



Occupation Report

Natural Sciences Managers

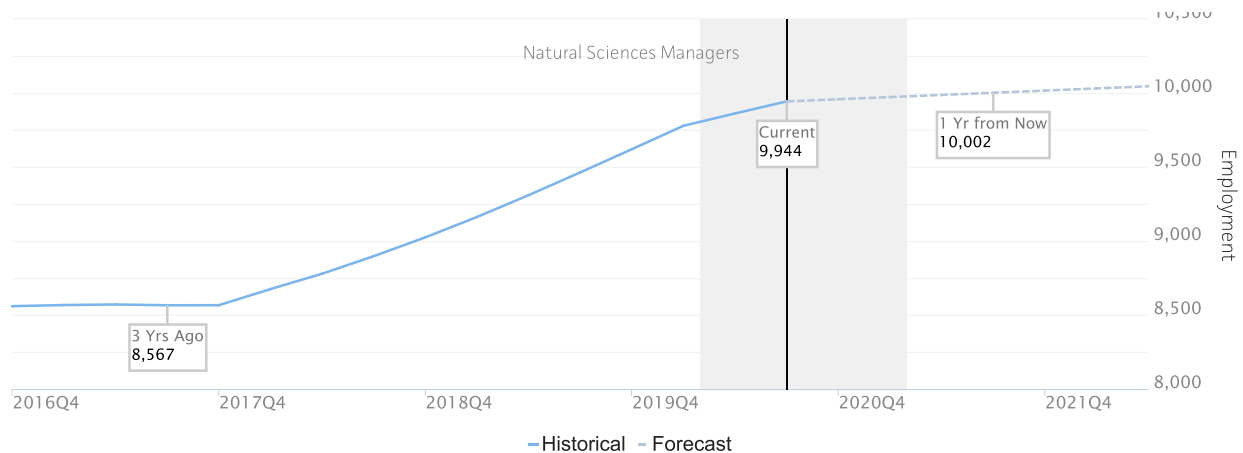
California



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Occupation Snapshot

6-Digit Occupation	Empl	Avg Mean Wages	LQ	3-Year Empl Change	Annual Demand	Forecast Ann Growth
Natural Sciences Managers	9,944	\$188,700	1.35	1,377	951	0.6%
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- “Annual Demand” is the projected need for new entrants into an occupation. New entrants are needed due to expected growth and to replace workers who left the occupation due to factors such as retirement or switching careers.
- “Forecast Ann Growth” is the expected change in jobs due to national, long-term trend projections (per the BLS) as well as local factors such as industry mix and population growth (as computed and modeled by Chmura).

Employment by Industry

Industry Title	% of Occ Empl	Empl	10-Year Separations	10-Year Empl Growth	10-Year Total Demand
Scientific Research and Development Services	46.2%	4,592	4,145	266	4,411
Pharmaceutical and Medicine Manufacturing	15.2%	1,507	1,360	87	1,447
Management, Scientific, and Technical Consulting Services	4.4%	440	429	104	533
Colleges, Universities, and Professional Schools	3.3%	325	293	19	312
Management of Companies and Enterprises	3.0%	295	268	21	288
Architectural, Engineering, and Related Services	2.9%	287	255	6	261
National Security and International Affairs	2.7%	268	231	-10	221
Justice, Public Order, and Safety Activities	2.7%	266	233	-1	232
General Medical and Surgical Hospitals	1.8%	175	157	7	163
Executive, Legislative, and Other General Government Support	1.7%	172	152	3	155
Administration of Economic Program	1.6%	158	137	-3	135
Administration of Human Resource Programs	1.5%	153	135	1	136
Drugs and Druggists' Sundries Merchant Wholesalers	1.3%	126	111	2	113
Medical Equipment and Supplies Manufacturing	1.2%	118	106	5	111
Administration of Environmental Quality Programs	1.1%	106	92	-3	89
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	1.0%	95	84	2	86
Medical and Diagnostic Laboratories	0.9%	93	87	14	101
Offices of Physicians	0.6%	58	53	5	58
Chemical and Allied Products Merchant Wholesalers	0.6%	56	50	1	51
Social Advocacy Organizations	0.5%	54	53	13	66
All Others	6.0%	600	551	60	611

