



**EMPLOYMENT
PROJECTIONS**
for
INDUSTRIES
and
OCCUPATIONS

2016-2026

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For more detailed projections data,
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Introduction

Employment Projections for Industries and Occupations, 2016-2026 is produced biennially and provides long-term industry and occupational projections for Honolulu MSA. It uses actual 2016 employment as the base year and projects out ten years to 2026.

The first section of this report looks at employment projections by industry. Industries are classified by the North American Industry Classification System (NAICS) codes. The breakout of industries uses a more detailed list of industries instead of major industry divisions as in previous reports. The detailed industries are aligned with the Governor's targeted industries and economic priorities.

The second section of this report focuses on employment projections by occupation. Occupations are classified under Standard Occupational Classification (SOC) codes.

The data tables including detailed industries and occupations are no longer included in this report. They can be found on the Hawaii Workforce Infonet (HIWI) website in Excel format - <https://www.hiwi.org/gsipub/index.asp?docid=423>. The website also includes "Highlights" and a flyer on the "Best Job Opportunities".

Annual average job openings data are included in this report. Job openings are due

to change, transfers, or exits. The openings due to transfers and exits are considered separations. Last year, the BLS introduced a new methodology to calculate job openings due to separations. More information on this is included in the Methodology section.

Additionally, this report includes information on the education, related work experience, and on-the-job training requirements for each occupation as assigned by the Bureau of Labor Statistics (BLS). These determine the typical path for entry into an occupation.

The information contained within this report can be used by students and jobseekers who are making career decisions; education and training program planners who develop specific occupational training programs; job placement specialists who help people find employment; counselors who assist individuals in choosing careers; managers who design, evaluate, and direct employment and training programs; policy decision makers who develop short- to long-range personnel policies; and employers who need information to help them plan the expansion or relocation of their businesses.

Prior to using the employment projections in this publication, it is important to understand the methodology used and assumptions made in developing these projections, and to note the limitations of the data.

Methodology

Industry employment is obtained from the Hawaii State Department of Labor and Industrial Relations' Quarterly Census of Employment and Wages (QCEW) and the Current Employment Statistics (CES) program. Average annual employment was compiled from 1990 through 2016. The 2012 Census of Agriculture, conducted every five years, was used to estimate farming employment.

Industry employment projections were produced using the Long-Term Industry Projections software system. The system allows the analyst to choose from a variety of predefined, generally accepted projection models including shift-share, simple time-series extrapolation, and linear regression models. Some of the independent variables that may be used in the regression models were CPI, resident population, gross state product, total personal income, average visitor census, visitor occupancy rates, and the number of unemployed persons. After the initial projections were developed, they were reviewed for reasonableness. Adjustments to the projections were made based on current knowledge of the industries and the economy.

Staffing patterns were obtained from the 2016 Occupational Employment Statistics (OES) survey, using the 2010 Standard Occupational Classification (SOC) codes. The pattern was used to divide each industry's employment into different occupations, forming a matrix.

Occupational employment projections were produced using the Occupational Projections System software. The system applied occupational change factors developed by BLS to adjust the projected pattern of each industry to account for changes due to new technology and business practices. Using national self-employment staffing patterns provided by BLS, the system generated employment estimates and projections for the self-employed.

The new separations methodology developed by BLS captures a more accurate picture of the workforce and offers the ability to differentiate between workers who are leaving the labor force entirely and those who are changing jobs and leaving an occupation. There are three types of job openings:

1. Job openings due to **change** are created by employment expansion. It is the difference between projected year employment and base year employment divided ten.
2. Job openings due to **transfer** occur when someone moves from one type of occupation to a different type such as for a promotion or career change.
3. Job openings due to **exit** appear when someone leaves the workforce for at least four months, retires or dies.

The total job openings are the sum of job openings due to change, transfers, and exits.

What is the difference between the old *replacement* methodology and the new *separation* methodology? The old way reflected primarily people who left their job due to retirement or death. The new methodology accounts for different types of job changes such as changing careers, being promoted into management or completing a retraining program. Therefore, the *replacement* openings are not comparable to the *separations* openings. More information on this methodology change is available online at: https://www.bls.gov/emp/ep_separations.htm.

Assumptions:

1. The institutional framework of the national and local economies will not change radically.
2. Current social, technological, and scientific trends will continue, including values placed on work, education, income, and leisure.
3. No major events, such as widespread or long-lasting energy shortages or wars, will significantly alter the industrial structure of the economy or the rate of economic growth.
4. Changes in relative wages, technological changes, or other factors will not radically alter trends in the occupational pattern of the industries.

Data limitations:

1. The employment outlook for the various industries and occupations are based solely on an assessment of their projected demand. The supply of workers was not presented.
2. The employment projections were based on past trends and do not take into account any economic developments that may have occurred after the projections were completed. Projections should be viewed as indicators of relative magnitude and probable direction rather than as predictions of absolute occupational demand. Therefore, it is more important to look at the growth rate and projected total openings rather than the projected employment itself.
3. Cyclical, seasonal, and other factors, such as large plant openings or closings were considered only if the information was available.
4. Adjustments were not made for persons who held two or more jobs in different establishments. In the OES survey, a worker was counted in each job held at different places of work. Furthermore, no distinction was made if a worker did several jobs within one company. That employee was counted in only one occupation - the one with the highest skill level. If the worker did several jobs at the same skill level, the person was reported in the occupation that he/she spent the most time doing.

Industry Employment Trends

Honolulu's employment is projected to increase by 30,190 jobs or 5.9 percent from 514,230 in 2016 to 544,420 in 2026. Meanwhile, the state is forecasted to expand by 6.5 percent.

The slowing pace of statewide job growth points to modest annual advances of 0.6 percent during the 2016 to 2026 decade for Oahu. Honolulu's projected growth rate of 5.9 percent will be the slowest among all

counties, but it will provide almost two-thirds of the total jobs added statewide. All industries, except three, are projected to grow. Figure 1 lists industry projections sorted by 2016 employment in descending order.

Figure 1

INDUSTRY EMPLOYMENT AND GROWTH, 2016-2026 (sorted by 2016 employment)

INDUSTRY	EMPLOYMENT		CHANGE (2016-2026)		ANNUAL PERCENT CHANGE
	2016	2026	NUMBER	PERCENT	
Total, All Industries	514,230	544,420	30,190	5.9%	0.6%
Government	60,530	61,330	800	1.3%	0.1%
Health Care & Social Assistance	53,940	62,850	8,920	16.5%	1.7%
Educational Services	50,770	53,670	2,900	5.7%	0.6%
Retail Trade	47,720	48,860	1,140	2.4%	0.2%
Food Services & Drinking Places	45,200	49,210	4,010	8.9%	0.9%
Administrative & Support & Waste Management & Remediation Services	38,490	39,070	580	1.5%	0.2%
Self Employed	37,670	39,400	1,730	4.6%	0.5%
Construction	27,730	29,370	1,640	5.9%	0.6%
Professional, Scientific, & Technical Services	20,760	21,980	1,230	5.9%	0.6%
Transportation & Warehousing	20,140	22,320	2,180	10.8%	1.1%
Other Services	19,820	21,240	1,420	7.2%	0.7%
Accommodation	17,740	19,080	1,340	7.5%	0.8%
Wholesale Trade	14,060	14,300	250	1.8%	0.2%
Finance & Insurance	13,120	13,450	330	2.5%	0.2%
Manufacturing	11,250	11,360	110	1.0%	0.1%
Real Estate & Rental & Leasing	8,060	8,620	560	6.9%	0.7%
Management of Companies & Enterprises	8,020	8,510	490	6.1%	0.6%
Information	7,360	7,220	-130	-1.8%	-0.2%
Arts, Entertainment, & Recreation	7,280	7,960	680	9.4%	0.9%
Utilities	2,550	2,600	50	2.0%	0.2%
Agriculture, Forestry, Fishing & Hunting	1,850	1,850	>-10	-0.1%	-0.0%
Mining	220	200	-10	-7.0%	-0.7%

