

# California Energy Commission

## STAFF REPORT

# LOCALIZED HEALTH IMPACTS REPORT

For Alternative and Renewable Fuel and Vehicle Technology  
Program Project 600-15-013 – National Park Service



CALIFORNIA  
ENERGY COMMISSION  
Edmund G. Brown Jr., Governor

MAY 2016  
CEC-600-2016-004

# CALIFORNIA ENERGY COMMISSION

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## ABSTRACT

Assembly Bill 118 (Núñez, Chapter 750, Statutes of 2007) created the Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP). This statute, amended by Assembly Bill 109 (Núñez, Chapter 313, Statutes of 2008), authorizes the California Energy Commission to “develop and deploy innovative technologies that transform California’s fuel and vehicle types to help attain the state’s climate change policies.” Assembly Bill 8 (Perea, Chapter 401, Statutes of 2013) reauthorizes the ARFVTP through January 1, 2024.

AB 118 also directs the California Air Resources Board (ARB) to develop guidelines to ensure air quality improvements. The ARB Air Quality Improvement Program (AQIP) Guidelines, approved in 2008, are published in the *California Code of Regulations, Title 13, Motor Vehicles, Chapter 8.1, AB 118 Air Quality Guidelines for the Alternative and Renewable Fuel and Vehicle Technology Program and the AQIP*. The *AQIP Guidelines* require the Energy Commission, as the funding agency, to analyze the localized health impacts of ARFVTP-funded projects that require a permit (13 CCR § 2343). As provided by 13 CCR § 2343, this *Localized Health Impacts Report* is required to be available for public comment for 30 days prior to the approval of projects.

This *Localized Health Impacts Report* analyzes the combined impacts in the communities, including exposure to air contaminants or localized air contaminants, or both, and including, but not limited to, communities of minority populations or low-income populations, as declared by the electric vehicle infrastructure project proposer or as determined by Energy Commission staff. Appendix A, Localized Health Impact Report Assessment Method, describes the analysis used for this *Localized Health Impacts Report*.

**Keywords:** Air pollution, air quality, Air Quality Improvement Program (AQIP), California Air Resources Board (ARB), alternative fuel, Assembly Bill (AB) 118, California Environmental Quality Act (CEQA), criteria emissions, demographics, environmental justice (EJ) indicators, Environmental Justice Screening Method (EJSM), greenhouse gas emissions (GHG), localized health impact (LHI)

Please use the following citation for this report:

Brecht, Patrick. 2016. *Localized Health Impacts Report*. California Energy Commission, Fuels and Transportation Division. Publication Number: CEC-600-2016-004.

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## EXECUTIVE SUMMARY

Under the *California Code of Regulations Title 13, (CCR § 2343)*, this *Localized Health Impacts Report* describes the alternative fuel demonstration projects proposed for Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP) funding that may or may not require a conditional or discretionary permit or environmental review, such as conditional use permits, air quality permits, wastewater permits, hazardous waste disposal permits, and other land-use entitlements. This report does not include projects that require only residential building permits, mechanical/electrical permits, or fire/workplace safety permits, as these are determined to have no likely impact on the environment.

The California Energy Commission is required to assess the localized health impacts of the projects proposed for ARFVTP funding. This *Localized Health Impacts Report* focuses on the potential impacts one project may or may not have on a particular community, particularly those communities that are considered especially vulnerable to emissions increases. For high-risk communities, this report assesses the impacts from criteria emissions/air toxics and the air quality attainment status.

Environmental justice communities, low-income communities, and minority communities are considered to be the most impacted by any project that could result in increased criteria and toxic air pollutants within an area because these communities typically have the most significant exposure to the emissions. Assessing projects and the communities surrounding them is important because of the health risks associated with these pollutants. Preventing health issues from air pollution in any community is important, but it is especially important to minimize any negative impacts in communities that are already considered to be at risk due to their continued exposure to these contaminants.

The project locations in this *Localized Health Impacts Report* are assessed for potential health impacts for the communities in which they will be located. Based on this analysis, it is not anticipated that implementation of the project locations will have negative impacts because there will not be a net increase in criteria and toxic emissions, specifically in those communities that are considered most vulnerable. Potentially, the project locations stand to provide improved quality of life through cleaner air.



