wayne, IN). To the southeast, the labor shed encompasses all of Sandusky County and elements of Erie, Hancock, and Seneca Counties.

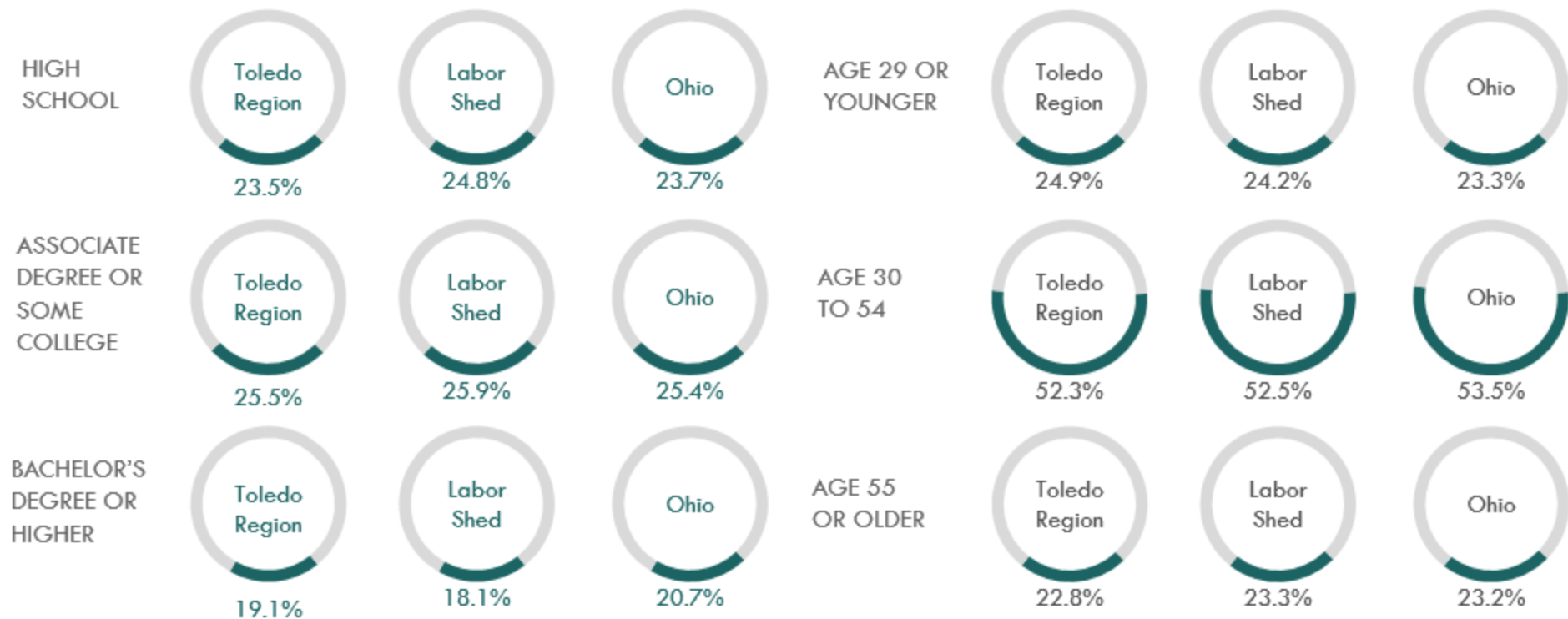


Labor Shed Demographics

Workers living outside the Toledo region but within the labor shed are slightly less educated and older. Educational attainment at the Bachelor's degree and above level is 1 percentage point lower across the labor shed than within just the 4-county region. At 25%, the proportion of workers living in Toledo's labor

EDUCATIONAL ATTAINMENT
(AMONG RESIDENTS AGE 30+), 2015

AGE COMPOSITION,
2015



SOURCE: AVALANCHE CONSULTING / US CENSUS BUREAU

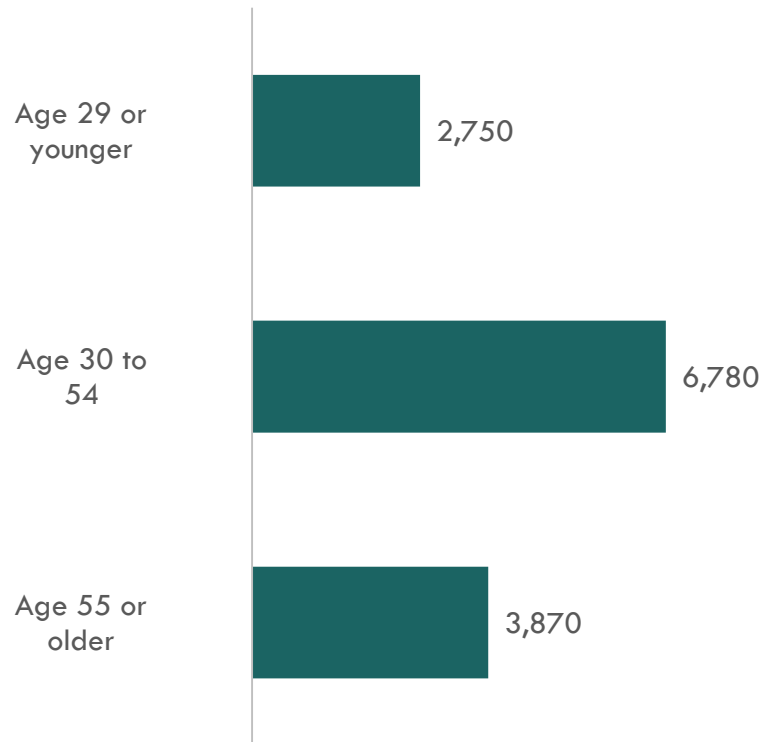
SOURCE: AVALANCHE CONSULTING / US CENSUS BUREAU



Net Commuters by Age & Earnings

The Toledo region imports workers across all age groups and earnings levels. **Together, these two dynamics suggest that the Toledo region offers a diverse set of employment opportunities at all experience and earnings levels relative to surrounding communities.**

