

Greater Sacramento

Life Sciences Report 2023

With an Exclusive on
Agri-Food Tech

IN PARTNERSHIP WITH



GREATER SACRAMENTO
ECONOMIC COUNCIL

Colliers

CBRE

Table of Contents

In collaboration with **Greater Sacramento Economic Council, Colliers, and CBRE**, this report examines the burgeoning life science space in the Greater Sacramento region.

The Agri-Food Tech Capital of California	04
Population & Diversity Trends	06
World Class Talent	08
University of California, Davis	10
Agri-Food Tech and Bio-Tech Innovation	12
Recent Expansions & Relocations	14
Real Estate Cost & Comparison	16
Vibrant Quality of Life	18
Innovation Assets	20
Expert Spotlights	22
Report & Executive Contacts	27

The Agri-Food Tech Capital of California

Greater Sacramento is seeing accelerated momentum, including in its life science industry. In 2023, Business Facilities ranked Sacramento #2 in the country for life science growth. **Greater Sacramento** is the capital region of California – the world's fifth largest economy. The region is home to 2.6 million people and includes six counties spanning 22,000+ square miles. It is located at the heart of California's Central Valley and shares an economy and workforce with the San Francisco Bay Area. **Greater Sacramento** is the destination of California's food and agriculture production, distribution, and innovation. The region is home to leaders across the supply chain and UC Davis – the #1 university in the U.S. for both agriculture and forestry and veterinary medicine. Startups and global leaders in the agri-food tech and biotech industries come to the region for its talent, real estate, and quality of life.