# CHAPTER 1: Project Proposed for Funding

The Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP) electric vehicle infrastructure project proposes funding the National Park Service for the installation of Level 2 (L2) and direct current fast charger (DCFC) electric vehicle charging stations (EVCS) in and around national parks in California. This project would provide adequate electric vehicle (EV) charging infrastructure for destination travel to national parks and surrounding areas located in California.

This *Localized Health Impact Report* assesses and reports on the potential localized health impacts of the proposed EVCS locations with public review and comment for a 30-day period.

Table 1 provides the proposer, approximate location of the EVCS, the surrounding communities, description of the EV charger type, and environmental justice (EJ) indicators. (See Appendix A.)

**Table 1: Proposed Locations for Electric Vehicle Charging Infrastructure in and Around California National Parks With Environmental Justice Indicators**

**Level 2 (L2) and Direct Current Fast Charger (DCFC)**

| National Park Service Park and/or Park Corridor Locations | Station Approximate Location                                       | Description of Chargers | EJ Indicator(s)                |
|---|--|-------------------------|--------------------------------|
| <u>Yosemite (Westside)</u><br>Wawona and Crane Flat       | State Route(SR)-41/<br>Wawona Road and<br>SR-120/Big Oak Flat Road | 3 L2 chargers           | Poverty                        |
| <u>Yosemite (Westside)</u><br>Mariposa                    | Intersection of SR-140 and SR-49                                   | 1 DCFC                  | Poverty, Unemployment, and Age |
| <u>Yosemite (Westside)</u><br>Oakhurst                    | Intersection of SR-49 and SR-41                                    | 1 DCFC                  | Unemployment and Age           |
| <u>Yosemite (Westside)</u><br>Groveland                   | SR-120   | 1 DCFC                  | N/A                            |
| <u>Sequoia and Kings Canyon (Westside)</u>                | SR-180 intersection of SR-198                                      | 2 L2 Chargers           | N/A                            |

| <b>National Park Service Park and/or Park Corridor Locations</b> | <b>Station Approximate Location</b>        | <b>Description of Chargers</b> | <b>EJ Indicator(s)</b>              |
|--|--|--------------------------------|-------------------------------------|
| <u>Sequoia and Kings Canyon (Westside)</u><br>Visalia            | SR-198                                     | 1 DCFC                         | Poverty, Unemployment, and Minority |
| <u>Sequoia and Kings Canyon (Westside)</u><br>Three Rivers       | SR-198                                     | 1 DCFC                         | Age                                 |
| <u>Sequoia and Kings Canyon (Westside)</u><br>Minkler            | SR-180/East Kings Canyon Road              | 1 DCFC                         | Poverty, Minority, and Age          |
| <u>Whiskeytown</u>   | SR-299                                     | 1 L2                           | N/A                                 |
| <u>Lassen Volcanic</u>   | SR-89 between SR-44 and SR-36              | 2 L2                           | N/A                                 |
| <u>Lassen Volcanic</u><br>Cassel                                 | SR-89 SE of SR-299                         | 1 DCFC                         | Poverty and Age                     |
| <u>Lassen Volcanic</u><br>Mount Shasta                           | Interstate 5 (I-5) between SR-97 and SR-89 | 1 DCFC                         | Poverty, Unemployment, and Age      |
| <u>Lassen Volcanic</u><br>Mineral                                | Junction of SR-36 and SR-172               | 1 DCFC                         | N/A                                 |
| <u>Mojave</u>  | SR-164                                     | 2 L2                           | N/A                                 |
| <u>Mojave</u><br>Baker   | I-15 and SR-127                            | 1 DCFC                         | Poverty, Minority, and Age          |
| <u>Mojave</u><br>Barstow   | I-15 and I-40                              | 1 DCFC                         | Minority and Age                    |
| <u>Mojave</u><br>Ludlow  | I-40 and Mojave South                      | 1 DCFC                         | N/A                                 |
| <u>Joshua Tree</u>   | I-10 on southern border of park            | 2 L2                           | Poverty, Unemployment, and Age      |