Totals may not add due to rounding

To view the complete long-term industry projections for Honolulu MSA, visit our website at: www.HIWI.org

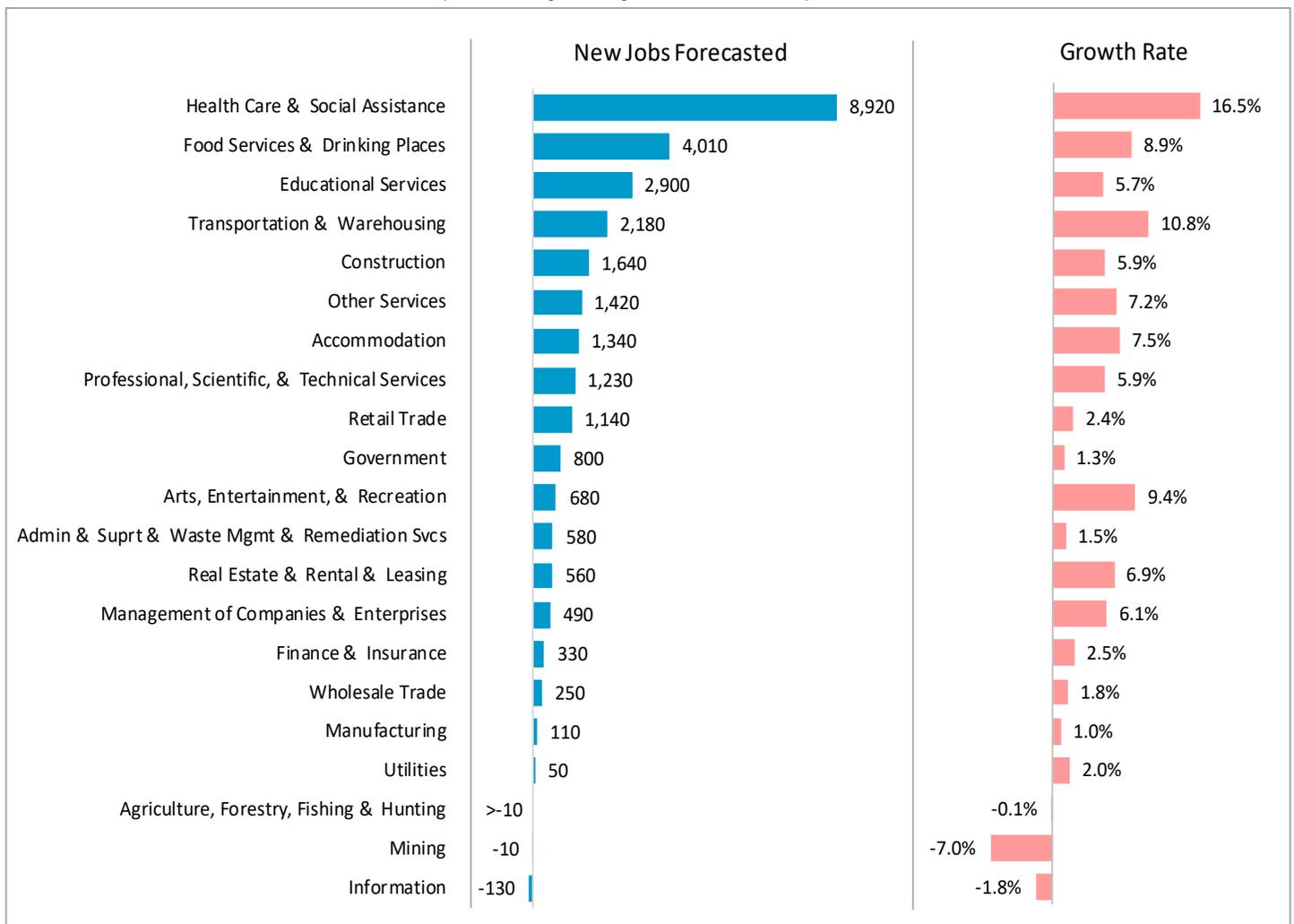
Health care and social assistance, with the addition of 8,920 positions, will create the most jobs by far, compared to the other industries (Figure 2). This industry alone will generate almost 30 percent of the total jobs added in Honolulu. It will also post the fastest growth rate of 16.5 percent over the projected period. By 2026, employment is anticipated to reach 62,850, making it the largest industry on Oahu, thereby increasing its share of total employment from 11 to 12 percent over 10 years. Much of the growth can be attributed to the aging population, which will stimulate robust demand in ambulatory

health care services. Social assistance, along with nursing and residential care facilities, will also boost this industry. Among the various occupations employed in this sector, home health aides and personal care aides in particular will account for the fastest growth. Not surprisingly, registered nurses, the largest of the health-related occupations will also be needed.

Driven by population growth and consumer spending, food services and drinking places are anticipated to generate 4,010 new jobs for the second largest gain. The total job

Figure 2

INDUSTRY JOB GROWTH, 2016-2026 (sorted by new jobs forecasted)



count will reach 49,210 in 2026, increasing by 8.9 percent from 2016. Openings for food preparation and serving workers will account for over a third of the projected advance.

Another major source of employment, the transportation and warehousing industry will add 2,180 jobs, equivalent to an expansion rate of 10.8 percent. Air transportation, the largest subsector within this industry, will boost the job count upward by 760 positions, based mainly on the need for flight attendants. However, in terms of percentage growth, demand for couriers and messengers will spike upward by 52.9 percent (or 620 jobs) as the volume of e-commerce transactions continues to swell. This will create significant job growth for light truck or delivery drivers, as well as hand laborers and freight/stock movers.

Employment in educational services, another of the larger industries, is anticipated to add 2,900 new positions which is almost 10 percent of the overall county gain. However, this 5.7 percent rate of growth is slower than the average for Honolulu. Job gains for this industry will consist of a wide range of teaching positions including substitutes, elementary and secondary school, self-enrichment education, and teacher assistants.

Although government workers constitute the biggest share of the workforce, a projected increase of 800 jobs will register a minimal gain of 1.3 percent. As a result, the percentage of workers employed in this industry will shrink from 12 percent in 2016 to 11 percent

in 2026. Even with cutbacks in the federal government's postal service, government jobs will manage modest gains in all three branches.

Construction job growth from 2016 to 2026 is predicted to slow down versus the prior projection period, but will still match the county average of 5.9 percent. The total addition of 1,640 slots will place construction in the upper third in terms of new jobs created. Of the three components, workers engaged in specialty trade construction will experience the majority of expansion in payrolls. Construction projects requiring construction laborers, electricians, and plumbers, pipefitters, and steamfitters, will offer the most opportunities.

Also vital to the local economy, an advance of 7.5 percent predicted for accommodations will raise employment to 19,080 in 2026. With the creation of 1,340 positions, maids and housekeeping cleaners will be in most demand, followed by hotel, motel, and resort desk clerks, waiters and waitresses, and general maintenance and repair workers.

Job losses are projected to impact three industries with the information industry posting the biggest job reduction. Falling employment in the telecommunications, broadcasting, and the publishing industries will overshadow an increase in motion picture and sound recording positions. Employment in the two smallest industries - agriculture, forestry, fishing, and hunting, along with mining - will also edge downward.

Occupational Employment Trends

Honolulu's employment is projected to advance by 5.9 percent from 2016 to 544,420 in 2026, creating 30,190 new jobs. On an annual basis, this 0.6 percent increase equals 3,020 new jobs resulting from change. About 32,700 job openings are expected to arise due to transfers and another 25,430 due to exits. The total number of annual job openings is 61,150.