90 minute drive to San Francisco

6 hour drive to Los Angeles

8 hour drive to San Diego



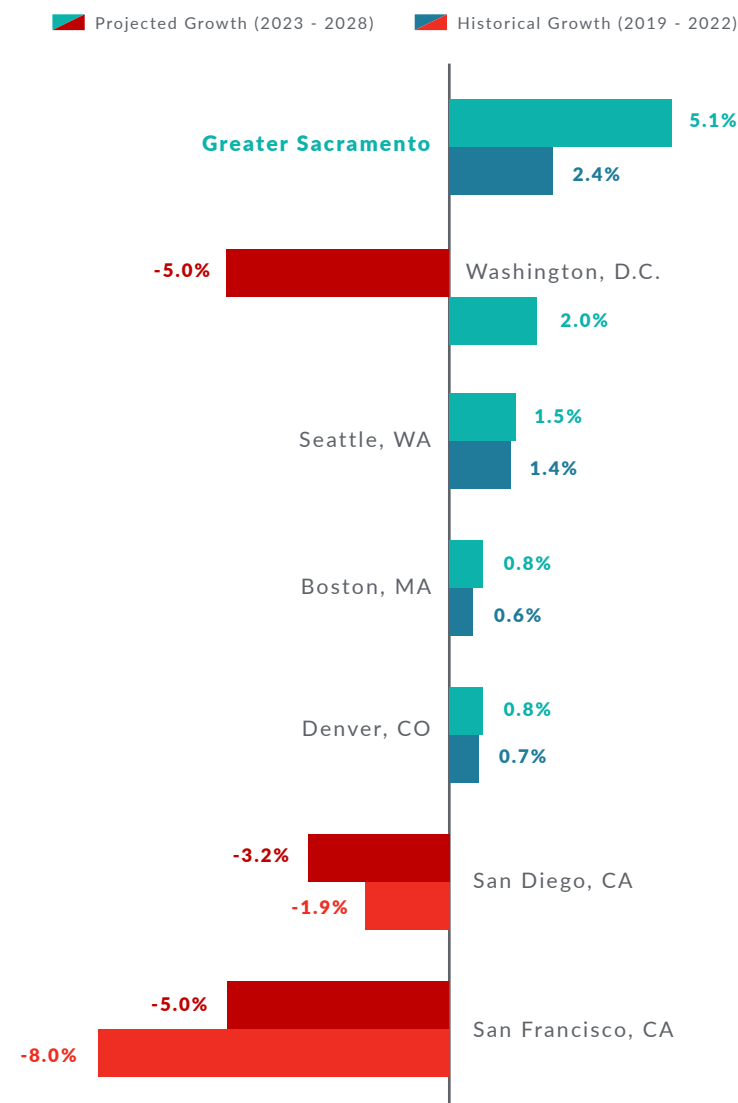
Population & Diversity Trends

Greater Sacramento is experiencing incredible momentum. The region grew by over 2% between 2019 and 2022 and is projected to grow by 5% over the next five years. With a higher current and projected population growth rate than Washington, D.C.; Seattle; Denver; Boston; San Diego; and San Francisco, Greater Sacramento is and will continue to be a top growth market among national science hubs.

A Top Market in California for Growth

Greater Sacramento has been experiencing steady growth in both its population and economy for several years. The region has been a top market to migrate into, both for employers and employees.

While many major markets in California lost population between 2019-2022, **Greater Sacramento's** population grew by 2.4%. This growth is continuing to grow and is projected to significantly outpace other science markets in the next five years.

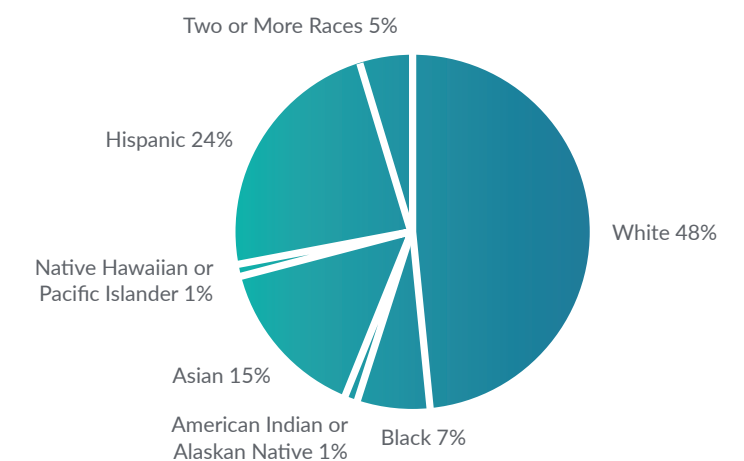


Source: U.S. Census Bureau (estimated population per county as of July 2022)

Top Market for Diversity

Greater Sacramento is a top market for diversity. Over 52% of the population is non-white, making it more diverse than Raleigh, Philadelphia, Seattle, Denver, and Boston.

2023 Population by Race & Ethnicity



Source: Lightcast, 2023

National Rankings

- #1** city for females in tech
- #2** most diverse city in the U.S.
- #2** city for diversity in tech
- #3** city for diversity in STEM

Source: U.S. Census 2020; BeyondHQ, 2022; CompTIA

World-Class Talent

Greater Sacramento is an increasingly attractive market for companies seeking highly educated talent. The region is home to a strong higher education system and is just 90 miles away from the San Francisco Bay Area, which boasts some of the best universities and talent in the world.

An Integrated Network of Universities and Community Colleges

UC DAVIS
UNIVERSITY OF CALIFORNIA

SACRAMENTO STATE

LOS RIOS
COMMUNITY COLLEGE DISTRICT

UNIVERSITY OF CALIFORNIA
MERCED

CALIFORNIA
NORTHSTATE
UNIVERSITY

JESSUP
UNIVERSITY

Stanford
University

Berkeley
UNIVERSITY OF CALIFORNIA

CHICO STATE

Santa Clara
University

SIERRA COLLEGE

UCSF

SJSU

SAN FRANCISCO STATE UNIVERSITY

UNIVERSITY OF THE
PACIFIC

718,000+

students enrolled in 2- & 4-year universities within 100 miles — more than Raleigh, Denver, and Seattle.

50%

of the population in Greater Sacramento with Bachelor's degrees or higher have STEM degrees.

