

### ECONOMIC DRIVERS



### EMPLOYMENT GROWTH RANK

2023-2025  
**108**  
2nd quintile

2023-2028  
**157**  
2nd quintile

Best=1, Worst=410

### RELATIVE COSTS

LIVING  
**178%**

BUSINESS  
**163%**

U.S.=100

### VITALITY

RELATIVE  
**-0.10**  
Rank: 217

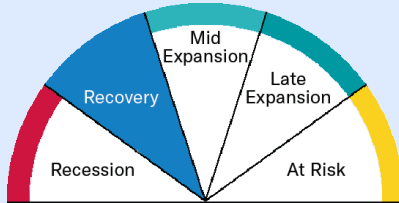
Best=1, Worst=403

### QUALITY

OF LIFE  
**6**

Best=1, Worst=378

### BUSINESS CYCLE STATUS



### ANALYSIS

**Recent Performance.** Marin County is stuck in neutral. Benchmark data revisions indicate that payroll employment merely moved sideways in 2024, in contrast to the above-average growth previously estimated. Healthcare and local government are barely offsetting steady losses in professional/business services and finance. The unemployment rate has paused its ascent after rising for much of 2023, but the labor force and household employment are contracting. Meanwhile, house price appreciation is fizzling out.

**Tech et al.** Office-using industries will continue to underwhelm this year. Professional/business services payrolls, rather than turning a corner in late 2023 as previously estimated, remain in free fall. Finance also continues to shed positions. Information has largely avoided the broader tech correction but has not advanced meaningfully in two years. While the Federal Reserve began cutting interest rates last year, further rate cuts are not anticipated until the final months of 2025. The Fed has adopted a wait-and-see approach as it evaluates the inflationary implications of President Trump's new trade and immigration policies. Higher-for-longer rates would further stifle the investment flowing to tech and erode investor sentiment and dealmaking in finance.

All is not gloomy, however. The Bay Area remains the unrefuted leader in attracting venture capital funding, both in deals and dollars, accounting for nearly half of all VC dollars in 2024. Marin's proximity to San Francisco and Silicon Valley is an advantage, particularly as the county possesses many of the same benefits but has lower business costs. For example, the share of the population with at least a bachelor's degree is nearly twice the national figure.

**Healthcare.** Healthcare job gains will slow from the heady pace of the last few

years. Marin's share of healthcare employment is above the national average, with providers such as Kaiser Permanente, Marin General and Sutter Health among its top employers. Outpatient centers and family services provide a reliable source of high- and mid-wage jobs. Payroll growth is decelerating from its post-pandemic pace, but this is to be expected, as that momentum was not sustainable. A shrinking population will dampen both demand for health services and the labor supply, but Marin's outsize senior citizen population will help to sustain a baseline level of demand. In the shorter term, California's budget deficit and the threat of losing federal Medicaid funding create some downside risk. Less funding for Medi-Cal would soften demand for outpatient services, which often provide a buffer for underinsured patients.

**Demographics.** Recent population gains will prove short-lived. The immigration surge pushed population growth into positive territory in 2024 for the first time since 2018. However, highly restrictive immigration policy will remove that support. Equifax data indicate that the outflow of domestic residents hastened in the second half of 2024. With both domestic migration and natural population growth in the red, Marin's population will resume its contraction in the second half of the decade. This will undermine labor force growth and demand for consumer services. Above-average income gains will keep a floor under consumer demand, however.

**Marin County will slow in the year ahead. Tech will struggle until monetary policy eases and healthcare will provide less of a boost than in recent years. Robust incomes will keep the county a step ahead of California even as the population contracts.**

Katie Nied  
March 2025

### STRENGTHS & WEAKNESSES

#### STRENGTHS

- » Proximity to larger economies.
- » High educational attainment.
- » Burgeoning biotech industry.

#### WEAKNESSES

- » High living costs.
- » Persistent out-migration.
- » Sensitivity to business cycle fluctuations, specifically the capital-raising climate.

### FORECAST RISKS

SHORT TERM



LONG TERM



RISK EXPOSURE  
2025-2030 **124** 2nd quintile *Most=1, Least=403*

#### UPSIDE

- » Above-average incomes encourage consumer spending.
- » Cost advantages over San Francisco attract businesses that wish to stay in the Bay Area.

#### DOWNSIDE

- » Higher-for-longer interest rates dampen tech and finance.
- » Pickup in out-migration dings labor force, making hiring a challenge.