Figure 3

OCCUPATIONAL EMPLOYMENT AND GROWTH, 2016–2026 (sorted by 2016 employment)

OCCUPATIONAL GROUP	EMPLOYMENT		CHANGE		AVERAGE ANNUAL OPENINGS				2018 MEDIAN WAGE
	2016	2026	#	%	CHANGE	TRNSFR	EXIT	TOTAL	
Total, All Occupations	514,230	544,420	30,190	5.9%	3,020	32,700	25,430	61,150	\$43,840
Office & Administrative Support	69,270	68,390	-890	-1.3%	-90	4,110	3,510	7,530	\$38,560
Food Preparation & Serving Related	54,560	59,160	4,610	8.4%	460	5,320	4,410	10,190	\$27,860
Sales & Related	47,180	47,760	580	1.2%	60	3,670	2,890	6,610	\$29,170
Management	38,490	40,910	2,420	6.3%	240	1,910	1,150	3,300	\$100,210
Education, Training, & Library	37,250	39,780	2,540	6.8%	250	1,610	1,730	3,590	\$49,100
Transportation & Material Moving	32,630	35,460	2,840	8.7%	280	2,330	1,700	4,310	\$38,630
Construction & Extraction	31,660	33,420	1,760	5.6%	180	2,080	1,130	3,380	\$69,230
Healthcare Practitioners & Technical	25,780	28,890	3,110	12.1%	310	680	720	1,710	\$89,800
Business & Financial Operations	25,170	26,680	1,510	6.0%	150	1,490	780	2,420	\$66,680
Building & Grounds Cleaning & Maintenance	24,920	26,690	1,770	7.1%	180	1,620	1,600	3,400	\$35,000
Installation, Maintenance, & Repair	18,870	20,030	1,160	6.1%	120	1,130	680	1,930	\$56,470
Personal Care & Service	16,900	18,880	1,980	11.7%	200	1,320	1,310	2,830	\$27,170
Protective Service	16,180	16,520	340	2.1%	30	960	840	1,840	\$39,460
Healthcare Support	14,960	18,230	3,270	21.8%	330	890	940	2,160	\$34,690
Production	12,400	12,360	-30	-0.3%	>-10	870	570	1,440	\$35,660
Arts, Design, Entertainment, Sports, & Media	9,910	10,280	370	3.7%	40	560	410	1,010	\$48,990
Architecture & Engineering	9,250	9,730	480	5.2%	50	440	230	720	\$79,970
Computer & Mathematical	8,870	9,650	780	8.8%	80	440	160	680	\$79,130
Community & Social Service	8,140	9,140	1,000	12.3%	100	580	340	1,020	\$51,630
Life, Physical, & Social Science	6,080	6,470	390	6.4%	40	380	160	590	\$70,120
Legal	4,410	4,640	240	5.4%	20	160	110	300	\$77,430
Farming, Fishing, & Forestry	1,360	1,350	-10	-0.7%	>-10	150	50	200	\$39,890

Percent change is calculated based on raw data, before it is rounded to the nearest ten. Totals may not add due to rounding.

To view the complete long-term occupational projections for Honolulu MSA, visit our website at: www.HIWI.org

Major Occupational Groups

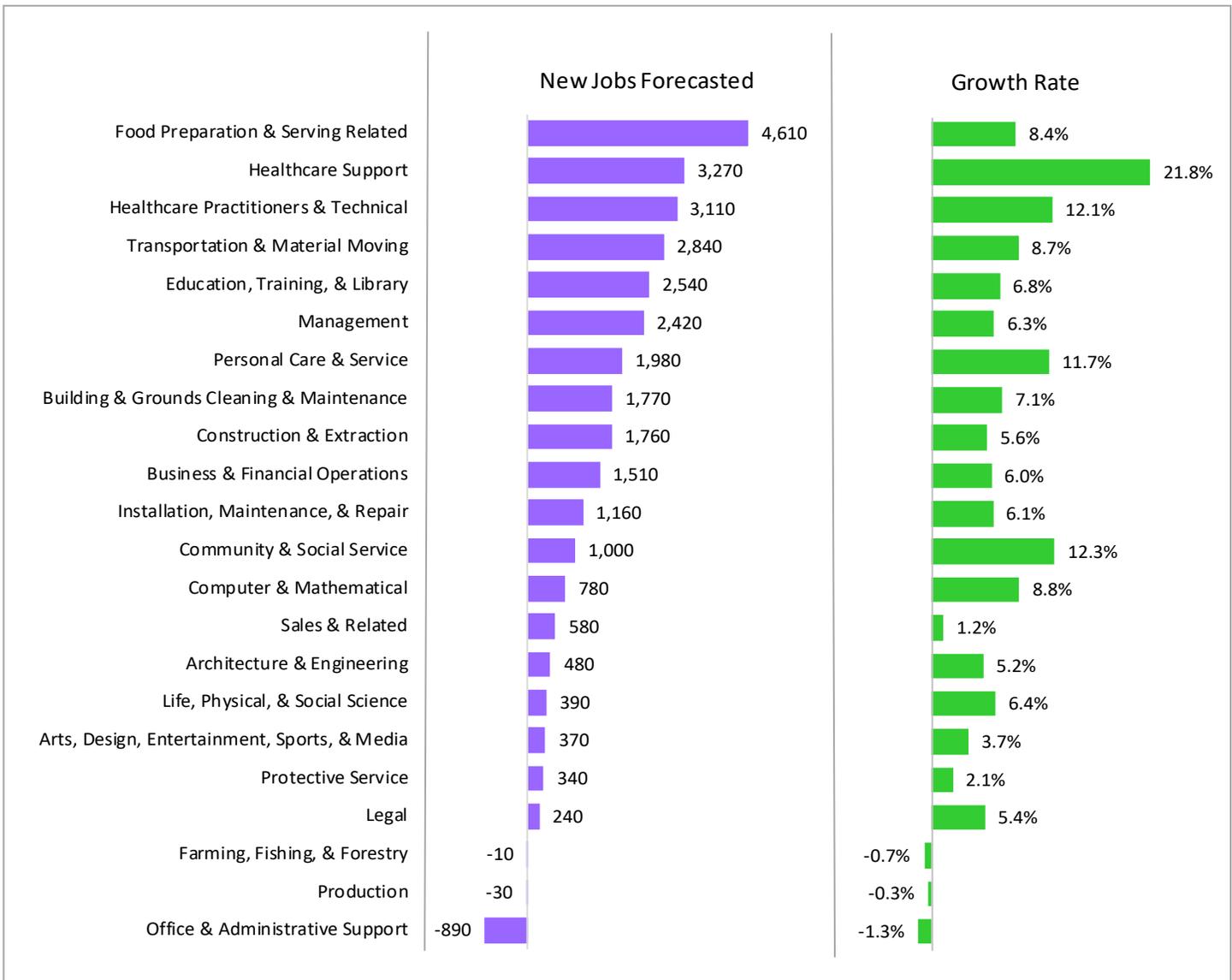
Nineteen out of the 22 major occupational groups will experience positive growth.

Food preparation and serving related occupations, the second largest occupational group, will expand by 4,610 positions over 10 years, leading all other major groups. (Figure 4). Adding to that gain, openings generated by job transfers and workers exiting the labor force, will outpace all other occupational

groups, for a combined total of 10,190 annual openings (Figure 5). Three of the larger-sized occupations, combined food preparation and serving workers, waiters and waitresses, and food preparation workers, will produce about half of the job openings. Since no work experience or formal educational credential is required for many of these positions, jobs in this field are typically considered entry level. The yearly median wage of \$27,860 for this group rank near the bottom of the pack.