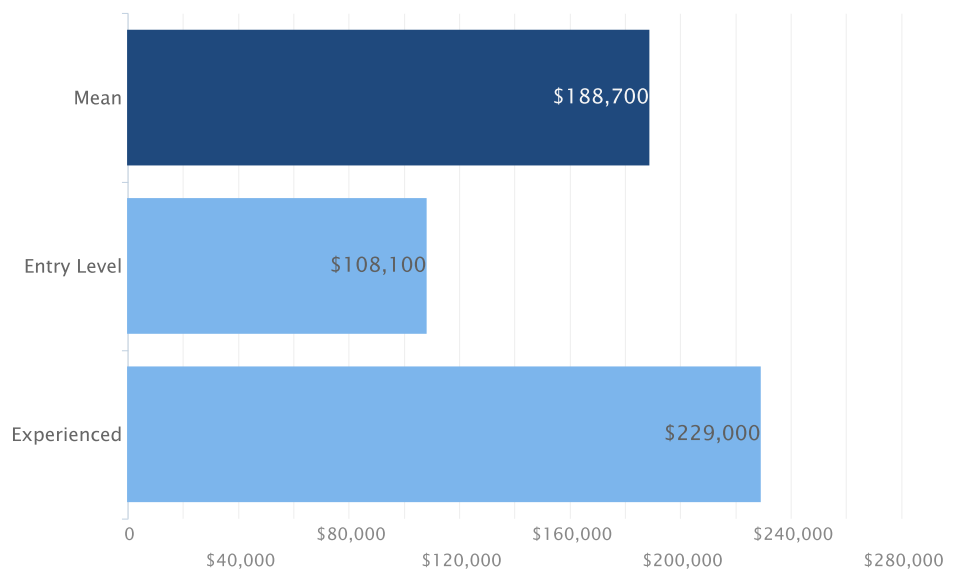


The industry distribution indicates the industries in which workers in the occupation(s) are primarily found.



“10-Year Empl Growth” may show industries with positive as well as negative growth; this would indicate that the occupation(s) being examined are expected to expand within some industries while contracting in others.

Wages



Occupation	Mean	Median	Entry Level	Experienced
Natural Sciences Managers	\$188,700	\$166,500	\$108,100	\$229,000



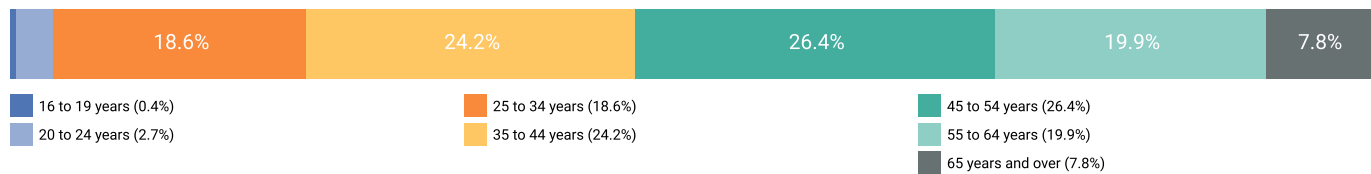
Occupation wages here are based on data from the Bureau of Labor Statistics, OES program, and imputed by Chmura where necessary.



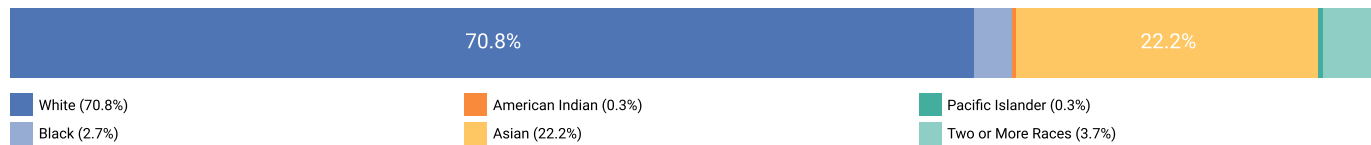
When this report is run for an occupation group, the table above displays up to the top ten detailed occupations which have the highest average wages within the occupation group.

