

## Estimating Worker Demand: A Fresh Look at Annual Job Openings

Employment in New Hampshire is expected to increase by 1.8 percent from second quarter 2017 to second quarter 2019, gaining 12,800 jobs. In addition, 83,822 job openings are projected annually — 33,342 job openings will be created because of workers leaving the labor force, and another 44,080 job openings will occur because of workers who transfer out of one occupation to work in some other occupation. These employment projections are for the first time based on a new methodology developed by the

U.S. Bureau of Labor Statistics that significantly changes the way job openings are estimated.

The new methodology reflects the changing workforce in the 21st century, recognizing that individuals may have several career changes in the course of their working life. National separation rates calculated by the U.S. Bureau of Labor Statistics, and which measure the number of workers who are projected to leave an occupation due to retirement or other reasons,

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**New Hampshire Short-term Occupational Projections, 2017 Q2 to 2019 Q2**

Occupational Group	2017 Q2 Estimated	2019 Q2 Projected	Numeric Change	Percent Change	Annual	Annual	Annual
					Labor Force Exits	Occupational Transfers	Total Openings
<b>Total, All Occupations</b>	<b>704,262</b>	<b>717,111</b>	<b>12,849</b>	<b>1.8%</b>	<b>33,342</b>	<b>44,080</b>	<b>83,822</b>
Management	46,562	47,563	1,001	2.1%	1,300	2,313	4,113
Business and Financial Operations	29,948	30,709	761	2.5%	890	1,767	3,037
Computer and Mathematical	19,764	20,269	505	2.6%	329	957	1,540
Architecture and Engineering	13,599	13,919	320	2.4%	348	635	1,143
Life, Physical, and Social Science	4,416	4,529	113	2.6%	110	273	438
Community and Social Services	9,243	9,557	314	3.4%	381	631	1,166
Legal	3,713	3,757	44	1.2%	94	139	255
Education, Training, and Library	45,647	46,273	626	1.4%	2,010	1,921	4,234
Arts, Design, Entertainment, Sports, and Media	10,809	11,005	196	1.8%	439	615	1,154
Healthcare Practitioners and Technical	40,302	41,575	1,273	3.2%	1,054	1,024	2,716
Healthcare Support	20,462	21,022	560	2.7%	1,188	1,098	2,567
Protective Service	11,823	11,967	144	1.2%	535	606	1,212
Food Preparation and Serving Related	59,148	60,789	1,641	2.8%	4,407	5,704	10,930
Building and Grounds Cleaning and Maintenance	27,093	27,852	759	2.8%	1,642	1,754	3,776
Personal Care and Service	27,005	27,979	974	3.6%	2,051	1,926	4,462
Sales and Related	87,654	88,486	832	0.9%	5,216	6,828	12,460
Office and Administrative Support	110,143	111,042	899	0.8%	5,738	6,645	12,832
Farming, Fishing, and Forestry	1,839	1,865	26	1.4%	68	200	268
Construction and Extraction	25,515	26,068	553	2.2%	903	1,639	2,818
Installation, Maintenance, and Repair	26,895	27,382	487	1.8%	922	1,619	2,788
Production	46,277	46,228	-49	-0.1%	1,898	3,281	5,157
Transportation and Material Moving	36,405	37,275	870	2.4%	1,819	2,505	4,756

or transfer to a different occupation, are used in New Hampshire occupational projections to estimate separations on a statewide basis.

Users familiar with projections data may notice that the latest values for projected openings are significantly higher than past projections. The new methodology provides a better estimate of labor market dynamics that have always existed by improving the measurement of these dynamics. Because of this change in methodology, long-term projections for 2014 to 2024 and other prior periods should not be compared to these new data to determine how occupational demand has changed over time. In addition, projected openings for an occupation should not be viewed as a precise estimate of the number of expected job openings, but used as a guide to the magnitude of openings in comparison to other occupations.

The Economic and Labor Market Information Bureau publishes short-term projections twice each year to assess how changes in economic conditions and seasonality affect the demand for workers. Frequent updates of short-term projections give users the best available view of employment trends for the upcoming two years. Projections are used in career guidance and workforce development and can also help identify where training and education programs are most needed.

