



Department of  
Job and Family Services

TO STRENGTHEN OHIO'S FAMILIES WITH SOLUTIONS TO TEMPORARY CHALLENGES

# Profile of Unemployment

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## A Post-Recession Analysis



# Profile of Ohio Unemployment: A Post-Recession Analysis

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## **Preface**

Every year, the Ohio Department of Job and Family Services (ODJFS), Bureau of Labor Market Information (LMI) reports on developments in the statewide economy and workforce. This year, the *Profile of Unemployment: A Post-Recession Analysis* focuses on unemployed workers, notably who they are, how long they have been out of work, which industries and occupations they are coming from, and where the best opportunities are for reemployment.

One of the key features of the 2007-09 recession has been its depth and length. It has been almost three and a half years since Ohio payroll employment crested, and almost one and a half years since it bottomed out. From January 2008 to April 2011, Ohio lost 332,700 jobs, or about 6.1 percent of nonfarm payroll employment. The state's recovery has been a slow and fragile one; unemployment rates are higher than they have been since 1983. Long-term unemployment of this sort can have ripple effects not only on the workers themselves, but the broader economy as well.

Section I examines unemployment trends in Ohio over the last few decades, its causes, and its effects in the broader economy. Section II takes a closer look at which demographic groups are most affected by unemployment. A comparison of unemployment within economic segments—industries and occupations—follows in Section III. Section IV reviews employment projections to 2018. Finally, Section V outlines workforce initiatives to assist employers and job seekers address the current economic climate.

Through careful examination of the economic statistics in this publication, we hope that individuals; businesses; economic development corporations; labor and governmental organizations; educational institutions; and all others interested in the economy and quality of life in Ohio will be able to draw a clearer picture of the unemployment situation in the state.

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## Executive Summary

- Ohio's statewide unemployment rate in 2010 was 10.1 percent, the highest it has been since 1983.
- In 2010, over 250,000 workers in Ohio had been unemployed for more than 26 weeks.
- Ohio's labor force participation rate fell from 67.0 percent in 2008 to 65.2 percent in 2010, indicative of worker discouragement. The most common reasons stated were inability to find work and a belief that there were no jobs in the area.
- Unemployment can have lingering effects on workers, such as difficulty in finding new work and reemployment at lower wages.
- Annual county unemployment rates for 2010 ranged from 7.1 percent in Delaware County to 16.4 percent in Clinton County.
- Unemployment rates tend to be higher among younger workers without a high school diploma and African Americans. Men comprise almost two thirds of the unemployed.
- Comparing industry sectors, construction; mining; leisure and hospitality; professional and business services; and manufacturing have had higher rates of displaced workers.
- Comparing occupational groups, construction and extraction; production; and transportation and material moving have had higher rates of displaced workers.
- Total nonfarm payroll employment is projected to increase 4.3 percent from 2008 to 2018, with strong growth in professional and technical services; health care and social assistance; and private educational services.
- Approximately 55.1 percent of job openings in the next ten years will require some sort of postsecondary education.
- The Ohio Department of Job and Family Services, Office of Workforce Development has a variety of programs and initiatives in place to help businesses and the unemployed, including OhioMeansJobs.com, One-Stop Centers, Rapid Response, the State Veterans' Program, the Work Opportunity Tax Credit, Apprenticeships, and National Emergency Grants.

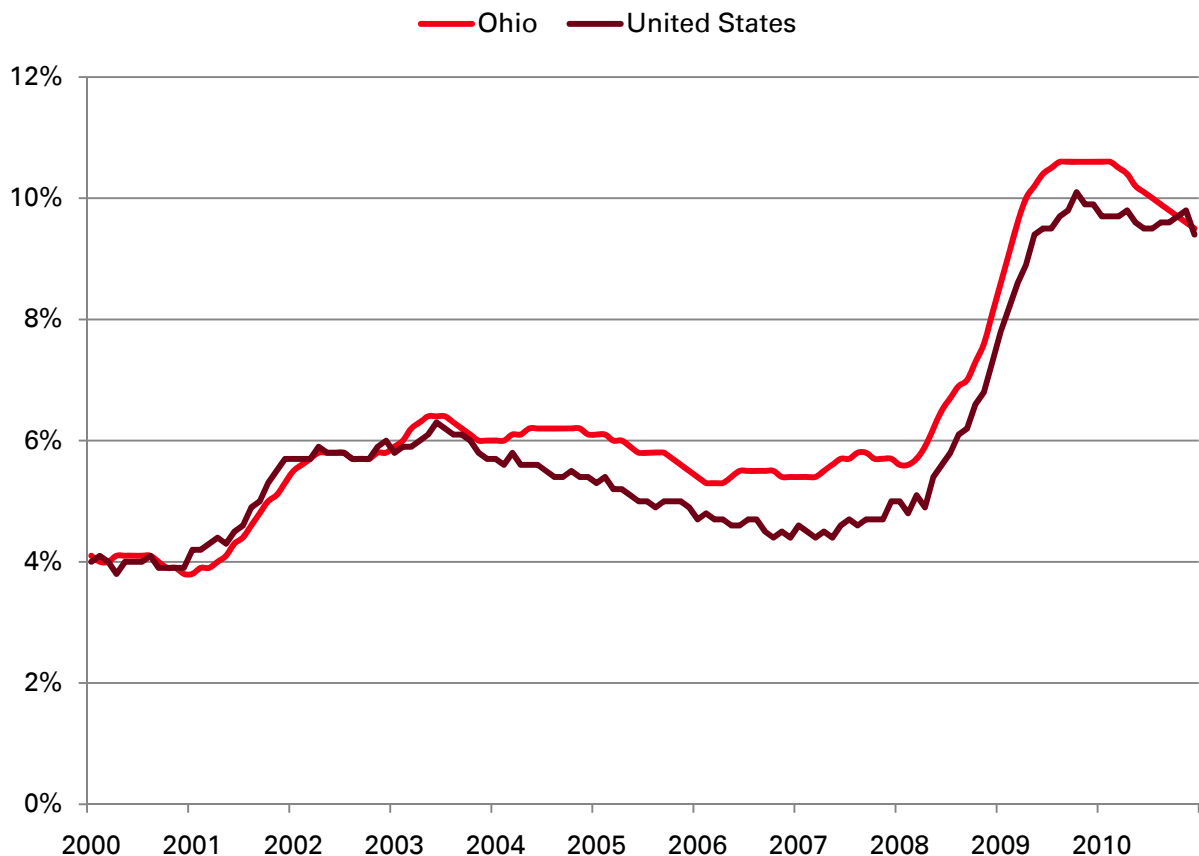
## I. Joblessness in Ohio

Official statistics define unemployment as being available and looking for work, but not having done any work for pay or profit. In 2010, there were approximately 592,000 unemployed Ohioans.

### *The Unemployment Rate*

The unemployment rate is the percentage of people in the labor force who have no work. The average unemployment rate for 2010 was 10.1 percent, the same level as 2009 and the highest it has been since 1983. Figure 1 below shows monthly unemployment rates, adjusted for seasonal variation, in Ohio and the United States since 2000. Following the last peak in unemployment in June 2003, the rate fell slowly until June 2008. By the following year, the unemployment rate had shot up to 10.3 percent. The national unemployment rate has largely followed a similar trend in the last three years, though slightly lower. The peak national unemployment rate was 10.1 percent in October 2009.

**Figure 1: Seasonally Adjusted Unemployment Rates, 2000-2010**



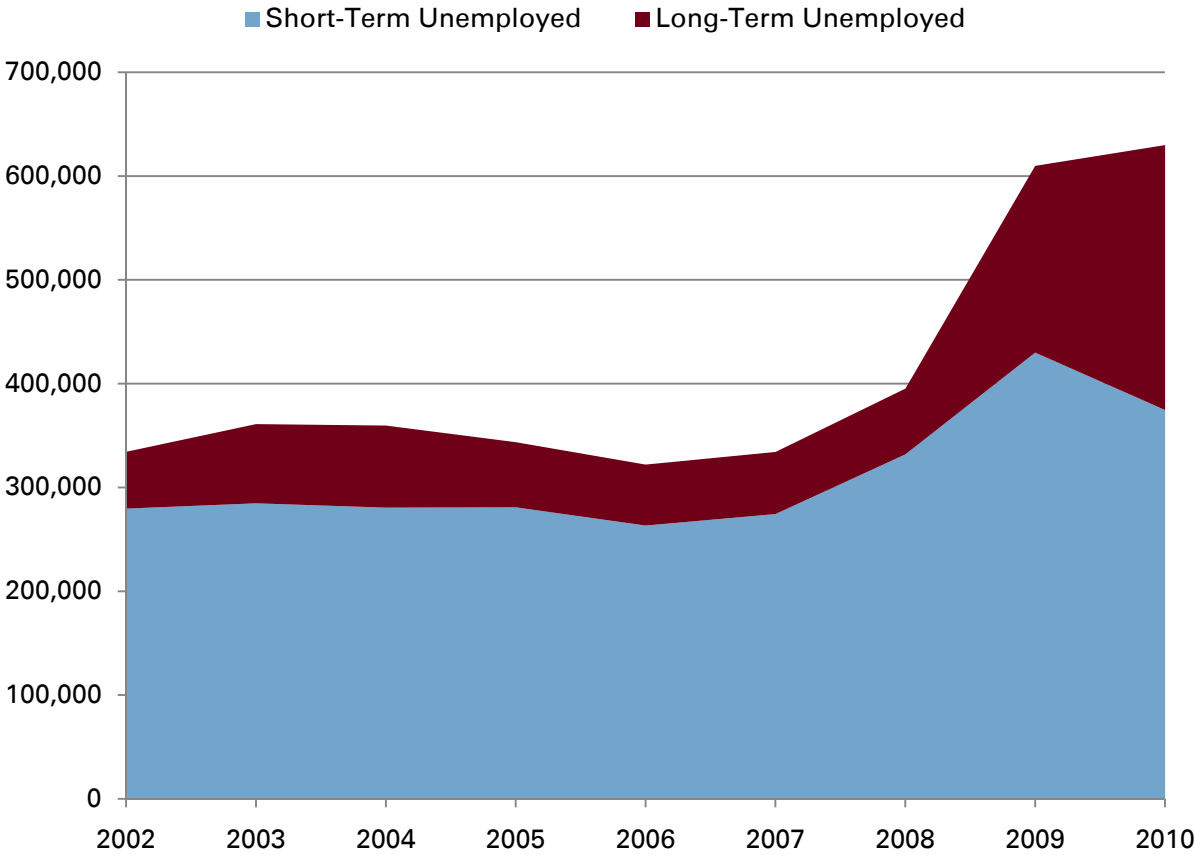
Source: U.S. Bureau of Labor Statistics [BLS], Current Population Survey; *Ibid.*, Local Area Unemployment Statistics.

**The Long-Term Unemployed**

One of the key features of the current recession has been its depth; the economic downturn has affected a large number of people over a long period of time. The result has been increases not only in unemployment but also long-term unemployment—defined as more than 26 weeks.

Figure 2 below shows how long-term unemployment has grown in Ohio in the last two years. From 2002 to 2008, only about 50,000 to 80,000 workers in the state were unemployed for more than six months. By 2010, over 250,000 workers were facing long jobless spells.

**Figure 2: Short- and Long-Term Unemployment Estimates in Ohio, 2002-2010**



Source: BLS, Current Population Survey.

Long-term unemployment is also a problem nationally. In the second quarter of 2010, 2.9 percent of the labor force had been unemployed for a year or longer. The average jobless spell was 35 weeks in 2010.<sup>1</sup> Also, some employers are reluctant to hire people who have been out of work for a long time, exacerbating this trend.<sup>2</sup>

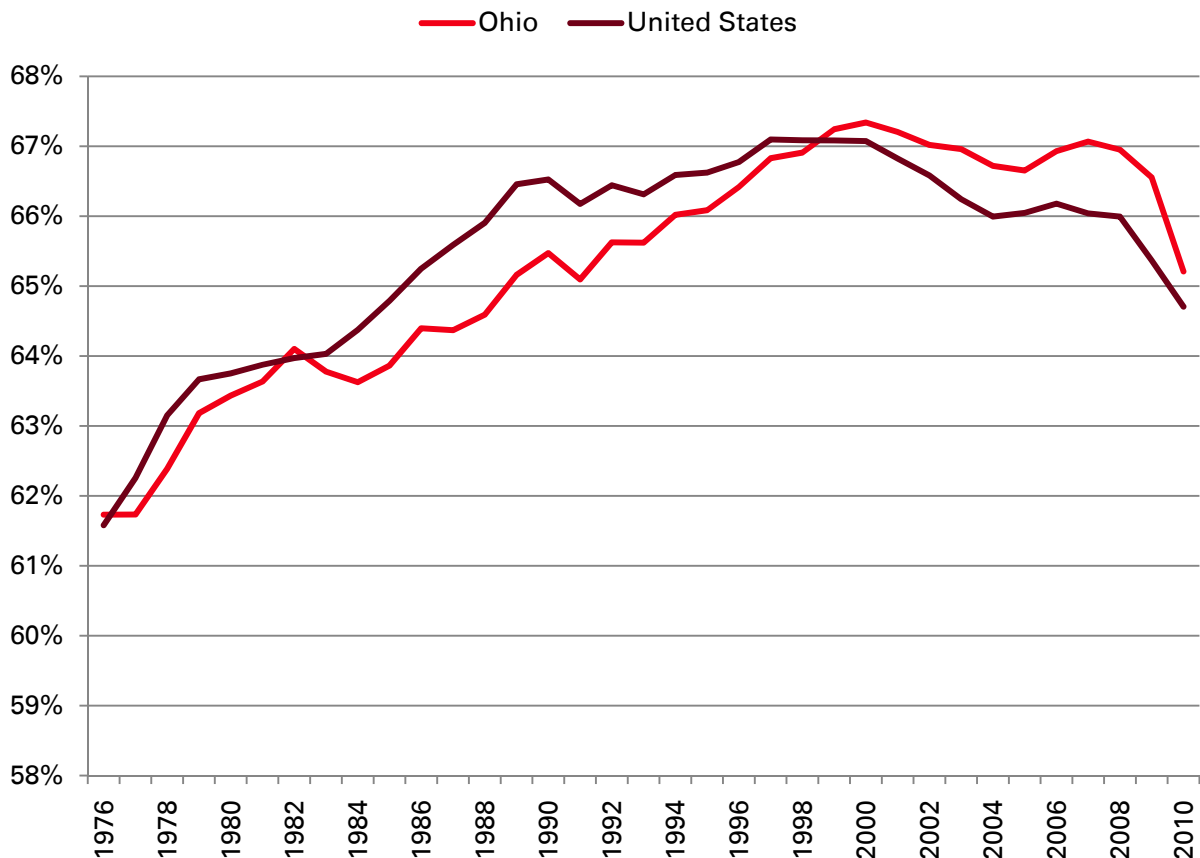
<sup>1</sup> Farber 2011, 28.  
<sup>2</sup> BLS, "Ranks of those unemployed for a year or more up sharply," 1.