| <b>National Park Service Park and/or Park Corridor Locations</b> | <b>Station Approximate Location</b>   | <b>Description of Chargers</b> | <b>EJ Indicator(s)</b>                |
|--|---|--------------------------------|---------------------------------------|
| <b><u>Joshua Tree</u><br/>En route from South (I-10)</b>         | <b>I-10 and SR-62 or I-10 and SR-86</b>                                       | <b>1 DCFC</b>                  | <b>Poverty, Unemployment, and Age</b> |
| <b><u>Yosemite (Eastside)</u></b>                                | <b>Yosemite Lakes RV Resort and Tuolumne Meadows Visitor Center on SR-120</b> | <b>3 L2</b>                    | <b>N/A</b>                            |
| <b><u>Yosemite (Eastside)</u><br/>Lee Vining</b>                 | <b>U.S. Route 395 (US-395)</b>  | <b>1 DCFC</b>                  | <b>Minority</b>                       |
| <b><u>Yosemite (Eastside)</u><br/>Mammoth Lakes</b>              | <b>US-395 and SR-203</b>  | <b>1 DCFC</b>                  | <b>Minority</b>                       |
| <b><u>Yosemite (Eastside)</u><br/>Bishop</b>                     | <b>US-395 (SR-168)</b>  | <b>1 DCFC</b>                  | <b>Poverty, Minority, and Age</b>     |
| <b><u>Yosemite (Eastside)</u><br/>Manzanar</b>                   | <b>US-395</b>   | <b>1 L2</b>                    | <b>N/A</b>                            |
| <b><u>Sequoia &amp; Kings Canyon (Eastside)</u></b>              | <b>SR-178</b>   | <b>1 L2</b>                    | <b>N/A</b>                            |
| <b><u>Death Valley</u></b>                                       | <b>US-395 to SR190</b>  | <b>2 L2</b>                    | <b>N/A</b>                            |
| <b><u>Death Valley</u><br/>Death Valley Junction</b>             | <b>SR-190</b>   | <b>1 DCFC</b>                  | <b>N/A</b>                            |
| <b><u>Death Valley</u><br/>Olancho</b>                           | <b>US-395</b>   | <b>1 DCFC</b>                  | <b>None</b>                           |
| <b><u>Death Valley</u><br/>Randsburg</b>                         | <b>US-395, from Barstow</b>   | <b>1 DCFC</b>                  | <b>Age</b>                            |
| <b><u>Redwood</u></b>  | <b>US-101, from Eureka</b>  | <b>1 L2</b>                    | <b>Poverty and Age</b>                |

| National Park Service Park and/or Park Corridor Locations | Station Approximate Location | Description of Chargers | EJ Indicator(s)                     |
|---|------------------------------|-------------------------|-------------------------------------|
| <u>Redwood</u><br>Red Bluff                               | I-5, SR-36                   | 1 DCFC                  | Poverty, Unemployment, and Age      |
| <u>Redwood</u><br>I-36 En route Locations                 | Between Red Bluff and Eureka | 2 DCFC                  | N/A                                 |
| <u>Redwood</u><br>Going North                             | En route to Crescent City    | 1 DCFC                  | Poverty, Unemployment, and Minority |

Source: California Energy Commission staff analysis

## CHAPTER 2: Approach

The *Localized Health Impact Report (LHI Report)* Assessment Method in Appendix A assesses communities potentially impacted by air pollution and possibly benefitted by electric vehicle charging infrastructure projects. The California Air Resources Board's (ARB) *Proposed Screening Method for Low-Income Communities Highly Impacted by Air Pollution for Assembly Bill (AB) 32 Assessments* is also used to integrate data to identify low-income communities that are highly impacted by air pollution<sup>1</sup>. Other resources used in this assessment are the *California Infrastructure State Implementation Plans*<sup>2</sup>, which contain publicly noticed air quality attainment plans, and the *Green Book Nonattainment Areas for Criteria Pollutants*<sup>3</sup>.

For this *LHI Report*, the Energy Commission interprets "permits" to mean discretionary and conditional use permits because they require a review of potential impacts to a community and the environment before issuance. Since ministerial-level permits, such as building permits, do not assess public health-related pollutants, the Energy Commission staff does not assess projects requiring only ministerial-level permits.

The cities and towns where the EVCS will be located (or in close proximity), are nearly all in nonattainment zones for ozone, PM<sup>4</sup> 2.5, and PM 10. Table 1 shows the EJ indicators for the 30 cities and towns, that is, minority populations, low incomes, and highly sensitive groups based on age (individuals younger than 5 years of age and older than 65 years of age). Table 2 shows the demographics. Fifteen cities and towns are classified high-risk communities, according to the Environmental Justice Screening Method (EJSM). Most locations are considered rural and not densely populated. A majority of the populous in the communities assessed in this *LHI* live below the poverty line and are 65 years of age or older. A portion of the communities identified in this report are small communities and lack U. S Census data; therefore, staff was unable to truly assess all locations.