3,000+

food and agriculture graduates annually from UC Davis and Sacramento State.

15%

increased completion rate since 2018.

University of California, Davis

The University of California, Davis is a globally recognized research institution with more than 40,000 students, 2,500 faculty and four academic colleges. Discoveries made here have changed the lives of people all over the world and fueled scientific innovation.

#1 in the nation for agriculture and forestry

#1 in the nation for veterinary medicine

#1 in the nation for campus sustainability

#3 in the nation for biological and agricultural engineering

#1 in the nation for greenest university

#10 public university in the nation

Photo provided by: UC Davis

Source: U.S. News & World Report, 2023

Top 20

university for external research funding (\$1.07 billion)

\$275M

NIH funding in 2022 (top 6% of universities)

1,500+

patents on record, including 305 from the College of Agriculture

403

records of invention (FY 2020 - FY 2022)

5,440 Acres

largest UC campus

Source: UC Davis, NIH

Top Science Research Institution

UC Davis is a top ranked institution in food science, agriculture, environmental science, and viticulture and enology. The College of Agriculture and Environmental Sciences has 8,525 undergraduate and graduate students and 381 faculty members. In addition, UC Davis includes the nationally ranked School of Medicine, College of Engineering, as well as the College of Biological Sciences, which is ranked #2 in the nation for its ecology and evolutionary biology.

Top Agri-Food Research Topics

College of Agriculture and Environmental Science

Industrial Best Practices

Water Energy

Bioenergy

Continuous Energy

Bioprocessing Fuels, Chemicals, and Materials

Food for Health and Well-Being

College of Biological Sciences

Evolution and Ecology

Microbiology and Molecular Genetics

Molecular and Cellular Biology

Neurobiology, Physiology and Behavior

Plant Biology

Agri-Food Research Accomplishments



Developed 15 wine, 15 table and 5 juice grape varieties



Built the first mechanical tomato harvester, halving harvesting costs and increasing tomato acreage and tonnage around the world



Developed 64 strawberry cultivars, which are grown in 83 countries



Discovered the Xa21 gene in rice that is key to disease resistance in plants



Built the world's first LEED platinum sustainable winery



Led research that made selective bee breeding possible

Source: UC Davis

Agri-Food and Bio-Tech Innovation

Greater Sacramento is where international leaders are revolutionizing agri-food and biotechnology. Nestled at the epicenter of California's agricultural heartland, the region is innovating across the supply chain, from sustainable farming to food processing and food science. The agri-food tech industry in Greater Sacramento is fueled by an ever-growing pipeline of plant and food scientists from UC Davis. The top crops produced in the region include wine grapes, walnuts, almonds, processed tomatoes, and rice.

#2 U.S. market for life science growth
Source: Business Facilities 2023 Metro Ranking Report