NET INFLOW OF WORKERS INTO TOLEDO REGION
BY AGE, 2015



NET INFLOW OF WORKERS INTO TOLEDO REGION
BY EARNINGS, 2015

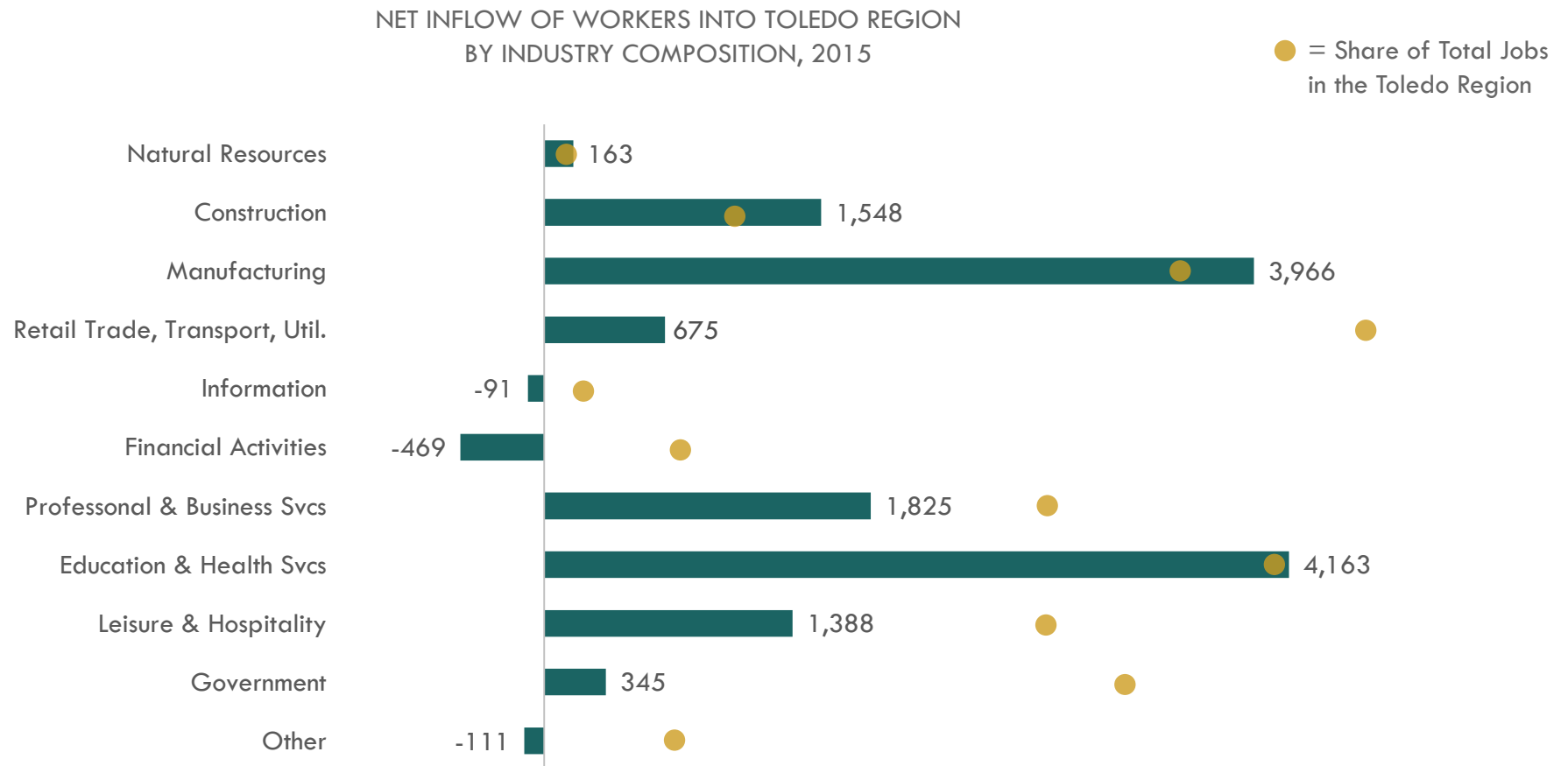


SOURCE: AVALANCHE CONSULTING / US CENSUS BUREAU



Net Worker Flow by Industry

The flow of workers within a community can illuminate a disconnect between the skills of residents and locally available employment opportunities. Industries with high levels of net inflows represent areas in which the community possesses more jobs than workers. For most industries, the Toledo region imports workers. Comparing flows to the employment share by industry, it is clear that **construction and manufacturing workers commute into the region at much higher levels than workers in other industries. Manufacturing and construction are industries with large labor shortages, which are clearly not helped by a lack of local workforce and having to recruit workers in from outside the region.** Other lower paying industries like Retail, Transportation and Hospitality have a much smaller commuter workforce. Government workers live where they work on average.



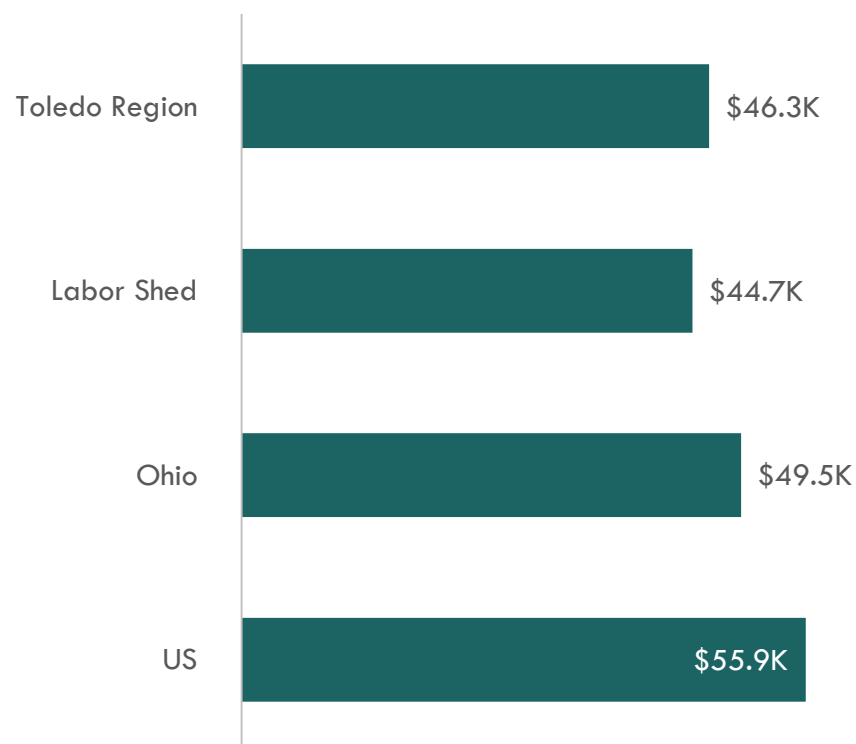
SOURCE: AVALANCHE CONSULTING / EMSI / US CENSUS BUREAU



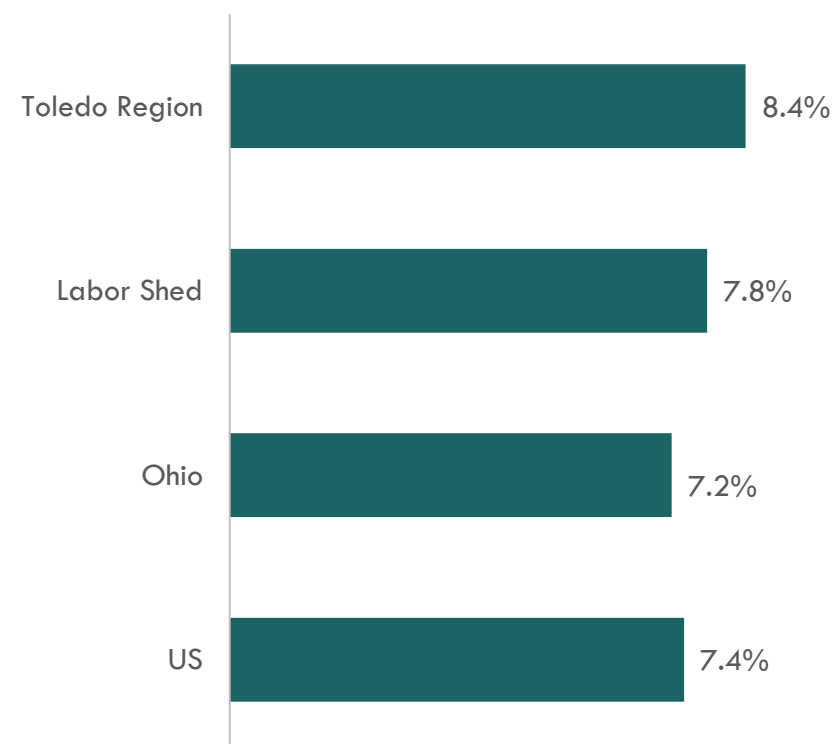
Average Annual Wages & Unemployment

Workers living outside the region make a slightly lower average salary, but not by much. Typically, metro economies pay higher salaries that draw more workers to commute in or relocate in. Given the comparable wage levels, it appears that **commuters from outside the region include both highly paid workers and lower-pay workers**. And, workers living outside the region have a lower unemployment rate than those living inside the region, primarily due to high unemployment rates of Fulton County residents.

AVERAGE ANNUAL SALARY, 2017
RESIDENT WORKERS



UNEMPLOYMENT RATE, 2016
RESIDENT WORKERS, FIVE-YEAR AVG.



