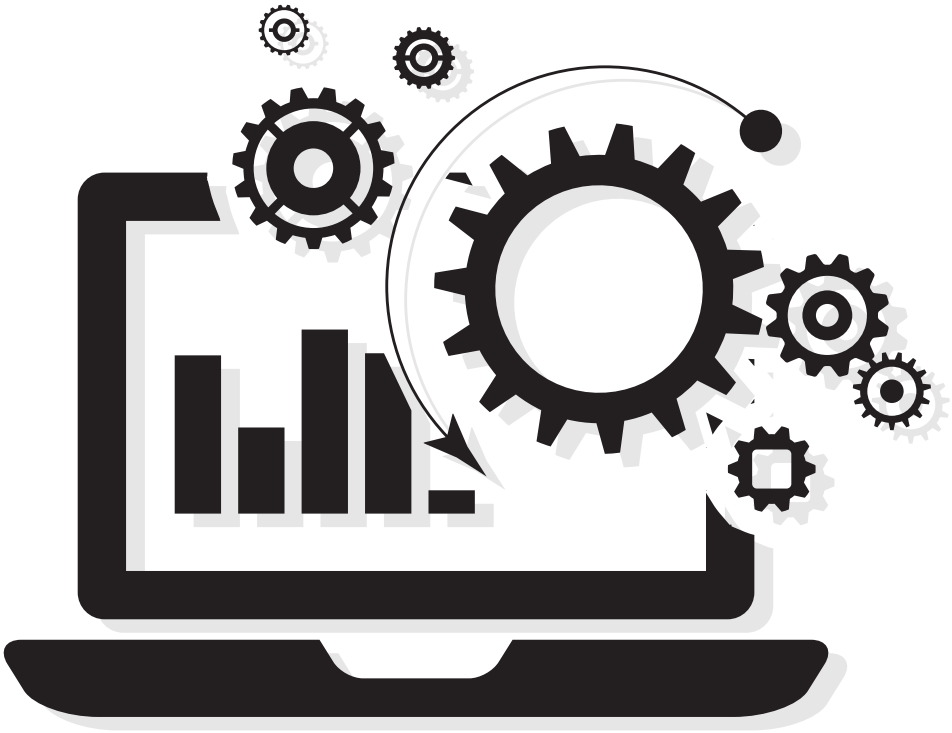
New Mexico Department of WORKFORCE SOLUTIONS

New Mexico Employment Projections 2014 - 2024

INTRODUCTION, METHODOLOGY & DEFINITIONS



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ECONOMIC RESEARCH & ANALYSIS BUREAU

2014–2024

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Introduction, Methodology & Definitions

November 2016

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Introduction

The New Mexico Department of Workforce Solutions (NMDWS) Economic Research and Analysis Bureau (ER&A) has completed and finalized long-term projections for the 2014 to 2024 period. New Mexico's employment projections are produced in conjunction with the U.S. Department of Labor (US DOL). Long-term projections have been prepared for New Mexico, its four metropolitan statistical areas (Albuquerque, Farmington, Las Cruces, and Santa Fe), and four Workforce Regions (Central, Northern, Eastern, and Southwestern, as defined by the Workforce Innovation and Opportunity Act (WIOA)).

Employment projections data are designed to assist students, job seekers, educators, employers, and public and private groups in their individual planning and reporting purposes. Employment growth and occupational job openings provide insight into key growth sectors and potential areas of decline in New Mexico's labor market. Projections are presented for over 100 industries and close to 800 detailed occupations at the state and substate levels.

Employment projections data are available in Excel format at www.dws.state.nm.us/Labor-Market-Information/Data-and-Statistics/Economic-Data and through NMDWS's interactive data website, LASER, at www.jobs.state.nm.us/analyzer.

Industry Projections

Industry employment projections are presented at the 2- and 3-digit North American Industry Classification System (NAICS) level for the state and substate areas. Industry projections include a base-year employment estimate (2014), ten-year employment projection (2024), and projected numeric and percentage employment change.