25.8K jobs in food and agriculture

2.08x the U.S. national average concentration of biological scientists

100 seed & seed-related companies

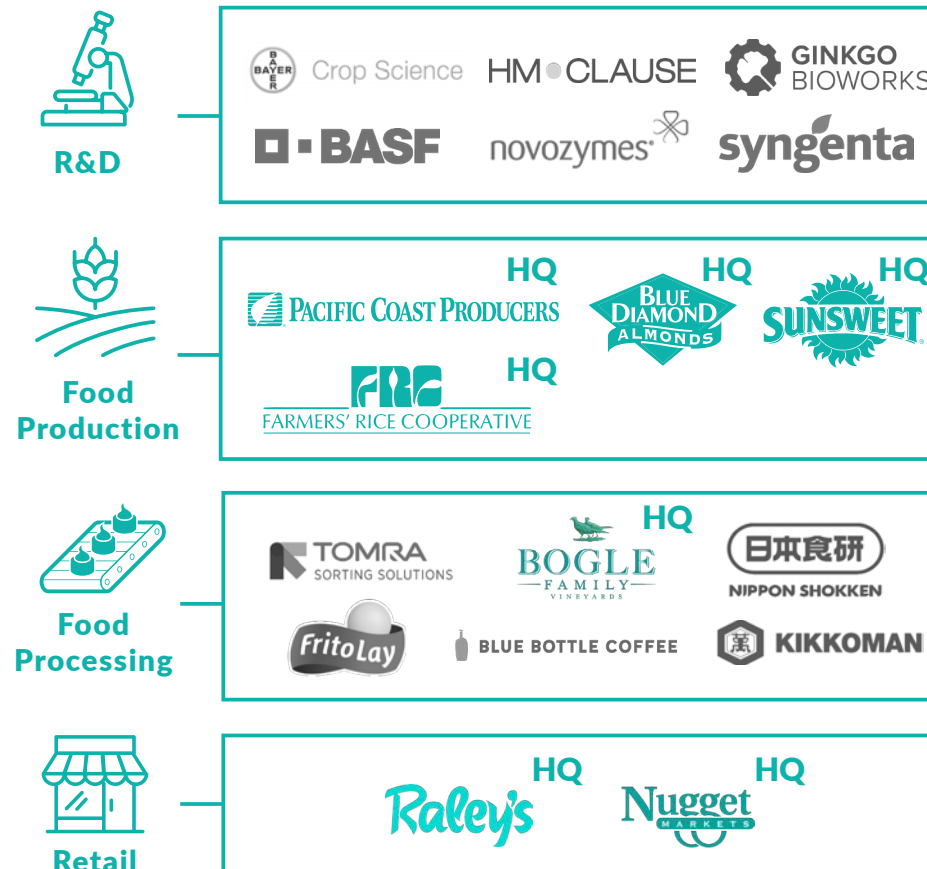
14.6K jobs in science

130 UC Davis startups formed since 2013

Source: Lightcast 2023

A Global Supply Chain **HQ** - Headquarters

Greater Sacramento has numerous companies innovating across the food and agriculture supply chain.



Companies That Have Relocated to the Region



The Singaporean company's 24,000-square-foot R&D facility in West Sacramento will house a world-class research hub showcasing the company's extensive array of innovations and technologies used to produce its cell-based mammalian milks.



This biotech company researches and develops products for the cosmetics, food, and materials industries from its kelp technology. This Bay Area company relocated to West Sacramento to build out its pilot R&D facility.



This Spanish biotech company uses cutting-edge DNA technologies to accelerate the long breeding process and provide genomic solutions to growers.

Agri-Food Tech Average Annual Wages

\$105,863

Microbiologists

\$103,979

Biochemists and Biophysicists

\$94,565

Chemical Engineers

\$90,520

Life Scientists, all other

\$88,026

Biological Scientists, all other

\$86,498

Food Scientists and Technologists

\$86,141

Chemists

\$85,948

Soil and Plant Scientists

\$55,763

Life Science Technicians

Source: Lightcast 2023



Recent Expansions & Relocations

Greater Sacramento's life science industry is seeing steady growth, with numerous agri-food tech and biotechnology companies moving or expanding in the region over the last three years. Their growth and investment into the region will create over 1,000 science related jobs and hundreds of millions of dollars in economic impact to region.

165K SF

life science leasing and sales activity since mid-year 2022

1K+

new jobs in agri-foodtech and biotech anticipated from these companies

Source: CBRE & Colliers Research

Innovative Companies Growing in the Region

Source: CBRE & Colliers Research

Ginkgo Bioworks

New-to-market acquisition of 165,000 SF former Bayer Crop Science manufacturing facility in West Sacramento.

Penumbra

Medical device company new-to-market signed a 160,000 SF lease in Roseville in 2018 and expanded by an additional 97,000 SF in 2022.

Orca Bio

95,000 SF new-to-market cGMP lease in Sacramento for its production of precision cell therapies.

Nivagen Pharmaceuticals

64,000 SF cGMP lease expansion in Sacramento to produce generic pharmaceutical drugs.