## Labor Force Participation and Worker Discouragement

Under a long-term jobless spell, many people may decide to exit the labor force, or stop looking for work—a phenomenon called worker discouragement. Declines in the labor force participation rate—the proportion of the non-institutional civilian population ages 16 and older who are working or looking for work—can help determine how many Ohioans are discouraged.

Figure 3 below shows labor force participation rates in Ohio and the U.S. in the last 34 years. After a long trend of increasing participation, rates began to stagnate and fall slightly starting in 2000. During this recession, however, participation rates in Ohio dropped sharply from 67.0 percent in 2008 to 65.2 percent in 2010.

**Figure 3: Labor Force Participation Rates, 1976-2010**



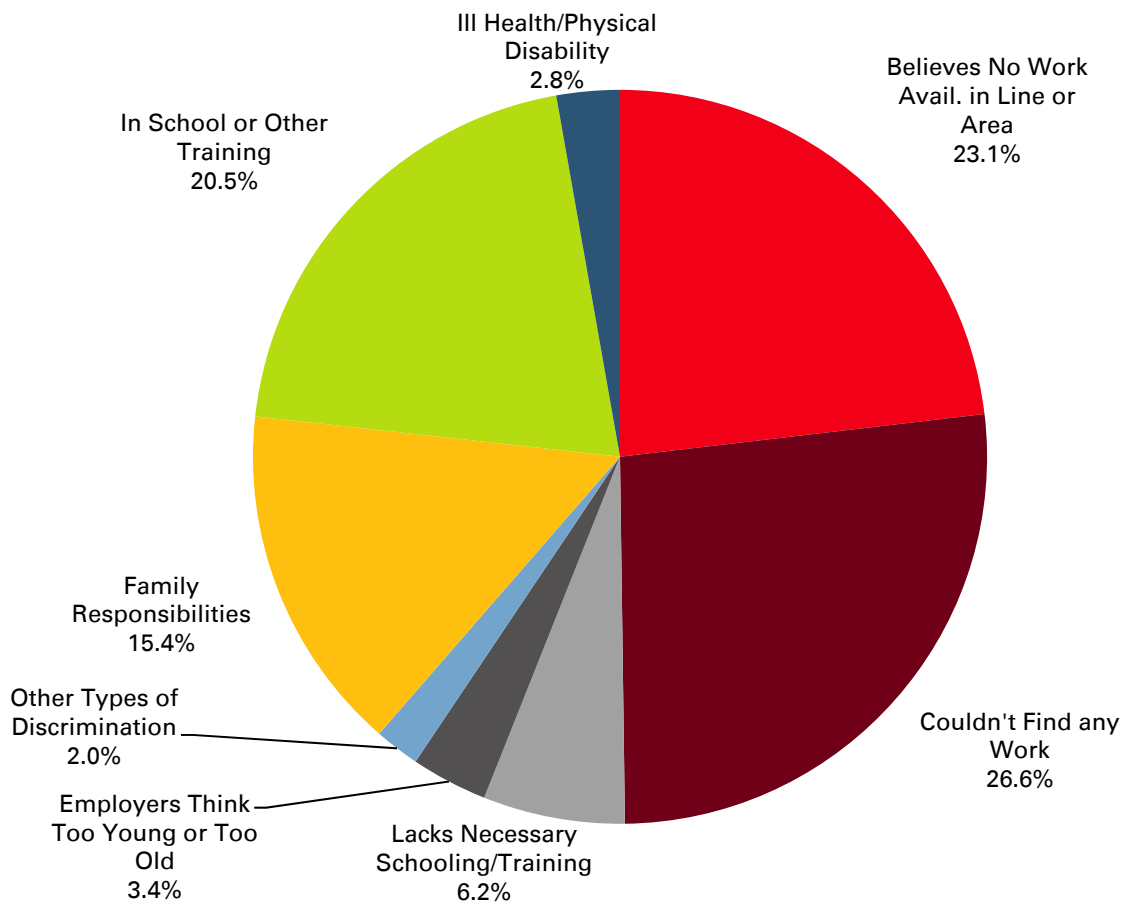
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Source: BLS, Current Population Survey; *Ibid.*, Local Area Unemployment Statistics.

Labor force participation rates for various demographic groups are shown in Appendix A at the end of this document. Labor force participation has declined in nearly all demographic groups between 2008 and 2010. The only demographic group to see a significant increase in participation was Hispanics (1.0%). The greatest decline was among women ages 16 to 19 (-6.2%).

Within the Current Population Survey, respondents gave a variety of reasons why they are not looking for work. Figure 4 below summarizes the results for discouraged workers in Ohio. (This data set does not include retirees or those who have never entered the labor force.) Nearly half of respondents claimed to have stopped looking because they could not find work (26.6%) or believed there were no jobs open in their field and area (23.1%). Another common reason is that respondents have left the labor force to return to school (20.5%). The final major reported reason for worker discouragement was family responsibilities (15.4%).

**Figure 4: "What is the Main Reason You Were Not Looking for Work during the Last Four Weeks?" December 2010**



Source: BLS, Current Population Survey.

### ***Effects of Unemployment***

Unemployment can have more effects than the obvious immediate financial stresses. An analysis of data from the Displaced Workers Survey, an adjunct to the monthly Current Population Survey, also identified several lingering effects when someone loses a job, even during an upturn.



There is the difficulty the unemployed can have finding new work. Of those who lost jobs between 2007 and 2009, only half had found new work by January 2010, much less than in the past.<sup>3</sup>

Of those who were let go from full-time employment, 20 percent of those who did find new work were only in part-time jobs. Similarly, this study also found that unemployment and reemployment can have a negative effect on earnings. Full-time job losers who were able to find new full-time employment earned 13 percent less on average nationally than they had before. This figure climbed to 17 percent taking into account forgone earnings increases (i.e. regular pay raises).<sup>4</sup>

### ***Unemployment Rates by County***

The map in Appendix B at the end of this report gives unemployment rates for 2010 for each of Ohio's 88 counties. There were only 22 counties with annual unemployment rates at or below the national rate of 9.6 percent. Many of these were located around Ohio's three largest cities—Cincinnati, Cleveland, and Columbus—though there were exceptions scattered around the southern and northwest portions of the state. Delaware County had the lowest unemployment rate that year: 7.2 percent.

Eight counties had unemployment rates above 14.0 percent, all in the southern portion of the state except Ottawa County. Clinton County had the highest unemployment rate of 2010: 16.4 percent.

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· Farber 2011, 28.  
· Farber 2005, 25.

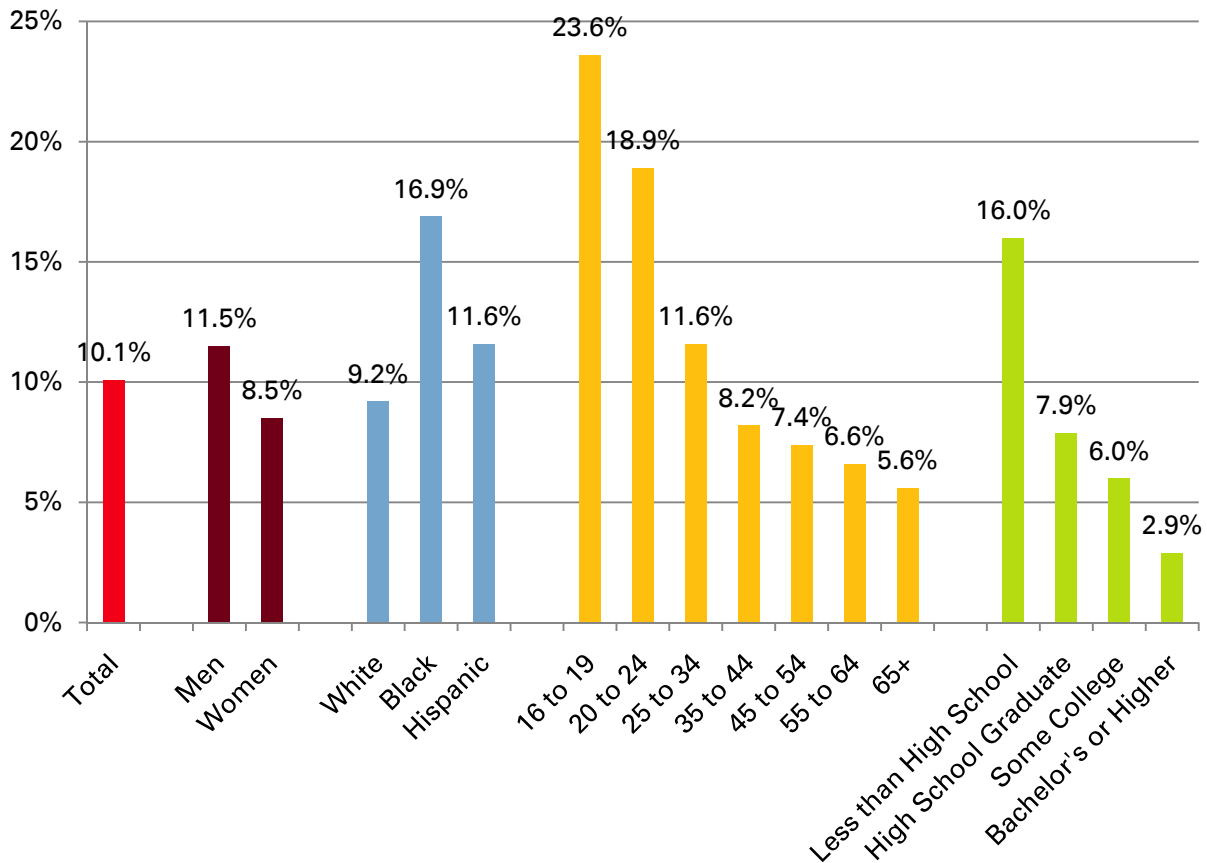
## II. Demographic Comparisons

The current economic downturn has affected different portions of the population in different ways. A demographic survey of unemployment in Ohio follows in this section.

### *Unemployment Rate Comparisons*

The Current Population Survey collects unemployment rates by various demographic groups in each of the states. Figure 5 below compares the 2010 total Ohio unemployment rate (10.1%) with rates by gender; race and ethnicity; age group; and educational attainment.

**Figure 5: Ohio Unemployment Rates by Demographic Group, 2010**



Source: BLS, Current Population Survey.

Workers ages 16 to 19 appear to have the hardest time finding work; 23.6 percent of the labor force in this group cannot find work, compared with 18.9 percent of those 20 to 24 and 11.6 percent of those 25 to 34. Workers without a high school diploma have also been strongly affected with an unemployment rate of 16.0 percent. Attaining a bachelor's degree or more brings the unemployment rate down to 2.9 percent. African American workers also appear to have a relatively high unemployment rate of 16.9 percent. (The three racial and ethnic groups shown here were the only figures available for Ohio.)

## ***Proportions of Net Unemployed***

In addition to unemployment rates, we can take a cross section of all unemployed workers in the state to get a clearer picture of who is unemployed. Figure 6 below shows various demographic groups in Ohio and how much of total unemployment they account for, compared with their relative shares of the whole population.

***Figure 6: Ohio Proportions of Net Unemployment and Total Population by Demographic Group, 2010***

| <b><i>Group</i></b> | <b><i>Proportion<br/>Unemployment</i></b> | <b><i>Proportion<br/>Population</i></b> |
|---------------------|---|---|
| Men                 | 63.8%                                     | 48.8%                                   |
| Women               | 36.2%                                     | 51.2%                                   |
| White               | 73.1%                                     | 81.1%                                   |
| Black               | 19.0%                                     | 12.0%                                   |
| Hispanic            | 3.9%                                      | 3.1%                                    |
| Asian               | 2.8%                                      | 1.7%                                    |
| Other               | 1.2%                                      | 2.1%                                    |
| 16 to 19            | 11.7%                                     | 5.8%                                    |
| 20 to 24            | 17.0%                                     | 6.6%                                    |
| 25 to 34            | 23.8%                                     | 12.2%                                   |
| 35 to 44            | 16.4%                                     | 12.8%                                   |
| 45 to 54            | 19.0%                                     | 15.1%                                   |
| 55 to 64            | 10.5%                                     | 12.6%                                   |
| 65+                 | 1.6%                                      | 14.1%                                   |
| No High School      | 16.4%                                     | N/A                                     |
| High School         | 42.7%                                     | N/A                                     |
| Some College        | 20.4%                                     | N/A                                     |
| Associate           | 8.4%                                      | N/A                                     |
| Bachelor's          | 9.2%                                      | N/A                                     |
| Master's or Higher  | 3.0%                                      | N/A                                     |

N/A - Data not available

Sources: BLS, Current Population Survey; U.S. Census Bureau, 2010 Decennial Census.

