JOBSEQ

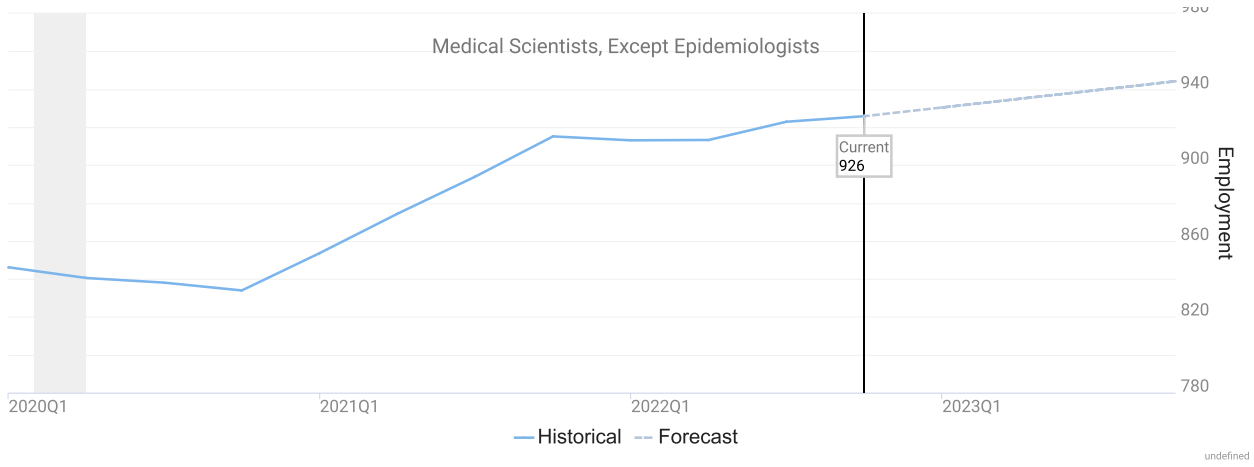
Occupation Report

# Medical Scientists, Except Epidemiologists

Sacramento-Roseville-Folsom, CA MSA

# Occupation Snapshot

| 6-Digit Occupation | Empl | Avg Mean Wages | LQ | 3-Year Empl Change | Annual Demand | Forecast Ann Growth |
|---|---|---|---|---|---|---|
| **Medical Scientists, Except Epidemiologists** | **926** | **$119,900** | **1.12** | **77** | **80** | **2.0%** |