Figure 4

JOB GROWTH BY MAJOR OCCUPATIONAL GROUP, 2016–2026 (sorted by new jobs forecasted)



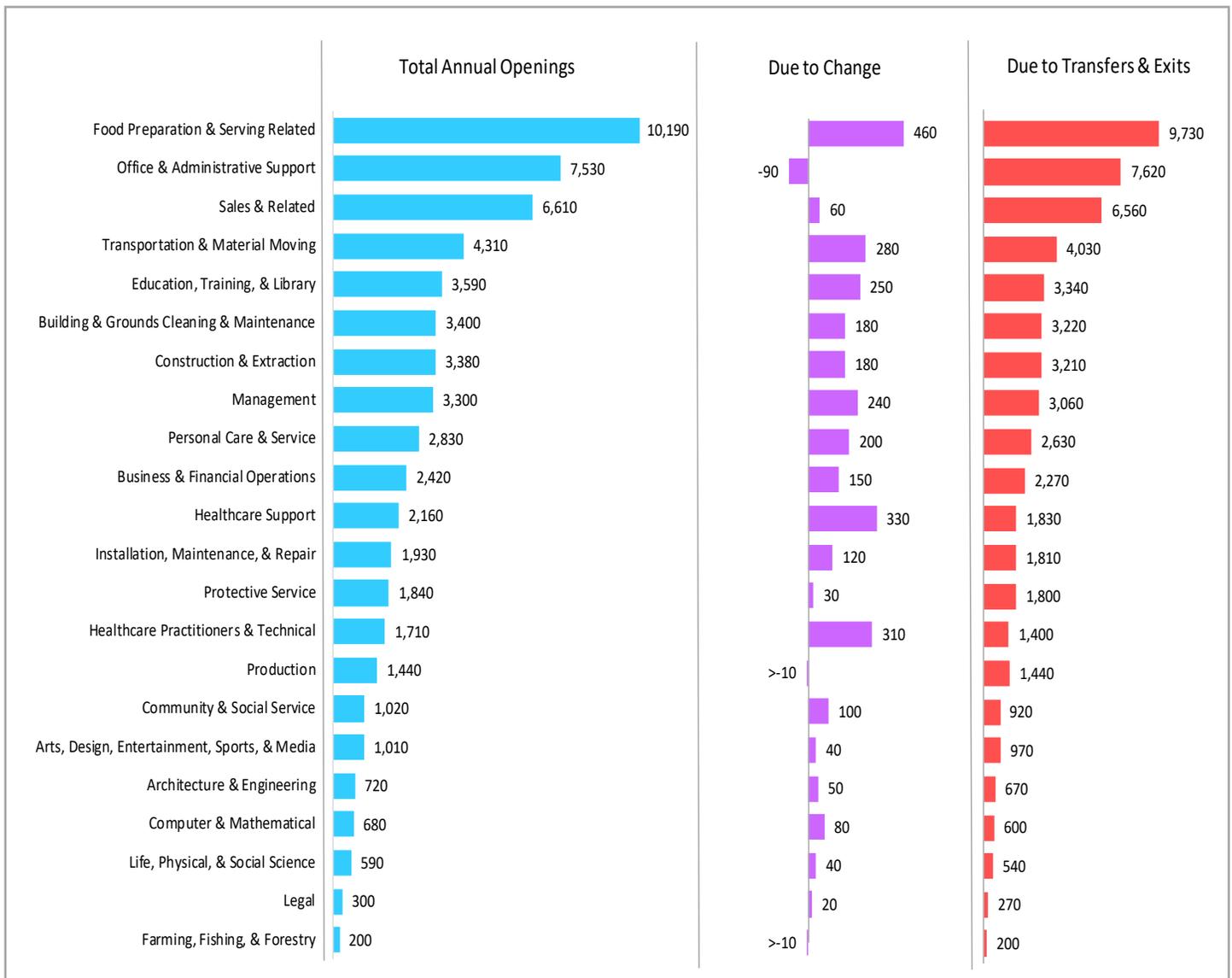
Largely attributed to the growing elderly population, healthcare support occupations will boast a projected expansion rate of 21.8 percent, significantly higher than any other major group. Employment will rise by 3,270 jobs, ranking second in terms of job gains. In addition to a 43.3 percent spike in home health aides, physical therapist assistants and phlebotomists will forge ahead with growth of at least 30 percent. In spite of the high growth anticipated for workers in this field, the

median wage of \$34,690 falls near the bottom compared to the other occupational groups.

Also reflective of the vastly expanding healthcare sector, healthcare practitioners and technical occupations will increase by 12.1 percent, more than double Honolulu’s advance of 5.9 percent. With the creation of 3,110 jobs, registered nurses will contribute more than one-third of the positions, while nurse practitioners, physician assistants,

Figure 5

PROJECTED JOB OPENINGS BY MAJOR OCCUPATIONAL GROUP, 2016–2026



and athletic trainers will benefit from rapid growth topping 20 percent. The median annual salary of \$89,800 ranks near the top.

Included among the fastest growing groups, community and social service occupations will rise by 12.3 percent. Notable advances will stem from a rise in counselors, social workers, and other social service specialists, which are related to healthcare as well. Median wages of \$51,630 remain near the middle of all major groups despite higher education standards of a bachelor's or master's degree to work in this field.

Despite the modest growth rate of 1.2 percent for the sales and related occupational group, the 6,610 annual total job openings projected, will rank third highest. Numerous employment opportunities will arise as workers change jobs or leave the labor force rather than through the creation of new openings. More than two-thirds of the vacant positions will be retail salespersons and cashiers, two occupations which employ a sizable share of workers in Honolulu. Wages of \$29,170 for this group are well below average.

Although office and administrative support occupations will employ the greatest number of workers, this sector will be one of three groups projected to lose jobs. Employment will shrink by 1.3 percent as new technology continues to replace some of the functions performed by workers in this group. However, because of the large size of this occupational group, job prospects due to separations will provide a bright spot. The volume of workers

transferring to another position or exiting the workforce will produce 7,530 openings annually, second highest among all groups. Even though nearly all positions in this sector require no more than a high school diploma, most workers will need to undergo some form of on-the-job training. Median wages in 2018 was \$38,560, below the average of \$43,840 for this area.

Two other major groups projected to lose employment include production and also farming, fishing, and forestry. Declines scattered among various production operations will negatively impact production jobs by 0.3 percent. Within farming, fishing, and forestry, the largest occupation consisting of crop, nursery, and greenhouse farmworkers and laborers, will push this sector down by 0.7 percent.