CPC Scientific

41,000 SF cGMP acquisition in Rocklin for its U.S.-based manufacturing site of synthetic peptides.

GeminiBio

32,000 SF lease expansion in West Sacramento to build out a state-of-the-art cGMP bioprocess liquid manufacturing facility .

ThermoGenesis

36,000 SF clean room and wet lab space with 6,000 SF of cGMP compliant ISO 7 Cleanrooms and additional wet lab bench space for lease by science startups.

Turtle Tree

24,000 SF new-to-market R&D lease in West Sacramento to scale up its pilot facility to manufacture cell-based milk.

JOINN Biologics

21,000 SF office and cGMP lab new-to-market acquisition in Sacramento.

BCD Bioscience

9,200 SF office lease in Sacramento — spinout from UC Davis.

Lab@AgStart

8,200 SF lab expansion totaling over 13,000 SF of agri-food tech wet lab space for startups to use.

MyFloraDNA

4,500 SF office/lab lease in Sacramento and 2,000 SF R&D lease in West Sacramento to expand their plant testing capacity — relocation from Lab@AgStart in Woodland.

Real Estate & Cost Comparison

Greater Sacramento's life science market is anchored by major agricultural firms, medical device manufacturers, and biotechnology companies. The industry's growth in the region is driven by both new company relocations and expansions of existing companies, all of which are drawn to the region's robust labor pool, affordable living and operational costs, and high quality of life.