- Major industry groups are denoted by NAICS codes ending in four zeros ("XX-0000"). All other industries are at the 3-digit detailed NAICS level ("XX-X000").
- Numeric change is the difference between the 2012 employment estimate and 2022 employment projection.
- Percentage change is the growth change between the 2012 estimate and 2022 projection.

Occupation Projections

Occupation employment projections are presented at the 2- and 6-digit Standard Occupational Classification (SOC) level for the state and substate areas. Occupation projections include a base-year employment estimate (2014); ten-year employment projection (2024); projected numeric and percentage employment change; total projected annual openings and openings due to growth and replacement needs; statewide growth outlook; average, entry, experienced, and median annual wage; and employment, experience, and training requirements.

- Major occupation groups are denoted by SOC codes ending in four zeros ("XX-0000"). All other occupations are at the 6-digit detailed SOC level.
- Typical education, experience, and training classifications are provided at the 6-digit SOC level. Definitions of the classifications are provided in the Definitions section of this document.
- Numeric change is the difference between the 2014 employment estimate and 2024 employment projection.
- Percentage change is the growth change between the 2014 estimate and 2024 projection.

- The statewide growth outlook is based on the statewide employment projection *only* and measures how quickly employment for a detailed occupation is projected to grow compared to the statewide, all-occupation growth rate. A detailed definition of the growth outlook is provided in the Definitions section.

- Annual growth openings represent the number of anticipated openings due to new job growth, while annual replacement openings represent the number of anticipated openings due to workers permanently leaving an occupation (due to promotion, retirement, death, etc.). Growth openings are newly created positions, while replacement openings represent openings from existing jobs, with no new jobs being created. Total annual openings are growth openings plus replacement openings.

- The average, entry, experienced, and median annual and hourly wages are based on 2015 Occupational Employment Statistics (OES) survey data. For more information on the application of OES to occupation projections, see the Methodology section.

Data Suppression

New Mexico and its substate areas have many small industries and occupations that have little employment. In addition, some of the industries have few employers. While the projected growth of these industries and occupations is important, the low employment levels and small number of employers often mean that data cannot be reported due to U.S. Bureau of Labor Statistics (BLS) suppression requirements. In addition, low employment levels can create extreme growth measurements that, if classified in similar ways as larger industries and occupations, can be misleading. For example, if an occupation's employment grows from 5 to 10, the percentage growth would be 100 percent. That growth shouldn't necessarily be compared to that of a larger occupation, which would likely report smaller percentage growth by the nature of its large base and projected employment.

Within the data tables, "***" for projections data indicates that data are suppressed, while the same symbol for wage data indicates that data are either suppressed or not available. To mitigate misleading growth rates of small occupations and industries, ER&A applied some reporting limitations beyond BLS suppression. In the case of both major and detailed industries, if the industry data are suppressed but its base employment is above the tenth percentile of all industries, the percentage growth (*only*) is shown. In the case of both major and detailed occupations, if the occupation data are suppressed but its base employment is above the all-occupation thirtieth percentile of all occupations, the percentage growth and total annual openings (as long as they are above 5) are shown. This approach allows some data to be reported.

The occupation projections tables also provide information on each occupation's growth outlook at the state level (the definition of which is provided in the following section of this document). If an occupation's base employment does not meet the thirtieth percentile criteria mentioned above, the statewide growth outlook is not provided.

Base Employment Thirtieth Percentiles for Major & Detailed Occupations			**Base Employment Tenth Percentiles for Major & Detailed Industries**		
	Major	Detailed		Major	Detailed
New Mexico	22,228	115	New Mexico	10,270	230
Abq MSA/Central Region	9,762	46	Abq MSA/Central Region	1,470	60
Farmington MSA	1,007	8	Farmington MSA	290	20
Las Cruces MSA	2,095	13	Las Cruces MSA	470	20
Santa Fe MSA	1,345	11	Santa Fe MSA	170	30
Eastern Region	3,079	20	Eastern Region	1,240	20
Northern Region	4,890	25	Northern Region	1,600	30
Southwestern Region	2,834	17	Southwestern Region	980	40

Definitions

Growth and Replacement Openings

Projections of job growth provide valuable insight into future employment opportunities because each new job created is an opening for a worker entering an occupation. However, opportunities also arise when workers *leave their*

occupations (not just their job) and need to be replaced. In most occupations, replacement needs provide many more job openings than employment growth does.