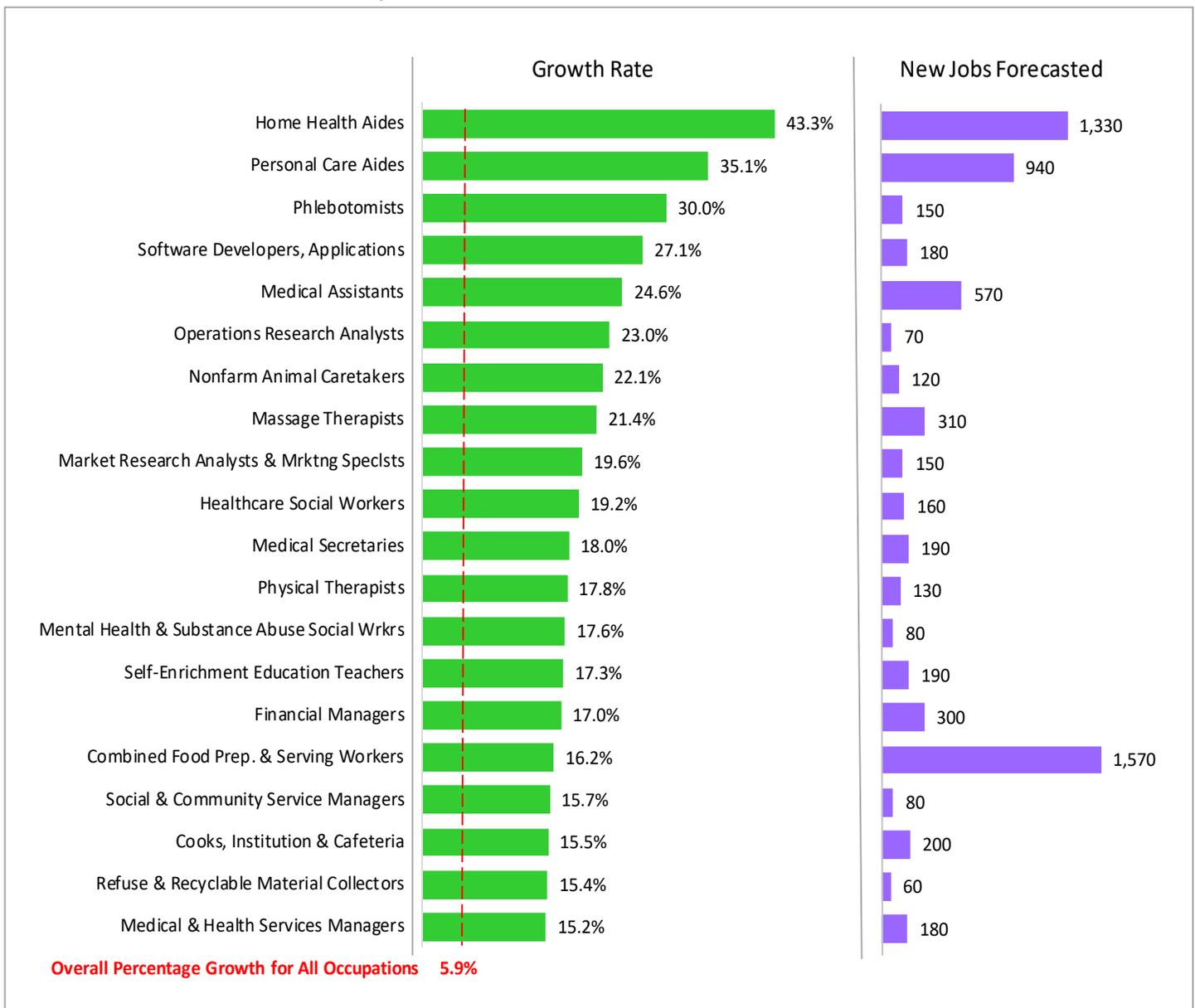
Detailed Occupational Projections

The growth rate of the 20 fastest expanding occupations are well above the average rate for all occupations which is 5.9 percent (Figure 6). Home health aides sits atop the list with 43.3 percent growth. As reflected by the increase in the healthcare occupational group,

half of the occupations relate to the medical field, including: personal care aides; phlebotomists; medical assistants; massage therapists; healthcare social workers; medical secretaries; physical therapists; mental health and substance abuse social workers; and medical and health services managers.

Figure 6

FASTEST GROWING OCCUPATIONS, 2016–2026

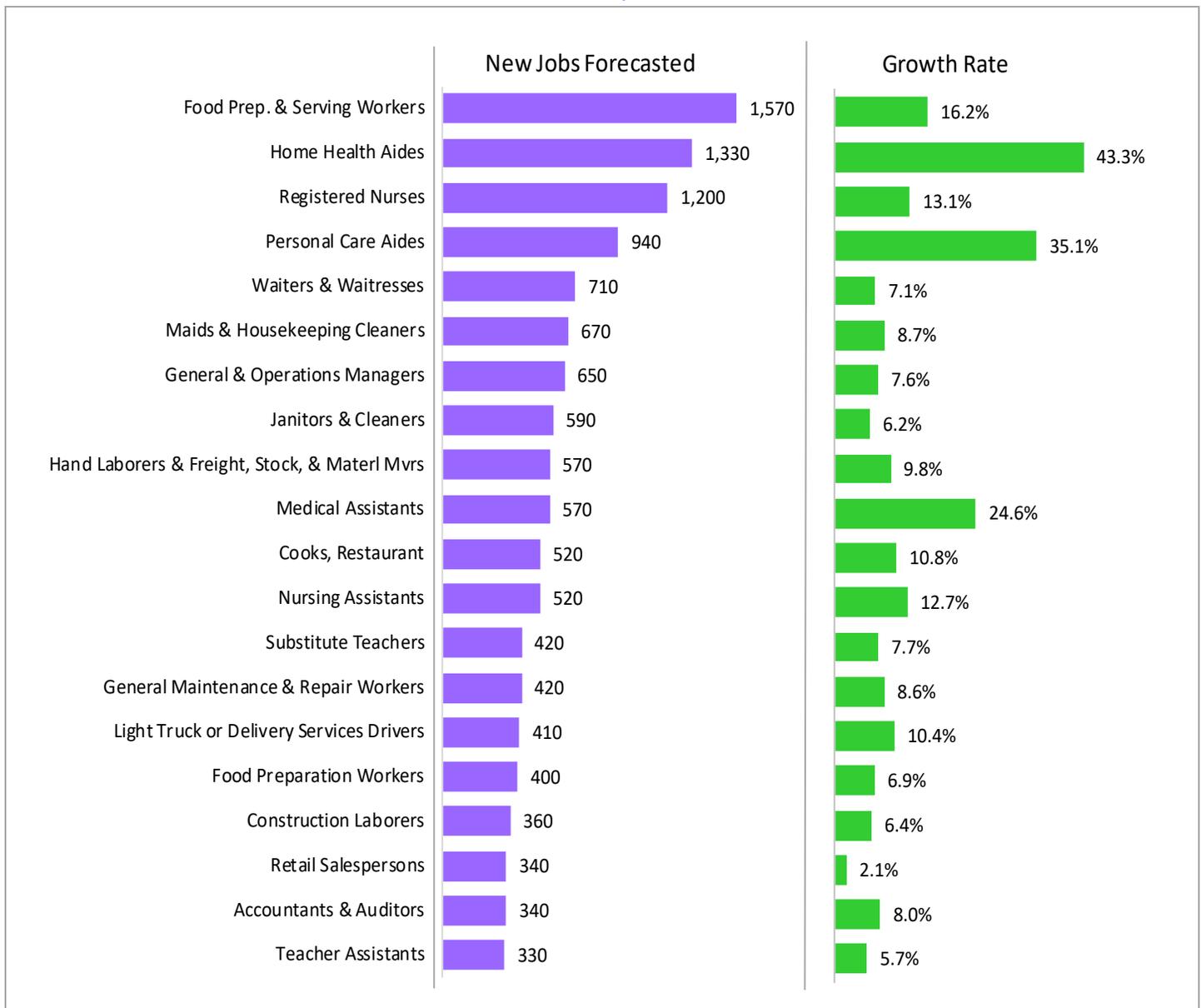


The 20 occupations adding the greatest number of positions during the decade will create a total of 12,860 new jobs or 43 percent of the overall total gains (Figure 7). Food preparation and serving workers is the leader in new job creation with 1,570. Three other

food preparation and serving related jobs made the list: waiters and waitresses; restaurant cooks; and food preparation workers. Four are healthcare related: home health aides; registered nurses; medical assistants; and nursing assistants.