Occupation Demographics

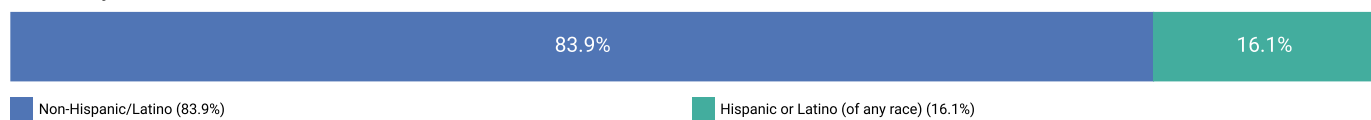
Age



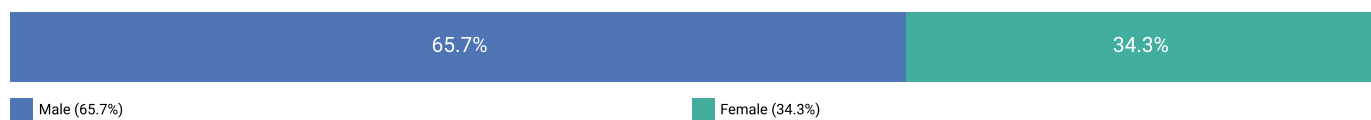
Race



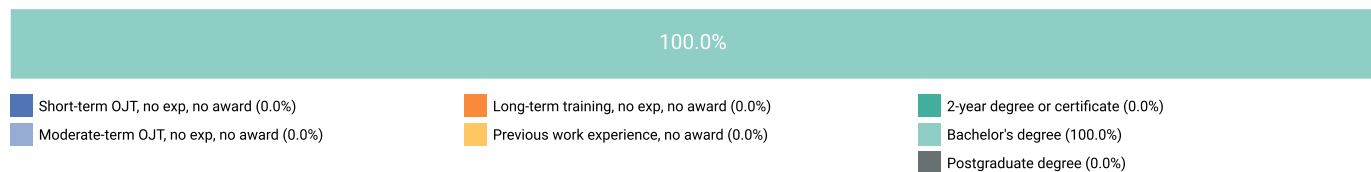
Ethnicity



Gender

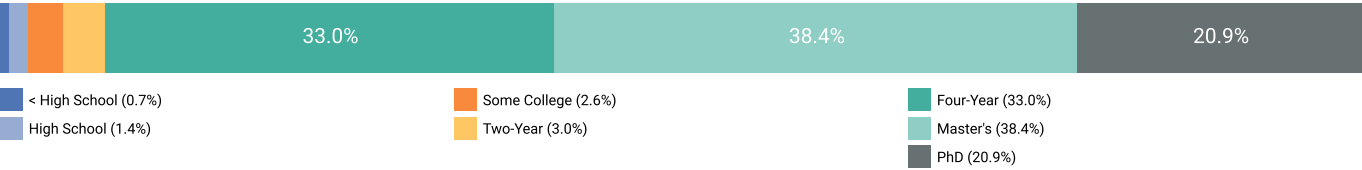


Education and Training Requirements



Education Profile

Educational Attainment



Occupation	Typical Entry-Level Education	Previous Work Experience	Typical On-the-Job Training
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- The stacked bar chart here illustrates the estimated mix of educational attainment of the workers in this occupation(s) in aggregate.
- The table indicates typical education and training requirements rather than the mix of attainment of workers in such positions.

Postsecondary Programs Linked to Natural Sciences Managers

Program	Awards
Chaffey College	
Biological and Physical Sciences	443
Contra Costa College	
Biological and Physical Sciences	424
Golden West College	
Biological and Physical Sciences	943
Los Angeles Pierce College	
Biological and Physical Sciences	724
Mt San Jacinto Community College District	
Biological and Physical Sciences	644
Pasadena City College	
Biological and Physical Sciences	1,120
Riverside City College	
Biological and Physical Sciences	639
Santa Barbara City College	
Biological and Physical Sciences	492
Sierra College	
Biological and Physical Sciences	529
Victor Valley College	
Biological and Physical Sciences	419



The number of graduates from postsecondary programs in the region identifies the pipeline of future workers as well as the training capacity to support industry demand.



Among postsecondary programs at schools located in California, the sampling above identifies those most linked to Remote Jobs. For a complete list see JobsEQ®, <http://www.chmuraecon.com/jobseq>

Top Skill and Certification Gaps

Top 10 Skill Gaps in California

Name	Candidates	Openings	Gap
Medical Terminology	84	159	-75
FDA Regulations	83	133	-50
Microsoft Office	137	176	-39
Word Processing	41	71	-30
Microsoft PowerPoint	98	127	-29
Spreadsheet Programs	10	29	-19
Presentation	35	50	-15
Microbiology	3	14	-12
Anatomy	11	19	-9
Statistical Analysis Software	9	18	-9

