

California Energy Commission  
**STAFF REPORT**

# **LOCALIZED HEALTH IMPACTS REPORT**

For Selected Projects Awarded Funding Through the  
Alternative and Renewable Fuel and Vehicle Technology  
Program Under Solicitation GFO-15-603 – DC Fast Chargers  
for California's Interregional Corridors

**California Energy Commission**

Edmund G. Brown Jr., Governor

November 2016 | CEC-600-2016-008



# 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 direct current (DC) fast charger proposers 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, direct current (DC), environmental justice (EJ) indicators, Environmental Justice Screening Method (EJSM), electric vehicle (EV), 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-600-2016-008.

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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 projects 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 projects 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 implementing these projects 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 projects stand to provide improved quality of life through cleaner air.



# CHAPTER 1:

## Projects Proposed for Funding

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On January 26, 2016, the California Energy Commission released a competitive grant funding opportunity titled “DC Fast Chargers for California’s Interregional Corridors” (GFO-15-603) under the Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP). This grant opportunity was an offer to fund projects that will install direct current fast (DC) charging stations along major corridors that will fill the existing gaps for interregional travel for electric vehicles travelling in the state.

On October 10, 2016, the Energy Commission posted the notice of proposed awards (NOPA) for GFO-15-603, resulting in 21 projects proposed for funding. This *Localized Health Impacts Report* assesses and reports on the potential localized health impacts of the proposed projects with public review and comment for a 30-day period.

This chapter summarizes the projects proposed for Energy Commission funding. Table 1 provides the applicant, project name, project address, number and type of chargers, and environmental justice (EJ) indicators. (See Appendix A.)

**Table 1: Proposed Projects for Direct Current Fast Chargers for California’s Interregional Corridors With Environmental Justice Indicators  
(Electric Vehicle Charger Type: Direct Current Fast Charger [DCFC] and Level 2 [L2])**

| Applicant                            | Project Name                                  | Project Address   | Number of Chargers | EJ Indicator (s) |
|--------------------------------------|---|---|--------------------|------------------|
| ChargePoint, Inc.<br>Application #10 | Mojave Express Interregional Corridor Project | Site 1: Motel 6 – Café 154<br>16868 Stoddard Wells Rd.<br>Victorville, CA 92394 | 2 DCFC<br>1 L2     | 4                |
|                                      |   | Site 2: Barstow Station<br>1611 E Main St.<br>Barstow, CA 92311                 | 2 DCFC<br>1 L2     | 4                |
|                                      |   | Site 3: Yermo Express Gas<br>40873 Sunrise Canyon Rd.<br>Yermo, CA 92398        | 2 DCFC<br>1 L2     | 3                |
|                                      |   | Site:4 Grewal Travel Center<br>72363 Baker Blvd<br>Baker, CA 92309              | 4 DCFC<br>1 L2     | 4                |
|                                      |   | Site 5:Nipton Shell/Cima Mining Company<br>65845 Cima Rd<br>Nipton, CA 92364    | 2 DCFC<br>1 L2     | 3                |