Figure 7

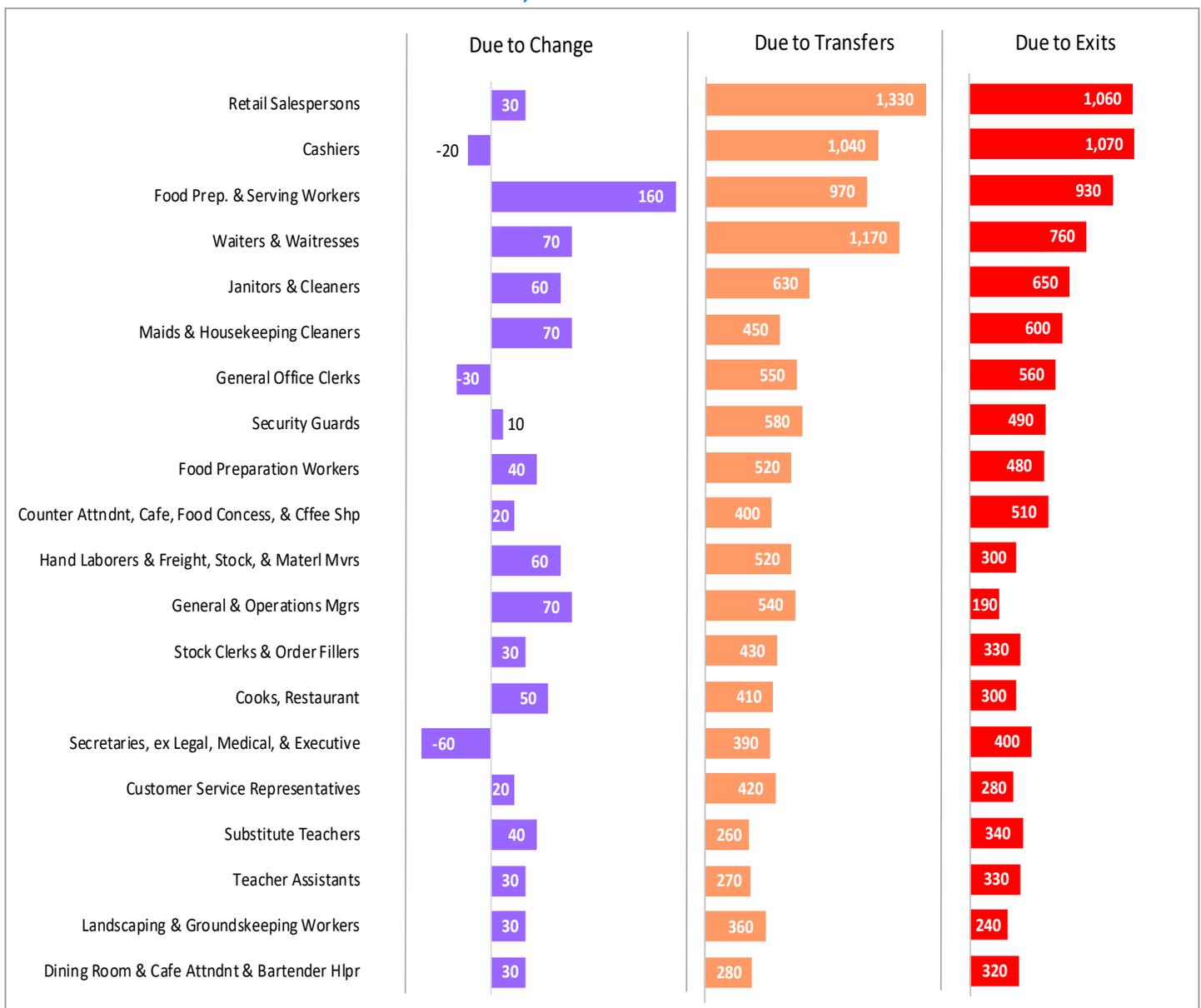
OCCUPATIONS WITH THE MOST NEW JOBS FORECASTED, 2016–2026



As for jobs with the most total openings (Figure 8), they are typically large-sized occupations with many of the openings created by separations rather than job growth. Occupations related to Hawaii’s strong tourism market is expected to boost employment opportunities. Jobs in this field include: retail salespersons; cashiers; food preparation and

serving workers; waiters and waitresses; janitors and cleaners; maids and housekeeping cleaners; food preparation workers; counter attendant, cafe, food concession, and coffee shop; restaurant cooks; customer service representatives; landscaping and groundskeeping workers; and dining room and cafeteria attendant and bartender helpers.

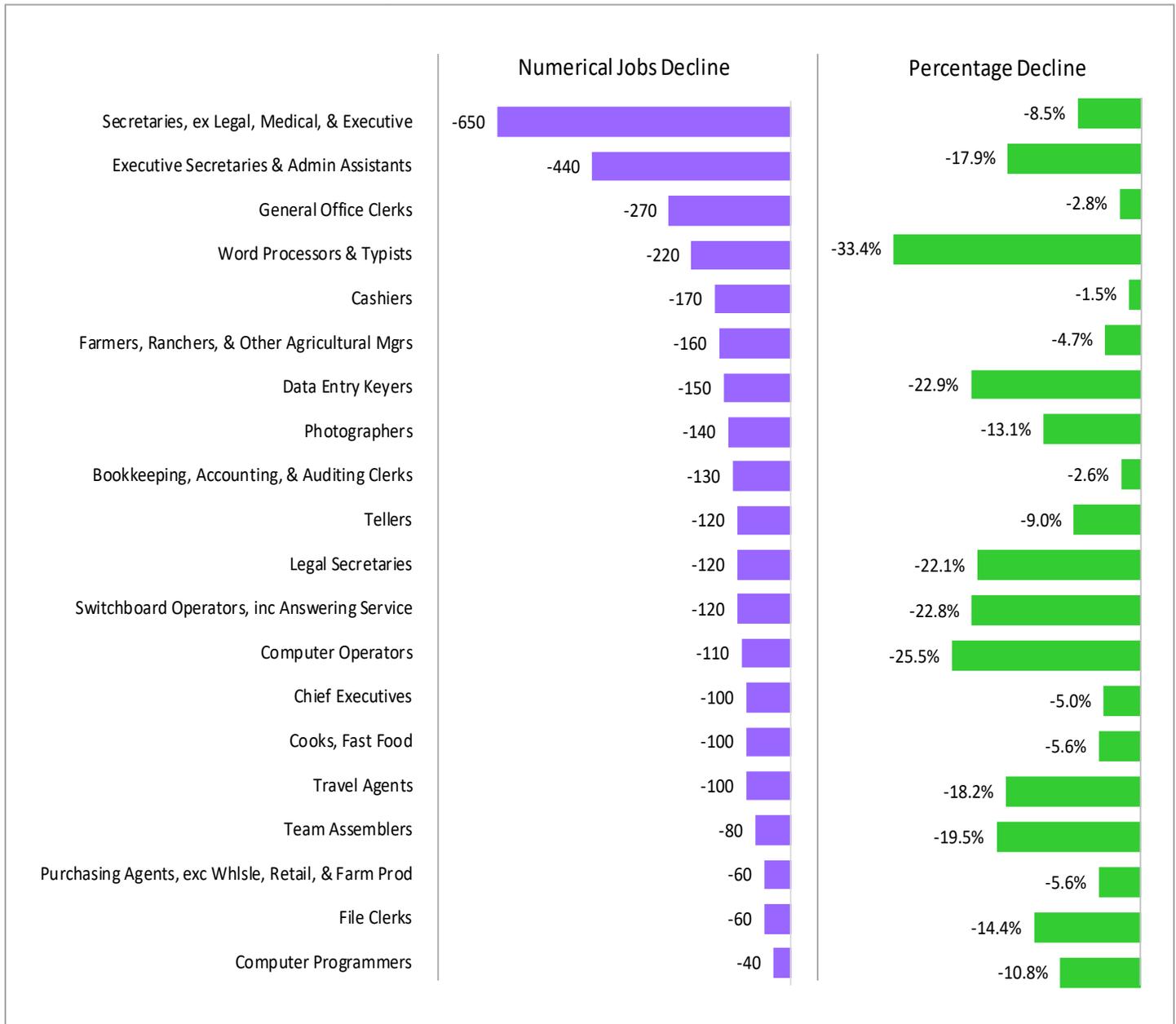
Figure 8
OCCUPATIONS WITH THE MOST JOB OPENINGS, 2016–2026



Many of the job losses during the projection period will occur as new technology leads to the elimination of some positions (Figure 9). The majority of these positions are classified under the office and administrative support sector, which is also projected to

decline. Although the total number of workers employed within each position will shrink, these occupations will still create openings as workers need to be replaced when they transfer, retire, or exit the workforce.

