

California Energy Commission  
**STAFF REPORT**

# **LOCALIZED HEALTH IMPACTS REPORT**

Addendum 12 for Projects With Location Changes  
Awarded Funding Through the Alternative and  
Renewable Fuel and Vehicle Technology Program  
Under Solicitation PON-13-606 - Electric Vehicle  
Charging Infrastructure

**California Energy Commission**

Edmund G. Brown Jr., Governor

July 2016 | CEC-600-2014-002-AD12



# California Energy Commission

Patrick Brecht  
**Primary Author**

Sharon Purewal, Sam Lerman, and Thanh Lopez  
**Project Managers**

John P. Butler II  
**Office Manager**  
ZERO-EMISSION VEHICLE AND INFRASTRUCTURE OFFICE

John Y. Kato  
**Deputy Director**  
FUELS AND TRANSPORTATION DIVISION

Robert P. Oglesby  
**Executive Director**

## DISCLAIMER

Staff members of the California Energy Commission prepared this report. As such, it does not necessarily represent the views of the Energy Commission, its employees, or the State of California. The Energy Commission, the State of California, its employees, contractors and subcontractors make no warrant, express or implied, and assume no legal liability for the information in this report; nor does any party represent that the uses of this information will not infringe upon privately owned rights. This report has not been approved or disapproved by the Energy Commission nor has the Commission passed upon the accuracy or adequacy of the information in this report.

# ADDENDUM 12

---

The *Localized Health Impacts (LHI) Report for Selected Projects Awarded Funding Through the Alternative and Renewable Fuel and Vehicle Technology Program Under Solicitation PON-13-606* was posted April 11, 2014 (CEC-600-2014-002)<sup>1</sup>. This addendum uses the same approach to assess the localized health impacts for projects with location changes. Bio-Rad Laboratories proposes to add three station locations and remove four previously proposed station locations. The Bay Area Air Quality Management District (BAAQMD) proposes to add 18 station locations and remove 3 station locations, including a station location provided in Addendum 3 (CEC-600-2014-AD3)<sup>2</sup>. The City of San Diego proposes to add one station location and remove one station location provided in Addendum 11 (CEC-600-2014-002-AD11)<sup>3</sup>. The original and newly proposed locations are described in Table 1, along with environmental justice indicators<sup>4</sup>. Charger quantity and type for all three projects remains comparable to the original proposals.

**Table 1: Original and New Site Locations for Bio-Rad Laboratories, the Bay Area Air Quality Management District, and the City of San Diego, Along With Environmental Justice (EJ) Indicators**

Original Site Locations	New Site Locations	EJ Indicators for New Locations
New Site Location	Bio-Rad Laboratories 1000 Alfred Nobel Drive Hercules, CA 94547	Minority
New Site Location	Bio-Rad Laboratories 21 Technology Drive Irvine, CA 92628	Minority

---

1 Brecht, Patrick, Jennifer Allen, Lindsee Tanimoto. 2014. *Localized Health Impacts Report*. California Energy Commission, Fuels and Transportation Division. Publication Number: CEC-600-2014-002.

2 Brecht, Patrick. 2014. *Localized Health Impacts Report*. California Energy Commission, Fuels and Transportation Division. Publication Number: CEC-600-2014-002-AD3.

3 Brecht, Patrick. 2014. *Localized Health Impacts Report*. California Energy Commission, Fuels and Transportation Division. Publication Number: CEC-600-2014-002-AD11.

4 The EJ indicators follow: (i.) minority subset represents more than 30 percent of a given city's population (2010), (ii.) city's poverty exceeds California's poverty level of 15.9 percent (2009-2013), (iii.) city's unemployment rate exceeds California's unemployment rate of 5.2 percent as of May 2016, and (iv.) city's percentage of persons younger than 5 years of age or older than 65 years of age is 20 percent higher than California's average. For the entire state, the percentage of persons under the age of 5 years is 6.8 percent, and the percentage of persons over the age of 65 years is 11.4 percent.