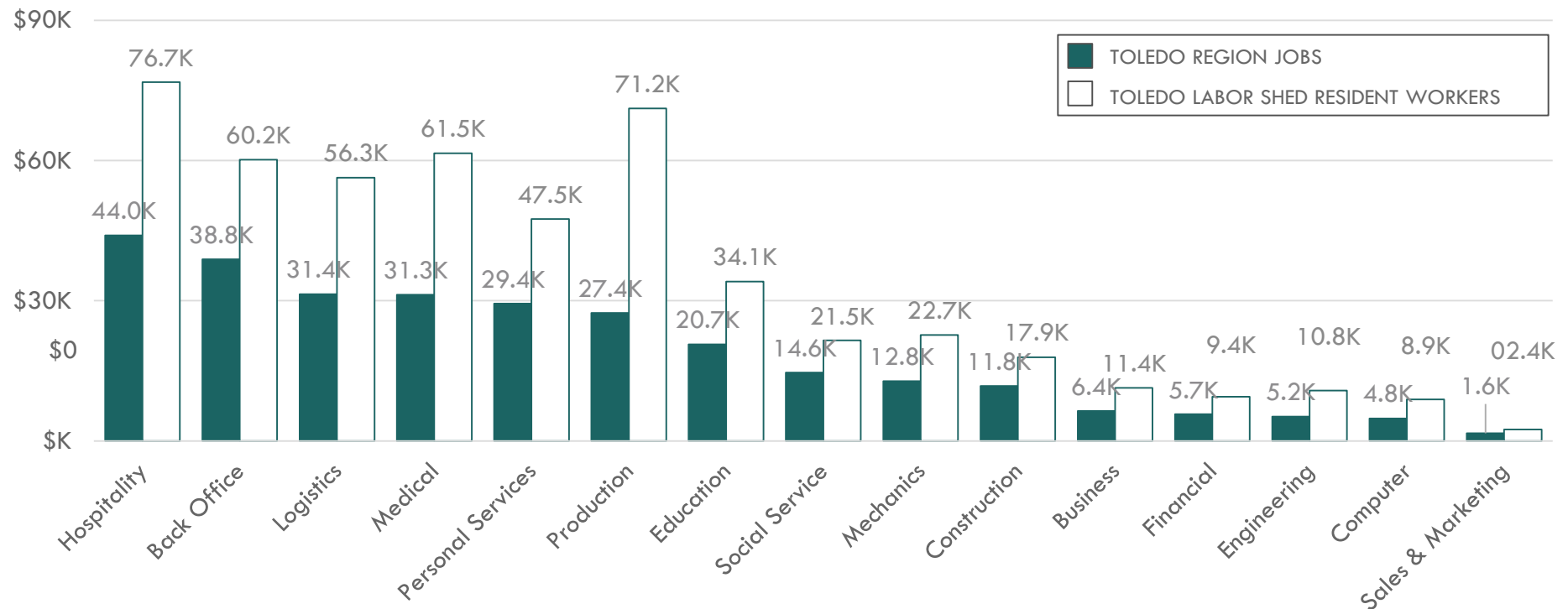
SOURCE: AVALANCHE CONSULTING / EMSI / US CENSUS BUREAU



Cluster Composition – Region Versus Labor Shed

The labor shed represents additional capacity of workers that can fill local jobs across all occupational clusters, with some occupation having a much larger potential workforce. Employers within the region can potentially attract workers currently residing in the labor shed by promoting available job opportunities, offering competitive wages, or providing a supportive work environment. For example, there are slightly more than 27,000 Production (manufacturing) workers employed in the Toledo region, but 71,000 Production workers reside across the region's entire labor shed. **Manufacturers have the most to gain** by drawing on workers in the labor shed, which is 2.6x in size relative to job demand. Other clusters in the Toledo region with high ratios of labor shed workforce to local jobs are **Engineering, Medical, IT/Computer, and Logistics**. Of course, **attracting these workers across the labor shed to commute into the Toledo region will depend greatly on transportation costs and wage differentials.**

TOLEDO REGION EMPLOYMENT VERSUS LABOR SHED RESIDENT WORKERS
(15 LARGEST CLUSTERS), 2017

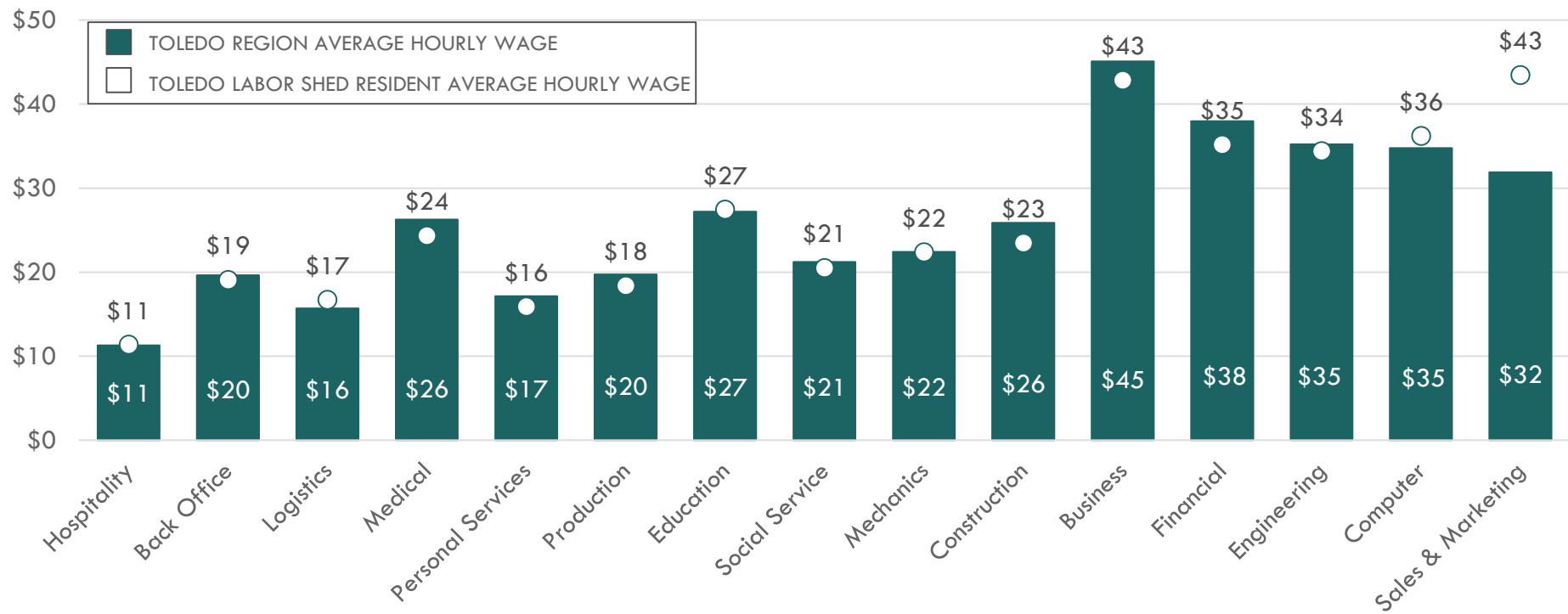


SOURCE: AVALANCHE CONSULTING / EMSI / US CENSUS BUREAU

Cluster Composition – Region Versus Labor Shed

Jobs within the Toledo region are typically characterized by higher wages than similar positions located in the broader labor shed. The average hourly wage for Construction workers in the Toledo region, for example, is approximately 10% higher than for Construction workers living in the labor shed. Other clusters in the Toledo region with average hourly wages at least 5% higher than those earned by workers living the labor shed include Business, Financial, Medical, Personal Services, and Production occupations. **Still, a higher differential between local and outside wage levels would yield a larger commuter workforce and/or attract more individuals to move to the Toledo region.**

TOLEDO REGION AVERAGE HOURLY WAGE VERSUS LABOR SHED RESIDENT WORKER AVERAGE HOURLY WAGE
(15 LARGEST CLUSTERS), 2017



SOURCE: AVALANCHE CONSULTING / EMSI / US CENSUS BUREAU



02

**Occupational
Profiles**

About the Occupational Profiles

The Occupational Profiles Supplemental Report includes more in-depth information on key occupations for the Toledo region. Seven occupation sectors were selected that reflect target competencies that are most in-demand and usually critical to the region's economic development target industries:

- Back Office/Financial
- Engineering
- Information Technology / Math
- Logistics
- Mechanic/Repair
- Medical
- Production

These occupation groups strongly support the region's largest primary industries (Manufacturing, Logistics, Healthcare, and Business/Financial). They are also comprised of workers with specialized skills that are served by the educational institutions in the region. Credentials typically require a Certificate or higher, with some clusters requiring large numbers of Associate's and Bachelor's graduates. The Supply-Demand Gap Analysis also identified these clusters as being high-demand and in some cases, short on graduate supply.