### Differences in Estimating Job Openings: Replacement versus Separation

The past methodology of estimating replacements, developed in the early

### Defining Occupational Job Openings

The new projections methodology identifies three aspects of annual job openings. Together, the total annual job openings provide perspective on the demand for workers in each occupation.

**Annual Labor Force Exits:** The numbers of workers leaving the labor force to go to school, start a family, or retire, for example.

**Annual Occupational Transfers:** The number of workers leaving one occupation to go to another occupation (in another job family), such as through promotion or career change.

**Total Annual Openings:** The sum of labor force exits plus occupational transfers, plus the projected annual numeric employment change for each occupation

1990s, significantly undercounted projected job openings. That methodology assumed that most individuals would follow a “traditional” career path — entering employment at a young age, and remaining in the same occupation until retirement, whereupon the individual would be replaced by another worker. The methodology relied mainly on age to determine when a worker would leave an occupation, using historical data from the Current Population Survey (CPS). The CPS provided detailed occupational and age cohort data for the estimates, but the data did not completely account for occupational changes over the course of a worker’s career.<sup>1</sup>

Estimation of replacement job openings, those created when a worker leaves an occupation, is no longer limited to the simple assumption that retiring workers will need to be replaced. The new methodology considers workers who leave the labor force entirely due to retirement or other reasons, known as labor force exits, as well as those who change to other occupations, known as occupational transfers. The

latter are much more common and a worker may change jobs multiple times during their working life, to change careers or move up the job ladder. Occupational transfers do not account for workers who change jobs but stay in the same occupation, as there is no impact on the overall employment in the occupation.

Self-employed workers are included in the primary occupation in which they specialize. Individuals working in the ‘gig’ economy for which the ‘gig’ is not their primary occupation, such as drivers for a ride-share service, would not be included in the separations methodology.

### Total Openings in an Occupation

Along with exits and transfers, there is another source of job openings, which is through industry growth. Growing employment in an industry due to increased demand for products and services equates to an increase in the number of workers in occupations employed in that industry. Occupational job growth is measured simply by the difference between base period employment and projected employment for a

<sup>1</sup> Occupational Separations Methodology Frequently Asked Questions. U.S. Bureau of Labor Statistics. [https://www.bls.gov/emp/ep\\_separations\\_faqs.htm](https://www.bls.gov/emp/ep_separations_faqs.htm).

future period. Occupational growth can also be negative, such as when changes in technology result in fewer workers needed to achieve the same level of labor productivity. Overall, the number of openings created by growth is lower than openings due to separations for most occupations.

There is no specific connection between occupational employment growth and the number of workers leaving an occupation.<sup>2</sup> On the other hand, the number of job openings projected for a specific occupation is correlated with the number of individuals currently employed in the occupation. Occupations with higher estimated employment usually have a large number of annual job openings, while occupations with fewer workers are expected to have a much lower number of annual job openings. For example, Cashiers account for roughly 22,500 workers statewide, with over 4,000 projected annual job openings. In comparison, Tellers account for roughly 2,000 workers statewide, and are projected to have just 214 annual job openings.

being measured; results are more reliable, and more accurate for small occupations.

Educators, workforce professionals, employers, job seekers, students, and others can use projections to learn about:

- Areas of the economy that are expected to grow or decline, and areas of the economy that are expected to have the best employment opportunities.
- Occupations expected to have more job openings than others, informing stakeholders who prepare and train the workforce.
- Possible career pathways, as workers in occupations with a high number of transfers that require a low level of education or experience are likely to transfer to a related occupation requiring a higher level of education or experience, as well as an increase in pay.