Although their group unemployment rate is only 9.2 percent, white workers account for almost three quarters of all unemployed in Ohio, while African Americans, Hispanics, and Asians account for 19.0, 3.9, and 2.8 percent, respectively. In terms of educational attainment, workers with only a high school diploma make up 42.7 percent of the state's unemployed, compared with only 3.0 percent with a master's degree or more.

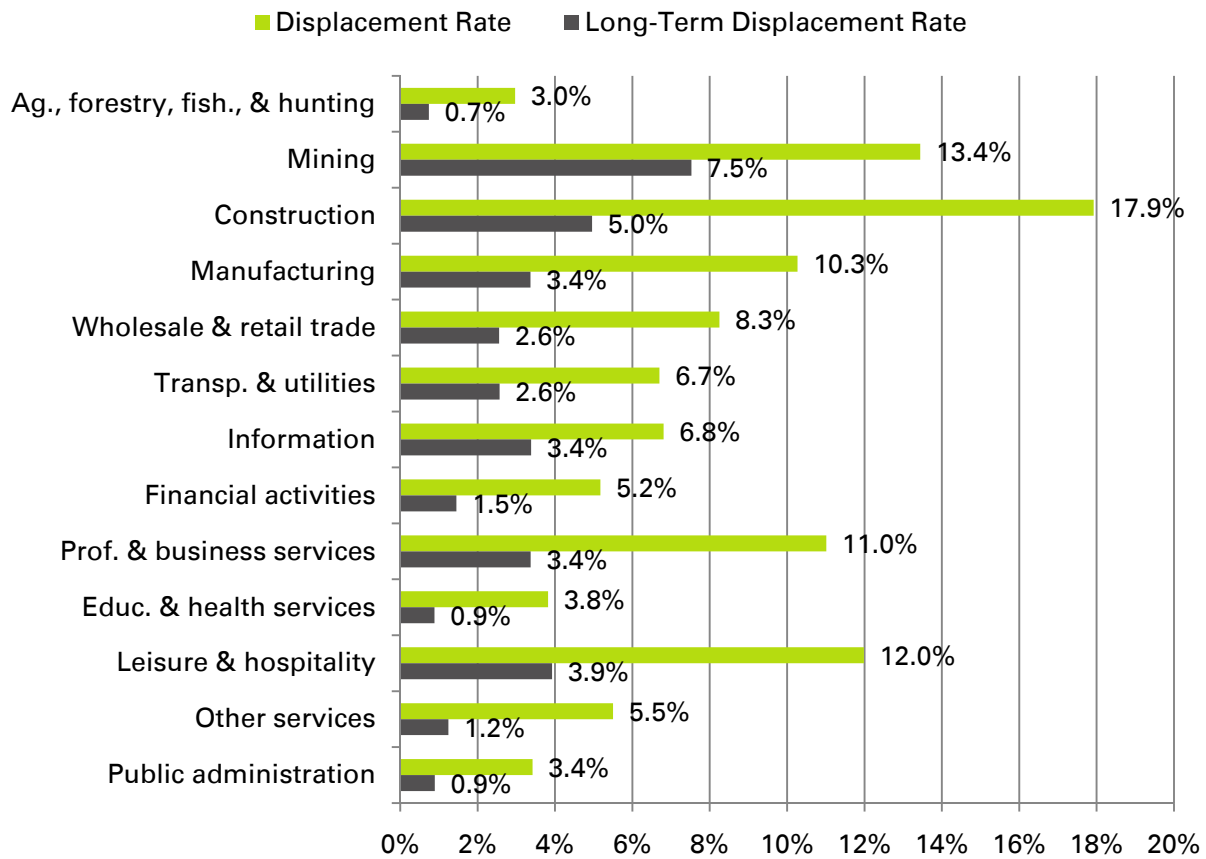
### III. Economic Segment Comparisons

Just as demographic groups have been affected differently, the most recent economic downturn has hit different segments of the economy at different times and to different degrees. While it may be theoretically problematic to assign the unemployed to any specific economic sector (by definition, the unemployed are not in any industry or occupation until they are rehired, and the BLS does not publish any such statistic), it can be useful to look at their most recent jobs to determine both where most economic pain is being felt, and to get an idea what sorts of hard skills the unemployed still possess.

#### Industry Displacement Rates

Figure 7 below shows estimated displacement rates and long-term displacement rates, based on most recent employment, for 13 industrial supersectors. Because this economic downturn has been characterized by declines in housing, the highest rate has been in construction (17.9%). The four other industries with rates above the statewide average are mining (13.4%); leisure and hospitality (12.0%); professional and business services (11.0%); and manufacturing (10.3%).

**Figure 7: Displacement Rates by Industry Supersector, 2010**



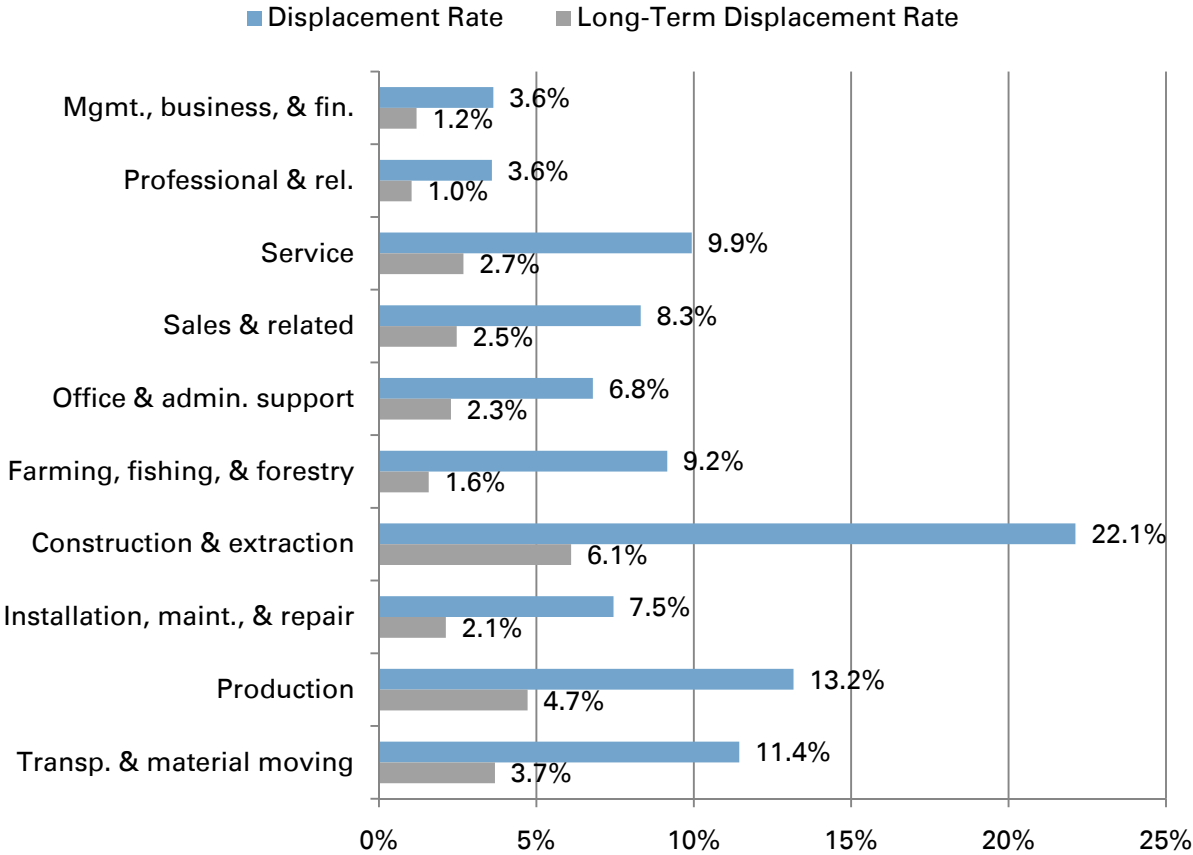
Source: BLS, Current Population Survey.

Long-term displacement, again defined as longer than 26 weeks, shows a slightly different pattern. Here, mining had the highest rate (7.5%), followed by construction (5.0%); leisure and hospitality (3.9%); information (3.4%); professional and business services (3.4%); manufacturing (3.4%); transportation and utilities (2.6%); and wholesale and retail trade (2.6%).

**Occupational Displacement Rates**

Figure 8 below shows estimated displacement rates and long-term displacement rates, based on most recent employment, for ten major occupational groups. Again reflecting the recession’s center on residential construction, the highest rate was in construction and extraction (22.1%). The two remaining rates above the statewide average were production (13.2%) and transportation and material moving (11.4%).

**Figure 8: Displacement Rates by Occupational Group, 2010**

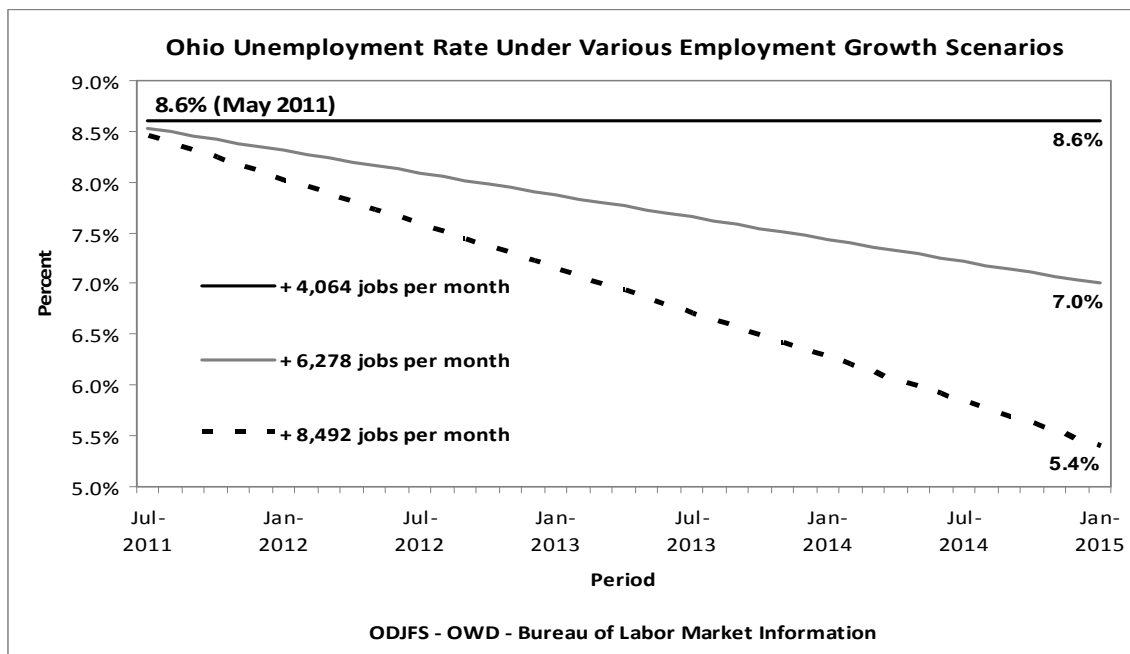


Source: BLS, Current Population Survey.

Construction and extraction also had the state’s highest long-term displacement rate (6.1%). This was followed by production (4.7%); transportation and material moving (3.7%); service occupations (2.7%); and sales and related (2.5%).

## Employment Growth Scenarios

This analysis of the magnitude and length of unemployment as a product of the last recession points to the obstacles to overcome in returning to prerecession levels of workforce participation. Economic forecasts suggest slow growth scenarios, where unemployment rates do not drop to 5 or 6 percent for multiple years. The economy not only has to absorb those not working back into the economy but also those entering the labor force for the first time. The simple extrapolation below helps illustrate the issue for Ohio. From July 2010 to July 2011, Ohio had a monthly average growth in employment of 2,250 per month. As a result, Ohio's unemployment rate edged up to 9 percent in July 2011.



This chart makes the following assumptions:

- The various scenarios present the amount of job growth that must occur each month to move from the base seasonally adjusted unemployment rate of 8.6 percent in May 2011 to the January 2015 target unemployment rate.
- Ohio's working age population (16 and older) grew monthly by about 2,874 persons per month since January 2000. That growth rate was applied to the period June 2011 through January 2015 to yield the estimated working age population data.
- Ohio's labor force population ratio, the ratio of those 16 and older that are either employed or unemployed, averaged 66.7 percent since January 2000. The percentage dropped to 65.5 percent in May 2011. This chart utilizes the May 2011 rate as its base and then moves to the average rate of 66.7 percent in January 2015. This projection assumes that the number of persons in the labor force will increase as the number of jobs increase.

## IV. Employment Projections to 2018

In light of this analysis, it is advantageous to know where employment options may be most prominent in the years ahead. Every two years, the Ohio Department of Job and Family Services develops long-term employment projections for various industries and occupations around the state. These projections help economic and workforce development professionals determine how best to dedicate resources by identifying which industries and occupations will grow in the coming years, presenting new employment opportunities.