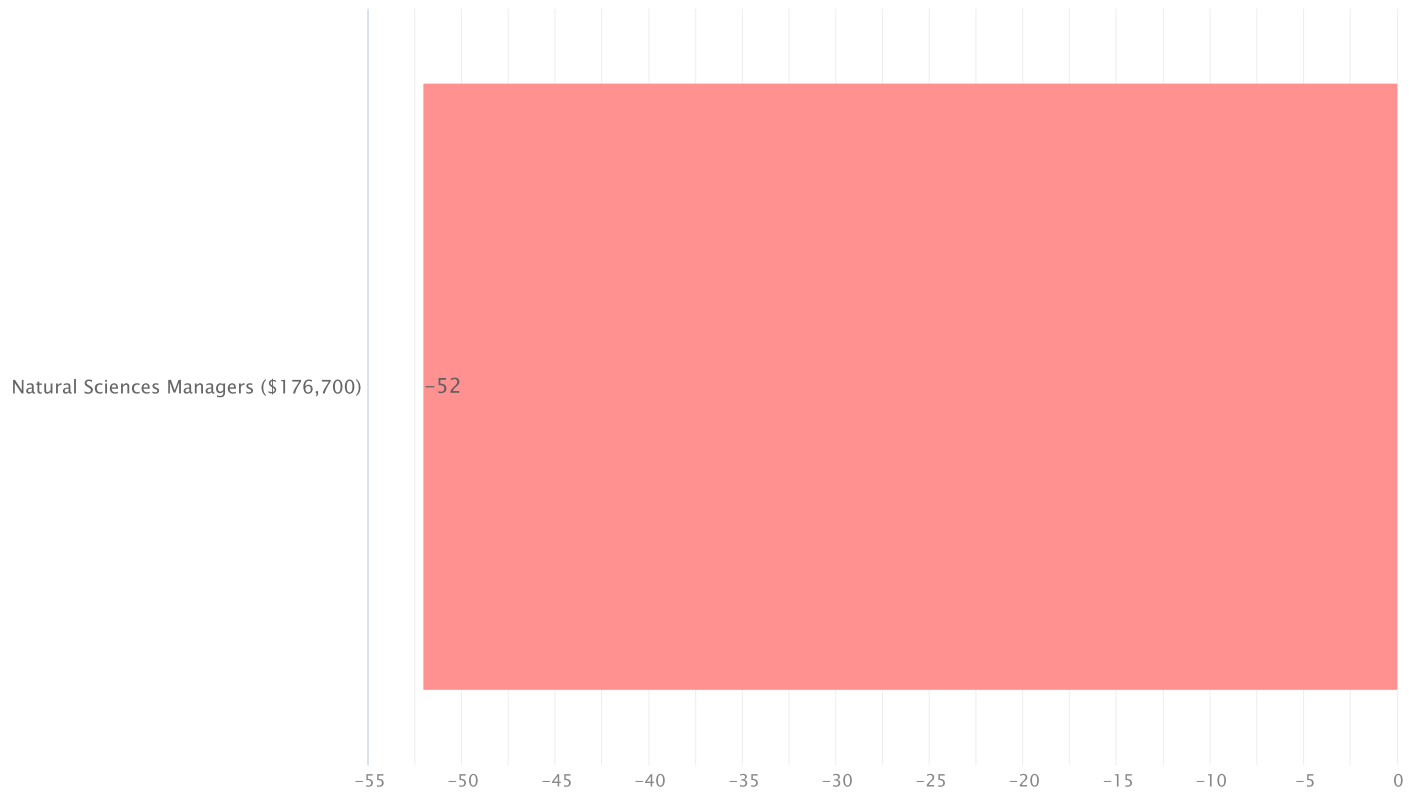
Top 10 Certification Gaps in California

Name	Candidates	Openings	Gap
Certified Clinical Research Coordinator (CCRC)	14	25	-10
Basic Life Support (BLS)	12	21	-9
Licensed Practical Nurse (LPN)	1	4	-3
National Phlebotomy Association Certified Phlebotomist	8	11	-3
Certified Clinical Research Associate (CCRA)	11	13	-1
Project Management Professional (PMP)	5	6	-1
Certified Phlebotomy Technician (CPT)	1	2	-1
Medical Assistant Certification (MA)	3	3	-1
Pediatric Advanced Life Support (PALS)	1	1	0
Oncology Certified Nurse (OCN)	0	1	0