"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

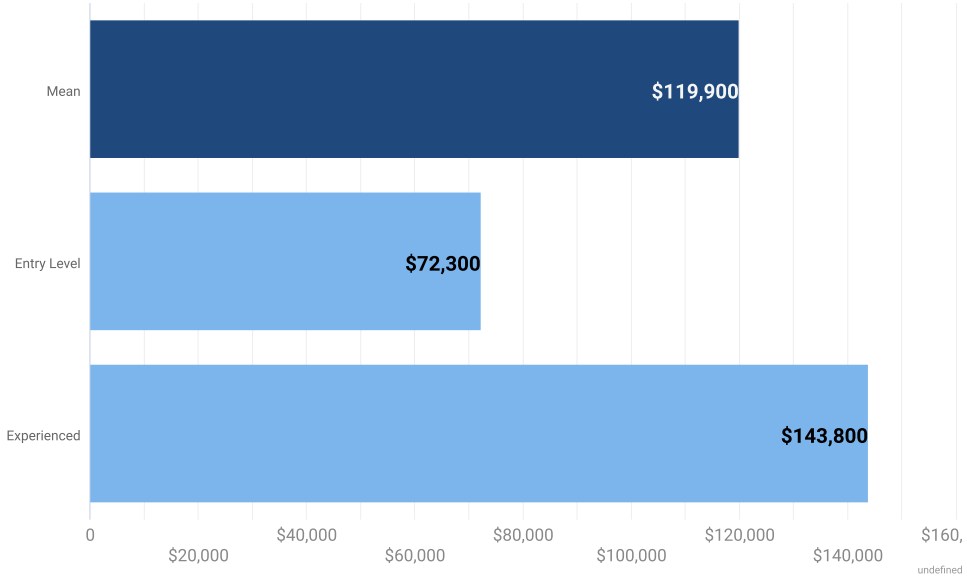
| Industry Title | % of Occ Empl | Empl | 10-Year Separations | 10-Year Empl Growth | 10-Year Total Demand |
|---|---|---|---|---|---|
| Scientific Research and Development Services | 45.2% | 418 | 295 | 131 | 426 |
| Colleges, Universities, and Professional Schools | 17.9% | 166 | 112 | 31 | 143 |
| General Medical and Surgical Hospitals | 14.5% | 135 | 86 | 10 | 96 |
| Outpatient Care Centers | 7.1% | 66 | 45 | 14 | 59 |
| Medical and Diagnostic Laboratories | 2.7% | 25 | 17 | 4 | 21 |
| Management of Companies and Enterprises | 1.7% | 16 | 10 | 1 | 11 |
| Pharmaceutical and Medicine Manufacturing | 1.4% | 13 | 9 | 2 | 10 |
| Offices of Physicians | 1.2% | 11 | 7 | 1 | 8 |
| Executive, Legislative, and Other General Government Support | 1.0% | 9 | 6 | 0 | 6 |
| Management, Scientific, and Technical Consulting Services | 0.7% | 6 | 4 | 1 | 5 |
| Administration of Human Resource Programs | 0.6% | 6 | 3 | 0 | 3 |
| Grantmaking and Giving Services | 0.6% | 6 | 4 | 1 | 4 |
| Administration of Environmental Quality Programs | 0.6% | 5 | 3 | 0 | 3 |
| Justice, Public Order, and Safety Activities | 0.5% | 5 | 3 | 0 | 3 |
| Administration of Economic Programs | 0.5% | 5 | 3 | 0 | 3 |
| Employment Services | 0.5% | 5 | 3 | 0 | 4 |
| All Others | 3.2% | 30 | 19 | 4 | 24 |

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.

Source: JobsEQ®, http://www.chmuraecon.com/jobseq

# Wages



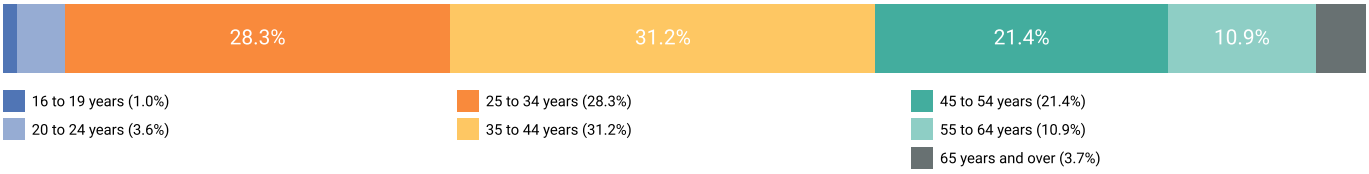

| Occupation | Mean | Median | Entry Level | Experienced |
|---|---|---|---|---|
| Medical Scientists, Except Epidemiologists | $119,900 | $120,900 | $72,300 | $143,800 |

Occupation wages here utilize BLS OEWS data, imputed and brought forward by Chmura.

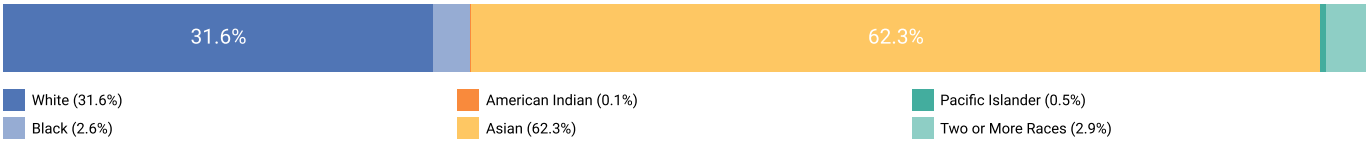
When this report is run for an occupation group, the table above displays up to the top ten detailed occupations which have the highest average wages within the occupation group.