### *Industry Employment*

Figure 9 below summarizes statewide employment projections for Ohio by two-digit industry sector. In total, employment is expected to grow 4.3 percent from 2008 to 2018, reaching approximately 5.98 million jobs.

**Figure 9: Long-Term Employment Projections by Industry Sector**

| <i>Industry Title</i>                                      | <i>2008<br/>Empl.</i> | <i>2018<br/>Proj.</i> | <i>Net<br/>Growth</i> | <i>Percent<br/>Growth</i> |
|--|-----------------------|-----------------------|-----------------------|---------------------------|
| Total, All Industries                                      | 5,726,100             | 5,975,100             | 249,000               | 4.3%                      |
| Goods-Producing Industries                                 | 1,054,600             | 964,600               | -90,000               | -8.5%                     |
| Agriculture, forestry, fishing and hunting                 | 92,500                | 88,800                | -3,700                | -4.0%                     |
| Mining   | 11,600                | 11,100                | -500                  | -4.3%                     |
| Construction   | 211,500               | 235,700               | 24,200                | 11.4%                     |
| Manufacturing  | 739,000               | 629,100               | -109,900              | -14.9%                    |
| Service-Providing Industries                               | 4,337,100             | 4,666,900             | 329,800               | 7.6%                      |
| Wholesale trade  | 236,500               | 240,900               | 4,400                 | 1.9%                      |
| Retail trade   | 589,300               | 586,200               | -3,100                | -0.5%                     |
| Transportation and warehousing                             | 188,100               | 206,000               | 17,900                | 9.5%                      |
| Utilities  | 21,700                | 19,400                | -2,300                | -10.6%                    |
| Information  | 86,100                | 80,100                | -6,000                | -7.0%                     |
| Finance and insurance                                      | 226,000               | 234,200               | 8,200                 | 3.6%                      |
| Real estate and rental and leasing                         | 63,500                | 67,100                | 3,600                 | 5.7%                      |
| Professional and technical services                        | 250,500               | 306,000               | 55,500                | 22.2%                     |
| Management of companies and enterprises                    | 109,600               | 117,200               | 7,600                 | 6.9%                      |
| Administrative and waste services                          | 307,300               | 345,600               | 38,300                | 12.5%                     |
| Educational services                                       | 90,000                | 102,300               | 12,300                | 13.7%                     |
| Health care and social assistance                          | 704,300               | 853,500               | 149,200               | 21.2%                     |
| Arts, entertainment and recreation                         | 63,700                | 65,800                | 2,100                 | 3.3%                      |
| Accommodation and food services                            | 428,400               | 447,600               | 19,200                | 4.5%                      |
| Other services, except public administration               | 220,700               | 240,900               | 20,200                | 9.2%                      |
| Government   | 751,400               | 755,000               | 3,600                 | 0.5%                      |
| Self-employed, private household and unpaid family workers | 334,400               | 342,700               | 8,300                 | 2.5%                      |

Source: Ohio Department of Job and Family Services [ODJFS], *2018 Ohio Job Outlook*, 10.

The strongest growth is expected in professional and technical services (22.2%); health care and social assistance (21.2%); and private educational services (13.7%). Note also that construction, which has the state's highest industrial displacement rate, is projected to gain 24,200 jobs over the period of analysis (11.4%), possibly helping to ameliorate that sector's situation. However, mining, another sector with a high unemployment rate, will lose 500 jobs (-4.3%)<sup>5</sup>.

## ***Occupational Employment***

Figure 10 below shows employment projections and predicted average annual openings by major occupational group. Here, we expect strong growth in healthcare support (27.3%); computer and mathematical occupations (17.5%); and healthcare practitioners and technical (16.7%). Again looking back at groups with high unemployment, construction and extraction is expected to grow 6.0 percent in the next ten years, while production occupations will decline 10.3 percent.

Figure 10: Long-Term Employment Projections and Average Annual Openings by Major Occupational Group

| <b><i>Occupational Group</i></b>             | <b><i>2008<br/>Empl.</i></b> | <b><i>2018<br/>Proj.</i></b> | <b><i>Net<br/>Growth</i></b> | <b><i>Percent<br/>Growth</i></b> | <b><i>Avg.<br/>Ann. Op.</i></b> |
|--|------------------------------|------------------------------|------------------------------|----------------------------------|---------------------------------|
| Total, All Occupations                       | 5,726,100                    | 5,975,100                    | 249,000                      | 4.3%                             | 166,269                         |
| Management                                   | 296,650                      | 296,290                      | -360                         | -0.1%                            | 6,453                           |
| Business and Financial Operations            | 240,990                      | 266,370                      | 25,380                       | 10.5%                            | 7,503                           |
| Computer and Mathematical                    | 130,300                      | 153,150                      | 22,850                       | 17.5%                            | 4,764                           |
| Architecture and Engineering                 | 91,550                       | 93,670                       | 2,120                        | 2.3%                             | 2,374                           |
| Life, Physical, and Social Science           | 41,150                       | 45,300                       | 4,150                        | 10.1%                            | 1,684                           |
| Community and Social Services                | 109,160                      | 121,980                      | 12,820                       | 11.7%                            | 3,629                           |
| Legal  | 37,460                       | 39,250                       | 1,790                        | 4.8%                             | 850                             |
| Education, Training, and Library             | 302,470                      | 325,250                      | 22,780                       | 7.5%                             | 9,138                           |
| Arts, Design, Entertainment, Sports, & Media | 82,600                       | 86,850                       | 4,250                        | 5.1%                             | 2,632                           |
| Healthcare Practitioners and Technical       | 326,850                      | 381,360                      | 54,510                       | 16.7%                            | 12,217                          |
| Healthcare Support                           | 201,960                      | 257,080                      | 55,120                       | 27.3%                            | 7,746                           |
| Protective Service                           | 117,200                      | 120,680                      | 3,480                        | 3.0%                             | 3,795                           |
| Food Preparation and Serving Related         | 472,430                      | 498,330                      | 25,900                       | 5.5%                             | 18,537                          |
| Building & Grounds Cleaning & Maintenance    | 195,230                      | 199,690                      | 4,460                        | 2.3%                             | 3,856                           |
| Personal Care and Service                    | 151,210                      | 173,120                      | 21,910                       | 14.5%                            | 5,872                           |
| Sales and Related                            | 600,140                      | 606,460                      | 6,320                        | 1.1%                             | 18,807                          |
| Office and Administrative Support            | 892,470                      | 916,530                      | 24,060                       | 2.7%                             | 23,423                          |
| Farming, Fishing, and Forestry               | 15,530                       | 14,920                       | -610                         | -3.9%                            | 417                             |
| Construction and Extraction                  | 216,510                      | 229,410                      | 12,900                       | 6.0%                             | 5,259                           |
| Installation, Maintenance, and Repair        | 224,670                      | 225,210                      | 540                          | 0.2%                             | 4,932                           |
| Production                                   | 540,890                      | 485,180                      | -55,710                      | -10.3%                           | 10,697                          |
| Transportation and Material Moving           | 438,660                      | 439,030                      | 370                          | 0.1%                             | 11,685                          |

ODJFS, 2018 Ohio Job Outlook, D-1.

<sup>5</sup>There has been a recent interest and initiative to expand shale gas drilling in Ohio, which could increase employment.

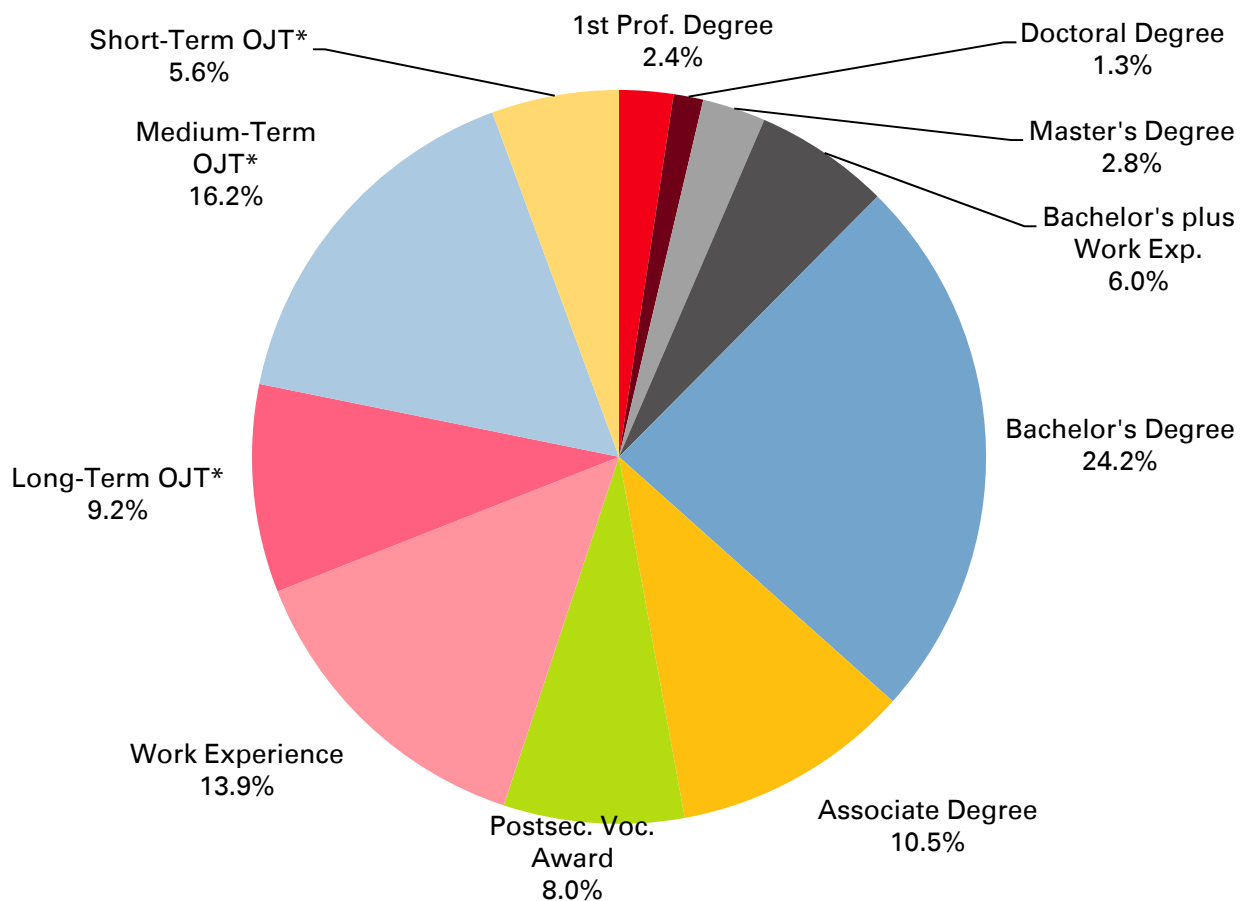


## High Prospects and Education and Training

The complete job outlook includes projections for over 700 detailed occupations. Expected job openings cover the spectrum of wage and educational levels. However, from a career exploration point of view it may be useful to consider high prospect occupations. Of these 700 occupations, 233 have been identified as “high prospects,” meaning they have average hourly wages above the statewide average \$15.30 and at least 50 projected average annual openings. Appendix C at the end of this report contains a complete list of these high prospect occupations and their projections data.

In all, there are 71,756 average annual openings projected in high prospect occupations. Figure 11 below shows the typical required education and training levels for high prospect occupations and how many average annual openings will be available for each. Over a third of high prospect openings will require at least a bachelor’s degree. More than half will require some sort of postsecondary education. About 21.8 percent of expected openings will only require short-term or medium-term on-the-job training. (Less than one month and between one month and one year, respectively.)

**Figure 11: Projected Job Openings in High Prospect Occupations by Required Education and Training**



\*OJT = On-the-Job Training  
Source: ODJFS, “High Occupational Prospects.”

## V. Workforce Programs

For the vast majority of states, the current economic climate translates into the political mantra of jobs and various policies to retain, expand and attract businesses to generate economic growth. In the case of Ohio, this is apparent in the Kasich administration's *JobsOhio* initiative. The core programs of the Ohio Department of Job and Family Services' Office of Workforce Development (OWD) have an affinity with such policy efforts.

There are two fundamental moments of truth resulting from the recession and current economic realities that cannot be ignored. First is the immediacy of the need to get more Ohioans back to work. Given that our mission is to accelerate the employment success of Ohio job seekers, OWD has been and will continue to review strategies that align with Governor Kasich's goal of creating more jobs in Ohio. This means helping people find jobs that already exist, preparing the workforce for jobs yet to come and aligning workforce strategies with business needs.

Second, the magnitude of economic losses in recent years translates into reduced federal funding and government resources. Yet, our customer base has grown, their needs are more substantial than ever and the nature of the needs have shifted or changed as the economy changed.

OWD maintains its fundamental mission but, in doing so, it must adapt to these fundamental truths. Doing so requires a realignment of organizational structure, business strategies and program policies. Although we continue to work on this realignment, there are four main strategies OWD has and will take to meet these realities. These are:

- Business structure change
- Increased and enhanced use of technology
- Program policy alignment
- Better use of information

Below are a few examples of actions steps taken under these four strategies.

**Business structure change:** OWD formed a Project Management Section specifically to address designing a variety of internal and external projects that align with the goals and objectives of the office and of this administration. The goal is to be flexible and adaptable to economic situations by implementing pilot programs and testing short-term strategies and innovative programs. Additionally, this section will respond to grant or other opportunities that may expand or improve our services.