### MOODY'S RATING

# Aaa

COUNTY  
AS OF NOV 03, 2022

2018	2019	2020	2021	2022	2023	INDICATORS	2024	2025	2026	2027	2028	2029
18.9	19.5	19.1	19.7	19.9	20.8	Gross metro product (C17\$ bil)	21.6	22.0	22.4	22.9	23.4	23.9
4.5	3.2	-2.0	3.3	1.0	4.3	% change	4.0	1.8	1.7	2.4	2.2	2.2
116.1	116.3	104.5	106.2	110.1	112.3	Total employment (ths)	114.2	116.1	116.5	116.9	117.2	117.5
0.7	0.2	-10.2	1.6	3.7	2.0	% change	1.7	1.6	0.4	0.3	0.3	0.2
2.4	2.3	6.9	4.6	2.7	3.3	Unemployment rate (%)	3.8	3.1	2.6	2.3	2.2	2.3
7.8	6.4	5.7	12.2	1.5	6.2	Personal income growth (%)	6.6	5.7	5.6	5.7	5.3	5.3
116.5	121.2	119.4	127.5	131.5	139.6	Median household income (\$ ths)	142.2	147.6	153.7	160.3	166.5	172.4
263.7	263.1	261.4	259.3	256.8	255.9	Population (ths)	257.6	258.8	259.9	261.0	262.0	263.0
0.2	-0.2	-0.6	-0.8	-0.9	-0.3	% change	0.6	0.5	0.4	0.4	0.4	0.4
0.4	-0.7	-1.6	-2.1	-2.7	-1.0	Net migration (ths)	1.4	1.0	0.9	1.0	0.9	0.9
108	179	127	149	285	185	Single-family permits (#)	144	215	222	203	182	165
56	61	28	116	17	119	Multifamily permits (#)	6	137	181	191	195	193
5.2	0.0	-0.7	7.2	13.9	0.7	FHFA house price index (% change)	1.9	3.7	3.4	4.1	4.7	4.8

**ECONOMIC HEALTH CHECK**

3-MO MA	Aug 24	Sep 24	Oct 24	Nov 24	Dec 24	Jan 25
Employment, change, ths	0.1	0.0	-0.2	0.0	0.1	0.1
Unemployment rate, %	3.7	3.7	3.8	3.8	3.8	3.8
Labor force participation rate, %	63.4	63.3	63.1	63.0	63.0	ND
Average weekly hours, #	32.4	33.0	33.6	33.9	33.7	33.4
Industrial production, 2012=100	104.1	104.1	104.3	104.7	105.3	ND
Residential permits, single-family, #	143	188	218	194	154	124
Residential permits, multifamily, #	0	0	0	0	17	17

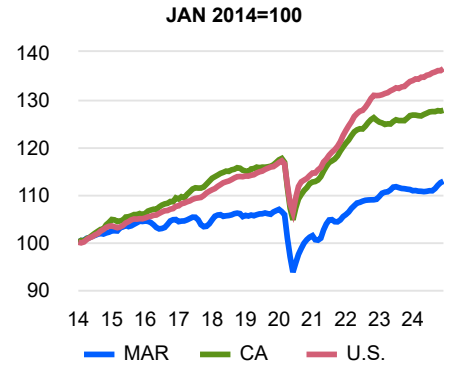
  

Dec/Dec	Dec 19	Dec 20	Dec 21	Dec 22	Dec 23	Dec 24
Employment, change, ths	1.0	-12.9	4.6	2.4	2.0	1.9

Stronger than prior 3-mo MA
Unchanged from prior 3-mo MA
Weaker than prior 3-mo MA

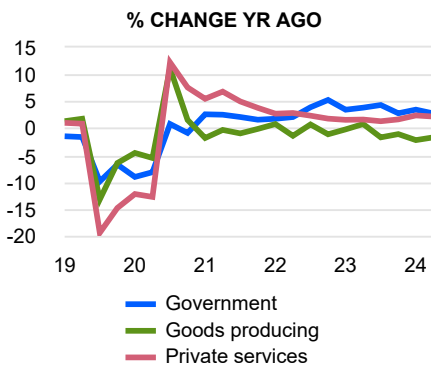
Sources: BLS, Census Bureau, Moody's Analytics

**BUSINESS CYCLE INDEX**



Source: Moody's Analytics

**INDUSTRY EMPLOYMENT**



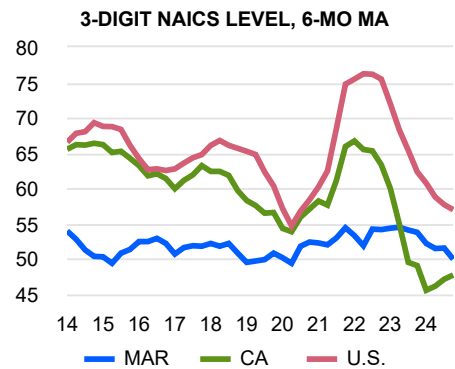
Sources: BLS, Moody's Analytics

**CURRENT EMPLOYMENT TRENDS**

	Dec 23	Jun 24	Dec 24
Total	1.6	1.4	2.0
Mining	NC	NC	NC
Construction	-1.8	-2.4	-2.6
Manufacturing	2.7	-0.5	-1.5
Trade	-1.7	2.1	5.4
Trans/Utilities	-2.0	-4.5	9.3
Information	0.3	-2.1	-6.9
Financial Activities	1.6	-1.7	-5.0
Prof & Business Svcs.	-2.8	0.1	3.4
Edu & Health Svcs.	5.6	3.8	4.7
Leisure & Hospitality	3.4	-0.9	-1.3
Other Services	7.1	5.0	1.2
Government	3.4	4.3	3.5