Figure 9
LARGEST DECLINING OCCUPATIONS, 2016–2026



Openings by Education Level

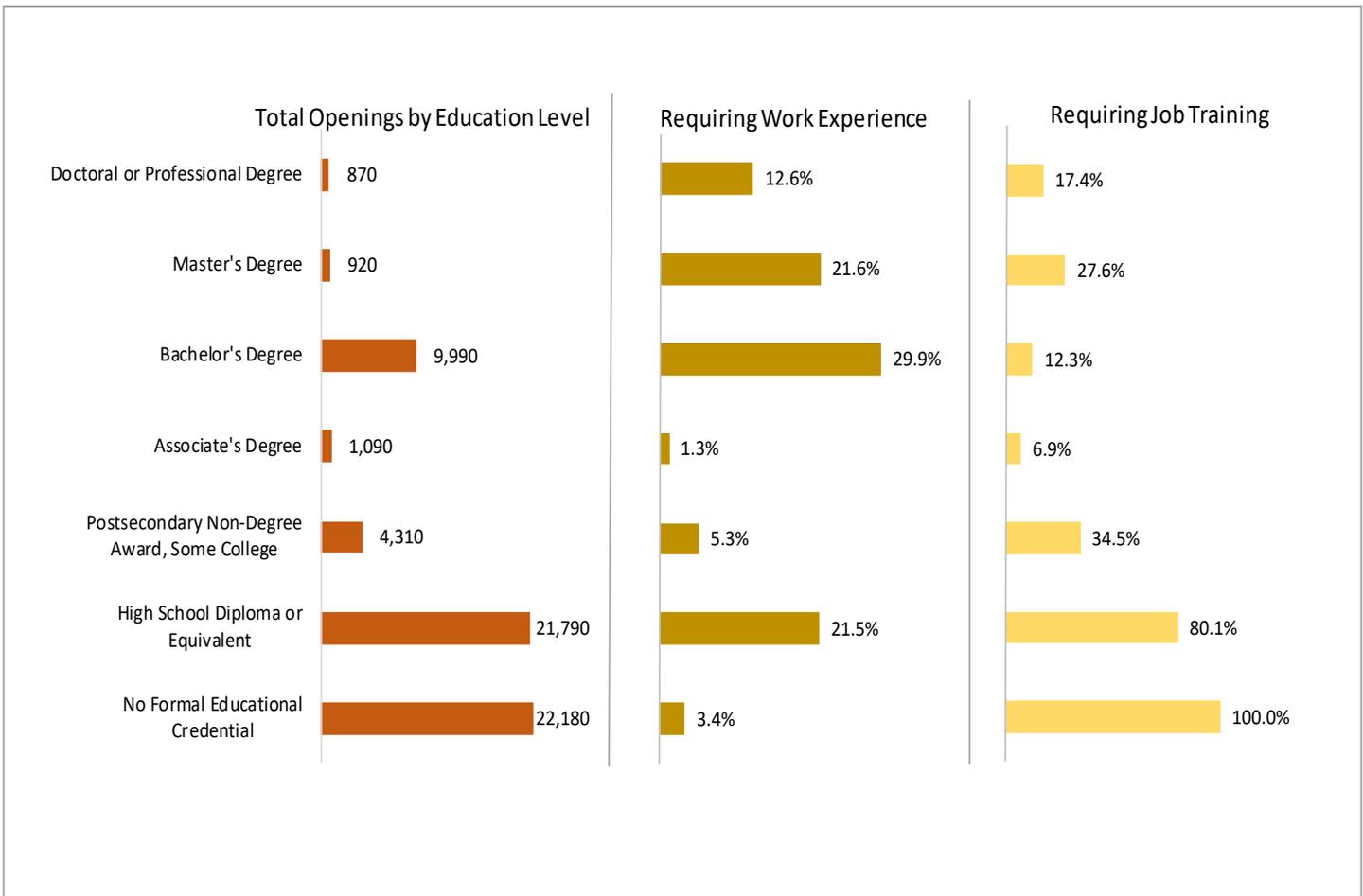
Jobs that have high school or no educational requirements will be the most prevalent, accounting for almost three-quarters of total projected job openings (Figure 10). Positions available to workers with education ranging from some college to a bachelor’s degree, will make up 25 percent of Honolulu’s total openings. Only about three percent of all openings fall under the highest education levels - master’s, doctoral, or professional degrees.

In terms of jobs requiring work experience, the highest percentage will be for individuals with a bachelor’s degree at 30 percent, while at the lower end, prior work experience is necessary for about one percent of those with an associate’s degree.

All workers without any formal educational credential, and 80 percent of those with a high school diploma will need to undergo on-the-job training.

Figure 10

JOB OPENINGS , WORK EXPERIENCE, & JOB TRAINING REQUIREMENTS BY EDUCATION LEVEL, 2016–2026



Appendix A

EDUCATION AND TRAINING CLASSIFICATION SYSTEM DEFINITIONS

U.S. Department of Labor, Bureau of Labor Statistics

EDUCATION	DEFINITION
Doctoral or professional degree	Requires at least 3 years of full-time academic work beyond a bachelor's degree
Master's degree	Requires 1 or 2 years of full-time academic study beyond Bachelor's
Bachelor's degree	Requires at least 4 years, but not more than 5 years, of full-time academic study
Associate's degree	Requires at least 2 years but not more than 4 years of full-time academic study beyond high school
Postsecondary non-degree award	Some programs may last a few weeks, while others may last 1 to 2 years and leads to a certificate or other award, but not a degree
Some college, no degree	Includes the completion of one or more postsecondary courses that did not result in a degree or award
High School or equivalent	Completion of high school or an equivalent program
No formal educational credential	No formal credential issued by an education institution such as a high school diploma or postsecondary certificate

RELATED WORK EXPERIENCE	DEFINITION
5 years or more experience (5+)	5 years or more of work experience in a related occupation may be a typical method of entry
Less than 5 years of experience (<5)	Workers typically need 1-4 years of work experience in related occupation
None	No work experience is needed in a related occupation

ON-THE-JOB TRAINING	DEFINITION
Internship/residency (Itn/Res)	Training that involves preparation in a field, generally under supervision, in a professional setting, paid or unpaid from 1-8 years
Apprenticeship (Appren)	Combines on-the-job training and related occupation-specific technical instruction which may last between 3 to 5 years
Long-term on-the-job training (LT OJT)	Lasts more than 12 months and includes either on-the-job training or combines work experience with formal instruction
Moderate-term on-the-job training (MT OJT)	Includes informal instruction and on-the-job training that lasts between 1 and 12 months
Short-term on-the-job training (ST OJT)	Informal on-the-job training or experience of 1 month or less