**Increased and enhanced use of technology:** OWD has continued to implement enhancements in this area, particularly with the development of OhioMeansJobs as a central portal for jobs and talent. Most recently it has expanded into the area of providing job ad analytics, a current and new data source of information about the job market. Similarly, it will soon implement a corresponding talent or resume analytics software tool.

**Program policy alignment:** The objective here is to take programs that have separate funding streams or administrative authority and align their strengths to mutually support each other.

For example, OWD integrated the Labor Market Information program data with that of OhioMeansJobs to provide a seamless transition from career exploration data to immediate job opportunities.

Given the economic realities, OWD must think differently about the training opportunities it funds. OWD is emphasizing short-term training, on-the-job training (OJT) and incumbent worker training across programs or grant opportunities. Not only are these training opportunities less expensive than long-term training, but they also meet Ohio's immediate employment needs. OJTs connect job seekers directly with employers and offer the employer an incentive to hire new workers. More than 1,400 OJTs have been arranged between July 1, 2010 and September, 2011.

Better use of information: The office collects volumes of information in the day-to-day administration of its programs. OWD's objective is to utilize these data beyond merely supporting administrative functions or meeting reporting requirements of our grantors. Rather we wish to put it to strategic applications such as "telling our story" to better inform our stakeholders about the significance of our programs or as input to program policy formation. With these objectives, OWD created a Performance Management Section with the charge of shifting our performance and data reporting to a higher level of utilization.

Below is a brief description of our commitment to jobs and ways to address the profile of unemployment presented earlier. These programs all have the common imperative to incorporate the four main strategies identified above within their daily operations.

### ***Workforce Investment and Wagner-Peyser Acts***

The Workforce Investment Act (WIA) program offers employment and training services to both employers and job seekers. The goals of WIA are to:

- Increase employment, retention, and earnings;
- Increase occupational skills attainment;
- Improve the quality of the workforce;
- Enhance productivity and competitiveness; and
- Reduce welfare dependency.

WIA is comprised of three program areas—adult, dislocated worker, and youth—and focuses on three levels of service—core, intensive and training. WIA services are delivered in 31 comprehensive and 59 satellite One-Stop Centers throughout Ohio. Ohio's 20 Workforce Investment Boards ensure training and services are relevant to Ohio employers.

The federally-funded Wagner-Peyser (W-P) program, aka Labor Exchange/Employment Services, is a national public labor exchange system providing services to job seekers and to employers through One-Stop System service delivery networks. The goal of labor exchange services is to help job seekers obtain meaningful employment opportunities and to assist employers in obtaining skilled and productive employees.

W-P services for job seekers include job placement, resume preparation, testing, job-seeking skills workshops, computer-based job matching, and labor market information. Services for

employers include assistance in listing and filling job vacancies, including basic screening and referral of qualified job seekers.

### ***Workforce Development Services***

The ODJFS Office of Workforce Development (OWD) offers a variety of direct and indirect services to businesses and other employers in Ohio.

#### *Ohio's One-Stop Centers*

One-Stop Centers provide services to local businesses and underemployed or unemployed job seekers. One-Stops work with county agencies and other partners to deliver a variety of employment and training services to meet the needs of local customers.

One-Stop Centers can provide employers with employee training and talent development, employee selection support, employee recruitment, and human resource planning and management support. Business customers can expect services such as posting job vacancies, pre-screening applicants, employee assessments, opportunities for job fairs, various training options, layoff and plant closure services, and mass recruitment.

Employers can obtain additional information on One-Stop Centers and locate the One-Stop Center closest to their business at <http://jfs.ohio.gov/owd/JobSeekers/One-Stop-Services.stm>.

#### *Layoff Aversion and Rapid Response*

When businesses in Ohio are facing the possibility of layoffs or closings, the state offers a variety of services designed to help businesses avert or manage layoffs and help workers obtain new employment. When layoffs are unavoidable, the ODJFS' Rapid Response Unit provides vital help to the affected workers and their communities as well as the employer.

Local Rapid Response staff are ready to assist businesses in identifying ways to keep moving forward. This could include assistance with finances, loans or training, and other strategies, as well. Rapid Response staff can help employers avoid future layoffs, access training programs for their employees, find skilled job seekers, and learn more about employment rights and regulations. Employers can learn more at <http://www.ohioed.gov>.

#### *Ohio Means Jobs*

[OhioMeansJobs.com](http://OhioMeansJobs.com) is a window for employers to look for Ohio-based talent, post job opportunities, and integrate employment events into a single, cost-free point of contact. OhioMeansJobs.com provides Ohio-based companies access to the talents and skills of resumes belonging to Ohioans and those looking to relocate to Ohio. The site provides employers with the 'Job Post' option to list their job opportunities within the state without having to register on the site.

OhioMeansJobs.com supports job seekers with job matching capability as well as information about career choices, job fairs and training opportunities.

OhioMeansJobs.com also has a data mining tool that will scan job postings/descriptions and job seeker resumes for key words. This increases the effectiveness of the search function for both the job seeker and the employer.

### *Labor Market Information*

Labor Market Information (LMI) can help employers recruit qualified workers, develop job descriptions, obtain affirmative action data, learn about wages in their area, and make sound economic decisions. It serves as the source for data about employment levels, unemployment rates, wages and earnings, employment projections, jobs, training resources and careers.

[OhioLmi.com](http://OhioLmi.com) is a website that answers questions such as: what jobs are in demand; how much do they pay; and how many workers are unemployed. There are a variety of resources on this site that can provide information that can assist in identifying economic development prospects, planning and characterizing a community for marketing to prospective businesses and talent, and fulfilling workforce needs.

### ***Workforce Development Programs***

The ODJFS Office of Workforce Development (OWD) offers a variety of programs that support Ohio employers and underemployed or unemployed job seekers.

#### *State Veterans' Program*

The State Veterans' Program develops policies and implements programs to increase opportunities for Veterans to obtain employment and participate in job training programs, in accordance with the Jobs for Veterans Act, which focuses on alleviating unemployment and underemployment for Veterans, Transitioning Service Members and other eligible persons. The goal of the Veterans' Program is to eliminate unemployment and under-employment among Ohio's veteran population.

Disabled Veteran Outreach Program (DVOP) specialists provide intensive services to targeted Veterans to assist them in alleviating barriers to employment, to become "job ready" in order to obtain or retain employment that supports their self-sufficiency. Local Veterans' Employment Representative (LVER) staff has a primary focus on outreach to employers to develop increased hiring opportunities within the local workforce by raising awareness of the benefits of hiring veterans.

The program also has a special focus on disabled Veterans and homeless Veterans, providing intensive employment services to assist them in gaining suitable employment. State Veterans' Program services can be found at <http://jfs.ohio.gov/owd/Program/veterans-home.stm>.

### *Work Opportunity Tax Credit*

The Work Opportunity Tax Credit (WOTC) Program is a federal tax credit that provides Ohio employers with a tax credit against their federal tax liability when they hire individuals from 9 target groups of disadvantaged job seekers.

Tax credits range from \$1,200 to \$9,000 for all WOTC target groups. Employers must apply for and receive certification from the Ohio Department of Job and Family Services to claim the tax credits on their federal tax returns. There are only two forms required to apply for these tax credits, which can be accessed at <http://jfs.ohio.gov/wotc/index.stm>.

There are no limits to the number of new hires who can qualify an employer for the tax credit. However, new hires must begin work on or after January 1, 2006, and before December 31, 2011. (per writing of this paper). For additional information on the WOTC program, employers can call 1-888-296-7541, Option # 9, or visit <http://jfs.ohio.gov/owd/Employers/WOTC-home.stm>.

### *Foreign Labor Certification*

Foreign Labor Certification (FLC) provides a way for Ohio employers to hire foreign workers if U.S. workers are not able, willing, qualified, and available to fill job openings. The FLC program provides certain protections to ensure that job opportunities (permanent or temporary), wages, and working conditions of U.S. workers will not be adversely affected by the employment of foreign workers. Employers can access further information on the FLC program at <http://jfs.ohio.gov/owd/flc/>.

### *State Apprenticeship Council (SAC)*

The unit that supports Ohio's SAC approves and awards nationally recognized and portable credentials for the successful completion of apprenticeship; increases opportunities for under-represented populations through the use of pre-apprenticeship models that provide disadvantaged youth and adults career pathways into the Registered Apprenticeship system; provides technical assistance to industry and small businesses with respect to the development and implementation of Registered Apprenticeship programs as a component of their workforce strategy; and reviews proposed apprenticeship training programs and recommend revisions for compliance with state and federal requirements, ensuring quality for Ohio's 10,000 private sector businesses participating in the state's apprenticeship system.

Registered Apprenticeship programs teach high-level skills for today's workplace. Ohio has more than 1,100 Registered Apprenticeship programs in fields as diverse as: aerospace, construction, energy, health care, manufacturing, and utilities. Each program includes, at minimum, 2,000 hours of structured on-the-job training and 144 hours per year of related technical instruction. Further information on Ohio's Registered Apprenticeship programs can be found at <http://jfs.ohio.gov/owd/Program/Apprenticeship-Home.stm>.

## *Employee Training*

There are a variety of training opportunities for job seekers and incumbent workers including job readiness, occupational classroom, on-the-job, and customized. Ohio's One-Stop Centers (<http://jfs.ohio.gov/owd/JobSeekers/One-Stop-Services.stm>) work with employers and Ohio's underemployed and unemployed job seekers to assess and meet training needs. Training availability is based on need, funding, and occupational demand.

## *National Emergency Grants*

National Emergency Grants (NEG) are discretionary dollars awarded by the U.S. Department of Labor to temporarily expand employment services in a state or local area in response to significant events that cause a sudden need for increased service levels. The purpose of NEGs is to help dislocated workers and their communities recover from the effects of plant closings, mass layoffs, and disasters, especially if the usual dislocated worker funding cannot accommodate the increased demand for services.

Ohio has received NEGs to support layoffs and plant closings in the automotive industry; at the Wilmington AirPark; Masco and Severstal closings; spring floods in Eastern Ohio; and for on-the-job training for dislocated workers with prolonged unemployment. ODJFS also has received an NEG to place prolonged unemployed dislocated workers in permanent jobs by reimbursing eligible employers a percentage of the employee's wages for the costs of providing on-the-job (OJT) training to the individuals they commit to hire. Employers interested in participating in the OJT NEG can contact their local One-Stop Center. Employers can also search OhioMeansJobs.com to find eligible workers with the skills needed, and then work with their One-Stop Center to create an OJT for that worker.

## **Contact Information**

Employers and job seekers can find additional information on Ohio's workforce development programs at <http://jfs.ohio.gov/owd/>. The website contains information on all the services and programs highlighted as well as additional programs, services, and resources to support workforce development in Ohio.

## **VI. Conclusions**

It is human tendency to craft expectations of the future based on current or near past events. It is hard to overstate the human hardships experienced as a result of economic events of the past several years. Consumer and business confidence remains low. However, it is important to note that our economy is very dynamic and forever on the move. Free market economies have a natural tendency toward growth. Although markets may rise and fall over the short term, over time Ohio's economy has repeatedly renewed itself and grown. Government programs and policy can assist people during these changes and nudge the economy in the direction of its natural propensities. The objective of this report is to inform, at least in some small way, that process.



## Technical Notes

Unemployment rates in this report come from two data programs. Official unemployment rates for Ohio and counties and labor force participation rates are from the Local Area Unemployment Statistics (LAUS) program, developed by ODJFS in cooperation with the BLS. All other unemployment data in this report, including the official U.S. unemployment rate; short-term and long-term estimates; demographic and economic breakouts; and worker survey data, are from the Current Population Survey run jointly by the BLS and U.S. Census Bureau.

Industry and occupational worker displacement rates as shown in Section III are estimates and are not subject to the same quality controls as normal unemployment rates.