About the Occupational Profiles

Each Occupational Profile provides information on the leading occupations within the sector, including:

- 2017 Employment
- Projected Employment % Growth (2017-2022)
- Projected Annual Openings (2017-2022)
- Median Wage and Entry-Level Wage, with US comparison
- Typical Education Requirement

All data is for the four-county Toledo region, with a US comparison for wage.

This Occupational Profiles Supplemental Report is designed to be a standalone document that can be shared with students and job seekers via websites at workforce agencies, colleges, and K-12 schools. Career awareness must be both supply- and demand-driven. That is, students must balance the pursuit of their passions and educational interests with the understanding of a demand for specific skills and careers. Students must know if an occupation is growing, how much it pays, and how much education is required – all of which combine to form an ROI and risk assessment of a student's specific career path. And, career advancement often involves acquiring more skills on the job or getting additional education – career pathing can be an important part of career planning. For example, the data in this report can show a student how he or she can advance from being a Home Health Aide with a short-term certificate to a Registered Nurse with another 2-3 years of education.

In addition, this report should be shared with employers so they can see what future projections of demand look like (Are we going to compete with others to hire a specific skilled worker?) and what competitive wages look like (Are we paying enough to find the workers we need?)

Data Sources

Data in these occupation profiles is sourced from EMSI, a leading data provider.

EMSI

EMSI provides detailed employment forecasts by industry for individual counties and metros, using proprietary methods to fill in gaps in publicly available data and to produce custom forecasts. Their data is based on the US Bureau of Labor Statistics' Occupational Employment Statistics (OES) survey and the US Census Bureau's American Community Survey.

Bureau of Labor Statistics (BLS)

The BLS produces annual estimates of employment and wage levels by occupation for metros, states, and the US based on a statistical survey of businesses. The BLS also estimates job openings by occupation using a unique methodology that determines when positions open up due to workers retiring or changing careers.

Avalanche Consulting conducted the analysis and uses a custom taxonomy that groups occupations into specific occupation clusters.

Back Office/Financial Occupations

With 100 or more jobs; Requiring a Certificate or higher

CODE	OCCUPATION	----- PROJECTED -----				MEDIAN WAGE		VERSUS US		ENTRY WAGE		VERSUS US		TYPICAL EDUCATION
		'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS										
11-1011	Chief Executives	283	-0.4%	135		\$93.04			6%	\$42.72			30%	B
11-1021	General and Operations Managers	3,355	5.4%	2,052		\$43.65			10%	\$15.21			29%	B
11-2021	Marketing Managers	193	13.3%	176		\$52.87			17%	\$30.64			7%	B
11-2022	Sales Managers	408	9.2%	438		\$51.67			11%	\$34.02			23%	B
11-3011	Administrative Services Managers	482	5.0%	486		\$37.97			16%	\$21.54			15%	B
11-3031	Financial Managers	785	12.7%	589		\$48.03			20%	\$28.01			12%	B
11-3061	Purchasing Managers	100	9.4%	84		\$46.80			16%	\$32.62			2%	B
11-3121	Human Resources Managers	194	9.3%	163		\$49.46			7%	\$28.32			9%	B
13-1041	Compliance Officers	332	7.0%	212		\$26.14			20%	\$16.47			10%	B
13-1051	Cost Estimators	557	5.7%	301		\$29.70			2%	\$19.59			10%	B
13-1071	Human Resources Specialists	804	5.7%	494		\$26.02			10%	\$16.43			5%	B
13-1075	Labor Relations Specialists	578	-12.3%	249		\$9.90			67%	\$8.37			8%	B
13-1081	Logisticians	201	9.1%	167		\$34.49			4%	\$23.79			10%	B
13-1111	Management Analysts	416	9.9%	252		\$30.04			24%	\$19.40			14%	B
13-1131	Fundraisers	284	0.7%	213		\$14.37			46%	\$8.89			44%	B
13-1141	Compensation, Benefits, and Job Ana...	165	4.1%	86		\$29.37			3%	\$16.88			10%	B
13-1151	Training and Development Specialist...	379	7.5%	309		\$26.05			10%	\$13.24			17%	B
13-1161	Market Research Analysts and Market...	925	11.6%	1,089		\$25.68			16%	\$16.11			3%	B
13-2011	Accountants and Auditors	1,968	4.7%	1,755		\$30.46			9%	\$20.55			1%	B
13-2021	Appraisers and Assessors of Real Es...	121	0.0%	68		\$29.57			14%	\$18.21			33%	B
13-2051	Financial Analysts	128	20.1%	108		\$30.00			26%	\$20.36			18%	B
13-2052	Personal Financial Advisors	196	6.4%	169		\$33.55			23%	\$22.04			12%	B
13-2072	Loan Officers	358	5.0%	165		\$36.73			18%	\$18.17			16%	B
27-3031	Public Relations Specialists	375	3.4%	192		\$20.86			27%	\$13.65			14%	B
41-3031	Securities, Commodities, and Financ...	650	0.7%	428		\$30.78			0%	\$16.93			7%	B
41-9022	Real Estate Sales Agents	259	-1.0%	127		\$18.80			15%	\$13.43			21%	C



Engineering Occupations

With 50 or more jobs; Requiring a Certificate or higher

CODE	OCCUPATION	----- PROJECTED -----			MEDIAN WAGE	VERSUS US	ENTRY WAGE	VERSUS US	TYPICAL EDUCATION				
		'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS									
11-9041	Architectural and Engineering Manag...	313	6.4%	176	\$56.74	<div><div></div></div>	<div><div></div></div>	14%	\$41.18	<div><div></div></div>	<div><div></div></div>	3%	B
11-9121	Natural Sciences Managers	55	16.2%	35	\$54.02	<div><div></div></div>	<div><div></div></div>	6%	\$30.05	<div><div></div></div>	<div><div></div></div>	1%	B
17-2011	Aerospace Engineers	73	5.5%	42	\$45.77	<div><div></div></div>	<div><div></div></div>	16%	\$30.12	<div><div></div></div>	<div><div></div></div>	12%	B
17-2041	Chemical Engineers	61	8.6%	40	\$41.93	<div><div></div></div>	<div><div></div></div>	15%	\$18.81	<div><div></div></div>	<div><div></div></div>	37%	B
17-2051	Civil Engineers	399	-0.8%	211	\$36.70	<div><div></div></div>	<div><div></div></div>	10%	\$23.58	<div><div></div></div>	<div><div></div></div>	9%	B
17-2112	Industrial Engineers	826	10.5%	413	\$37.36	<div><div></div></div>	<div><div></div></div>	10%	\$25.22	<div><div></div></div>	<div><div></div></div>	5%	B
17-2131	Materials Engineers	102	5.9%	52	\$43.33	<div><div></div></div>	<div><div></div></div>	5%	\$28.53	<div><div></div></div>	<div><div></div></div>	4%	B
17-2141	Mechanical Engineers	566	9.0%	287	\$35.58	<div><div></div></div>	<div><div></div></div>	14%	\$23.27	<div><div></div></div>	<div><div></div></div>	12%	B
17-2161	Nuclear Engineers	97	23.8%	71	\$43.91	<div><div></div></div>	<div><div></div></div>	14%	\$30.49	<div><div></div></div>	<div><div></div></div>	4%	B
17-2171	Petroleum Engineers	111	6.8%	48	\$44.12	<div><div></div></div>	<div><div></div></div>	31%	\$31.58	<div><div></div></div>	<div><div></div></div>	12%	B
17-2199	Engineers, All Other	245	6.1%	110	\$41.17	<div><div></div></div>	<div><div></div></div>	12%	\$24.58	<div><div></div></div>	<div><div></div></div>	1%	B
17-3011	Architectural and Civil Drafters	142	-1.4%	50	\$22.32	<div><div></div></div>	<div><div></div></div>	12%	\$15.18	<div><div></div></div>	<div><div></div></div>	7%	A
17-3013	Mechanical Drafters	143	3.7%	59	\$25.53	<div><div></div></div>	<div><div></div></div>	4%	\$16.50	<div><div></div></div>	<div><div></div></div>	2%	A
17-3019	Drafters, All Other	59	1.7%	23	\$26.65	<div><div></div></div>	<div><div></div></div>	10%	\$16.63	<div><div></div></div>	<div><div></div></div>	7%	A
17-3022	Civil Engineering Technicians	152	-2.8%	50	\$24.51	<div><div></div></div>	<div><div></div></div>	1%	\$17.32	<div><div></div></div>	<div><div></div></div>	12%	A
17-3026	Industrial Engineering Technicians	144	6.8%	72	\$23.88	<div><div></div></div>	<div><div></div></div>	9%	\$19.17	<div><div></div></div>	<div><div></div></div>	17%	A
17-3027	Mechanical Engineering Technicians	110	4.6%	47	\$22.64	<div><div></div></div>	<div><div></div></div>	15%	\$14.82	<div><div></div></div>	<div><div></div></div>	10%	A
17-3029	Engineering Technicians, Except Dra...	125	5.4%	58	\$28.59	<div><div></div></div>	<div><div></div></div>	4%	\$18.04	<div><div></div></div>	<div><div></div></div>	7%	A
17-3031	Surveying and Mapping Technicians	103	-1.5%	54	\$17.88	<div><div></div></div>	<div><div></div></div>	14%	\$11.02	<div><div></div></div>	<div><div></div></div>	14%	C
19-1042	Medical Scientists, Except Epidemio...	136	12.8%	106	\$32.34	<div><div></div></div>	<div><div></div></div>	18%	\$18.15	<div><div></div></div>	<div><div></div></div>	16%	D
19-2031	Chemists	164	8.9%	99	\$29.44	<div><div></div></div>	<div><div></div></div>	18%	\$19.17	<div><div></div></div>	<div><div></div></div>	7%	B
19-2041	Environmental Scientists and Specia...	199	-0.5%	113	\$34.26	<div><div></div></div>	<div><div></div></div>	3%	\$23.83	<div><div></div></div>	<div><div></div></div>	19%	B
19-4021	Biological Technicians	219	5.6%	189	\$23.30	<div><div></div></div>	<div><div></div></div>	11%	\$14.24	<div><div></div></div>	<div><div></div></div>	2%	B
19-4031	Chemical Technicians	144	10.0%	133	\$21.80	<div><div></div></div>	<div><div></div></div>	4%	\$15.75	<div><div></div></div>	<div><div></div></div>	13%	A
19-4051	Nuclear Technicians	57	23.6%	50	\$29.89	<div><div></div></div>	<div><div></div></div>	23%	\$19.21	<div><div></div></div>	<div><div></div></div>	17%	A
19-4091	Environmental Science and Protectio...	114	2.5%	65	\$15.12	<div><div></div></div>	<div><div></div></div>	31%	\$8.69	<div><div></div></div>	<div><div></div></div>	36%	A