2.3M SF

of inventory

\$2.50-\$3.50/SF NNN

Avg. 2nd / 3rd Gen Rent

5.5M SF

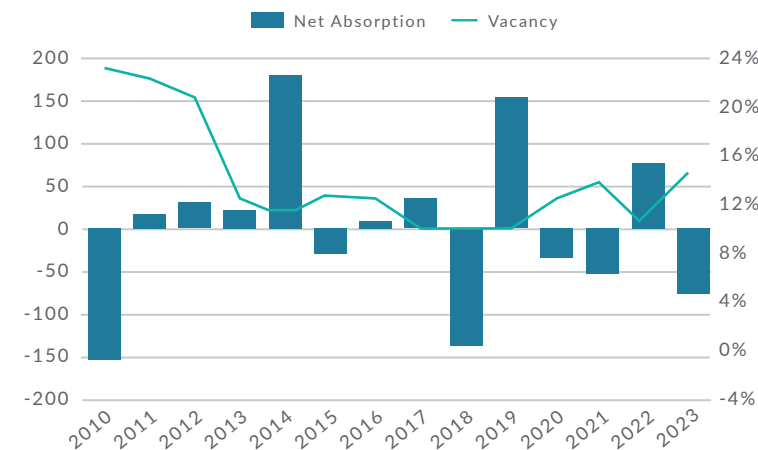
proposed development

907K SF

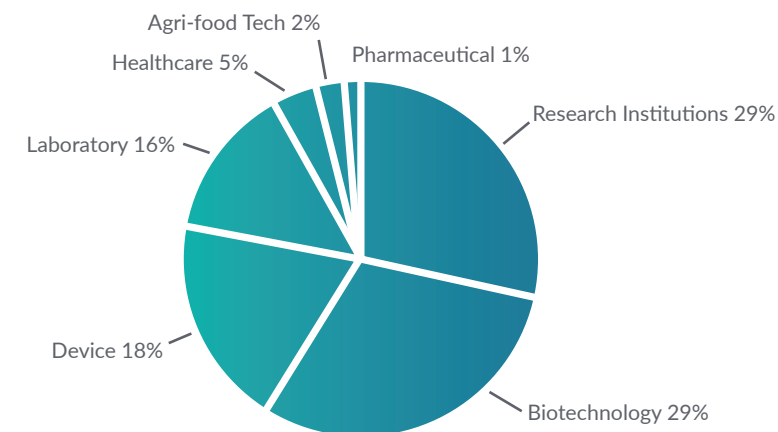
under construction

Source: CBRE & Colliers Research

Vacancy & Net Absorption

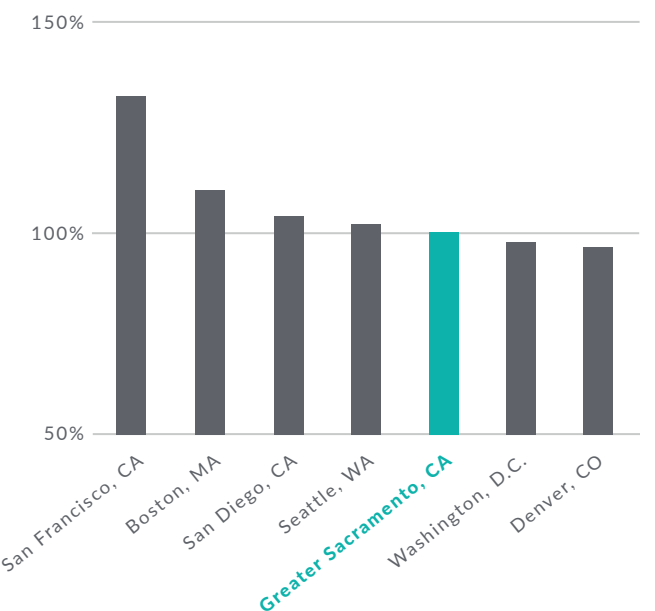


Occupancy by Life Science Industry



Cost Effectiveness for R&D Companies

The **Greater Sacramento** region's operational costs are significantly lower than those of other top-tier science markets. The chart below highlights the differences in annual operating costs among top markets for an R&D company that leases a 50,000-square-foot facility with 100 science jobs and \$50 million in equipment.



Greater Sacramento Life Science Users

 CALIFORNIA NORTHSTATE UNIVERSITY 823,000 SF	 UC DAVIS UNIVERSITY OF CALIFORNIA 537,822 SF	 Penumbra 254,023 SF	 AMPAC FINE CHEMICALS 235,000 SF	 GINKGO BIOWORKS 164,330 SF
 The Jackson Laboratory 118,000 SF	 orca bio 94,442 SF	 BECKMAN COULTER 87,000 SF	 eurofins 70,656 SF	 Agilent Technologies 65,608 SF
 ThermoGenesis Transforming Cell Therapy Manufacturing 63,496 SF	 Milenyi Biotec 60,000 SF	 GeminiBio 57,000 SF	 Marrone Bio Innovations 45,870 SF	 TurtleTree 25,000 SF

Sources: CBRE & Colliers Research, CoStar Analytics

Vibrant Quality of Life

Greater Sacramento offers not only an energetic environment in which businesses thrive but also one that fosters prosperity for its residents. Employees can choose to live in one of the region's many urban, suburban, and foothill communities while saving on housing and other living expenses. Excellent K-12 schools, a thriving urban core and miles of outdoor spaces make the region a dynamic home.



#1

city to live in CA



200+

wineries



40+

local breweries

Source: Forbes



15

Michelin recognized restaurants



Farm-to-Fork

Capital of America



4,700+

acres of parks



9+

rivers and lakes



180+

miles of bike trails



Kings

home to the NBA Kings



Lake Tahoe

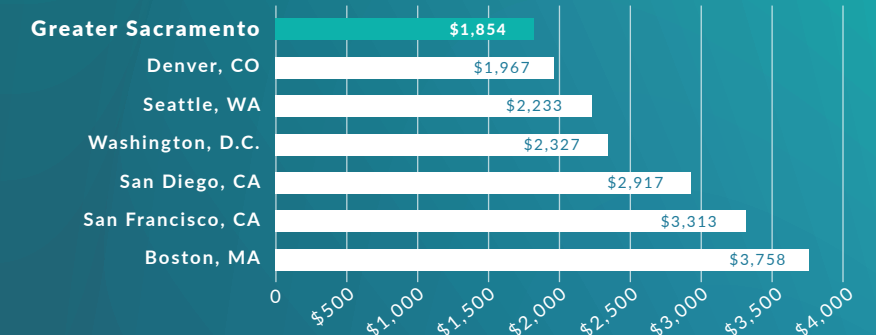
home to one of the most well-known destinations