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## Appendix A: Labor Force Participation Rates by Demographic Group

|                 | <i>2008</i>  | <i>2009</i>  | <i>2010*</i> | <i>Net<br/>Change</i> |
|-----------------|--------------|--------------|--------------|-----------------------|
| <b>Total</b>    | <b>67.2%</b> | <b>66.0%</b> | <b>65.2%</b> | <b>-2.0%</b>          |
| Men             | 72.4%        | 71.3%        | 70.5%        | -1.9%                 |
| Women           | 62.4%        | 61.1%        | 60.3%        | -2.1%                 |
| <b>White</b>    | <b>67.8%</b> | <b>66.9%</b> | <b>65.9%</b> | <b>-1.9%</b>          |
| Men             | 73.2%        | 72.5%        | 71.3%        | -1.9%                 |
| Women           | 62.8%        | 61.7%        | 60.9%        | -1.9%                 |
| <b>Black</b>    | <b>62.2%</b> | <b>61.4%</b> | <b>60.6%</b> | <b>-1.6%</b>          |
| Men             | 64.1%        | 62.9%        | 63.8%        | -0.3%                 |
| Women           | 60.8%        | 60.2%        | 58.0%        | -2.8%                 |
| <b>Asian</b>    | <b>69.4%</b> | <b>56.8%</b> | <b>N/A</b>   | <b>N/A</b>            |
| Men             | 85.2%        | 70.7%        | N/A          | N/A                   |
| Women           | N/A          | 43.3%        | N/A          | N/A                   |
| <b>Hispanic</b> | <b>69.5%</b> | <b>70.0%</b> | <b>70.5%</b> | <b>1.0%</b>           |
| Men             | 80.3%        | 81.3%        | 81.1%        | 0.8%                  |
| Women           | 57.3%        | 56.3%        | 59.4%        | 2.1%                  |
| 16 to 19        | 47.3%        | 47.7%        | 43.2%        | -4.1%                 |
| 20 to 24        | 78.0%        | 77.3%        | 76.1%        | -1.9%                 |
| 25 to 34        | 84.7%        | 83.4%        | 83.3%        | -1.4%                 |
| 35 to 44        | 84.5%        | 83.1%        | 83.4%        | -1.1%                 |
| 45 to 54        | 84.3%        | 81.9%        | 79.7%        | -4.6%                 |
| 55 to 64        | 64.1%        | 64.6%        | 64.8%        | 0.7%                  |
| 65+             | 16.5%        | 16.1%        | 16.0%        | -0.5%                 |
| <b>Men</b>      |              |              |              |                       |
| 16 to 19        | 43.2%        | 46.0%        | 41.2%        | -2.0%                 |
| 20 to 24        | 81.9%        | 79.0%        | 79.6%        | -2.3%                 |
| 25 to 34        | 90.2%        | 89.5%        | 89.2%        | -1.0%                 |
| 35 to 44        | 91.3%        | 89.6%        | 91.0%        | -0.3%                 |
| 45 to 54        | 89.0%        | 85.8%        | 84.0%        | -5.0%                 |
| 55 to 64        | 69.0%        | 68.6%        | 66.9%        | -2.1%                 |
| 65+             | 20.4%        | 20.1%        | 19.8%        | -0.6%                 |
| <b>Women</b>    |              |              |              |                       |
| 16 to 19        | 51.4%        | 49.3%        | 45.2%        | -6.2%                 |
| 20 to 24        | 74.1%        | 75.6%        | 72.3%        | -1.8%                 |
| 25 to 34        | 79.6%        | 77.3%        | 77.4%        | -2.2%                 |
| 35 to 44        | 77.8%        | 76.9%        | 76.4%        | -1.4%                 |
| 45 to 54        | 80.1%        | 78.0%        | 75.4%        | -4.7%                 |
| 55 to 64        | 59.3%        | 61.2%        | 63.0%        | 3.7%                  |
| 65+             | 13.5%        | 13.1%        | 13.1%        | -0.4%                 |

\*Preliminary estimates

Source: BLS, Current Population Survey.



## Appendix C: High Prospect Occupations

| SOC  | Occupational Title                                 | 2008<br>Empl. | 2018<br>Proj. | Net<br>Growth | Percent<br>Growth | Avg. Ann.<br>Op. | May 2009<br>Avg.<br>Wages |
|--|--|---------------|---------------|---------------|-------------------|------------------|---------------------------|
| <b>Occupations Requiring Short-Term On-the-Job Training (up to one month)</b>                                      |  |               |               |               |                   |                  |                           |
| 39-9041  | Residential Advisors                               | 2,600         | 2,630         | 30            | 1.2%              | 95               | \$16.10                   |
| 43-4031  | Court, Municipal, and License Clerks               | 7,400         | 7,370         | -30           | -0.4%             | 210              | \$16.09                   |
| 43-4041  | Credit Authorizers, Checkers and Clerks            | 3,120         | 2,870         | -250          | -8.0%             | 88               | \$16.23                   |
| 43-4131  | Loan Interviewers and Clerks                       | 8,420         | 8,710         | 290           | 3.4%              | 237              | \$15.69                   |
| 43-4161  | Human Resources Assis., ex. Payroll & Timekcp      | 5,340         | 4,720         | -620          | -11.6%            | 151              | \$17.19                   |
| 43-4181  | Reservation/Trans. Ticket Agents & Travel Clerks   | 3,010         | 3,010         | 0             | 0.0%              | 68               | \$15.34                   |
| 43-5051  | Postal Service Clerks                              | 2,590         | 2,040         | -550          | -21.2%            | 55               | \$25.20                   |
| 43-5052  | Postal Service Mail Carriers                       | 14,810        | 14,100        | -710          | -4.8%             | 462              | \$23.57                   |
| 45-2091  | Agricultural Equipment Operators                   | 6,660         | 6,290         | -370          | -5.6%             | 180              | \$15.41                   |
| 53-3032  | Truck Drivers, Heavy and Tractor-Trailer           | 75,880        | 85,010        | 9,130         | 12.0%             | 2,271            | \$18.84                   |
| 53-7081  | Refuse and Recyclable Material Collectors          | 6,330         | 6,480         | 150           | 2.4%              | 199              | \$15.84                   |
| <b>Occupations Requiring Moderate-Term On-the-Job Training (one to twelve months combined experience/training)</b> |  |               |               |               |                   |                  |                           |
| 13-2072  | Loan Officers                                      | 10,870        | 11,670        | 800           | 7.4%              | 199              | \$26.57                   |
| 13-2082  | Tax Preparers                                      | 3,340         | 3,300         | -40           | -1.2%             | 55               | \$15.60                   |
| 31-9091  | Dental Assistants                                  | 9,970         | 12,480        | 2,510         | 25.2%             | 438              | \$15.54                   |
| 33-3012  | Correctional Officers and Jailers                  | 13,880        | 13,680        | -200          | -1.4%             | 308              | \$18.79                   |
| 41-3011  | Advertising Sales Agents                           | 5,740         | 5,840         | 100           | 1.7%              | 124              | \$21.59                   |
| 43-3031  | Bookkeeping, Accounting, and Auditing Clerks       | 73,730        | 77,080        | 3,350         | 4.5%              | 1,221            | \$15.87                   |
| 43-3051  | Payroll and Timekeeping Clerks                     | 7,120         | 6,230         | -890          | -12.5%            | 169              | \$16.92                   |
| 43-3061  | Procurement Clerks                                 | 2,980         | 2,980         | 0             | 0.0%              | 91               | \$16.37                   |
| 43-4011  | Brokerage Clerks                                   | 1,890         | 1,740         | -150          | -7.9%             | 54               | \$18.00                   |
| 43-4051  | Customer Service Representatives                   | 83,800        | 93,860        | 10,060        | 12.0%             | 3,644            | \$15.56                   |
| 43-4061  | Eligibility Interviewers, Government Programs      | 3,590         | 3,590         | 0             | 0.0%              | 84               | \$18.79                   |
| 43-5011  | Cargo and Freight Agents                           | 2,160         | 2,670         | 510           | 23.6%             | 101              | \$17.63                   |
| 43-5031  | Police, Fire, and Ambulance Dispatchers            | 4,350         | 4,730         | 380           | 8.7%              | 128              | \$17.57                   |
| 43-5032  | Dispatchers, except Police, Fire and Ambulance     | 7,250         | 6,800         | -450          | -6.2%             | 149              | \$17.73                   |
| 43-5061  | Production, Planning, and Expediting Clerks        | 13,090        | 12,640        | -450          | -3.4%             | 322              | \$19.52                   |
| 43-9041  | Insurance Claims and Policy Processing Clerks      | 12,550        | 12,560        | 10            | 0.1%              | 165              | \$16.77                   |
| 47-2051  | Cement Masons and Concrete Finishers               | 5,290         | 5,630         | 340           | 6.4%              | 167              | \$20.16                   |
| 47-2061  | Construction Laborers                              | 28,050        | 31,690        | 3,640         | 13.0%             | 552              | \$18.50                   |
| 47-2073  | Operating Engineers & Other Con. Equip. Op.        | 10,860        | 11,440        | 580           | 5.3%              | 244              | \$23.96                   |
| 47-2141  | Painters, Construction and Maintenance             | 10,400        | 10,570        | 170           | 1.6%              | 195              | \$18.99                   |
| 47-2181  | Roofers  | 5,450         | 5,580         | 130           | 2.4%              | 103              | \$18.36                   |
| 47-4051  | Highway Maintenance Workers                        | 10,630        | 10,550        | -80           | -0.8%             | 288              | \$17.45                   |
| 49-9042  | Maintenance and Repair Workers, General            | 60,010        | 62,160        | 2,150         | 3.6%              | 1,139            | \$17.38                   |
| 51-2041  | Structural Metal Fabricators and Fitters           | 4,040         | 3,650         | -390          | -9.7%             | 85               | \$16.97                   |
| 51-4011  | Computer-Controlled Machine Tool Oper., MP         | 13,270        | 12,720        | -550          | -4.1%             | 260              | \$17.14                   |
| 51-4021  | Extruding & Drawing Machine Setters, O/T, MP       | 7,020         | 5,820         | -1,200        | -17.1%            | 137              | \$16.12                   |
| 51-4191  | Heat Treating Equip. Setters, O/T, MP              | 2,340         | 1,920         | -420          | -17.9%            | 106              | \$16.27                   |
| 51-5023  | Printing Machine Operators                         | 9,100         | 8,300         | -800          | -8.8%             | 191              | \$16.15                   |
| 51-9023  | Mixing/Blending Mach. Setter/Operator/Tenders      | 9,010         | 9,670         | 660           | 7.3%              | 220              | \$17.08                   |
| 51-9061  | Inspectors/Testers/Sorters/Samplers/Weighers       | 24,010        | 21,540        | -2,470        | -10.3%            | 402              | \$16.76                   |
| 53-3021  | Bus Drivers, Transit and Intercity                 | 5,510         | 5,530         | 20            | 0.4%              | 98               | \$20.01                   |
| 53-4011  | Locomotive Engineers                               | 2,610         | 2,660         | 50            | 1.9%              | 89               | \$21.89                   |
| 53-7032  | Excavating & Loading Machine & Dragline Oper.      | 2,330         | 2,260         | -70           | -3.0%             | 68               | \$16.75                   |
| <b>Occupations Requiring Long-Term On-the-Job Training (twelve months or more combined experience/training)</b>    |  |               |               |               |                   |                  |                           |
| 13-1022  | Wholesale & Retail Buyers, ex. Farm Products       | 4,320         | 4,060         | -260          | -6.0%             | 108              | \$24.48                   |
| 13-1023  | Purchasing Agents, ex. Whole., Retail, & Farm      | 12,640        | 13,430        | 790           | 6.3%              | 412              | \$27.50                   |
| 13-1031  | Claims Adjusters, Examiners and Investigators      | 9,620         | 10,240        | 620           | 6.4%              | 306              | \$27.94                   |
| 13-1041  | Compl. Off., ex. Agric, Con, Hlth/Safety, & Trans. | 8,080         | 9,910         | 1,830         | 22.6%             | 269              | \$25.77                   |
| 27-2042  | Musicians and Singers                              | 9,050         | 9,680         | 630           | 7.0%              | 246              | \$26.28                   |
| 29-2081  | Opticians, Dispensing                              | 3,160         | 3,310         | 150           | 4.7%              | 79               | \$16.47                   |