Information Technology / Math Occupations

CODE	OCCUPATION	----- PROJECTED -----			MEDIAN WAGE	VERSUS US	ENTRY WAGE	VERSUS US	TYPICAL EDUCATION
		'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS					
11-3021	Computer and Information Systems Ma...	429	8.6%	455	\$51.81	23%	\$35.42	12%	B
15-1121	Computer Systems Analysts	560	7.5%	411	\$35.90	15%	\$23.85	8%	B
15-1122	Information Security Analysts	42	27.9%	39	\$32.55	29%	\$20.81	22%	B
15-1131	Computer Programmers	182	-0.2%	121	\$34.77	12%	\$20.20	11%	B
15-1132	Software Developers, Applications	766	14.3%	666	\$35.83	27%	\$16.35	43%	B
15-1133	Software Developers, Systems Softwa...	68	34.6%	80	\$37.65	27%	\$28.34	10%	B
15-1134	Web Developers	128	4.5%	94	\$29.95	8%	\$14.96	16%	A
15-1141	Database Administrators	145	6.1%	100	\$32.53	22%	\$21.05	10%	B
15-1142	Network and Computer Systems Admini...	486	4.8%	330	\$33.72	14%	\$22.46	6%	B
15-1143	Computer Network Architects	102	9.4%	58	\$39.20	22%	\$25.84	8%	B
15-1151	Computer User Support Specialists	772	6.0%	535	\$18.11	25%	\$12.18	17%	C
15-1152	Computer Network Support Specialist...	337	5.6%	232	\$23.36	22%	\$16.13	9%	A
15-1199	Computer Occupations, All Other	183	10.7%	120	\$26.90	37%	\$16.70	25%	B
15-2011	Actuaries	26	18.2%	19	\$39.95	18%	\$22.72	21%	B
15-2031	Operations Research Analysts	62	21.6%	45	\$41.47	6%	\$25.17	16%	B
15-2041	Statisticians	28	21.3%	21	\$28.03	31%	\$16.46	32%	M
17-2061	Computer Hardware Engineers	21	25.1%	17	\$52.29	6%	\$33.26	4%	B
17-2071	Electrical Engineers	291	8.9%	184	\$39.38	14%	\$23.59	19%	B
17-2072	Electronics Engineers, Except Compu...	172	10.6%	140	\$39.74	19%	\$23.21	25%	B
17-3012	Electrical and Electronics Drafters...	41	6.0%	18	\$28.80	0%	\$13.34	23%	A
17-3023	Electrical and Electronic Engineeri...	91	12.4%	47	\$31.95	4%	\$13.93	23%	A
17-3024	Electro-Mechanical Technicians	15	10.0%	7	\$26.53	3%	\$18.53	5%	A

Logistics Occupations

With 50 or more jobs; Requiring a HS Diploma or higher

CODE	OCCUPATION	----- PROJECTED -----			MEDIAN WAGE	VERSUS US	ENTRY WAGE	VERSUS US	TYPICAL EDUCATION
		'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS					
11-3071	Transportation, Storage, and Distri...	293	4.9%	228	\$41.06	□ 8%	\$27.37	□ 5%	HS
43-5011	Cargo and Freight Agents	74	0.8%	39	\$18.88	□ 6%	\$13.21	□ 7%	HS
43-5021	Couriers and Messengers	180	2.6%	111	\$11.75	□ 13%	\$9.64	□ 0%	HS
43-5061	Production, Planning, and Expeditin...	700	4.4%	505	\$22.97	□ 2%	\$14.21	□ 4%	HS
43-5071	Shipping, Receiving, and Traffic Cl...	1,696	0.2%	964	\$14.93	□ 2%	\$10.11	□ 3%	HS
43-5111	Weighers, Measurers, Checkers, and ...	101	0.0%	57	\$15.53	□ 7%	\$11.21	□ 14%	HS
53-3021	Bus Drivers, Transit and Intercity	308	-1.1%	195	\$20.06	□ 2%	\$11.13	□ 7%	HS
53-3022	Bus Drivers, School or Special Clie...	372	-0.5%	243	\$14.27	□ 4%	\$9.75	□ 8%	HS
53-3031	Driver/Sales Workers	1,046	-5.4%	615	\$9.70	□ 16%	\$8.68	□ 2%	HS
53-3032	Heavy and Tractor-Trailer Truck Dri...	5,059	4.0%	3,346	\$18.72	□ 8%	\$13.57	□ 3%	C
53-3033	Light Truck or Delivery Services Dr...	2,188	5.8%	1,498	\$12.66	□ 16%	\$8.89	□ 6%	HS
53-3099	Motor Vehicle Operators, All Other	373	4.2%	247	\$11.57	□ 10%	\$8.87	□ 1%	HS
53-5021	Captains, Mates, and Pilots of Wate...	69	6.0%	32	\$26.98	□ 21%	\$13.70	□ 20%	B
53-6099	Transportation Workers, All Other	61	2.2%	28	\$12.64	□ 28%	\$9.58	□ 6%	HS
53-7021	Crane and Tower Operators	162	3.9%	89	\$18.70	□ 25%	\$14.31	□ 4%	HS