Replacement openings estimate the difference between the movement of workers who change jobs to enter other occupations, retire, or leave the workforce for other reasons and the movement of workers filling the openings, resulting in a net replacement number. Because workers entering an occupation often need training, these replacement needs, added to job openings due to growth, may be used to assess the *minimum* number of workers who will need to be trained for the occupation. This estimate of replacement needs does not count workers who change jobs but remain in the same occupation, and, therefore, should not be used as a measurement of turnover.

States apply replacement rates based on those calculated at the national level. BLS uses occupational employment data from the Current Population Survey (CPS), a household survey that collects demographic and employment information about individuals and measures the net change in occupational employment for 13 different age cohorts over a five-year period. After calculating net change by age cohort, BLS estimates historical replacement needs. For more information on the methodology of calculating replacement needs, visit http://www.bls.gov/emp/ep_replacements.htm.

Note that the demand for new workers in an occupation is underestimated when looking at projected openings because openings are based on net changes and do not capture the gross flows into and out of an occupation. If employment in an occupation is projected to decline, the number of openings resulting from growth is zero, and replacement openings are the only source of employment opportunities.

Statewide Growth Outlook

The statewide growth outlook is used to express the relative rate of growth of a particular industry or occupation based on how that industry's or occupation's growth rate compares to the all-industry or all-occupation average. The projected all-industry/all-occupation growth rate for New Mexico is 7.7 percent. Note that this is an indicator of employment growth and not projected openings. Small employment growth in a large occupation can result in far more openings than faster growth in a small occupation.

Exceptional Growth: Employment growth is projected to increase 16.1 percent or more

High Growth: Employment growth is projected to increase between 10.1 and 16.0 percent

Average to Near Average Growth: Employment growth is projected to increase between 6.1 and 10.0 percent

Below Average Growth: Employment growth is projected to increase between 0.1 and 6.0 percent

Zero to Declining Growth: Employment growth is projected to be zero to negative

Note that for industries where base employment is below the tenth percentile for all industries, and for occupations where base employment is below the thirtieth percentile, a statewide growth outlook is not identified. This is implemented to recognize extreme growth rates in small industries and occupations that may give a misleading perception of growth.

Education and Training Classifications

BLS uses a system to assign categories for entry-level education, work experience in a related occupation, and typical on-the-job training to each occupation for which BLS publishes projections data. The assignments allow occupations to be grouped to create estimates of the education and training needs for the labor force as a whole and estimates of the outlook for occupations with various types of education and training needs. New Mexico applies this information to its statewide and substate occupation projections. For more information on education and training classifications, visit http://www.bls.gov/emp/ep_education_tech.htm.

- **Education:** The level of education typically required for entry into the occupation. Categories are as follows:

  Doctoral or professional degree: degree awarded usually for at least three years of full-time academic work beyond a bachelor's degree; *e.g., lawyers, physicians and surgeons,* and *dentists*

  Master's degree: degree awarded usually for one or two years of full-time academic study beyond a bachelor's degree

Bachelor's degree: degree awarded usually for at least four years of full-time academic study beyond high school

Associate's degree: degree awarded usually for at least two years of full-time academic study beyond high school

Postsecondary non-degree award: usually a certificate or other award that is not a degree. Certifications issued by professional organizations or certifying bodies are not included in this category. Programs may last only a few weeks to two years. *e.g., nursing assistants, emergency medical technicians (EMTs) and paramedics,* and *hairstylists*

Some college, no degree: a high school diploma or the equivalent, plus the completion of one or more postsecondary courses that did not result in any degree or award

High school diploma or equivalent: the completion of high school or the equivalent resulting in the award of a high school diploma or the equivalent, such as the General Education Development (GED) credential

No formal education credential: the completion of any level of education that did not result in the awarding of a formal credential, like a high school diploma or postsecondary certificate

- **Work experience in a related occupation ("Work Experience"):** the level of work experience in an occupation related to a given occupation; the work experience captures work experience that is commonly considered necessary by employers or is a commonly accepted substitute for other, more formal types of training or education. Categories are as follows:

  Five years or more: the number of years of experience in a related occupation typically needed for entry into a given occupation is more than five years.