Affordable Place to Live

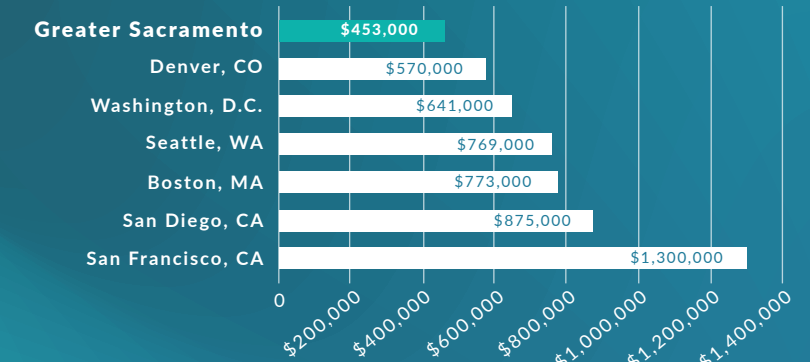
From trendy urban apartments to expansive foothill homes, Greater Sacramento offers not only a variety of lifestyle options, but also a more affordable cost of living, creating significant value for employers and employees alike. It is one of the most affordable markets in California and is competitive outside the state as well.

Median Rent

\$/Month



Median Home Price



Cost of Living Index



* Cost of living indexes have a baseline of 100, with figures above and below to show how much more or less expensive a market is than the national average.

Sources: Redfin, 2023; RentCafe, 2023; Sperling, 2023; U.S. Census 2022; Private New Build Housing Permits Data, 2023

Innovation Assets



- Existing
- Under Construction
- Entitled

Lab@AgStart

The Lab@AgStart is the only integrated wet lab and food lab in Northern California with a focus on agri-food tech. It features 13,000 square feet of shared wet lab, food lab and coworking space, including a commercial kitchen for food product development and prototyping.

Seed Central

Seed Central is a public-private partnership energizing the seed and agri-food tech cluster surrounding UC Davis. Seed Central facilitates communication and research between UC Davis and the seed and agri-food tech industry to bring science to market faster.

Woodland Research and Technology Park

Woodland Research Park is a 350-acre project planned just seven miles from UC Davis. The research park will house over 2 million square feet of office and lab space focused on agri-food tech, biotech, manufacturing, and environmental technology. The park will be a live/work community, including multi-family homes, parks, and a transportation hub.

HM.CLAUSE Life Science Innovation Center

This center is a 3,100 square-foot facility administered and owned by HM.CLAUSE, a global leader in the production and sale of vegetable seeds. It is equipped with biochemistry, molecular biology and a chemical lab space, and also offers 1,800 square feet of contiguous greenhouse space.

An Ecosystem Driver



BioSpace at The Bridge District

1.4 million square-foot Class A life science campus located at The Bridge District, a premier, waterfront, urban, mixed-use development in West Sacramento. Phase I consists of ±430,000 SF purpose built lab.

ThermoGenesis

Thermogenesis has developed 35,000 square feet of shared office and lab space for emerging life science startups. ReadyStart features 11 cGMP ISO 7 clean room labs for startups to lease. IncuStart includes 26 wet lab benches with shared equipment. There is also 15,000 square feet of office space for startups.

An Ecosystem Driver



Aggie Square

A \$1 billion innovation park anchored by UC Davis and developed by Wexford Science + Technology, featuring 1.1 million square feet of classroom and lab space to facilitate partnerships between the university and industry leaders.