# Occupation Demographics

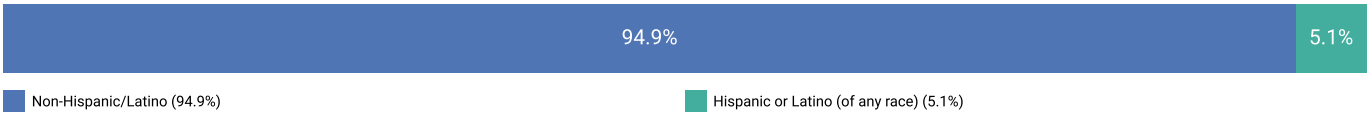
## Age




## Race

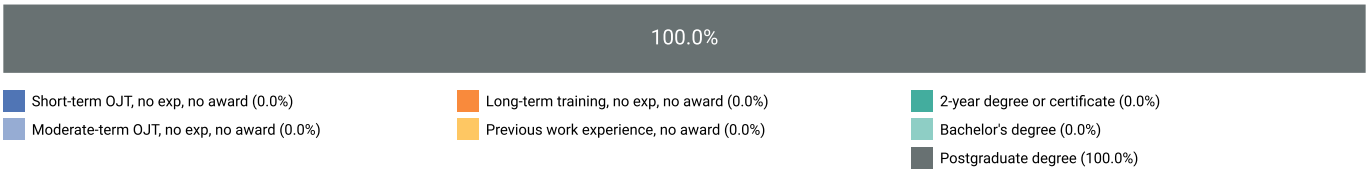



## Ethnicity




## Gender

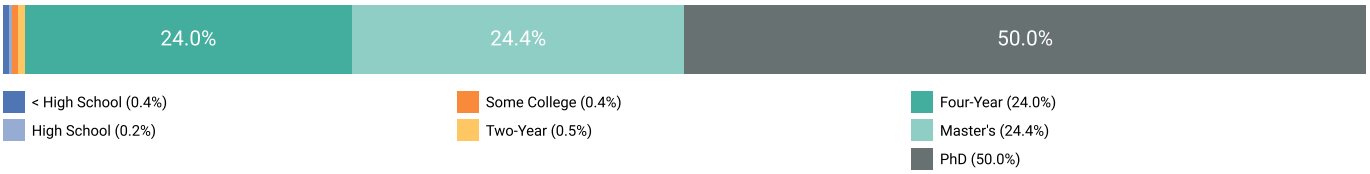

## Education and Training Requirements




Source: JobsEQ®, http://www.chmuraecon.com/jobseq

# Education Profile

Educational Attainment




| Occupation | Typical Entry-Level Education | Previous Work Experience | Typical On-the-Job Training |
|---|---|---|---|
| Medical Scientists, Except Epidemiologists | Doctoral or professional degree | None | None |

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 Medical Scientists, Except Epidemiologists

| Program | Awards |
|---|---|
| **California Northstate University** | |
| Pharmaceutical Sciences | 27 |
| **California State University-Sacramento** | |
| Biochemistry | 30 |
| Gerontology | 65 |
| **University of California-Davis** | |
| Cell Physiology | 10 |
| Cell/Cellular Biology and Histology | 44 |
| Molecular Biochemistry | 214 |
| Neurobiology and Anatomy | 518 |
| Pharmaceutical Sciences | 134 |
| Pharmacology and Toxicology | 11 |
| Physiology, Pathology, and Related Sciences, Other | 123 |