  Less than 5 years: the number of years of experience in a related occupation typically needed for entry into a given occupation is less than five years.

  None: No work experience in a related occupation is typically needed for entry.

- **On-the-job training:** training or preparation that is typically needed, once employed in an occupation, to attain competency in the occupation. Training is occupation-specific rather than job-specific; skills learned can be transferred to another job in the same occupation. Categories are as follows:

  Internship/Residency: training that involves preparation in a field such as medicine or teaching, generally under supervision in a professional setting, such as a hospital or classroom. This type of training may occur before one is employed. Completion of an internship or residency program is commonly required for state licensure or certification in fields including medicine, counseling, architecture, and teaching. This category does not include internships that are suggested for advancement.

  Apprenticeship: a formal relationship between a worker and sponsor that consists of a combination of on-the-job training and related occupation-specific instruction in which the workers learns the practical and theoretical aspects of an occupation. Apprenticeship programs are sponsored by individual employers, joint employer-and-labor groups, and employee associations. Apprenticeship programs usually provide at least 144 hours of occupation-specific technical instruction and 2,000 hours of on-the-job training per year over a three- to-five-year period. Examples of occupations that utilize apprenticeships include electricians and structural iron and steel workers.

  Long-term on-the-job training: more than 12 months of on-the-job training or, alternatively, combined work experience and formal classroom instruction, are needed for workers to develop the skills to attain competency. This on-the-job training category also includes employer-sponsored training programs. Such programs include those offered by fire academies and schools for air traffic controllers. In other occupations—nuclear power reactor operators, for example—trainees take formal courses, often provided at the jobsite, to prepare for the required licensing exams. This category also includes occupations in which workers typically need to possess a natural ability or talent—including musicians and singers, athletes, dancers, photographers, and actors—and that ability or talent must be cultivated over several years, sometimes in a non-work setting. This category excludes apprenticeships.

Moderate-term on-the-job training: more than one month up to 12 months of combined on-the-job experience and informal training is needed for the worker to develop the skills to attain competency; this on-the-job training category also includes employer-sponsored training programs.

Short-term on-the-job training: one month or less of combined on-the-job experience and informal training is needed for the worker to develop the skills to attain competency; this on-the-job training category also includes employer-sponsored training programs.

None: no additional occupation-specific training or preparation is typically required to attain competency in the occupation.

Methodology

Employment projections are based on methodologies developed by US DOL for projecting state and area occupational needs using both national information and procedures specifically adapted to each state's industrial and occupational patterns. ER&A utilizes the Projections Suite software system, which is a national standard product of the Projections Workgroup, under the direction of the Projections Managing Partnership (PMP). The PMP works in cooperation with the Employment and Training Administration of US DOL. The Projections Suite is developed by the Utah Department of Workforce Services, Workforce Information Division, Systems Research & Analysis. Industry employment projections are developed through simple time-share, shift-share, extrapolation, and regression model analysis using state-specific inputs. Occupational projections are prepared by applying occupational staffing patterns for each industry to industry employment projections. The staffing patterns used are derived from information collected by the OES survey.

Industry employment measured in the projection process is primarily derived from employment reported at the establishment level through the Quarterly Census of Employment and Wages (QCEW) program, at the 2- and 3-digit NAICS level. Because QCEW data capture only those workers covered by unemployment insurance, QCEW data are supplemented with employment data from the Current Employment Statistics (CES) program, the U.S. Census Bureau, Bureau of Economic Analysis (BEA), and the Census of Agriculture. Employment projection inputs measure wage and salary workers, as well as self-employed and unpaid family workers, farmers and farm workers, private household workers, and other residual employment. Therefore, base employment estimates used for projections will likely differ from those reported by other sources, including QCEW. In addition, some industries incorporate both private- and public-sector employment in order to comply with the methods used to collect occupational staffing patters. For example, state and local government educational services employment is included in the educational services sector in the projections process, but is actually included in the government sector in QCEW.