Staff collected information about predicted emissions from the project proposal. Activities conducted are not expected to have significant impact on emissions. Expanding the electric vehicle charging infrastructure will lead to reduced greenhouse gas emissions, and reduced petroleum use. This proposed project will also lead to greater access to and from California national parks.

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1 California Air Resources Board, *Proposed Screening Method for Low-Income Communities Highly Impacted by Air Pollution, 2010* (Sacramento, California).

2 <http://www.arb.ca.gov/planning/sip/sip.htm>.

3 <http://www.epa.gov/oaqps001/greenbk>.

4 "Particulate matter" is unburned fuel particles that form smoke or soot and stick to lung tissue when inhaled, and a chief component of exhaust emissions from heavy-duty diesel engines.

## **CHAPTER 3: Summary**

The proposed EVCS locations would in establish or expand charging infrastructure in and around national parks in California. Adequate EV charging infrastructure for destination travel to national parks and surrounding areas in California will help increase access for EVs, reduce emissions, and displace gasoline and diesel vehicles. Expanding the EV market will also help achieve both energy and climate change goals.

The anticipated impacts to the communities where the EVCS are to be located are positive in terms of air quality and anticipated greenhouse gas reductions.

## **CHAPTER 4: Acronyms**

Air Quality Improvement Program (AQIP)

Air Resources Board (ARB)

Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP)

Assembly Bill (AB)

California Code of Regulations (CCR)

California Environmental Quality Act (CEQA)

Direct current fast charger (DCFC)

Environmental justice (EJ)

Environmental justice screening method (EJSM)

Greenhouse gas (GHG)

Level 2 (L2)

Localized health impact (LHI)

Notice of proposed awards (NOPA)

Particulate matter (PM)

Program opportunity notice (PON)

State Implementation Plan (SIP)

**Table 2: Environmental Justice (EJ) Indicators by Zip Code Compared With California**  
 Yellow highlighted areas indicate numbers (percentages) that meet the definition for EJ indicators.

|                          | Number of EJ Indicators by Category | Below Poverty Level (2010-2014) | 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 Rate ( March 2016) |
|--------------------------|-------------------------------------|---------------------------------|----------------------|---|--------------------------------------|---|-------------------------------------|-------------------------------------|---------------------------------|
| <b>California</b>        |                                     | 15.3%                           | 6.2%                 | 1.0%  | 13.0%                                | 37.6%                                       | 6.8%                                | 11.4%                               | 5.4%                            |
|                          |                                     | >15.3%                          | >30%                 | >30%  | >30%                                 | >30%  | >8.16%                              | >13.8%                              | >5.4%                           |
| Baker                    | 3                                   | 17.9%                           | 0.1%                 | 0.7%  | 1.4%                                 | 68.3%                                       | 11.6%                               | 2.9%                                | N/A                             |
| Barstow                  | 3                                   | 30.2%                           | 14.6%                | 2.1%  | 3.2%                                 | 42.8%                                       | 9.2%                                | 4.9%                                | 5.2%                            |
| Bishop                   | 3                                   | 19.9%                           | 0.6%                 | 2.3%  | 1.6%                                 | 30.9%                                       | 7.2%                                | 15.8%                               | 4.0%                            |
| Cassel                   | 2                                   | 23.5%                           | 0.0%                 | 1.4%  | 0.0%                                 | 2.9%  | 5.8%                                | 29.5%                               | N/A                             |
| Crescent City            | 3                                   | 30.0%                           | 11.9%                | 4.8%  | 4.4%                                 | 30.6%                                       | 4.6%                                | 7.7%                                | 12.4%                           |
| Death Valley Junction    | N/A                                 | N/A                             | N/A                  | N/A   | N/A                                  | N/A   | N/A                                 | N/A                                 | N/A                             |
| Dinsmore                 | N/A                                 | N/A                             | N/A                  | N/A   | N/A                                  | N/A   | N/A                                 | N/A                                 | N/A                             |
| Eureka                   | 1                                   | 23.5%                           | 1.9%                 | 3.7%  | 4.2%                                 | 11.6%                                       | 6.1%                                | 11.8%                               | 5.2%                            |
| Grant Grove              | N/A                                 | N/A                             | N/A                  | N/A   | N/A                                  | N/A   | N/A                                 | N/A                                 | N/A                             |
| Groveland – Big Oak Flat | N/A                                 | N/A                             | N/A                  | N/A   | N/A                                  | N/A   | N/A                                 | N/A                                 | N/A                             |
| Joshua Tree              | 3                                   | 21.0%                           | 3.2%                 | 1.1%  | 1.4%                                 | 17.6%                                       | 7.2%                                | 15.7%                               | 8.8%                            |
| Lee Vining               | 1                                   | 0.0%                            | 0.0%                 | 11.3%                                       | 0.0%                                 | 43.2%                                       | 7.7%                                | 7.7%                                | N/A                             |