*Michael Argiropolis, Labor Market Analyst*

### **Key Points for End Users**

Employment projections provide an idea of what is expected for workers in the future. The new separations methodology was designed to better understand and project labor force dynamics. This methodology provides greater clarity in what is

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Detailed short-term employment projections for New Hampshire can be found at <http://www.nhes.nh.gov/elmi/products/proj.htm>

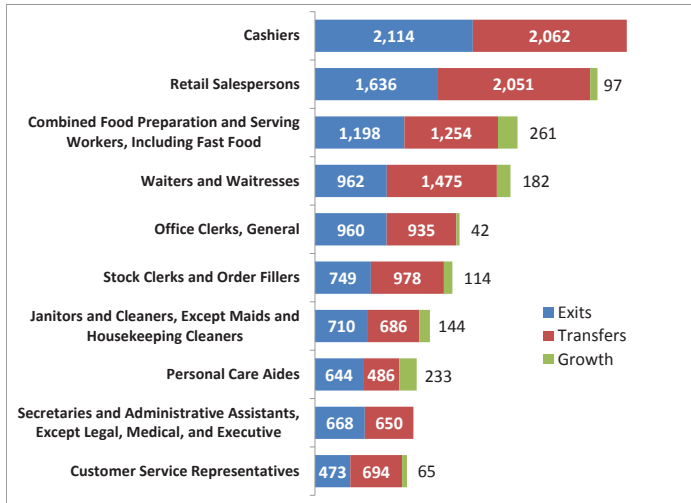
Long-term projections for 2016 to 2026 using the new separations methodology will be released in June 2018.

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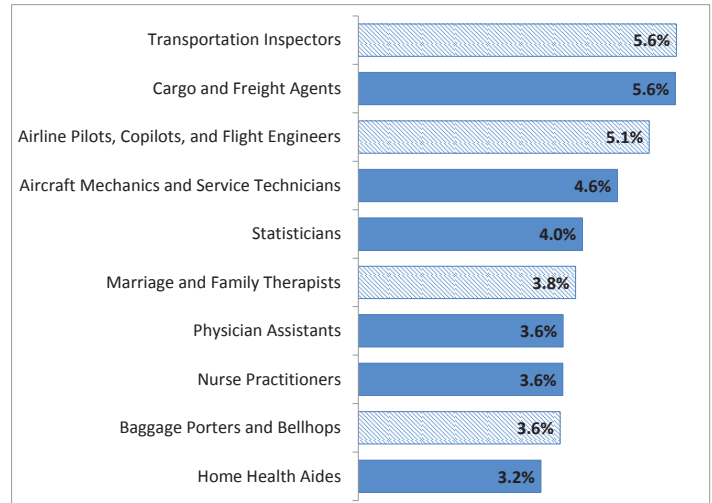
<sup>2</sup> Ibid.

## Highlights of Short-term Employment Projections, 2017 Q2 to 2019 Q2

**Top Ten Occupations with the Most Annual Openings, 2017 Q2 to 2019 Q2**  
 New job growth is the smallest portion of annual job openings

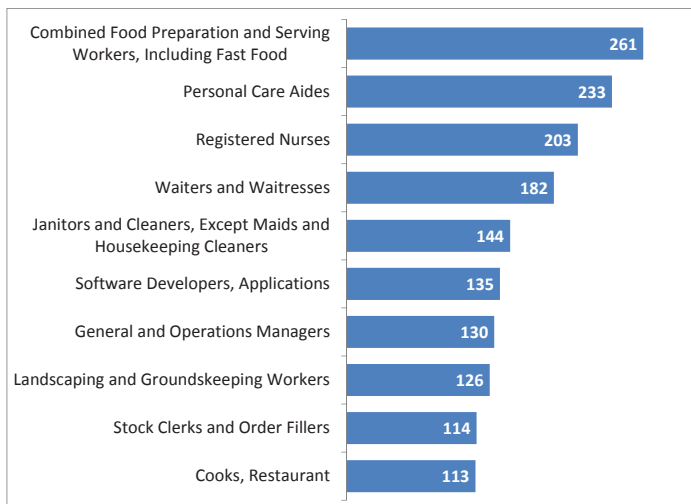


**Fastest Annual Growth Rate 2017 Q2 to 2019 Q2**  
 Four of the ten occupations with the fastest annual growth rate had fewer than 100 workers in 2017 Q2



**Occupations Adding the Most New Jobs Annually, 2017 Q2 to 2019 Q2**

Occupations adding the most new jobs generally have a larger number of workers in New Hampshire



**Occupations with Negative Annual Job Growth, 2017 Q2 to 2019 Q2**

Even if overall employment in an occupation may decline over the period, there are still job opportunities from exits and transfers