Occupation employment and projections are derived by applying staffing patterns (the distribution of occupations by industry) developed through the OES survey. In cases where OES survey responses are low or missing in a particular industry, national staffing patterns or patterns from earlier OES surveys are substituted. Staffing patterns for industries not covered by the OES survey are derived from other sources, such as the U.S. Census Bureau. Occupational estimates for self-employed and unpaid family workers are not industry-specific, and are reported as one sector, as opposed to being distributed across industries.

When industry and occupational staffing patterns are merged to project occupational employment, BLS national occupational change factors (the projected change in the distribution of occupations within an industry) are applied to produce new occupational staff patterns. The new patterns are adjusted to equal the projected employment by industry. The projected employment of an occupation, therefore, is based on changes in the proportion of workers in the occupation in each industry and the growth rates of the industries in which employment in that occupation is found.

For more detailed information on projections methodology, visit http://www.bls.gov/emp/ep_projections_methods.htm and https://support.projectionscentral.com/.

Data Limitations and Assumptions

Projections produced by ER&A necessarily have some limitations that should be acknowledged any time the data are used. Long-term projections report what is likely to happen if historical and state-level employment patterns continue on their historical growth trends; this includes trends in population, labor force, productivity, and economic growth. These projections do not take into consideration major shocks to the economy, and assume that employment will ultimately return to levels that fit long-term growth trends. The projections process assumes the (1) institutional framework of the economy will not radically change; (2) current technological, scientific, and social trends will continue; (3) and major events (e.g. natural disasters, terrorist attacks, conventional wars) will not be significant enough to alter the industrial structure of the economy or its growth. New developments will undoubtedly, however, impact the labor market in unexpected ways. Certain industries are also particularly sensitive to business cycles, and their employment can be more difficult to project. Because of these assumptions, projections are designed to provide general magnitudes and probable directional changes in employment rather than precise predictions of actual employment developments.

Other assumptions and limitations include the following:

- Projections measure occupational demand only, not supply of labor. Projections, therefore, should be utilized as a starting point in evaluating occupational surpluses and shortages in the labor market and should be coupled with other data measurements for such purposes.
- Employment projections are based on place-of-work and count the number of jobs (including full and part-time) as opposed to the number of workers. The total number of projected jobs will exceed the number of employed workers in the labor force due to persons holding more than one job or commuting from other states for work.
- Projected employment growth or decline will not be consistent over the 10-year projection period. At the same time, growth rates could be interpreted as either recovery growth or post-recovery growth, depending on how each industry or occupation is impacted by a recession or depression.
- Projections are more reliable at the major industry and occupation groups.
- National assumptions include the following:
    - the labor force will grow at the same rate as during the past 10-year period;
    - productivity will grow faster than before;
    - the unemployment rate will remain constant;
    - trade deficits will increase;
    - a Federal budget surplus will exist;
    - Federal spending programs will grow moderately;
    - consumer spending on durable goods will grow faster than average;
    - spending on food and beverages will grow more slowly than the average for all consumer expenditures;
    - health care and other services spending will grow faster than average;
    - investment in production equipment will grow quickly; and
    - residential construction will grow with the population, while nonresidential construction will make a comeback from depressed levels seen during the previous 10 years.
- State assumptions include the following:
    - New Mexico population growth will closely track the national average;
    - personal incomes will continue to grow moderately;
    - tourism will increase due to promotion, special events, and the state's unique appeal;
    - federal government spending for both defense and non-defense purposes will remain at roughly the current level;
    - natural resources will play a larger role in the New Mexico economy than it was in the recent past due to higher prices, demand, and other factors such as technology improvements;

- employment in the manufacturing sector will maintain its share of between 4 and 5 percent of non-farm employment; and
- manufacturing employment will grow in absolute terms as manufacturing and other companies relocate to New Mexico and existing businesses expand their operations due to extensive recruitment campaigns, an ample supply of labor at relatively low wage scales, favorable living conditions, and other considerations.