Mechanic/Repair Occupations

With 50 or more jobs; Requiring a Certificate or higher

CODE	OCCUPATION	----- PROJECTED -----			MEDIAN WAGE	VERSUS US	ENTRY WAGE	VERSUS US	TYPICAL EDUCATION
		'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS					
49-2011	Computer, Automated Teller, and Off...	207	-6.5%	38	\$14.46	<input type="checkbox"/> 20%	\$9.95	<input type="checkbox"/> 12%	C
49-2022	Telecommunications Equipment Instal...	304	6.6%	321	\$22.72	<input type="checkbox"/> 11%	\$9.50	<input type="checkbox"/> 36%	C
49-2094	Electrical and Electronics Repairer...	157	4.9%	106	\$27.48	<input type="checkbox"/> 0%	\$19.97	<input type="checkbox"/> 18%	C
49-2097	Electronic Home Entertainment Equip...	97	-8.4%	43	\$20.61	<input type="checkbox"/> 15%	\$12.94	<input type="checkbox"/> 23%	C
49-3011	Aircraft Mechanics and Service Tech...	152	1.8%	81	\$31.58	<input type="checkbox"/> 8%	\$21.50	<input type="checkbox"/> 24%	C
49-3021	Automotive Body and Related Repaire...	215	2.2%	139	\$17.56	<input type="checkbox"/> 13%	\$10.71	<input type="checkbox"/> 12%	C
49-3023	Automotive Service Technicians and ...	1,497	3.6%	998	\$18.16	<input type="checkbox"/> 5%	\$10.58	<input type="checkbox"/> 3%	C
49-3031	Bus and Truck Mechanics and Diesel ...	717	4.0%	483	\$18.87	<input type="checkbox"/> 15%	\$13.28	<input type="checkbox"/> 9%	C
49-3041	Farm Equipment Mechanics and Servic...	79	-1.1%	38	\$18.49	<input type="checkbox"/> 2%	\$12.94	<input type="checkbox"/> 3%	C
49-3042	Mobile Heavy Equipment Mechanics, E...	231	5.7%	132	\$27.15	<input type="checkbox"/> 11%	\$18.43	<input type="checkbox"/> 15%	C
49-3051	Motorboat Mechanics and Service Tec...	64	-3.4%	56	\$18.37	<input type="checkbox"/> 2%	\$13.31	<input type="checkbox"/> 16%	C
49-3053	Outdoor Power Equipment and Other S...	106	2.8%	88	\$11.67	<input type="checkbox"/> 29%	\$8.17	<input type="checkbox"/> 23%	C
49-9021	Heating, Air Conditioning, and Refr...	758	18.0%	577	\$20.68	<input type="checkbox"/> 9%	\$11.74	<input type="checkbox"/> 16%	C
49-9031	Home Appliance Repairers	57	-4.1%	48	\$18.49	<input type="checkbox"/> 1%	\$9.10	<input type="checkbox"/> 18%	C
49-9041	Industrial Machinery Mechanics	1,282	8.2%	1,300	\$26.16	<input type="checkbox"/> 6%	\$15.95	<input type="checkbox"/> 0%	C
49-9043	Maintenance Workers, Machinery	84	14.6%	64	\$24.39	<input type="checkbox"/> 11%	\$15.68	<input type="checkbox"/> 16%	C
49-9044	Millwrights	415	5.8%	264	\$32.16	<input type="checkbox"/> 24%	\$19.55	<input type="checkbox"/> 22%	C
49-9051	Electrical Power-Line Installers an...	107	35.4%	124	\$36.45	<input type="checkbox"/> 9%	\$31.37	<input type="checkbox"/> 73%	C
49-9052	Telecommunications Line Installers ...	290	11.4%	218	\$15.63	<input type="checkbox"/> 41%	\$10.82	<input type="checkbox"/> 23%	C
49-9071	Maintenance and Repair Workers, Gen...	3,065	2.1%	1,833	\$19.26	<input type="checkbox"/> 6%	\$11.37	<input type="checkbox"/> 4%	C

Medical Occupations



























With 25 or more jobs; Requiring a Bachelor's or higher

CODE	OCCUPATION	----- PROJECTED -----				MEDIAN WAGE		VERSUS US	ENTRY WAGE		VERSUS US	TYPICAL EDUCATION		
		'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS										
11-9111	Medical and Health Services Manager...	805	6.3%	561	<div><div></div></div>	\$43.24	<div><div></div></div>	<div><div></div></div>	9%	\$28.12	<div><div></div></div>	<div><div></div></div>	0%	B
19-3031	Clinical, Counseling, and School Ps...	194	7.0%	132	<div><div></div></div>	\$36.36	<div><div></div></div>	<div><div></div></div>	1%	\$23.32	<div><div></div></div>	<div><div></div></div>	14%	D
29-1011	Chiropractors	81	6.7%	53	<div><div></div></div>	\$69.97	<div><div></div></div>	<div><div></div></div>	112%	\$31.24	<div><div></div></div>	<div><div></div></div>	88%	D
29-1021	Dentists, General	213	7.7%	167	<div><div></div></div>	\$86.54	<div><div></div></div>	<div><div></div></div>	19%	\$29.03	<div><div></div></div>	<div><div></div></div>	13%	D
29-1031	Dietitians and Nutritionists	144	1.6%	57	<div><div></div></div>	\$27.87	<div><div></div></div>	<div><div></div></div>	2%	\$21.33	<div><div></div></div>	<div><div></div></div>	20%	B
29-1041	Optometrists	65	8.9%	30	<div><div></div></div>	\$54.28	<div><div></div></div>	<div><div></div></div>	2%	\$31.08	<div><div></div></div>	<div><div></div></div>	20%	D
29-1051	Pharmacists	844	-4.4%	274	<div><div></div></div>	\$55.70	<div><div></div></div>	<div><div></div></div>	7%	\$14.24	<div><div></div></div>	<div><div></div></div>	66%	D
29-1061	Anesthesiologists	70	9.8%	39	<div><div></div></div>	\$112.39	<div><div></div></div>	<div><div></div></div>	10%	\$88.88	<div><div></div></div>	<div><div></div></div>	50%	D
29-1062	Family and General Practitioners	275	8.3%	149	<div><div></div></div>	\$121.61	<div><div></div></div>	<div><div></div></div>	27%	\$79.31	<div><div></div></div>	<div><div></div></div>	125%	D
29-1063	Internists, General	150	5.4%	69	<div><div></div></div>	\$88.41	<div><div></div></div>	<div><div></div></div>	5%	\$28.25	<div><div></div></div>	<div><div></div></div>	0%	D
29-1064	Obstetricians and Gynecologists	59	6.8%	28	<div><div></div></div>	\$102.37	<div><div></div></div>	<div><div></div></div>	13%	\$29.43	<div><div></div></div>	<div><div></div></div>	34%	D
29-1065	Pediatricians, General	80	7.3%	39	<div><div></div></div>	\$78.74	<div><div></div></div>	<div><div></div></div>	5%	\$46.44	<div><div></div></div>	<div><div></div></div>	17%	D
29-1066	Psychiatrists	61	2.7%	35	<div><div></div></div>	\$93.76	<div><div></div></div>	<div><div></div></div>	4%	\$48.89	<div><div></div></div>	<div><div></div></div>	42%	D
29-1067	Surgeons	104	7.1%	58	<div><div></div></div>	\$103.22	<div><div></div></div>	<div><div></div></div>	6%	\$33.56	<div><div></div></div>	<div><div></div></div>	21%	D
29-1069	Physicians and Surgeons, All Other	537	8.0%	423	<div><div></div></div>	\$96.51	<div><div></div></div>	<div><div></div></div>	7%	\$26.78	<div><div></div></div>	<div><div></div></div>	8%	D
29-1071	Physician Assistants	240	16.4%	141	<div><div></div></div>	\$41.46	<div><div></div></div>	<div><div></div></div>	18%	\$21.19	<div><div></div></div>	<div><div></div></div>	34%	M
29-1081	Podiatrists	29	-37.6%	(1)	<div><div></div></div>	\$62.90	<div><div></div></div>	<div><div></div></div>	2%	\$27.21	<div><div></div></div>	<div><div></div></div>	11%	D
29-1122	Occupational Therapists	246	5.3%	142	<div><div></div></div>	\$36.49	<div><div></div></div>	<div><div></div></div>	9%	\$26.46	<div><div></div></div>	<div><div></div></div>	1%	M
29-1123	Physical Therapists	389	4.6%	188	<div><div></div></div>	\$42.42	<div><div></div></div>	<div><div></div></div>	2%	\$30.72	<div><div></div></div>	<div><div></div></div>	8%	D
29-1125	Recreational Therapists	40	-3.2%	18	<div><div></div></div>	\$20.65	<div><div></div></div>	<div><div></div></div>	10%	\$13.12	<div><div></div></div>	<div><div></div></div>	8%	B
29-1127	Speech-Language Pathologists	351	4.1%	180	<div><div></div></div>	\$35.30	<div><div></div></div>	<div><div></div></div>	4%	\$21.76	<div><div></div></div>	<div><div></div></div>	7%	M
29-1131	Veterinarians	130	9.7%	87	<div><div></div></div>	\$47.17	<div><div></div></div>	<div><div></div></div>	9%	\$26.51	<div><div></div></div>	<div><div></div></div>	2%	D
29-1151	Nurse Anesthetists	116	3.6%	60	<div><div></div></div>	\$92.62	<div><div></div></div>	<div><div></div></div>	17%	\$69.65	<div><div></div></div>	<div><div></div></div>	31%	M
29-1171	Nurse Practitioners	322	16.1%	224	<div><div></div></div>	\$49.18	<div><div></div></div>	<div><div></div></div>	2%	\$41.40	<div><div></div></div>	<div><div></div></div>	15%	M
29-1181	Audiologists	24	4.5%	10	<div><div></div></div>	\$37.01	<div><div></div></div>	<div><div></div></div>	1%	\$27.79	<div><div></div></div>	<div><div></div></div>	13%	D
29-1199	Health Diagnosing and Treating Prac...	32	0.2%	17	<div><div></div></div>	\$38.29	<div><div></div></div>	<div><div></div></div>	8%	\$24.07	<div><div></div></div>	<div><div></div></div>	22%	M
29-9011	Occupational Health and Safety Spec...	273	2.5%	267	<div><div></div></div>	\$32.73	<div><div></div></div>	<div><div></div></div>	5%	\$20.58	<div><div></div></div>	<div><div></div></div>	3%	B
29-9091	Athletic Trainers	44	-0.6%	41	<div><div></div></div>	\$25.76	<div><div></div></div>	<div><div></div></div>	15%	\$14.18	<div><div></div></div>	<div><div></div></div>	8%	B
29-9099	Healthcare Practitioners and Techni...	36	6.3%	59	<div><div></div></div>	\$27.16	<div><div></div></div>	<div><div></div></div>	10%	\$14.43	<div><div></div></div>	<div><div></div></div>	12%	B