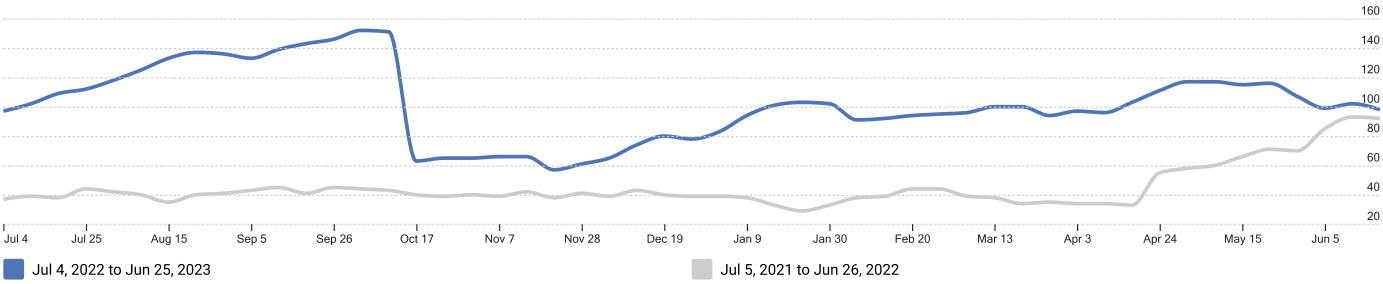
The number of graduates from postsecondary programs in the region identifies the pipeline of future workers as well as the training capacity to support industry demand.

Among postsecondary programs at schools located in the Sacramento-Roseville-Folsom, CA MSA, the sampling above identifies those most linked to Medical Scientists, Except Epidemiologists. For a complete list see JobsEQ®, http://www.chmuraecon.com/jobseq

Source: JobsEQ®, http://www.chmuraecon.com/jobseq

# RTI (Job Postings)

Active Job Ads by Date




Online job ads are a timely indicator of local demand. Occupation assignments shown below are made by Chmura based upon analysis of job titles and job descriptions. Top employers and listed job requirements are shown on the following pages.

**Occupations**

| SOC | Occupation | Active Job Ads | |
|---|---|---|---|
| 19- 1042.00 | Medical Scientists, Except Epidemiologists | 590 | |

**Locations**

| Location | Active Job Ads |
|---|---|
| University of California Davis | 221 |
| Sacramento, California | 135 |
| Sacramento County, California | 55 |
| Davis, California | 25 |
| West Sacramento, California | 25 |
| University of California Davis Health System | 11 |
| Dixon, California | 5 |
| 95620 | 4 |
| Davis, CA 95618 (Downtown Core area) | 4 |
| Sacramento, CA 94278 (Marshall School area) | 4 |

**Employers**

| Employer Name | Active Job Ads |
|---|---|
| Davis, California | 176 |
| Sacramento, California | 52 |
| University of California, Davis | 34 |
| Abbvie | 28 |
| State of California Department of Public Health | 25 |
| Cedars-Sinai | 13 |
| Integrated Resources, Inc | 10 |
| Origin Materials | 7 |
| State of California Environmental Health Hazard Assessment Office | 7 |
| Genentech | 6 |

**Hard Skills**

| Skill Name | Active Job Ads |
|---|---|
| Data Analysis | 108 |
| Molecular Biology | 103 |
| Microsoft Excel | 62 |
| Cell Culture | 56 |
| Physiology | 56 |
| Mathematics | 51 |
| Polymerase Chain Reaction (PCR) | 49 |
| Pharmacology | 36 |
| Statistical Analysis System (SAS) | 36 |
| Microsoft Office | 32 |