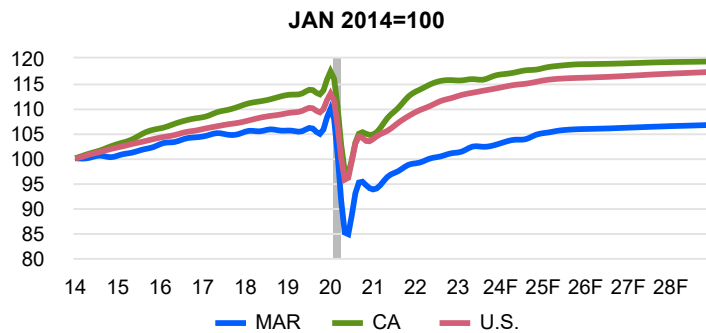
Sources: BLS, Moody's Analytics

**DIFFUSION INDEX**



Sources: BLS, Moody's Analytics

**RELATIVE EMPLOYMENT PERFORMANCE**



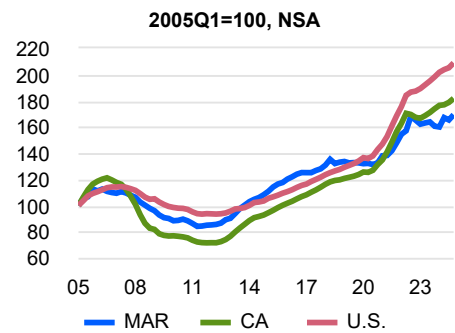
Sources: BLS, Moody's Analytics

**RELATIVE EMPLOYMENT FORECAST**



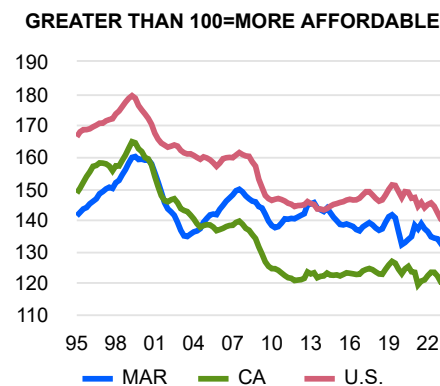
Sources: BLS, Moody's Analytics

**HOUSE PRICE**



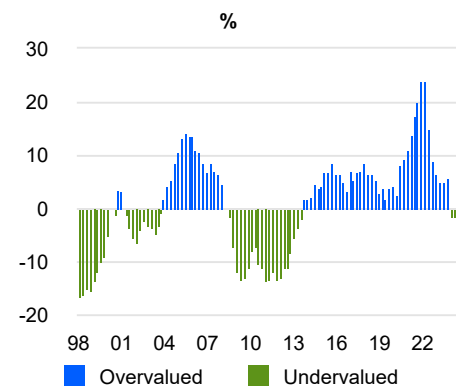
Sources: FHFA, Moody's Analytics

**RENTAL AFFORDABILITY**



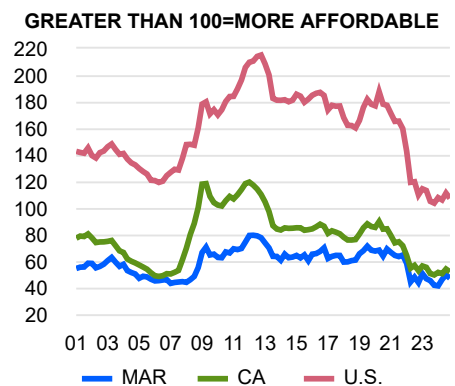
Sources: Census Bureau, BLS, Moody's Analytics

**HOUSE PRICE TRENDS**



Sources: Moody's Analytics

**HOUSING AFFORDABILITY**



Sources: NAR, Moody's Analytics

**TOP EMPLOYERS**

Kaiser Permanente	1,250-4,999
Marinhealth Medical Center	1,000-4,999
BioMarin Pharmaceutical	950
Bay Equity	500-999
College of Marin	500-999
California Alpine Club	500-999
Glassdoor Inc.	500-999
Restoration Hardware	500-999
Dominican University of California	302
Ghilotti Bros. Inc.	298
Embassy Suites	250-499
Hospice by the Bay Marin	250-499
Bay Club	250-499
Whole Foods Market	250-499
Macy's	250-499
Managed Health Networks	250-499
Marin Independent Journal	250-499
YMCA	250-499
Sutter Health	250-499
Brayton Purcell	250-499