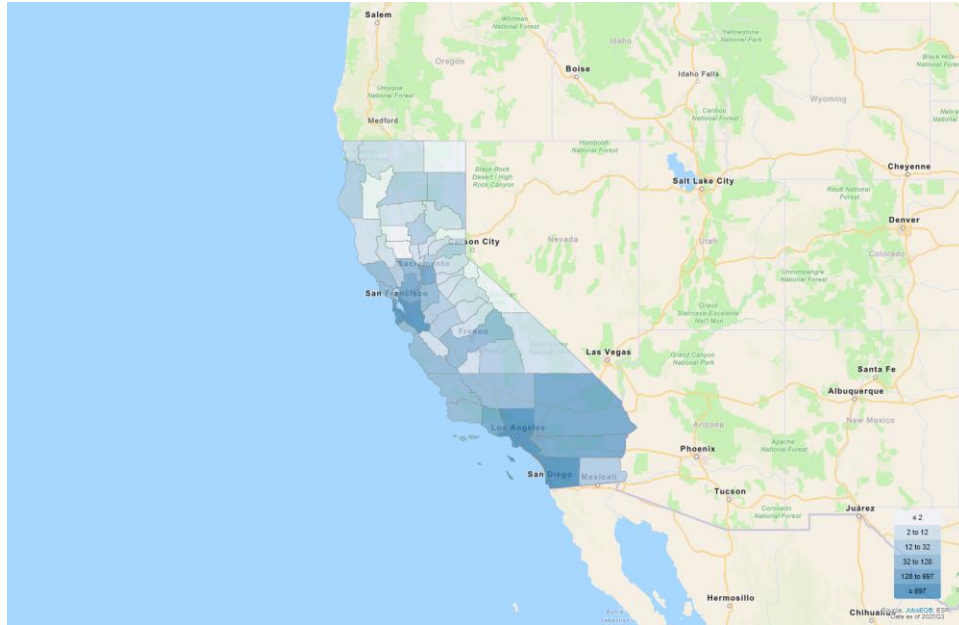
Skill and certifications gaps can help inform employee development programs, as well as provide a comparison of the needs of regional employers to the supply.

Occupation Gaps



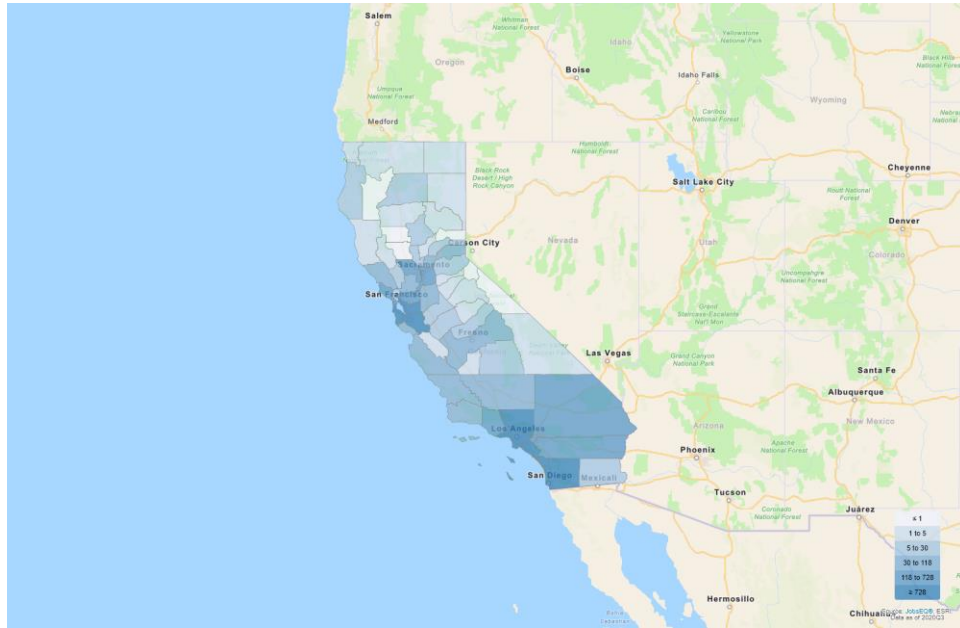
- 💡 The above are the potential average annual gaps over 10 years. Many variables go into this analysis, but at its core it is based on a forecast comparing occupation demand growth to the local population growth and the projected educational attainment of those residents. When an area, for example, has an occupation expected to grow quickly but the educational requirement for the occupation does not match well with the educational attainment of its residents, there is a high potential for an occupation shortfall in the region. Alternatively, slow-growing or contracting occupations often represent potential supply surpluses.
- 💡 The potential supply shortfall is an underlying force that the market needs to resolve one way or another, such as by employers recruiting from further distances for these occupations, wages going up to attract more candidates, and/or increased demand and wages enticing more local residents to get training for these occupations. While this an important analysis for determining local occupation needs, the occupation gap should be considered along with other regional data including growth and separation forecasts, unemployment rates, wage trends, and award and skill gap analyses.