**Job Titles**

| Job Title | Active Job Ads |
|---|---|
| RESEARCH SCIENTIST III (EPIDEMIOLOGY/BIOSTATISTICS) | 15 |
| Development Scientist I | 12 |
| SRA 2 NEX (Staff Research Associate) | 10 |
| Staff Research Associate 2- SOM: Physiology & Membrane Biology- Davis Campus | 10 |
| Assistant Project Scientist | 8 |
| RESEARCH SCIENTIST I (EPIDEMIOLOGY/BIOSTATISTICS) | 8 |
| Research Scientist | 8 |
| SRA 1 (Staff Research Associate) | 8 |
| Staff Research Associate 2 - SOM: Physiology & Membrane Biology- Davis Campus | 7 |
| Development Scientist | 6 |

**Education Levels**

| Minimum Education Level | Active Job Ads |
|---|---|
| Bachelor's degree | 183 |
| Doctoral or professional degree | 112 |
| Master's degree | 75 |
| Associate's degree | 4 |
| Unspecified/other | 216 |

**Programs**

| Program Name | Active Job Ads |
|---|---|
| Biology | 86 |
| Biochemistry | 47 |
| Molecular Biology | 44 |
| Immunology | 41 |
| Science | 39 |
| Life Science | 34 |
| Cell Biology | 33 |
| Neuroscience | 32 |
| Chemistry | 29 |
| Medicine | 23 |

# Top Skill and Certification Gaps

**Top 10 Skill Gaps in Sacramento-Roseville-Folsom, CA MSA**

| Name | Candidates | Openings | Gap |
|---|---|---|---|
| Statistical Analysis System (SAS) | 2 | 7 | -5 |
| Structured Query Language (SQL) | 0 | 4 | -4 |
| Word Processing | 0 | 3 | -3 |
| Statistical Analysis Software | 3 | 5 | -2 |
| Personal Computers (PC) | 1 | 3 | -2 |
| Physiology | 3 | 5 | -2 |
| Keyboarding/Typing | 0 | 2 | -2 |
| Statistical Package for the Social Sciences (SPSS) | 1 | 2 | -2 |
| Calculators | 0 | 1 | -1 |
| Microbiology | 1 | 2 | -1 |

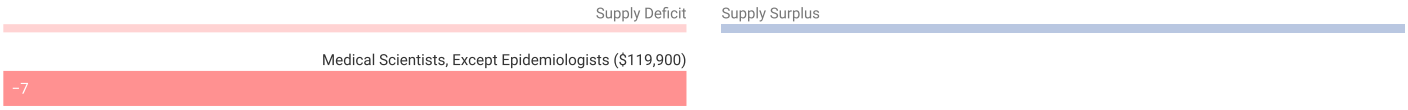
**Top 10 Certification Gaps in Sacramento-Roseville-Folsom, CA MSA**

| Name | Candidates | Openings | Gap |
|---|---|---|---|
| Medical Physics | 1 | 0 | 1 |

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.