|                   | Number of EJ Indicators by Category | Below Poverty Level (2010-2014) | 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 Rate ( March 2016) |
|-------------------|-------------------------------------|---------------------------------|----------------------|---|--------------------------------------|---|-------------------------------------|-------------------------------------|---------------------------------|
| <b>California</b> |                                     | 15.3%                           | 6.2%                 | 1.0%  | 13.0%                                | 37.6%                                       | 6.8%                                | 11.4%                               | 5.4%                            |
|                   |                                     | >15.3%                          | >30%                 | >30%  | >30%                                 | >30%  | >8.16%                              | >13.8%                              | >5.4%                           |
| Ludlow            | N/A                                 | N/A                             | N/A                  | N/A   | N/A                                  | N/A   | N/A                                 | N/A                                 | N/A                             |
| Mammoth Lakes     | 1                                   | 4.9%                            | 0.4%                 | 0.6%  | 1.6%                                 | 33.7%                                       | 6.3%                                | 6.5%                                | 4.4%                            |
| Mariposa          | 3                                   | 33.6%                           | 0.5%                 | 4.8%  | 1.4%                                 | 9.9%  | 6.4%                                | 27.1%                               | 22.2%                           |
| Mineral           | N/A                                 | N/A                             | N/A                  | N/A   | N/A                                  | N/A   | N/A                                 | N/A                                 | N/A                             |
| Minkler           | 3                                   | 20.0%                           | 0.4%                 | 2.0%  | 2.3%                                 | 30.1%                                       | 4.8%                                | 20.7%                               | N/A                             |
| Mount Shasta      | 3                                   | 19.2%                           | 1.8%                 | 0.6%  | 1.6%                                 | 8.2%  | 4.5%                                | 18.2%                               | 10.2%                           |
| Oakhurst          | 2                                   | 10.0%                           | 0.8%                 | 2.2%  | 1.6%                                 | 16.7%                                       | 5.2%                                | 26.5%                               | 9.9%                            |
| Olancha           | 0                                   | 0.0%                            | 0.0%                 | 2.1%  | 4.2%                                 | 24.5%                                       | 4.2%                                | 17.2%                               | 0.0%                            |
| Orick             | 2                                   | 29.6%                           | 0.0%                 | 10.9%                                       | 0.0%                                 | 5.6%  | 4.2%                                | 18.2%                               | N/A                             |
| Randsburg         | 1                                   | 7.8%                            | 0.0%                 | 5.8%  | 2.9%                                 | 2.9%  | 0.0%                                | 33.3%                               | 0.0%                            |
| Red Bluff         | 3                                   | 24.0%                           | 0.9%                 | 3.1%  | 1.3%                                 | 21.6%                                       | 8.9%                                | 13.3%                               | 8.4%                            |
| Three Rivers      | 0                                   | 10.7%                           | 0.3%                 | 1.2%  | 1.4%                                 | 9.7%  | 3.3%                                | 24.4%                               | 4.1%                            |
| Tuolumne          | 2                                   | 38.4%                           | 1.1%                 | 7.5%  | 1.0%                                 | 11.6%                                       | 5.2%                                | 16.9%                               | N/A                             |
| Visalia           | 3                                   | 20.5%                           | 2.1%                 | 1.4%  | 5.4%                                 | 46.0%                                       | 8.6%                                | 10.3%                               | 10.0%                           |