Original Site Locations	New Site Locations	EJ Indicators for New Locations
New Site Location	Bio-Rad Laboratories 225 Linus Pauling Drive Hercules, CA 94547	Minority
Bio-Rad Laboratories 1000 Alfred Nobel Drive Hercules, California 94547	Remove	
Bio-Rad Laboratories 875 Alfred Nobel Drive Hercules, California 94547	Remove	
Bio-Rad Laboratories 5731 W. Las Positas Pleasanton, California 94588	Remove	
Bio-Rad Laboratories 235 Linus Pauling Drive Hercules, California 94547	Remove	
BAAQMD 808 South Airport Boulevard South San Francisco, California 94080	Remove	
BAAQMD 3004 Andrade Road Sunol, California 94586	Remove	
BAAQMD 43800 Osgood Road Fremont, California 94539	Remove	
New Site Location	BAAQMD 100 Old County Road Brisbane, California 94005	None
New Site Location	BAAQMD 1690 S. Bascom Avenue Campbell, California 95008	None
New Site Location	BAAQMD 1198 El Camino Real Colma, California 94014	Minority
New Site Location	BAAQMD 1550 Gate Boulevard Fairfield, California 94533	None
New Site Location	BAAQMD 3330 N. Texas Street Fairfield, California 94533	None
New Site Location	BAAQMD 3000 Las Positas Road Livermore, California 94551	None
New Site Location	BAAQMD 301 Ranch Drive Milpitas, California 95035	Minority
New Site Location	BAAQMD 170 Cochrane Plaza Morgan Hill, California 95037	Minority
New Site Location	BAAQMD 3510 Broadway	Poverty

	Oakland, California 94611	
New Site Location	BAAQMD 3751 Broadway Oakland, California 94611	Poverty
New Site Location	BAAQMD 1400 Pinole Valley Road Pinole, California 94564	Age
New Site Location	BAAQMD 901 Nevin Avenue Richmond, California 94801	Poverty and Minority
New Site Location	BAAQMD 276 International Circle San Jose, California 95119	Minority
New Site Location	BAAQMD 2500 Merced Street San Leandro, California 94577	Age
New Site Location	BAAQMD 13650 Saratoga Avenue Saratoga, California 95070	Minority and Age
New Site Location	BAAQMD 19181 CA-12 Sonoma, California 94576	Age
New Site Location	BAAQMD 32300 Dyer Street Union City, California 94587	Minority
New Site Location	BAAQMD 975 Sereno Drive Vallejo, California 94589	Poverty and Unemployment
City of San Diego Carmel Valley Community Park San Diego, California 92130	Remove	
New Site Location	City of San Diego Ocean Air Recreation Center 4770 Fairport Way, San Diego, California 92130	None

Source: California Energy Commission Staff

## Air Quality and EJ Indicators

The 19 cities where the proposed projects will be located are in nonattainment zones for ozone, particulate matter (PM<sup>5</sup>) 2.5 and PM 10. If a project site is in a nonattainment zone and has more than one EJ indicator, as shown in Table 1, with further detail in Table 2, it is considered a high-risk community, according to the Environmental Justice Screening Method<sup>6</sup>. According to staff assessment, three communities are classified high-risk, which are Richmond, Saratoga, and Vallejo.