| SOC   | Occupational Title                                | 2008<br>Empl. | 2018<br>Proj. | Net<br>Growth | Percent<br>Growth | Avg. Ann.<br>Op. | May 2009<br>Avg.<br>Wages |
|---|---|---------------|---------------|---------------|-------------------|------------------|---------------------------|
| <b>Occupations Requiring Long-Term On-the-Job Training (twelve months or more combined experience/training) (con't)</b> |   |               |               |               |                   |                  |                           |
| 33-2011   | Fire Fighters                                     | 19,730        | 21,630        | 1,900         | 9.6%              | 796              | \$19.79                   |
| 33-3051   | Police and Sheriff's Patrol Officers              | 24,650        | 24,700        | 50            | 0.2%              | 641              | \$25.11                   |
| 47-2021   | Brickmasons and Blockmasons                       | 5,370         | 5,820         | 450           | 8.4%              | 181              | \$24.04                   |
| 47-2031   | Carpenters  | 37,270        | 40,520        | 3,250         | 8.7%              | 789              | \$19.39                   |
| 47-2111   | Electricians                                      | 26,660        | 27,030        | 370           | 1.4%              | 681              | \$23.16                   |
| 47-2121   | Glaziers  | 1,890         | 1,970         | 80            | 4.2%              | 77               | \$20.44                   |
| 47-2152   | Plumbers, Pipefitters and Steamfitters            | 15,780        | 16,500        | 720           | 4.6%              | 390              | \$23.51                   |
| 47-2211   | Sheet Metal Workers                               | 4,560         | 4,490         | -70           | -1.5%             | 109              | \$21.78                   |
| 47-2221   | Structural Iron and Steel Workers                 | 2,800         | 2,970         | 170           | 6.1%              | 63               | \$25.19                   |
| 49-3021   | Automotive Body and Related Repairers             | 7,160         | 6,500         | -660          | -9.2%             | 185              | \$18.74                   |
| 49-3042   | Mobile Heavy Equip. Mechanics, ex. Engines        | 3,710         | 3,900         | 190           | 5.1%              | 90               | \$21.62                   |
| 49-9041   | Industrial Machinery Mechanics                    | 15,020        | 15,120        | 100           | 0.7%              | 226              | \$23.37                   |
| 49-9044   | Millwrights                                       | 2,740         | 2,400         | -340          | -12.4%            | 55               | \$27.38                   |
| 49-9051   | Electrical Power-Line Installers and Repairers    | 3,900         | 3,800         | -100          | -2.6%             | 138              | \$24.58                   |
| 49-9052   | Telecommunications Line Installers & Repairers    | 5,380         | 5,170         | -210          | -3.9%             | 83               | \$20.54                   |
| 51-4041   | Machinists  | 32,780        | 29,700        | -3,080        | -9.4%             | 432              | \$17.88                   |
| 51-8031   | Water/Liquid Waste Treatment Plant/System Op.     | 4,650         | 5,100         | 450           | 9.7%              | 145              | \$20.03                   |
| 53-7021   | Crane and Tower Operators                         | 2,320         | 1,960         | -360          | -15.5%            | 54               | \$20.47                   |
| <b>Occupations Requiring Work Experience in a Related Occupation</b>  |   |               |               |               |                   |                  |                           |
| 11-3051   | Industrial Production Managers                    | 11,070        | 9,520         | -1,550        | -14.0%            | 388              | \$44.49                   |
| 11-3071   | Transportation, Storage, & Distribution Managers  | 4,370         | 4,090         | -280          | -6.4%             | 120              | \$41.31                   |
| 11-9051   | Food Service Managers                             | 11,680        | 11,850        | 170           | 1.5%              | 244              | \$22.48                   |
| 25-3021   | Self-Enrichment Education Teachers                | 7,280         | 9,190         | 1,910         | 26.2%             | 303              | \$20.41                   |
| 33-1012   | First-Line Superv./Mgrs of Police & Detectives    | 3,040         | 3,020         | -20           | -0.7%             | 133              | \$34.40                   |
| 33-1021   | FL Sup/Mgms of Fire Fighting & Prev. Workers      | 1,960         | 1,960         | 0             | 0.0%              | 99               | \$31.10                   |
| 33-3021   | Detectives and Criminal Investigators             | 2,750         | 2,850         | 100           | 3.6%              | 66               | \$30.87                   |
| 33-9021   | Private Detectives and Investigators              | 1,580         | 1,790         | 210           | 13.3%             | 53               | \$21.03                   |
| 37-1011   | FL Sup/Mgms of Housekeeping & Janitorial Workers  | 7,140         | 7,300         | 160           | 2.2%              | 90               | \$17.09                   |
| 37-1012   | FL Sup/Mgms of Lndscap./Lawn Ser/Groundskp        | 6,970         | 7,630         | 660           | 9.5%              | 142              | \$20.95                   |
| 39-1021   | First-Line Sup/Mgms of Personal Serv. Workers     | 6,880         | 7,660         | 780           | 11.3%             | 265              | \$17.34                   |
| 41-1011   | First-Line Superv./Mgms of Retail Sales Workers   | 58,960        | 58,680        | -280          | -0.5%             | 1,265            | \$18.01                   |
| 41-1012   | First-Line Sup./Mgms of Non-Retail Sales Workers  | 19,070        | 19,250        | 180           | 0.9%              | 413              | \$36.48                   |
| 41-4011   | Sales Rep., Wholesale & Mfg, Tech./Sci. Prod.     | 20,540        | 22,250        | 1,710         | 8.3%              | 647              | \$37.37                   |
| 41-4012   | Sales Rep., Wholesale/Mfg, ex. Tech./Sci. Prod.   | 66,060        | 67,220        | 1,160         | 1.8%              | 1,646            | \$28.29                   |
| 43-1011   | First-Line Sup/Mgms of Office & Admin. Support    | 47,700        | 50,340        | 2,640         | 5.5%              | 1,340            | \$23.09                   |
| 43-6011   | Executive Secretaries & Administrative Assistants | 47,800        | 50,600        | 2,800         | 5.9%              | 924              | \$19.90                   |
| 47-1011   | First-Line Sup/Mgms of Con. Trades/Extract. Work  | 17,020        | 18,610        | 1,590         | 9.3%              | 488              | \$28.86                   |
| 47-4011   | Construction and Building Inspectors              | 3,580         | 3,720         | 140           | 3.9%              | 88               | \$23.46                   |
| 49-1011   | FL Sup/Mgms of Mechanics/Installers/Repairers     | 17,350        | 16,720        | -630          | -3.6%             | 454              | \$28.56                   |
| 51-1011   | FL Sup/Mgms of Production/Operating Workers       | 37,380        | 32,870        | -4,510        | -12.1%            | 504              | \$25.79                   |
| 53-1021   | FL Sup/Mgms of Help/Labor/Mat. Movers, Hand       | 8,720         | 8,710         | -10           | -0.1%             | 151              | \$21.50                   |
| 53-1031   | FL Sup/Mgr of Trans/Mat.-Mov. Mach & Veh Op       | 9,000         | 8,420         | -580          | -6.4%             | 156              | \$25.74                   |
| <b>Occupations Requiring a Postsecondary Vocational Award</b>   |   |               |               |               |                   |                  |                           |
| 17-3011   | Architectural and Civil Drafters                  | 2,850         | 2,900         | 50            | 1.8%              | 66               | \$20.84                   |
| 17-3013   | Mechanical Drafters                               | 3,810         | 3,560         | -250          | -6.6%             | 82               | \$22.19                   |
| 29-2055   | Surgical Technologists                            | 3,440         | 4,150         | 710           | 20.6%             | 158              | \$18.59                   |
| 29-2061   | Licensed Practical & Licensed Vocat. Nurses       | 41,570        | 48,790        | 7,220         | 17.4%             | 2,022            | \$19.19                   |
| 41-3021   | Insurance Sales Agents                            | 27,580        | 29,580        | 2,000         | 7.3%              | 840              | \$27.50                   |
| 41-9022   | Real Estate Sales Agents                          | 5,620         | 6,460         | 840           | 14.9%             | 176              | \$23.66                   |
| 49-2011   | Computer, ATM, & Office Machine Repairers         | 5,060         | 4,480         | -580          | -11.5%            | 87               | \$17.83                   |
| 49-2022   | Telecomm. Equip. Install/Repair, ex. Line Install | 6,880         | 6,460         | -420          | -6.1%             | 120              | \$25.90                   |
| 49-2094   | Electrical/Electronics Repair, Comm/Indus Equip.  | 3,050         | 2,810         | -240          | -7.9%             | 53               | \$23.85                   |
| 49-2098   | Security and Fire Alarm Systems Installers        | 1,980         | 2,200         | 220           | 11.1%             | 56               | \$15.87                   |
| 49-3023   | Automotive Service Technicians and Mechanics      | 28,640        | 27,310        | -1,330        | -4.6%             | 547              | \$17.35                   |

| SOC   | Occupational Title                                | 2008<br>Empl. | 2018<br>Proj. | Net<br>Growth | Percent<br>Growth | Avg. Ann.<br>Op. | May 2009<br>Avg.<br>Wages |
|---|---|---------------|---------------|---------------|-------------------|------------------|---------------------------|
| <b>Occupations Requiring a Postsecondary Vocational Award (con't)</b> |   |               |               |               |                   |                  |                           |
| 49-3031   | Bus & Truck Mechanics & Diesel Engine Spec.       | 13,450        | 13,600        | 150           | 1.1%              | 324              | \$18.89                   |
| 49-9021   | Heating, AC, & Refrigeration Mechanics/Installers | 11,430        | 14,170        | 2,740         | 24.0%             | 458              | \$22.25                   |
| 51-4121   | Welders, Cutters, Solderers, and Brazers          | 15,660        | 14,250        | -1,410        | -9.0%             | 480              | \$16.91                   |
| 51-4122   | Welding/Soldering/Brazing Machine Setters, O/T    | 7,320         | 5,970         | -1,350        | -18.4%            | 224              | \$16.31                   |
| <b>Occupations Requiring an Associate Degree</b>                      |   |               |               |               |                   |                  |                           |
| 15-1041   | Computer Support Specialists                      | 22,090        | 24,960        | 2,870         | 13.0%             | 899              | \$20.07                   |
| 17-3022   | Civil Engineering Technicians                     | 2,050         | 2,270         | 220           | 10.7%             | 61               | \$22.40                   |
| 17-3023   | Electrical & Electronic Engineering Technicians   | 3,830         | 3,510         | -320          | -8.4%             | 72               | \$24.90                   |
| 17-3026   | Industrial Engineering Technicians                | 3,730         | 3,550         | -180          | -4.8%             | 71               | \$22.66                   |
| 19-4031   | Chemical Technicians                              | 3,200         | 2,990         | -210          | -6.6%             | 64               | \$20.23                   |
| 19-4091   | Environ. Science & Protection Tech., inc. Health  | 1,340         | 1,500         | 160           | 11.9%             | 74               | \$18.82                   |
| 23-2011   | Paralegals and Legal Assistants                   | 6,570         | 7,740         | 1,170         | 17.8%             | 192              | \$21.25                   |
| 27-1025   | Interior Designers                                | 1,960         | 2,090         | 130           | 6.6%              | 73               | \$20.27                   |
| 29-1111   | Registered Nurses                                 | 118,680       | 139,700       | 21,020        | 17.7%             | 4,175            | \$28.72                   |
| 29-1126   | Respiratory Therapists                            | 5,310         | 6,160         | 850           | 16.0%             | 182              | \$24.04                   |
| 29-2012   | Medical and Clinical Laboratory Technicians       | 4,470         | 4,930         | 460           | 10.3%             | 131              | \$18.47                   |
| 29-2021   | Dental Hygienists                                 | 7,100         | 8,880         | 1,780         | 25.1%             | 323              | \$29.82                   |
| 29-2031   | Cardiovascular Technologists and Technicians      | 2,180         | 2,580         | 400           | 18.3%             | 72               | \$22.91                   |
| 29-2032   | Diagnostic Medical Sonographers                   | 2,490         | 2,880         | 390           | 15.7%             | 75               | \$27.37                   |
| 29-2034   | Radiologic Technologists and Technicians          | 10,140        | 11,310        | 1,170         | 11.5%             | 264              | \$23.91                   |
| 29-2071   | Medical Records & Health Info. Technicians        | 6,340         | 7,150         | 810           | 12.8%             | 210              | \$15.31                   |
| 31-2011   | Occupational Therapist Assistants                 | 2,430         | 3,160         | 730           | 30.0%             | 108              | \$24.66                   |
| 31-2021   | Physical Therapist Assistants                     | 4,800         | 6,310         | 1,510         | 31.5%             | 220              | \$24.61                   |
| 43-6012   | Legal Secretaries                                 | 8,400         | 9,100         | 700           | 8.3%              | 183              | \$17.90                   |
| 49-9062   | Medical Equipment Repairers                       | 1,890         | 2,260         | 370           | 19.6%             | 92               | \$23.74                   |
| <b>Occupations Requiring a Bachelor's Degree</b>                      |   |               |               |               |                   |                  |                           |
| 11-9021   | Construction Managers                             | 15,520        | 17,080        | 1,560         | 10.1%             | 277              | \$47.89                   |
| 11-9141   | Property, Real Estate & Community Assn Mgrs       | 6,460         | 6,740         | 280           | 4.3%              | 139              | \$31.53                   |
| 11-9151   | Social and Community Service Managers             | 4,860         | 5,360         | 500           | 10.3%             | 162              | \$30.15                   |
| 13-1051   | Cost Estimators                                   | 10,170        | 12,020        | 1,850         | 18.2%             | 411              | \$29.40                   |
| 13-1071   | Employment, Recruitment & Placement Specialists   | 7,450         | 9,210         | 1,760         | 23.6%             | 370              | \$24.75                   |
| 13-1072   | Comp., Benefits & Job Analysis Specialists        | 4,330         | 5,040         | 710           | 16.4%             | 184              | \$26.00                   |
| 13-1073   | Training and Development Specialists              | 9,180         | 10,890        | 1,710         | 18.6%             | 411              | \$25.71                   |
| 13-1081   | Logisticians                                      | 4,190         | 4,770         | 580           | 13.8%             | 151              | \$33.48                   |
| 13-2011   | Accountants and Auditors                          | 45,900        | 53,230        | 7,330         | 16.0%             | 1,509            | \$30.21                   |
| 13-2051   | Financial Analysts                                | 7,310         | 8,280         | 970           | 13.3%             | 230              | \$35.19                   |
| 13-2052   | Personal Financial Advisors                       | 4,910         | 5,970         | 1,060         | 21.6%             | 159              | \$42.64                   |
| 13-2053   | Insurance Underwriters                            | 6,030         | 5,850         | -180          | -3.0%             | 176              | \$29.20                   |
| 13-2081   | Tax Examiners, Collectors & Revenue Agents        | 2,260         | 2,330         | 70            | 3.1%              | 87               | \$28.61                   |
| 15-1021   | Computer Programmers                              | 14,220        | 13,150        | -1,070        | -7.5%             | 268              | \$33.37                   |
| 15-1031   | Computer Software Engineers, Applications         | 21,470        | 28,140        | 6,670         | 31.1%             | 848              | \$39.17                   |
| 15-1032   | Comp. Software Engineers, Systems Software        | 10,170        | 12,650        | 2,480         | 24.4%             | 334              | \$39.97                   |
| 15-1051   | Computer Systems Analysts                         | 19,140        | 21,770        | 2,630         | 13.7%             | 676              | \$37.42                   |
| 15-1061   | Database Administrators                           | 4,040         | 4,750         | 710           | 17.6%             | 138              | \$33.36                   |
| 15-1071   | Network and Computer Systems Administrators       | 15,910        | 18,250        | 2,340         | 14.7%             | 499              | \$29.96                   |
| 15-1081   | Network Systems & Data Comm. Analysts             | 11,790        | 16,880        | 5,090         | 43.2%             | 721              | \$34.38                   |
| 17-1011   | Architects, except Landscape and Naval            | 3,890         | 4,230         | 340           | 8.7%              | 100              | \$34.74                   |
| 17-2051   | Civil Engineers                                   | 6,980         | 8,090         | 1,110         | 15.9%             | 229              | \$35.13                   |
| 17-2071   | Electrical Engineers                              | 4,950         | 4,700         | -250          | -5.1%             | 114              | \$35.65                   |
| 17-2072   | Electronics Engineers, except Computer            | 3,360         | 3,260         | -100          | -3.0%             | 77               | \$41.22                   |
| 17-2112   | Industrial Engineers                              | 13,170        | 13,550        | 380           | 2.9%              | 374              | \$34.46                   |
| 17-2131   | Materials Engineers                               | 1,780         | 1,940         | 160           | 9.0%              | 58               | \$41.51                   |
| 17-2141   | Mechanical Engineers                              | 13,480        | 13,270        | -210          | -1.6%             | 346              | \$33.90                   |
| 19-2031   | Chemists  | 3,680         | 3,460         | -220          | -6.0%             | 122              | \$32.61                   |