Source: JobsEQ®, http://www.chmuraecon.com/jobseq

# Occupation Gaps

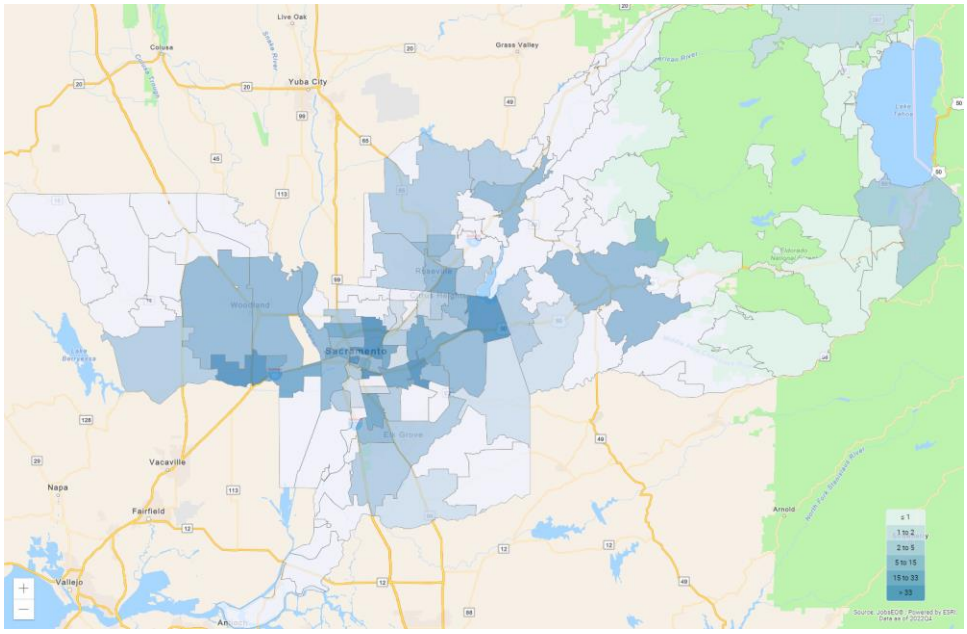



The above are the potential average annual gaps over 10 years. Many variables go into this analysis, but at its core it is based on a forecast comparing occupation demand growth to the local population growth and the projected educational attainment of those residents. When an area, for example, has 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.

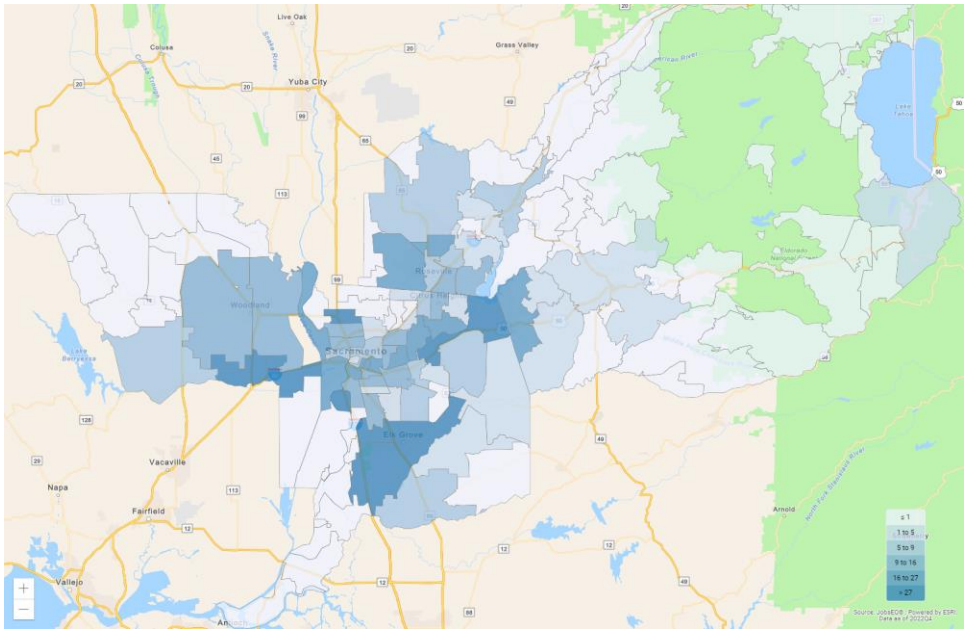
Source: JobsEQ®, http://www.chmuraecon.com/jobseq

# Geographic Distribution




**Top ZCTAs by Place of Work for Medical Scientists, Except Epidemiologists, 2022Q4**

| Region | Employment |
|---|---|
| ZCTA 95827 | 117 |
| ZCTA 95616 | 112 |
| ZCTA 95814 | 69 |
| ZCTA 95817 | 60 |
| ZCTA 95630 | 52 |
| ZCTA 95815 | 40 |
| ZCTA 95838 | 33 |
| ZCTA 95825 | 31 |
| ZCTA 95826 | 28 |
| ZCTA 95823 | 28 |