An Ecosystem Driver



The Port

The Port is a 60-acre, 1.1 million square-foot manufacturing (including GMP/cGMP) opportunity, allowing life science users to have dedicated biomanufacturing space only 2.5 miles away from BioSpace at The Bridge District at the Port of West Sacramento.



miles to Portland, OR



miles to Seattle, WA



miles to San Francisco



miles to Los Angeles



miles to San Diego



miles to Lake Tahoe



miles to Reno, NV



miles to Salt Lake City, UT

Expert Spotlights

Greater Sacramento Economic Council, Fulcrum Property, and Blue Rise Ventures are playing a pivotal role in the rapid transformation of the Greater Sacramento life science scene.

Greater Sacramento Economic Council



Greater Sacramento Economic Council is the region's leading economic development organization. Whether a company is looking to relocate, expand, or build, our experts are ready to assist them navigate and identify solutions to meet their business goals. With regional, state, and national connections, GSEC ensures companies have a customized and seamless entry into the Greater Sacramento region. GSEC's services include site selection assistance, custom research, incentive application support, public relations, marketing and more.



Fulcrum Property



Fulcrum Property is an award-winning real estate development and investment firm committed to creating innovative and meaningful projects in Northern California.

Founded in 1962 with a focus on development and renovation of retail properties, Fulcrum has evolved into a full spectrum firm experienced in retail, office, residential, and mixed-use development. Fulcrum's projects are anchored in sustainable design principles that bring aesthetic, social, and economic value to the tenants and communities they serve. Guiding their work is a commitment to tackle some of the most urgent and challenging problems facing cities today - the revitalization of urban cores, and the reuse of aging buildings and the creation of new community centers.

"We create beautiful spaces designed to bring people together in meaningful ways"



Blue Rise Ventures



Blue Rise Ventures ("BRV") is a multi-asset class commercial real estate operator and investment firm focusing primarily on life science and industrial properties. BRV's

vertically integrated platform allows them to move swiftly and nimbly across various disciplines to provide unparalleled support to prospective tenants that allow them to focus on their innovative research. To achieve this, BRV's Leasing and Project Management teams are involved every step of the way—from the first tour to the final project completion. With 5 million square feet under management/in development across the San Francisco Bay Area and strong ties to the region, Blue Rise Ventures has established themselves as a key life science operator in Northern California.

*Big Enough To Serve You,
Small Enough To Know You...*



SOUTHPORT PARKWAY AT LAKE WASHINGTON BOULEVARD

INNOVATION'S DESTINATION

UP TO ±1,014,000 SF cGMP,
ADVANCED MANUFACTURING
IN WEST SACRAMENTO, CA



www.theportwestsac.com

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COMING SOON
BIO_
SPACE
AT THE BRIDGE DISTRICT

PHASE 1

SACRAMENTO'S PREMIER LIFE SCIENCE DESTINATION

1.4M SQ. FT. CLASS A LIFE SCIENCE CAMPUS

at The Bridge District, a premier, waterfront, urban, mixed-use development in West Sacramento, centrally located in one of the nation's leading AgTech and FoodTech hubs.

Phase I (+/- 430,000 SQ. FT.) PURPOSE BUILT LAB

within 20 minutes of UC Davis and will anchor the Sacramento Region's Life Science initiatives.
Target Delivery Timeline: Q2 2025.

PREMIER PARTNERSHIP

Established and localized sponsorship in Blue Rise Ventures (BRV) and Fulcrum Property.



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Aggie Square

A \$1 billion innovation park anchored by UC Davis and developed by Wexford Science + Technology, featuring 1.1 million square feet of classroom and lab space to facilitate partnerships between the university and industry leaders

Tech focuses: cell and gene therapy, genomics, digital health and imaging modalities

Key infrastructure:

- Digital Co-Lab / Amazon Web Services Cloud Innovation Center
- Surgical device development and training
- Shared lab and office space from Connect Labs by Wexford
- UC Davis Maker Lab
- Mixed use housing and retail
- Teaching and training spaces



Source: UC Davis

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Greater Sacramento

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With an Exclusive on
Agri-Food Tech



GREATER SACRAMENTO
ECONOMIC COUNCIL



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