Appendix B

INDUSTRY CLASSIFICATION CODE DEFINITIONS

North American Industry Classification System (NAICS), 2017

NAICS	INDUSTRY AND DESCRIPTION
11	Agriculture, forestry, fishing, and hunting - growing crops, raising animals, harvesting timber, and harvesting fish and other animals from a farm, ranch, or their natural habitats.
21	Mining - activities of extracting naturally occurring mineral solids, liquid minerals, and gases.
22	Utilities - provision of utility services such as electric power, natural gas, water supply, sewage removal.
23	Construction - construction of buildings or engineering projects.
31-33	Manufacturing - mechanical, physical, or chemical transformation of materials, substances, or components into new products.
42	Wholesale trade - wholesaling merchandise, generally without transformation, and rendering services incidental to the sale of merchandise.
44-45	Retail trade - retailing merchandise, generally without transformation, and rendering services incidental to the sale of merchandise.
48-49	Transportation and warehousing - providing transportation of passengers & cargo, warehousing and storage for goods, scenic and sightseeing transportation, and support activities related to transportation.
51	Information - producing and distributing information and cultural products; providing the means to transmit or distribute these products as well as data or communications; and processing data.
52	Finance and insurance - financial transactions involving the creation, liquidation, or change in ownership of financial assets and/or facilitating financial transactions.
53	Real estate and rental and leasing - renting, leasing, or otherwise allowing the use of tangible or intangible assets, and providing related services.
54	Professional, scientific, and technical - specialize in performing professional, scientific, and technical activities for others.
55	Management of companies and enterprises - holding of securities of companies and enterprises for the purpose of owning controlling interest or influencing management decisions; or administering, overseeing, and managing establishments of the company or enterprise and normally undertaking the strategic or organizational planning and decision-making role of the company or enterprise.
56	Administrative and support and waste management and remediation services - performing routine support activities for the day-to-day operations of other organizations.
61	Educational services - provide instruction and training in a wide variety of subjects.
62	Health care and social assistance - provide health care and social assistance for individuals.
71	Arts, entertainment, and recreation - operate facilities or provide services to meet varied cultural, entertainment, and recreational interests of patrons.
721	Accommodation - provide lodging or short-term accommodations for travelers, vacationers, others.
722	Food services and drinking places - prepare meals, snacks, beverages for immediate consumption.
81	Other Services - provide non-governmental services not elsewhere specified..
90	Government - the administration, management, and oversight of public programs by Federal, State, and local governments.

Appendix C

OCCUPATIONAL CLASSIFICATION CODE DEFINITIONS

Standard Occupational Classification System (SOC), 2010

SOC	OCCUPATIONAL GROUP AND DESCRIPTION
11-0000	Management Occupations consist of managers responsible for the policy-making, planning, directing, or coordination of work activities of an establishment or organization. Examples include financial managers, construction managers, and engineering managers.
13-0000	Business and Financial Operations Occupations include business operations specialists such as business agents, buyers, claims adjusters, appraisers and examiners, compliance officers, cost estimators, emergency management specialists, human resources specialists, logisticians, management analysts, and meeting planners; and financial specialists like accountants and auditors, real estate appraisers, budget analysts, credit analysts, financial analysts, financial examiners, loan counselors, and tax examiners.
15-0000	Computer and Mathematical Occupations include computer specialists who perform computer research, programming, software development, provide technical assistance, database administration, and network administration. Mathematical science occupations develop and apply mathematical theory to analyze statistical data, which provides useful information that may assist in decision-making or policy formulation.
17-0000	Architecture and Engineering Occupations are primarily responsible for planning and designing structures, land areas, machines, and processes. Also included are drafters and engineering and mapping technicians.
19-0000	Life, Physical, and Social Science Occupations are comprised of life scientists including agriculture, biological, conservation, and medical scientists; physical scientists such as astronomers and physicists, atmospheric and space scientists, chemists, and environmental scientists and social scientists and related workers like economists, market researchers, psychologists, sociologists, and urban/regional planners.
21-0000	Community and Social Service Occupations provide services such as counseling, social services, and religious worship to various groups or individuals.
23-0000	Legal Occupations consists of lawyers, judges, arbitrators, mediators, magistrates, and legal support workers such as paralegals, law clerks, court reporters, and title examiners.
25-0000	Education, Training, and Library Occupations include postsecondary, primary, secondary, and special education teachers, adult literacy instructors, librarians, curators, archivists, library technicians and teacher assistants.
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations are comprised of art and design workers such as craft and multi-media artists, fashion, floral, graphic, and interior designers; entertainers and performers, sports and related workers, consisting of actors, athletes, dancers, and musicians; media and communication workers including announcers, reporters, public relations specialists, and writers; and media and communication equipment workers which includes broadcast technicians, radio operators, photographers, and camera operators.
29-0000	Healthcare Practitioner and Technical Occupations includes workers directly involved in the diagnosis and treatment of health-related matters. This occupational group includes physicians, chiropractors, dentists, pharmacists, physician assistants, registered nurses, therapists, veterinarians, and health technologists and technicians.

SOC	OCCUPATIONAL GROUP AND DESCRIPTION
31-0000	Healthcare Support Occupations perform healthcare duties under the direct supervision of medical staff. Those classified under this category include home health aides, physical therapist assistants, dental assistants, pharmacy aides, and massage therapists.
33-0000	Protective Service Occupations protect people and property. Workers in this group include law enforcement workers, fire fighters, animal control workers, and security guards.
35-0000	Food Preparation and Serving Related Occupations prepare, clean, and serve meals and beverages to patrons. Examples of workers in this group are cooks, bartenders, waiters and waitresses, dining room attendants, and hosts and hostesses.
37-0000	Building and Grounds Cleaning and Maintenance Occupations consists of building cleaning and pest control workers and grounds maintenance workers who clean and maintain the interior of buildings and property grounds. First-line supervisors are also included.
39-0000	Personal Care and Service Occupations include entertainment attendants, funeral service workers, personal appearance workers, transportation attendants, childcare workers, and recreation workers.
41-0000	Sales and Related Occupations influence or assist customers in the purchase of merchandise, real estate, services, or investments. This category includes retail salespersons, travel agents, cashiers, and insurance brokers.
43-0000	Office and Administrative Support Occupations perform office and clerical tasks such as typing, filing, computer operations, record keeping, mail preparation, and distribution. Examples include tellers, hotel desk clerks, and public safety dispatchers.
45-0000	Farming, Fishing, and Forestry Occupations include agriculture inspectors, graders and sorters, and forest and conservation workers. Also included are the first-line supervisors of these workers.
47-0000	Construction and Extraction Occupations construct, assemble, maintain, install, and perform repair work on structures and fixtures. This may involve the use of hand and power tools. Examples of jobs classified under this group include boilermakers, carpenters, electricians, painters, and construction trades helpers.
49-0000	Installation, Maintenance, and Repair Occupations primarily deal with electrical and electronic equipment or vehicle and mobile equipment. They repair, maintain, install, test, or make adjustments to the equipment using various power and hand tools. Examples of workers include telecommunications equipment installers, aircraft mechanics, and medical equipment repairers.
51-0000	Production Occupations include assemblers and fabricators, food processing workers, metal and plastic workers, printing workers, textile and apparel workers, woodworkers, and plant and system operators. Workers employed as bakers, machinists, printing machine operators, and cabinetmakers would be included in this occupational group.
53-0000	Transportation and Material Moving Occupations consist of air transportation workers which includes aircraft pilots and air traffic controllers; motor vehicle operators such as ambulance drivers and attendants, bus drivers, and delivery drivers; water transportation workers like sailors, boat captains, and ship engineers; other transportation workers including parking lot attendants, service station attendants, traffic technicians, and transportation inspectors; and material moving workers including conveyor operators, crane operators, dredging and excavating operators, hoist and winch operators, laborers, pumping station operators, refuse collectors, and truck and ship loaders.