**Table 2: EJ Indicators Compared With California**  
Yellow highlighted percentages indicate EJ indicators

	Below Poverty Level (2009 – 2013)	Black Persons (2010)	American Indian and/or Alaska Native (2010)	Asian and/or Pacific Islander (2010)	Persons of Hispanic or Latino Origin (2010)	Persons Under 5 Years of Age (2010)	Persons Over 65 Years of Age (2010)	Unemployment (May 2016)
California	15.9%	6.2%	1.0%	13.0%	37.6%	6.8%	11.4%	5.2%
EJ Indicators	>15.9%	>30%	>30%	>30%	>30%	>8.16%	>13.8%	>5.2%
Brisbane	3.7%	1.9%	0.5%	25.3%	16.6%	6.6%	10.0%	3.4%
Campbell	6.6%	2.9%	0.7%	16.1%	18.4%	6.6%	11.2%	2.4%
Colma	10.3%	3.3%	0.4%	34.5%	39.5%	6.0%	11.4%	2.6%
Fairfield	12.7%	15.7%	0.8%	14.9%	27.3%	7.4%	10.2%	4.4%
Hercules	10.3%	18.9%	0.4%	45.5%	14.6%	5.8%	10.5%	2.6%
Irvine	12.4%	1.8%	0.2%	39.2%	9.2%	5.7%	8.7%	2.7%
Livermore	5.5%	2.1%	0.6%	8.4%	20.9%	6.6%	10.3%	2.6%
Milpitas	7.5%	2.9%	0.5%	62.2%	16.8%	6.9%	9.5%	3.1%
Morgan Hill	11.0%	2.0%	0.9%	10.2%	34.0%	7.4%	9.5%	3.7%
Oakland	21.0%	28.0%	0.8%	16.8%	25.4%	6.7%	11.1%	4.7%
Pinole	8.8%	13.4%	0.8%	22.9%	21.8%	5.1%	15.5%	3.3%
Richmond	17.1%	26.6%	0.6%	13.5%	39.5%	7.4%	10.2%	4.6%

<sup>5</sup> "Particulate matter" is unburned fuel particles that form smoke or soot and stick to lung tissue when inhaled. The numbers stand for microns in diameter.

<sup>6</sup> California Air Resources Board (ARB), *Air Pollution and Environmental Justice, Integrating Indicators of Cumulative Impact and Socio-Economic Vulnerability Into Regulatory Decision-Making*, 2010. (Sacramento, California) Contract authors: Manuel Pastor Jr., Ph.D., Rachel Morello-Frosch, Ph.D., and James Sadd, Ph.D.

	Below Poverty Level (2009 – 2013)	Black Persons (2010)	American Indian and/or Alaska Native (2010)	Asian and/or Pacific Islander (2010)	Persons of Hispanic or Latino Origin (2010)	Persons Under 5 Years of Age (2010)	Persons Over 65 Years of Age (2010)	Unemployment (May 2016)
San Diego	15.8%	6.7%	0.6%	15.9%	28.8%	6.2%	10.7%	4.0%
San Jose	11.8%	3.2%	0.9%	32.0%	33.2%	7.3%	10.1%	3.7%
San Leandro	11.0%	12.3%	0.8%	29.7%	27.4%	6.2%	13.8%	4.1%
Saratoga	3.6%	0.3%	0.1%	41.4%	3.5%	3.3%	20.3%	2.3%
Sonoma	7.2%	0.5%	0.5%	2.8%	15.3%	4.4%	25.0%	3.1%
Union City	8.4%	6.3%	0.5%	50.9%	22.9%	6.8%	11.1%	3.4%
Vallejo	18.3%	22.1%	0.7%	24.9%	22.6%	6.5%	12.1%	6.6%

Sources: Unemployment information from the State of California, Employee Development Department Labor Market Information Div.: <http://www.labormarketinfo.edd.ca.gov/data/unemployment-and-labor-force.html#Tool>. U.S. Census Bureau, <http://www.census.gov/quickfacts/table/PST045215/0607064> and [http://factfinder.census.gov/faces/nav/jsf/pages/community\\_facts.xhtml](http://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml)

## Location Analysis and Community Impacts

Although the street addresses have changed, the assessment remains unchanged from the original and addendum *LHIs* for Bio-Rad Laboratories, BAAQMD, and the City of San Diego. The environmental justice indicators are comparable, the charger quantity and type along with the estimated gasoline gallons displaced are nearly unchanged, and the anticipated impact to the communities where the electric vehicle chargers will be located remains positive in terms of cleaner air and anticipated greenhouse reductions.