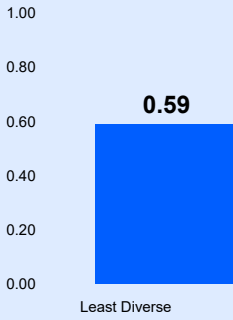
Sources: City of San Rafael ACFR, 2024, Employment Development Department CA, 2024

**PUBLIC**

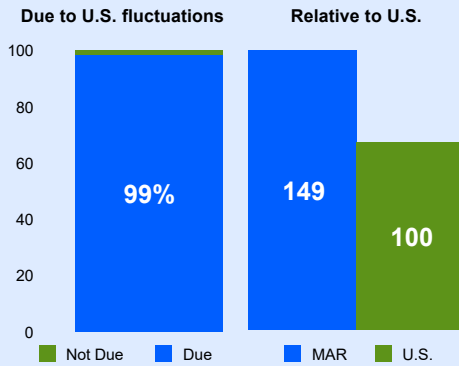
Federal	601
State	1,802
Local	12,945
2023	

**INDUSTRIAL DIVERSITY**

Most Diverse (U.S.)

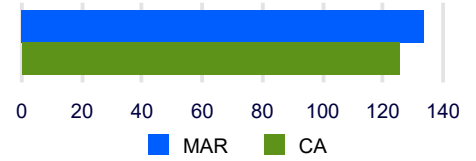


**EMPLOYMENT VOLATILITY**



**ENTREPRENEURSHIP**

BROAD-BASED START-UP RATE; U.S.=100



Sources: Census Bureau, Moody's Analytics, 2022

NOT AVAILABLE

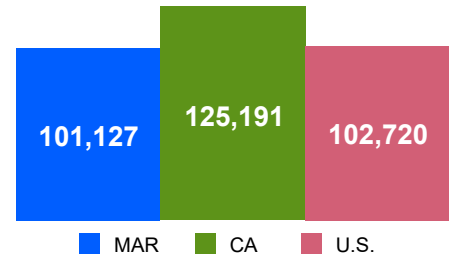
**COMPARATIVE EMPLOYMENT AND INCOME**

Sector	% OF TOTAL EMPLOYMENT			AVERAGE ANNUAL EARNINGS		
	MAR	CA	U.S.	MAR	CA	U.S.
Mining	0.0	0.1	0.4	ND	\$88,575	\$181,917
Construction	6.6	5.1	5.2	\$98,364	\$89,170	\$77,604
Manufacturing	3.7	7.0	8.1	\$180,042	\$137,245	\$100,233
Durable	20.7	63.6	62.1	ND	\$161,854	\$102,888
Nondurable	79.3	36.4	37.9	ND	\$94,144	\$95,935
Transportation/Utilities	1.2	4.7	4.6	ND	\$67,471	\$64,074
Wholesale Trade	2.0	3.7	3.9	ND	\$107,508	\$107,061
Retail Trade	12.3	8.8	9.8	\$66,174	\$49,938	\$43,636
Information	2.4	3.0	1.9	\$202,542	\$226,963	\$147,064
Financial Activities	4.5	4.5	5.8	\$72,784	\$69,359	\$60,198
Prof. and Bus. Services	15.8	15.5	14.3	\$106,504	\$106,280	\$88,706
Educ. and Health Services	19.7	18.3	16.8	\$81,877	\$69,429	\$67,977
Leisure and Hosp. Services	12.7	11.2	10.6	\$78,755	\$48,318	\$37,546
Other Services	5.1	3.3	3.8	\$61,872	\$45,388	\$44,257
Government	13.9	14.8	14.8	\$121,844	\$115,368	\$92,363

Sources: Percent of total employment — BLS, Moody's Analytics, 2024, Average annual earnings — BEA, Moody's Analytics, 2022