Medical Occupations

With 50 or more jobs; Requiring a Associate's

CODE	OCCUPATION	----- PROJECTED -----			MEDIAN WAGE	VERSUS US	ENTRY WAGE	VERSUS US	TYPICAL EDUCATION
		'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS					
29-1124	Radiation Therapists	32	5.2%	18	\$38.82	 0%	\$29.01	 9%	A
29-1126	Respiratory Therapists	412	3.6%	203	\$27.35	 5%	\$21.53	 4%	A
29-1141	Registered Nurses	6,575	2.4%	3,274	\$30.34	 10%	\$24.56	 5%	A
29-2021	Dental Hygienists	627	6.3%	436	\$29.27	 18%	\$21.23	 14%	A
29-2031	Cardiovascular Technologists and Te...	171	-2.2%	91	\$26.25	 1%	\$17.57	 27%	A
29-2032	Diagnostic Medical Sonographers	103	7.4%	67	\$29.46	 14%	\$24.85	 2%	A
29-2033	Nuclear Medicine Technologists	51	-1.4%	28	\$32.78	 10%	\$26.36	 1%	A
29-2034	Radiologic Technologists	466	0.6%	269	\$28.40	 1%	\$21.57	 13%	A
29-2035	Magnetic Resonance Imaging Technolo...	48	2.8%	27	\$33.77	 0%	\$25.91	 11%	A
29-2051	Dietetic Technicians	34	7.9%	23	\$13.66	 7%	\$9.75	 7%	A
29-2056	Veterinary Technologists and Techni...	149	11.1%	114	\$14.47	 10%	\$10.55	 4%	A
31-2011	Occupational Therapy Assistants	327	-0.8%	333	\$25.83	 9%	\$20.51	 9%	A
31-2021	Physical Therapist Assistants	460	0.1%	510	\$26.96	 2%	\$21.13	 22%	A

Medical Occupations

With 50 or more jobs; Requiring a Certificate

CODE	OCCUPATION	----- PROJECTED -----				MEDIAN WAGE	VERSUS US	ENTRY WAGE	VERSUS US	TYPICAL EDUCATION
		'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS						
29-2041	Emergency Medical Technicians and P...	588	-12.5%	238		\$15.13		\$11.03		C
29-2052	Pharmacy Technicians	1,166	-3.2%	614		\$13.08		\$9.69		C
29-2053	Psychiatric Technicians	97	-1.7%	58		\$17.12		\$13.30		C
29-2055	Surgical Technologists	195	1.0%	123		\$22.03		\$17.66		C
29-2057	Ophthalmic Medical Technicians	76	13.0%	60		\$17.55		\$14.07		C
29-2061	Licensed Practical and Licensed Voc...	2,135	1.7%	1,395		\$21.50		\$16.50		C
29-2071	Medical Records and Health Informat...	575	3.0%	512		\$17.68		\$12.99		C
29-2099	Health Technologists and Technician...	345	3.0%	346		\$17.93		\$14.01		C
31-1011	Home Health Aides	2,867	19.7%	4,928		\$9.92		\$8.75		C
31-1013	Psychiatric Aides	59	2.2%	84		\$12.95		\$9.01		C
31-1014	Nursing Assistants	3,328	1.8%	4,677		\$12.44		\$10.07		C
31-1015	Orderlies	163	-3.6%	213		\$13.62		\$10.52		C
31-2022	Physical Therapist Aides	42	6.4%	34		\$14.34		\$10.66		C
31-9011	Massage Therapists	123	3.2%	80		\$14.88		\$8.94		C
31-9091	Dental Assistants	583	8.5%	462		\$17.33		\$13.23		C
31-9092	Medical Assistants	2,189	10.0%	2,127		\$15.17		\$11.31		C
31-9093	Medical Equipment Preparers	68	3.6%	62		\$14.80		\$10.81		C
31-9094	Medical Transcriptionists	73	-1.0%	62		\$19.13		\$14.21		C
31-9095	Pharmacy Aides	39	-6.1%	30		\$11.41		\$8.22		C
31-9096	Veterinary Assistants and Laborator...	186	9.1%	183		\$10.80		\$8.76		C
31-9097	Phlebotomists	362	4.4%	332		\$17.77		\$13.52		C
31-9099	Healthcare Support Workers, All Oth...	245	0.1%	209		\$14.57		\$8.85		C