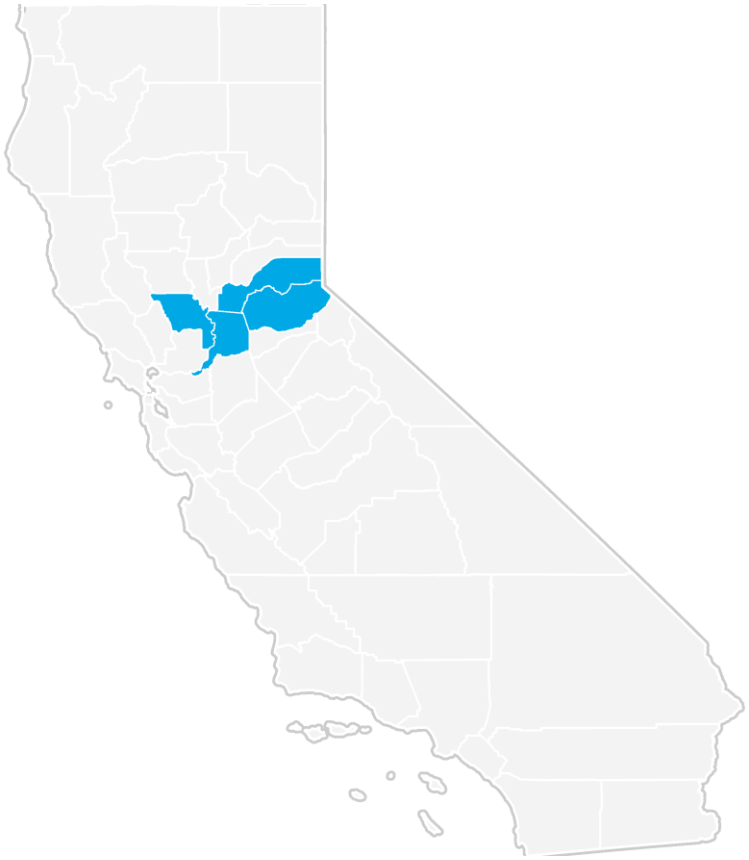



**Top ZCTAs by Place of Residence for Medical Scientists, Except Epidemiologists, 2022Q4**

| Region | Employment |
|---|---|
| ZCTA 95616 | 110 |
| ZCTA 95618 (Yolo County, CA portion) | 64 |
| ZCTA 95630 | 61 |
| ZCTA 95835 | 34 |
| ZCTA 95758 | 34 |
| ZCTA 95831 | 30 |
| ZCTA 95757 | 29 |
| ZCTA 95624 | 27 |
| ZCTA 95670 | 27 |
| ZCTA 95819 | 26 |

"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.

# Sacramento-Roseville-Folsom, CA MSA Regional Map



Source: JobsEQ®, http://www.chmuraecon.com/jobseq

# Data Notes

- Occupation employment by default indicates employment by place of work. Occupation employment is as of 2022Q4 and is based on industry employment and local staffing patterns calculated by Chmura and utilizing BLS OEWS data. Employment forecasts are modeled by Chmura and are consistent with BLS national-level 10-year forecasts. Wages by occupation are as of 2022Q4, utilizing BLS OEWS data, imputed and brought forward by Chmura. Entry-level and experienced wages are derived from these source data, computed by Chmura.
- Industry employment is as of 2022Q4 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 2022Q4 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 2020-2021 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 40,000 websites. Data reflect ads active during the last twelve month period ending 07/05/2023 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 August 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 dyanamics, including educational attainment and projected growth.
- Occupation employment by place of residence is as of 2022Q4 and modeled by Chmura based upon occuaption employment by place of work and commuting patterns. Commuting patterns are derived from source data from the Census Bureau, occupation-specific commuting tendancies, and updated to reflect more recent population and employment estimates.
- Figures may not sum due to rounding.

# Region Definition

**Sacramento-Roseville-Folsom, CA MSA is defined as the following counties:**

| | |
|---|---|
| El Dorado County, California | Sacramento County, California |
| Placer County, California | Yolo County, California |

# 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.