**PRODUCTIVITY**

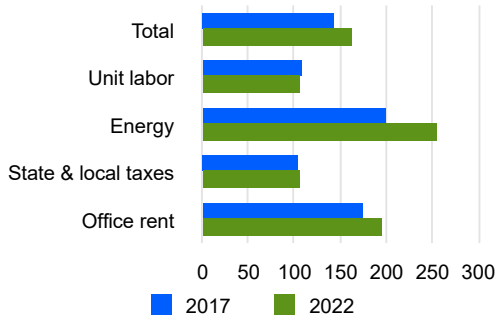
REAL OUTPUT PER WORKER, \$



Sources: BEA, Moody's Analytics, 2022

**BUSINESS COSTS**

U.S.=100



Source: Moody's Analytics

**EMPLOYMENT**

HIGH-TECH

	Ths	% of total
MAR	7.7	6.7
U.S.	8,351.2	5.3

HOUSING-RELATED

	Ths	% of total
MAR	14.1	12.3
U.S.	15,584.6	9.9

Source: Moody's Analytics, 2024

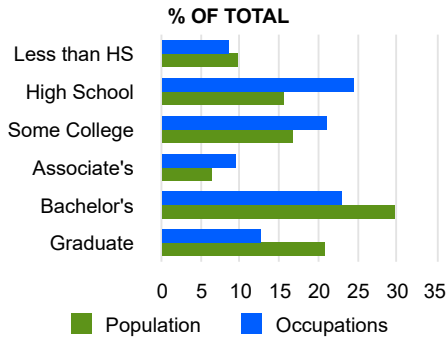
**LEADING INDUSTRIES BY WAGE TIER**

NAICS	Industry	Location Quotient	Employees (ths)
5511	Management of companies & enterprises	1.5	2.7
6214	Outpatient care centers	3.7	2.6
2361	Residential building construction	4.2	2.6
5415	Computer systems design & related svcs.	1.2	2.0
GVL	Local Government	1.2	12.1
6241	Individual and family services	1.8	3.4
GVS	State Government	0.5	1.9
2383	Building finishing contractors	2.7	1.6
7225	Restaurants and other eating places	1.3	9.4
4451	Grocery stores	1.9	3.7
5617	Services to buildings and dwellings	1.9	3.0
7139	Other amusement and recreation industries	2.0	1.8

High Mid Low

Source: Moody's Analytics, 2023

**SKILLS MISMATCH**



Sources: Census Bureau, ACS, Moody's Analytics, 2018

**PER CAPITA INCOME**



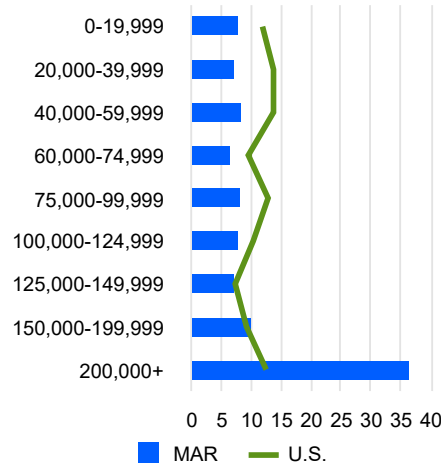
Sources: BEA, Moody's Analytics

**ECONOMIC DISENFRANCHISEMENT**

Index	2021	Rank*
Gini coefficient	0.53	8
Palma ratio	4.5	5
Poverty rate	7.5%	390

\*Most unequal=1; Most equal=403

**HOUSEHOLDS BY INCOME, %**



Sources: Census Bureau, ACS, Moody's Analytics, 2023

**MIGRATION FLOWS**

**INTO MARIN COUNTY CA**

Origin	Number of Migrants
San Francisco CA	3,224
Oakland CA	1,252
Santa Rosa CA	862
Los Angeles CA	453
San Jose CA	328
Sacramento CA	258
Vallejo CA	214
New York NY	158
San Diego CA	157
Seattle WA	122
<b>Total in-migration</b>	<b>9,990</b>

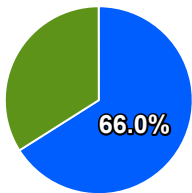
**FROM MARIN COUNTY CA**

Santa Rosa CA	1,953
San Francisco CA	1,454
Oakland CA	1,133
Los Angeles CA	527
Sacramento CA	483
Vallejo CA	362
San Diego CA	288
San Jose CA	239
New York NY	228
Seattle WA	208
<b>Total out-migration</b>	<b>12,358</b>

**Net migration -2,368**

**COMMUTER FLOWS**

**RESIDENTS WHO WORK IN MAR**



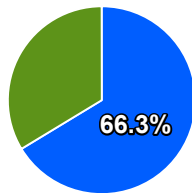
**Top Outside Sources of Jobs**

Marin County CA	Share
San Francisco CA	22.6
Oakland CA	5.1
Santa Rosa CA	3.6
San Jose CA	0.7
Vallejo CA	0.5

Sources: Census Bureau, Moody's Analytics, avg 2016-2020

**COMMUTER FLOWS**

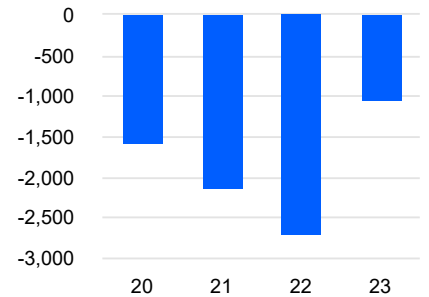
**WORKERS WHO LIVE IN MAR**



**Top Outside Sources of Workers**

Marin County CA	Share
Santa Rosa CA	11.6
Oakland CA	9.8
San Francisco CA	4.9
Vallejo CA	4.4
Napa CA	0.9