Production Occupations

Requiring a Certificate or higher

CODE	OCCUPATION	----- PROJECTED -----			MEDIAN WAGE	VERSUS US	ENTRY WAGE	VERSUS US	TYPICAL EDUCATION
		'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS					
11-3051	Industrial Production Managers	639	3.9%	529	\$46.82	□ 3%	\$30.73	□ 4%	B
51-1011	First-Line Supervisors of Productio...	1,980	3.1%	1,456	\$29.18	□ 3%	\$17.91	□ 6%	C
51-2011	Aircraft Structure, Surfaces, Riggi...	12	-4.4%	8	\$23.08	□ 10%	\$16.16	□ 3%	C
51-2031	Engine and Other Machine Assemblers...	652	-6.5%	367	\$27.55	□ 32%	\$24.03	□ 83%	C
51-2041	Structural Metal Fabricators and Fi...	116	-2.9%	71	\$16.17	□ 13%	\$10.43	□ 16%	C
51-2091	Fiberglass Laminators and Fabricato...	47	0.5%	33	\$13.42	□ 14%	\$10.04	□ 7%	C
51-4011	Computer-Controlled Machine Tool Op...	376	3.2%	259	\$19.19	□ 2%	\$13.22	□ 5%	C
51-4012	Computer Numerically Controlled Mac...	69	7.7%	34	\$21.23	□ 16%	\$13.16	□ 19%	C
51-4021	Extruding and Drawing Machine Sette...	190	-2.7%	128	\$16.07	□ 3%	\$11.55	□ 5%	C
51-4022	Forging Machine Setters, Operators,...	48	2.0%	30	\$18.22	□ 2%	\$12.92	□ 11%	C
51-4023	Rolling Machine Setters, Operators,...	123	4.2%	81	\$19.28	□ 6%	\$13.86	□ 13%	C
51-4031	Cutting, Punching, and Press Machin...	851	-0.8%	504	\$14.69	□ 8%	\$9.44	□ 12%	C
51-4032	Drilling and Boring Machine Tool Se...	56	-5.8%	30	\$17.69	□ 1%	\$12.21	□ 3%	C
51-4033	Grinding, Lapping, Polishing, and B...	205	-2.4%	121	\$15.93	□ 1%	\$10.42	□ 4%	C
51-4034	Lathe and Turning Machine Tool Sett...	120	-1.7%	72	\$19.67	□ 6%	\$14.23	□ 16%	C
51-4035	Milling and Planing Machine Setters...	116	-4.3%	68	\$22.12	□ 8%	\$15.74	□ 27%	C
51-4041	Machinists	3,030	2.1%	2,001	\$26.42	□ 29%	\$14.70	□ 16%	C
51-4111	Tool and Die Makers	917	-0.4%	576	\$25.70	□ 2%	\$13.35	□ 15%	C
51-4121	Welders, Cutters, Solderers, and Br...	783	8.5%	581	\$16.63	□ 14%	\$12.44	□ 6%	C
51-4122	Welding, Soldering, and Brazing Mac...	237	-2.9%	139	\$17.15	□ 4%	\$13.00	□ 7%	C
51-4191	Heat Treating Equipment Setters, Op...	109	-7.9%	57	\$15.55	□ 13%	\$10.90	□ 10%	C
51-4193	Plating and Coating Machine Setters...	150	-8.6%	80	\$19.58	□ 28%	\$13.57	□ 27%	C
51-4194	Tool Grinders, Filers, and Sharpene...	22	1.3%	15	\$17.23	□ 2%	\$11.91	□ 6%	C
51-5111	Prepress Technicians and Workers	85	-12.4%	39	\$18.67	□ 3%	\$12.72	□ 7%	C
51-9141	Semiconductor Processors	68	10.3%	81	\$18.09	□ 3%	\$14.13	□ 13%	A



Production Occupations

With 50 or more jobs; Requiring a High School diploma

CODE	OCCUPATION	----- PROJECTED -----			MEDIAN WAGE	VERSUS US	ENTRY WAGE	VERSUS US	TYPICAL EDUCATION
		'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS					
51-3092	Food Batchmakers	229	-7.5%	141	\$14.13	3%	\$9.62	0%	HS
51-3093	Food Cooking Machine Operators and ...	136	-11.4%	89	\$18.08	32%	\$13.01	37%	HS
51-4051	Metal-Refining Furnace Operators an...	124	0.0%	80	\$17.94	10%	\$12.97	8%	HS
51-4072	Molding, Coremaking, and Casting Ma...	1,365	-6.6%	727	\$14.71	2%	\$11.24	9%	HS
51-4081	Multiple Machine Tool Setters, Oper...	1,373	1.4%	894	\$23.50	40%	\$12.41	13%	HS
51-4199	Metal Workers and Plastic Workers, ...	68	0.1%	43	\$12.97	25%	\$8.60	16%	HS
51-5112	Printing Press Operators	500	-7.4%	236	\$15.99	7%	\$10.84	3%	HS
51-5113	Print Binding and Finishing Workers...	115	-7.1%	64	\$15.16	2%	\$10.22	0%	HS
51-6093	Upholsterers	98	1.9%	69	\$19.23	19%	\$14.04	38%	HS
51-7011	Cabinetmakers and Bench Carpenters	259	3.0%	200	\$15.27	6%	\$11.55	9%	HS
51-7021	Furniture Finishers	61	1.6%	40	\$14.49	4%	\$10.27	1%	HS
51-7042	Woodworking Machine Setters, Operat...	1,021	1.8%	750	\$15.12	8%	\$12.34	25%	HS
51-9021	Crushing, Grinding, and Polishing M...	101	-5.8%	71	\$19.15	13%	\$13.00	17%	HS
51-9023	Mixing and Blending Machine Setters...	520	-2.0%	340	\$17.31	2%	\$11.25	0%	HS
51-9032	Cutting and Slicing Machine Setters...	360	-4.7%	196	\$20.17	25%	\$12.36	15%	HS
51-9041	Extruding, Forming, Pressing, and C...	507	-8.6%	297	\$15.61	4%	\$11.76	7%	HS
51-9051	Furnace, Kiln, Oven, Drier, and Ket...	162	-9.7%	91	\$18.07	0%	\$12.15	3%	HS
51-9061	Inspectors, Testers, Sorters, Sampl...	2,030	-5.3%	1,091	\$18.90	5%	\$11.34	4%	HS
51-9081	Dental Laboratory Technicians	68	-3.2%	48	\$20.71	11%	\$12.16	8%	HS
51-9082	Medical Appliance Technicians	76	-3.8%	48	\$14.35	20%	\$12.15	8%	HS
51-9111	Packaging and Filling Machine Opera...	1,066	0.0%	725	\$16.79	19%	\$12.29	25%	HS
51-9121	Coating, Painting, and Spraying Mac...	394	-0.5%	331	\$16.86	4%	\$12.62	14%	HS
51-9191	Adhesive Bonding Machine Operators ...	183	0.0%	169	\$14.42	8%	\$12.78	23%	HS
51-9195	Molders, Shapers, and Casters, Exce...	237	-8.2%	233	\$17.99	17%	\$11.80	12%	HS
51-9196	Paper Goods Machine Setters, Operat...	210	10.3%	198	\$14.69	19%	\$10.22	7%	HS
51-9199	Production Workers, All Other	787	4.4%	631	\$15.84	14%	\$9.21	3%	HS



Production Occupations

With 50 or more jobs; Requiring less than a HS diploma

CODE	OCCUPATION	----- PROJECTED -----			MEDIAN WAGE	VERSUS US	ENTRY WAGE	VERSUS US	TYPICAL EDUCATION
		'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS					
51-3011	Bakers	216	1.1%	150	\$10.19	☐ 18%	\$8.78	☐ 5%	<HS
51-3021	Butchers and Meat Cutters	302	-3.5%	241	\$15.27	☐ 3%	\$9.08	☐ 7%	<HS
51-3022	Meat, Poultry, and Fish Cutters and...	63	1.1%	47	\$12.67	☐ 4%	\$9.85	☐ 4%	<HS
51-3023	Slaughterers and Meat Packers	146	-4.8%	98	\$12.40	☐ 6%	\$9.44	☐ 3%	<HS
51-3099	Food Processing Workers, All Other	152	-3.2%	103	\$9.59	☐ 18%	\$8.36	☐ 13%	<HS
51-6011	Laundry and Dry-Cleaning Workers	407	-6.9%	218	\$9.88	☐ 8%	\$8.22	☐ 4%	<HS
51-6021	Pressers, Textile, Garment, and Rel...	144	-14.1%	69	\$10.08	☐ 7%	\$8.42	☐ 1%	<HS
51-6031	Sewing Machine Operators	120	8.7%	84	\$13.52	☐ 16%	\$10.55	☐ 17%	<HS
51-6052	Tailors, Dressmakers, and Custom Se...	62	-4.4%	35	\$13.80	☐ 0%	\$10.51	☐ 10%	<HS
51-9022	Grinding and Polishing Workers, Han...	121	-10.8%	51	\$14.28	☐ 3%	\$10.36	☐ 3%	<HS
51-9192	Cleaning, Washing, and Metal Pickli...	61	-4.9%	48	\$16.14	☐ 12%	\$11.98	☐ 17%	<HS
51-9198	Helpers--Production Workers	1,886	4.6%	1,784	\$16.34	☐ 30%	\$11.98	☐ 31%	<HS