| SOC   | Occupational Title                                | 2008<br>Empl. | 2018<br>Proj. | Net<br>Growth | Percent<br>Growth | Avg. Ann.<br>Op. | May 2009<br>Avg.<br>Wages |
|---|---|---------------|---------------|---------------|-------------------|------------------|---------------------------|
| <b>Occupations Requiring a Bachelor's Degree (con't)</b>                        |   |               |               |               |                   |                  |                           |
| 19-3021   | Market Research Analysts                          | 8,780         | 10,780        | 2,000         | 22.8%             | 436              | \$30.21                   |
| 19-4021   | Biological Technicians                            | 2,340         | 2,610         | 270           | 11.5%             | 109              | \$17.89                   |
| 21-1011   | Substance Abuse & Behavioral Dis. Counselors      | 2,340         | 2,750         | 410           | 17.5%             | 88               | \$19.29                   |
| 21-1021   | Child, Family and School Social Workers           | 10,700        | 11,530        | 830           | 7.8%              | 352              | \$18.39                   |
| 21-1022   | Medical and Public Health Social Workers          | 6,400         | 7,670         | 1,270         | 19.8%             | 288              | \$21.88                   |
| 21-1091   | Health Educators                                  | 1,860         | 2,020         | 160           | 8.6%              | 55               | \$20.63                   |
| 21-1092   | Probation Officers & Correct. Treatment Spec.     | 3,270         | 3,550         | 280           | 8.6%              | 97               | \$22.63                   |
| 21-2021   | Directors, Religious Activities and Education     | 6,620         | 7,450         | 830           | 12.5%             | 217              | \$19.69                   |
| 25-2012   | Kindergarten Teachers, ex. Special Education      | 4,010         | 4,410         | 400           | 10.0%             | 121              | \$47,530**                |
| 25-2021   | Elementary School Teachers, ex.Special Ed.        | 41,380        | 44,720        | 3,340         | 8.1%              | 1,275            | \$51,970**                |
| 25-2022   | Middle School Teachers, ex. Special & Voc. Ed.    | 19,090        | 20,540        | 1,450         | 7.6%              | 579              | \$50,620**                |
| 25-2031   | Secondary Sch. Teachers, ex. Spec. & Voc. Ed.     | 51,920        | 53,590        | 1,670         | 3.2%              | 1,676            | \$54,530**                |
| 25-2041   | Special Ed. Teachers, Pre./Kinder./Elem. Sch.     | 7,270         | 8,110         | 840           | 11.6%             | 273              | \$49,900**                |
| 25-2042   | Special Education Teachers, Middle School         | 5,350         | 5,900         | 550           | 10.3%             | 194              | \$50,280**                |
| 25-2043   | Special Education Teachers, Secondary School      | 9,070         | 9,580         | 510           | 5.6%              | 286              | \$53,800**                |
| 25-3011   | Adult Literacy, Remedial Ed., & GED Teachers      | 3,120         | 3,370         | 250           | 8.0%              | 73               | \$23.27                   |
| 27-1021   | Commercial and Industrial Designers               | 1,790         | 1,760         | -30           | -1.7%             | 55               | \$27.67                   |
| 27-1024   | Graphic Designers                                 | 10,430        | 11,090        | 660           | 6.3%              | 386              | \$20.39                   |
| 27-3022   | Reporters and Correspondents                      | 2,330         | 2,130         | -200          | -8.6%             | 64               | \$17.26                   |
| 27-3031   | Public Relations Specialists                      | 6,900         | 8,030         | 1,130         | 16.4%             | 276              | \$25.22                   |
| 27-3041   | Editors   | 4,840         | 4,520         | -320          | -6.6%             | 127              | \$21.98                   |
| 27-3043   | Writers and Authors                               | 2,550         | 2,840         | 290           | 11.4%             | 82               | \$24.70                   |
| 29-1031   | Dietitians and Nutritionists                      | 2,480         | 2,530         | 50            | 2.0%              | 88               | \$24.68                   |
| 29-2011   | Medical and Clinical Laboratory Technologists     | 5,900         | 6,150         | 250           | 4.2%              | 137              | \$24.98                   |
| 29-9011   | Occupational Health and Safety Specialists        | 2,280         | 2,380         | 100           | 4.4%              | 86               | \$31.21                   |
| 29-9091   | Athletic Trainers                                 | 870           | 1,180         | 310           | 35.6%             | 60               | \$42,860**                |
| 41-3031   | Securities/Commodities/Fin. Serv. Sales Agents    | 12,940        | 13,570        | 630           | 4.9%              | 460              | \$32.31                   |
| 41-9031   | Sales Engineers                                   | 2,470         | 2,520         | 50            | 2.0%              | 94               | \$37.90                   |
| 53-2011   | Airline Pilots, Copilots & Flight Engineers       | 2,190         | 2,310         | 120           | 5.5%              | 86               | \$99,810**                |
| <b>Occupations Requiring Work Experience plus a Bachelor's or Higher Degree</b> |   |               |               |               |                   |                  |                           |
| 11-2021   | Marketing Managers                                | 3,960         | 4,160         | 200           | 5.1%              | 105              | \$54.80                   |
| 11-2022   | Sales Managers                                    | 11,890        | 12,900        | 1,010         | 8.5%              | 357              | \$53.10                   |
| 11-3011   | Administrative Services Managers                  | 9,350         | 9,950         | 600           | 6.4%              | 256              | \$48.99                   |
| 11-3021   | Computer and Information Systems Managers         | 9,760         | 10,990        | 1,230         | 12.6%             | 282              | \$53.76                   |
| 11-3031   | Financial Managers                                | 15,860        | 16,220        | 360           | 2.3%              | 321              | \$53.10                   |
| 11-3061   | Purchasing Managers                               | 2,400         | 2,250         | -150          | -6.3%             | 68               | \$43.09                   |
| 11-9011   | Farm, Ranch, and Other Agricultural Managers      | 3,560         | 3,660         | 100           | 2.8%              | 82               | \$28.44                   |
| 11-9031   | Education Admin., Pre & Child Care Center/Prog.   | 2,150         | 2,400         | 250           | 11.6%             | 89               | \$21.42                   |
| 11-9032   | Education Admin., Elem. & Secondary School        | 7,710         | 7,810         | 100           | 1.3%              | 241              | \$87,510**                |
| 11-9033   | Education Administrators, Postsecondary           | 2,390         | 2,310         | -80           | -3.3%             | 72               | \$51.34                   |
| 11-9041   | Engineering Managers                              | 6,240         | 6,070         | -170          | -2.7%             | 127              | \$52.52                   |
| 11-9111   | Medical and Health Services Managers              | 12,610        | 14,270        | 1,660         | 13.2%             | 406              | \$39.96                   |
| 11-1021   | General and Operations Managers                   | 31,370        | 28,620        | -2,750        | -8.8%             | 909              | \$54.48                   |
| 13-1111   | Management Analysts                               | 23,230        | 25,230        | 2,000         | 8.6%              | 599              | \$37.46                   |
| 25-2032   | Vocational Education Teachers, Secondary Sch.     | 4,520         | 4,620         | 100           | 2.2%              | 142              | \$59,350**                |
| 27-1011   | Art Directors                                     | 2,830         | 3,130         | 300           | 10.6%             | 93               | \$39.77                   |
| 27-2012   | Producers and Directors                           | 1,760         | 1,730         | -30           | -1.7%             | 55               | \$28.14                   |
| 27-2041   | Music Directors and Composers                     | 2,050         | 2,270         | 220           | 10.7%             | 63               | \$23.53                   |
| <b>Occupations Requiring a Master's Degree</b>                                  |   |               |               |               |                   |                  |                           |
| 19-2041   | Environmental Scientists/Specialists, inc. Health | 2,200         | 2,370         | 170           | 7.7%              | 80               | \$31.25                   |
| 21-1012   | Educational, Vocational, & School Counselors      | 10,950        | 11,590        | 640           | 5.8%              | 286              | \$27.53                   |
| 21-1014   | Mental Health Counselors                          | 4,110         | 5,080         | 970           | 23.6%             | 180              | \$20.99                   |
| 21-1015   | Rehabilitation Counselors                         | 4,540         | 4,910         | 370           | 8.1%              | 129              | \$19.71                   |
| 21-1023   | Mental Health & Substance Abuse Social Work.      | 4,990         | 5,860         | 870           | 17.4%             | 212              | \$17.85                   |

| SOC  | Occupational Title                                  | 2008<br>Empl. | 2018<br>Proj. | Net<br>Growth | Percent<br>Growth | Avg. Ann.<br>Op. | May 2009<br>Avg.<br>Wages |
|--|---|---------------|---------------|---------------|-------------------|------------------|---------------------------|
| <b>Occupations Requiring a Master's Degree (con't)</b>   |   |               |               |               |                   |                  |                           |
| 25-4021  | Librarians  | 6,260         | 6,260         | 0             | 0.0%              | 165              | \$26.41                   |
| 25-9031  | Instructional Coordinators                          | 6,380         | 7,420         | 1,040         | 16.3%             | 244              | \$29.73                   |
| 29-1071  | Physician Assistants                                | 1,910         | 2,550         | 640           | 33.5%             | 99               | \$40.33                   |
| 29-1122  | Occupational Therapists                             | 4,270         | 5,130         | 860           | 20.1%             | 164              | \$35.85                   |
| 29-1123  | Physical Therapists                                 | 7,650         | 9,440         | 1,790         | 23.4%             | 271              | \$36.22                   |
| 29-1127  | Speech-Language Pathologists                        | 5,090         | 5,860         | 770           | 15.1%             | 170              | \$37.13                   |
| <b>Occupations Requiring a Doctoral Degree</b>           |   |               |               |               |                   |                  |                           |
| 19-1042  | Medical Scientists, except Epidemiologists          | 1,780         | 2,290         | 510           | 28.7%             | 87               | \$32.99                   |
| 19-3031  | Clinical, Counseling and School Psychologists       | 4,510         | 4,730         | 220           | 4.9%              | 150              | \$38.69                   |
| 25-1011  | Business Teachers, Postsecondary                    | 3,180         | 3,420         | 240           | 7.5%              | 80               | \$66,770**                |
| 25-1032  | Engineering Teachers, Postsecondary                 | 2,090         | 2,250         | 160           | 7.7%              | 53               | \$88,930**                |
| 25-1071  | Health Specialties Teachers, Postsecondary          | 6,410         | 6,880         | 470           | 7.3%              | 159              | \$84,210**                |
| 25-1072  | Nursing Instructors and Teachers, Postsecondary     | 2,780         | 2,970         | 190           | 6.8%              | 67               | \$63,110**                |
| 25-1081  | Education Teachers, Postsecondary                   | 2,680         | 2,880         | 200           | 7.5%              | 67               | \$58,000**                |
| 25-1121  | Art, Drama, and Music Teachers, Postsecondary       | 4,570         | 4,910         | 340           | 7.4%              | 114              | \$63,820**                |
| 25-1123  | English Language/Literature Teachers, Postsecondary | 2,890         | 3,110         | 220           | 7.6%              | 72               | \$62,820**                |
| 25-1194  | Vocational Education Teachers, Postsecondary        | 3,320         | 3,570         | 250           | 7.5%              | 83               | \$23.06                   |
| <b>Occupations Requiring a First Professional Degree</b> |   |               |               |               |                   |                  |                           |
| 23-1011  | Lawyers   | 19,860        | 20,750        | 890           | 4.5%              | 460              | \$50.73                   |
| 29-1011  | Chiropractors                                       | 2,060         | 2,440         | 380           | 18.4%             | 74               | \$48.53                   |
| 29-1021  | Dentists, General                                   | 4,010         | 4,250         | 240           | 6.0%              | 135              | \$77.04                   |
| 29-1041  | Optometrists  | 1,140         | 1,410         | 270           | 23.7%             | 65               | \$61.08                   |
| 29-1051  | Pharmacists   | 11,720        | 13,310        | 1,590         | 13.6%             | 419              | \$49.21                   |
| 29-1061  | Anesthesiologists                                   | 1,340         | 1,620         | 280           | 20.9%             | 52               | \$110.00                  |
| 29-1062  | Family and General Practitioners                    | 5,050         | 6,140         | 1,090         | 21.6%             | 198              | \$78.79                   |
| 29-1063  | Internists, General                                 | 2,080         | 2,450         | 370           | 17.8%             | 74               | \$79.99                   |
| 29-1065  | Pediatricians, General                              | 1,600         | 1,880         | 280           | 17.5%             | 56               | \$69.55                   |
| 29-1067  | Surgeons  | 2,120         | 2,570         | 450           | 21.2%             | 82               | \$110.72                  |
| 29-1131  | Veterinarians                                       | 2,070         | 2,630         | 560           | 27.1%             | 92               | \$43.55                   |

High prospect occupations are those with average hourly wages of \$15.30 or more, and at least 50 projected average annual openings.

\*\*Annual earnings, typically 9½ months for teachers

**Abbreviations:**

FL Sup/Mgrs First-Line Supervisors/Managers  
M/P Metal and plastic  
O/T Operators and tenders  
S/O/T Setters, operators, and tenders

Source: ODJFS, "High Occupational Prospects."



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