**NET MIGRATION, #, MAR**

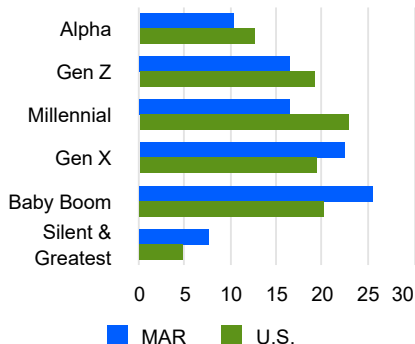


	2020	2021	2022	2023
Domestic	-2,195	-2,510	-4,344	-2,997
Foreign	625	388	1,651	1,963
<b>Total</b>	<b>-1,570</b>	<b>-2,122</b>	<b>-2,693</b>	<b>-1,033</b>

Sources: IRS (top), 2022, Census Bureau, Moody's Analytics

**GENERATIONAL BREAKDOWN**

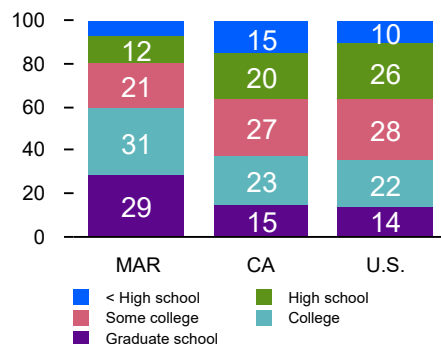
**POPULATION BY GENERATION, %**



Sources: Census Bureau, Moody's Analytics, 2023

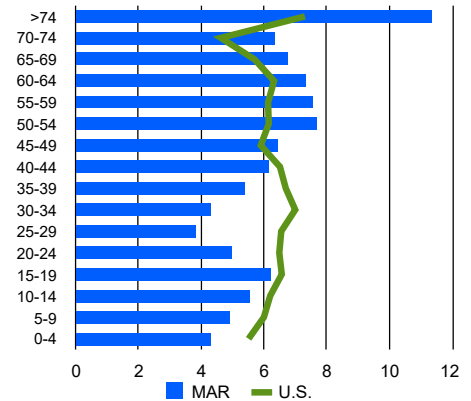
**EDUCATIONAL ATTAINMENT**

**% OF ADULTS 25 AND OLDER**



Sources: Census Bureau, ACS, Moody's Analytics, 2023

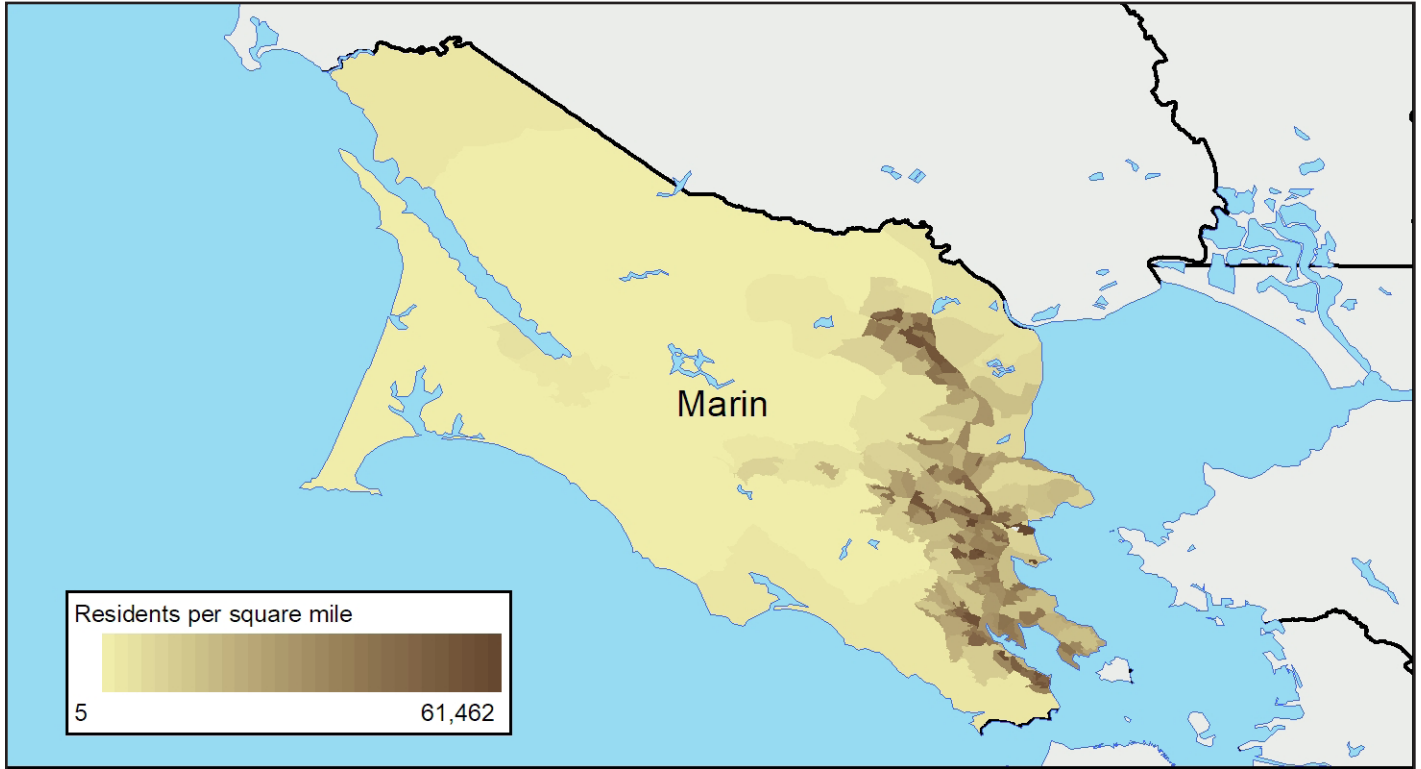
**POPULATION BY AGE, %**



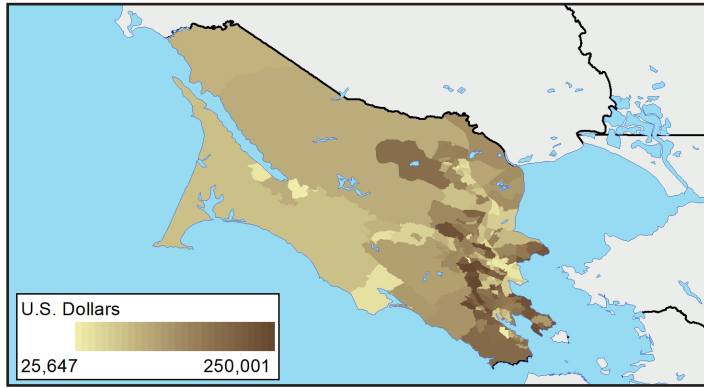
Sources: Census Bureau, Moody's Analytics, 2023

**GEOGRAPHIC PROFILE**

**POPULATION DENSITY**



**MEDIAN HOUSEHOLD INCOME**



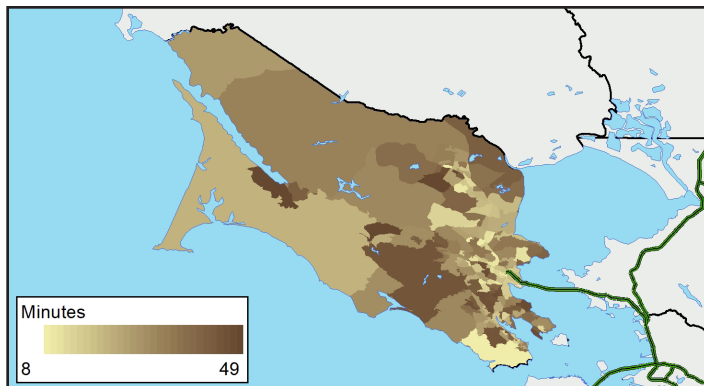
**POPULATION & HOUSING CHARACTERISTICS**

	Units	Value	Rank*
Total area	sq mi	828.2	328
Total water area	sq mi	ND	ND
Total land area	sq mi	520.1	364
Land area - developable	sq mi	ND	ND
Land area - undevelopable	sq mi	ND	ND
Population density	pop. to developable land	492.9	75
Total population	ths	256.4	211
U.S. citizen at birth	% of population	78.4	354
Naturalized U.S. citizen	% of population	10.1	38
Not a U.S. citizen	% of population	9.7	47
Median age		48.2	16
Total housing units	ths	112.4	204
Owner occupied	% of total	59.4	215
Renter occupied	% of total	31.1	164
Vacant	% of total	9.6	156
1-unit; detached	% of total	63.8	252
1-unit; attached	% of total	7.9	75
Multifamily	% of total	27.0	97
Median year built		1967	

\* Areas & pop. density, out of 410 metro areas/divisions, including metros in Puerto Rico; all others, out of 403 metros.

Sources: Census Bureau, Moody's Analytics, 2023 except land area 2020

**MEDIAN COMMUTE TIME**



Sources: ACS, Moody's Analytics

## About Moody's Analytics

In an increasingly interconnected and complex operating environment, organizations face challenges decoding the intricacies of the global economy. Moody's Analytics Economics team delivers timely and in-depth data, forecasts and analysis of the global economy's latest developments and trends—empowering organizations and policymakers to identify and manage risks, seize new growth opportunities, respond to geopolitical threats, and thrive in an ever-evolving landscape.