Geographic Distribution



Top Counties by Place of Work for Natural Sciences Managers, 2020Q3

Region	Employment
San Diego County, California	1,743
Los Angeles County, California	1,613
San Mateo County, California	1,073
Alameda County, California	1,009
Santa Clara County, California	983
Orange County, California	698
San Francisco County, California	469
Sacramento County, California	437
San Bernardino County, California	154
Solano County, California	138



Top Counties by Place of Residence for Natural Sciences Managers, 2020Q3

Region	Employment
San Diego County, California	1,686
Los Angeles County, California	1,591
Santa Clara County, California	1,104
Alameda County, California	1,042
San Mateo County, California	798
Orange County, California	728
San Francisco County, California	571
Sacramento County, California	320
Contra Costa County, California	291
Riverside County, California	168

💡 “Place of work” employment is based upon the location of employers for these workers. “Place of residence” data refers to the home locations of the workforce, which is typically the preferred data set to use when calculating labor availability within a drive-time or radius of a potential worksite.

California Regional Map



Data Notes

- Occupation employment by default indicates employment by place of work. Occupation employment is as of 2020Q3 and is based on industry employment and local staffing patterns calculated by Chmura and utilizing BLS OES data. Employment forecasts are modeled by Chmura and are consistent with BLS national-level 10-year forecasts. Occupation wages (mean, median, and percentiles) are derived from BLS OES data and are as of 2019 and represent the average for all Covered Employment. Entry-level and experienced wages are derived from these source data, computed by Chmura.
- Industry employment is as of 2020Q3 and is based upon BLS QCEW data, imputed by Chmura where necessary, and supplemented by additional sources including Census ZBP data.
- Education and training requirements are from the BLS. Educational attainment mix and other occupation demographics data are modeled by Chmura for 2020Q3 using regional occupation employment from JobsEQ, ZCTA-level demographics data from the Census Bureau, and national occupation-demographics patterns from the BLS.
- Postsecondary awards are per the NCES and are for the 2018-2019 academic year. Any programs shown are linked with the occupation(s) being analyzed via the program-occupation crosswalk, which may not be comprehensive. Any programs shown reflect only data reported to the NCES; reporting is required of all Title IV schools. Training providers that do not report data to the NCES are not reflected.
- Job ads data are online job posts from the Real-Time Intelligence (RTI) data set, produced wholly by Chmura and gleaned from over 30,000 websites. Data reflect ads active during the last twelve month period ending 04/20/2021 and advertised for any Zip Code Tabulation Area in or intersecting with the region for which this report was produced. Historical ad volume is revised as additional data are made available and processed. Since many extraneous factors can affect short-term volume of online job postings, time-series data can be volatile and should be used with caution. All ad counts represent deduplicated figures.
- For skill and certification gaps, openings and candidates are based upon regional occupation demand (growth plus separations) and the percent of skill demand and supply. Skill demand mix data are per a one-year sample of RTI data; skill supply data are estimated using a five-year sample of resumes data; both data sets compiled as of January 2021. Data may be based, at least in part, on data from broader geographies; see the Skill Gaps analytic export for more details.
- Occupation gaps are modeled by Chmura, indicating long-term potential supply and demand mismatches in a region due, in part, to job demand and labor pool dynamics, including educational attainment and projected growth.
- Occupation employment by place of residence is as of 2020Q3 and modeled by Chmura based upon occupation employment by place of work and commuting patterns. Commuting patterns are derived from source data from the Census Bureau, occupation-specific commuting tendencies, and updated to reflect more recent population and employment estimates.
- Figures may not sum due to rounding.

FAQ

What is (LQ) location quotient?

Location quotient is a measurement of concentration in comparison to the nation. An LQ of 1.00 indicates a region has the same concentration of an industry (or occupation) as the nation. An LQ of 2.00 would mean the region has twice the expected employment compared to the nation and an LQ of 0.50 would mean the region has half the expected employment in comparison to the nation.

What is annual demand?

Annual demand is a of the sum of the annual projected growth demand and separation demand. Separation demand is the number of jobs required due to separations—labor force exits (including retirements) and turnover resulting from workers moving from one occupation into another. Note that separation demand does not include all turnover—it does not include when workers stay in the same occupation but switch employers. Growth demand is the increase or decrease of jobs expected due to expansion or contraction of the overall number of jobs.