|                   | Number of EJ Indicators by Category | Below Poverty Level (2010-2014) | 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 Rate ( March 2016) |
|-------------------|-------------------------------------|---------------------------------|----------------------|---|--------------------------------------|---|-------------------------------------|-------------------------------------|---------------------------------|
| <b>California</b> |                                     | 15.3%                           | 6.2%                 | 1.0%  | 13.0%                                | 37.6%                                       | 6.8%                                | 11.4%                               | 5.4%                            |
|                   |                                     | >15.3%                          | >30%                 | >30%  | >30%                                 | >30%  | >8.16%                              | >13.8%                              | >5.4%                           |
| Wawona            | 1                                   | 53.9%                           | 1.2%                 | 1.8%  | 2.4%                                 | 7.1%  | 5.3%                                | 8.9%                                | N/A                             |
| Weldon            | 3                                   | 27.2%                           | 0.2%                 | 3.1%  | 0.4%                                 | 8.2%  | 4.7%                                | 25.8%                               | 9.9%                            |
| Whiskeytown       | N/A                                 | N/A                             | N/A                  | N/A   | N/A                                  | N/A   | N/A                                 | N/A                                 | N/A                             |
| Wildwood          | N/A                                 | N/A                             | N/A                  | N/A   | N/A                                  | N/A   | N/A                                 | N/A                                 | N/A                             |

Sources: Unemployment information from the State of California, Employee Development Department (EDD) Labor Market Information Division: <http://www.labormarketinfo.edd.ca.gov/Content.asp?pageid=133> and [Age / ethnicity demographics, U.S. Census Bureau: http://quickfacts.census.gov](http://quickfacts.census.gov) and [http://factfinder.census.gov/faces/nav/jsf/pages/community\\_facts.xhtml#](http://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml#)

# APPENDIX A:

## Localized Health Impact Report Assessment Method

Based on the California Energy Commission's interpretation of the *California ARB AQIP Guidelines*, this *LHI Report* assesses the potential impacts to communities as a result of the projects proposed by the ARFVTP. This report is prepared under the *California ARB AQIP Guidelines, California Code of Regulations, Title 13, Motor Vehicles, Chapter 8.1 (CCR § 2343)*:

“(6) Localized health impacts must be considered when selecting projects for funding. The funding agency must consider environmental justice consistent with state law and complete the following:

(A) For each fiscal year, the funding agency must publish a staff report for review and comment by the public at least 30 calendar days prior to approval of projects. The report must analyze the aggregate locations of the funded projects, analyze the impacts in communities with the most significant exposure to air contaminants or localized air contaminants, or both, including, but not limited to, communities of minority populations or low-income populations, and identify agency outreach to community groups and other affected stakeholders.

(B) Projects must be selected and approved for funding in a publicly noticed meeting.”

This *LHI Report* is not intended to be a detailed environmental health impact analysis of proposed projects nor is it intended to substitute for the environmental review conducted during the California Environmental Quality Act (CEQA) review. This *LHI Report* includes staff application of the Environmental Justice Screening Method (EJSM) to identify projects located in areas with social vulnerability indicators and the greatest exposure to air pollution and associated health risks<sup>5</sup>.

The EJSM was developed to identify low-income communities highly affected by air pollution for assessing the impacts of climate change regulations, specifically Assembly Bill 32 (Núñez, Chapter 488, Statutes of 2006), the California Global Warming Solutions Act of 2006. The EJSM integrates data on (i.) exposure to air pollution, (ii.) cancer risk, (iii.) ozone concentration, (iv.) frequency of high ozone days, (v.) race/ethnicity, (vi.) poverty level, (vii.) home ownership, (viii.) median household value, (ix.) educational attainment, and (x.) sensitive populations (populations under 5 years of age or over 65 years of age).

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<sup>5</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.

To determine high-risk communities, environmental justice (EJ) indicators for locations of the electric vehicle charging infrastructure are compared to data from the U.S. Census Bureau or other public agency. Staff identifies high-risk communities by using a two-part standard. For a community to be considered high-risk, for this assessment, it must meet both Parts 1 and 2 of this standard.

*Part 1:*

- Communities located in nonattainment air basins for ozone, PM 10 or PM 2.5

*Part 2:*

- Communities having more than one of the following EJ indicators: (1) minority, (2) poverty, (3) unemployment and (4) high percentage of population under 5 years of age and over 65 years of age. The EJ indicators follow:
  - A minority subset represents more than 30 percent of a given city's population.
  - A city's poverty level exceeds California's poverty level.
  - A city's unemployment rate exceeds California's unemployment rate.
  - The percentage of people living in that city are younger than 5 years of age or older than 65 years of age is 20 percent higher than the average percentage of persons under 5 years of age or over 65 years of age for all of California.