The Economics team has more than 35 years of dedicated experience in economic forecasting and research. Leveraging our team's global coverage and local expertise, our economists provide unrivalled insight on pivotal economic topics, including labor markets, housing and consumer spending, among others, across the Americas, Europe, the Middle East, and APAC. We also provide real-time monitoring of economic indicators, scenario analysis, and thought leadership on critical themes such as monetary and fiscal policy and sovereign risk—all of which support decision makers and policymakers in strategic planning, product and sales forecasting, stress testing, credit risk management, and investment decisions.

By combining economic modeling, expansive data resources, and innovative technology solutions, we equip business leaders with critical insights to navigate the complexities of an ever-changing economic landscape. Recognized for our industry-leading solutions and commitment to quality, client service, and integrity, more than 1,000 organizations worldwide—including multinational corporations, governments, financial institutions, real estate firms, and professional investors—trust us to help them turn today's risks into tomorrow's opportunities.

Learn how Moody's Analytics can help drive your success at [www.economy.com](http://www.economy.com)

### **DISCLAIMER:**

Please attribute information in this document to Moody's Analytics, which is a division within Moody's that is separate from Moody's Ratings. Accordingly, the viewpoints expressed herein do not reflect those of Moody's Ratings.

**CREDIT RATINGS ISSUED BY MOODY'S CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED OR OTHERWISE MADE AVAILABLE BY MOODY'S (COLLECTIVELY, "MATERIALS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S MATERIALS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S MATERIALS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES OR OTHERWISE MAKES AVAILABLE ITS MATERIALS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.**

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND MATERIALS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR MATERIALS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT. FOR CLARITY, NO INFORMATION CONTAINED HEREIN MAY BE USED TO DEVELOP, IMPROVE, TRAIN OR RETRAIN ANY SOFTWARE PROGRAM OR DATABASE, INCLUDING, BUT NOT LIMITED TO, FOR ANY ARTIFICIAL INTELLIGENCE, MACHINE LEARNING OR NATURAL LANGUAGE PROCESSING SOFTWARE, ALGORITHM, METHODOLOGY AND/OR MODEL.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the credit rating process or in preparing its Materials.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING, ASSESSMENT, OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it. MCO and all MCO entities that issue ratings under the "Moody's Ratings" brand name ("Moody's Ratings"), also maintain policies and procedures to address the independence of Moody's Ratings' credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service, Inc. and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at [ir.moody.com](http://ir.moody.com) under the heading "Investor Relations — Corporate Governance — Charter and Governance Documents - Director and Shareholder Affiliation Policy."

Moody's SF Japan K.K., Moody's Local AR Agente de Calificación de Riesgo S.A., Moody's Local BR Agência de Classificação de Risco LTDA, Moody's Local MX S.A. de C.V., I.C.V., Moody's Local PE Clasificadora de Riesgo S.A., and Moody's Local PA Clasificadora de Riesgo S.A. (collectively, the "Moody's Non-NRSRO CRAs") are all indirectly wholly-owned credit rating agency subsidiaries of MCO. None of the Moody's Non-NRSRO CRAs is a Nationally Recognized Statistical Rating Organization.

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors.

Additional terms for India only: Moody's credit ratings, Assessments, other opinions and Materials are not intended to be and shall not be relied upon or used by any users located in India in relation to securities listed or proposed to be listed on Indian stock exchanges.

Additional terms with respect to Second Party Opinions and Net Zero Assessments (as defined in Moody's Ratings Rating Symbols and Definitions): Please note that neither a Second Party Opinion ("SPO") nor a Net Zero Assessment ("NZA") is a "credit rating". The issuance of SPOs and NZAs is not a regulated activity in many jurisdictions, including Singapore. JAPAN: In Japan, development and provision of SPOs and NZAs fall under the category of "Ancillary Businesses", not "Credit Rating Business", and are not subject to the regulations applicable to "Credit Rating Business" under the Financial Instruments and Exchange Act of Japan and its relevant regulation.

PRC: Any SPO: (1) does not constitute a PRC Green Bond Assessment as defined under any relevant PRC laws or regulations; (2) cannot be included in any registration statement, offering circular, prospectus or any other documents submitted to the PRC regulatory authorities or otherwise used to satisfy any PRC regulatory disclosure requirement; and (3) cannot be used within the PRC for any regulatory purpose or for any other purpose which is not permitted under relevant PRC laws or regulations. For the purposes of this disclaimer, "PRC" refers to the mainland of the People's Republic of China, excluding Hong Kong, Macau and Taiwan.