| Applicant                            | Project Name   | Project Address  | Number of Chargers | EJ Indicator (s) |
|--------------------------------------|--|--|--------------------|------------------|
| ChargePoint, Inc.<br>Application #21 | Redwood Coast Express Interregional Corridor Project | Site 1: 350 North Indian Road<br>Smith River, CA 95567 | 1 DCFC<br>1 L2     | 4                |
|                                      |  | Site 2: 655 US-101<br>Crescent City, CA 95531          | 1 DCFC<br>1 L2     | 3                |
|                                      |  | Site 3: 171 Klamath Boulevard<br>Klamath, CA 95548     | 2 DCFC<br>1 L2     | 4                |
|                                      |  | Site 4: 4701 Valley W. Boulevard<br>Arcata, CA 95521   | 2 DCFC<br>1 L2     | 2                |
|                                      |  | Site 5: 11 Bear Paws Way<br>Loleta, CA 95551           | 2 DCFC<br>1 L2     | 1                |
|                                      |  | Site 6: 705 US-101<br>Garberville, CA 95542            | 2 DCFC<br>1 L2     | 0                |
| Recargo, Inc.<br>Application #35     | Recargo California Electric Highway - Corridor 2     | Site 1: 10700 Highway 101<br>Smith River, CA 95567     | 1 DCFC<br>1 L2     | 4                |
|                                      |  | Site 2: 15870 Highway 101<br>Klamath, CA 95548         | 1 DCFC<br>1 L2     | 4                |
|                                      |  | Site 3: 120025 Highway 101<br>Orick, CA 95555          | 1 DCFC<br>1 L2     | 2                |
|                                      |  | Site 4: 1929 Fourth Street<br>Eureka, CA 95501         | 3 DCFC<br>1 L2     | 1                |
|                                      |  | Site 5: 1328 Eeloa Avenue<br>Rio Dell, CA 95562        | 1 DCFC<br>1 L2     | 1                |
|                                      |  | Site 6: 6685 Avenue of the Giants<br>Miranda, CA 95553 | 1 DCFC<br>1 L2     | 1                |
| ChargePoint, Inc.<br>Application #11 | Joshua Tree Express Interregional                    | Site 1: 1540 E. 2nd Street<br>Beaumont, CA 92223       | 2 DCFC<br>1 L2     | 2                |



| Applicant                            | Project Name   | Project Address   | Number of Chargers | EJ Indicator (s) |
|--------------------------------------|--|---|--------------------|------------------|
|                                      | Corridor Project   | Site 2: 42625 Jackson Street<br>Indio, Ca 92203           | 2 DCFC<br>1 L2     | 3                |
|                                      |  | Site 3: 62450 Chiriaco Road<br>Indio, CA 92201            | 2 DCFC<br>1 L2     | 3                |
|                                      |  | Site 4: 850 W. Hobson Way<br>Blythe, CA 92225             | 2 DCFC<br>1 L2     | 3                |
| EV Connect, Inc.<br>Application #22  | GFO-15-603 DC<br>Fast Chargers<br>for California<br>Interregional<br>Corridors | Site 1: 1693 2nd Street<br>Beaumont, CA 92223             | 1 DCFC<br>2 L2     | 2                |
|                                      |  | Site 2: 74-900 Gerald Ford Drive<br>Palm Desert, CA 92211 | 1 DCFC<br>1 L2     | 1                |
|                                      |  | Site 3: 62450 Chiriaco Road<br>Indio, CA 92201            | 4 DCFC<br>1 L2     | 3                |
|                                      |  | Site 4: 2011 East Donlon Street<br>Blythe, CA 92225       | 2 DCFC<br>1 L2     | 3                |
| ChargePoint, Inc.<br>Application #12 | Mendocino<br>Express<br>Interregional<br>Corridor Project                      | Site 1: 69501 US-101<br>Leggett, CA 95585                 | 1 DCFC<br>1 L2     | 0                |
|                                      |  | Site 2: 45020 US-101<br>Laytonville, CA 95454             | 2 DCFC<br>1 L2     | 2                |
|                                      |  | Site 3: 1355 S. Main Street<br>Willits, CA 95490          | 2 DCFC<br>1 L2     | 2                |
|                                      |  | Site 4: 115 E. 2nd Street<br>Cloverdale, CA 95425         | 2 DCFC<br>1 L2     | 2                |
|                                      |  | Site 5: 1345 Healdsburg, Avenue<br>Healdsburg, CA 95448   | 2 DCFC<br>1 L2     | 2                |
| Recargo, Inc.<br>Application #36     | Recargo<br>California<br>Electric<br>Highway -<br>Corridor 4                   | Site 1: 67676 North Highway 271<br>Leggett, CA 95585      | 1 DCFC<br>1 L2     | 0                |
|                                      |  | Site 2: 44611 Harmon Drive<br>Laytonville, CA 95454       | 1 DCFC             | 2                |

| Applicant                            | Project Name   | Project Address   | Number of Chargers | EJ Indicator (s) |
|--------------------------------------|--|---|--------------------|------------------|
|                                      |  |   | 1 L2               |                  |
|                                      |  | Site 3: 212 South Main Street<br>Willits, CA 95490              | 1 DCFC<br>1 L2     | 2                |
|                                      |  | Site 4: 13771 Highway 101<br>Hopland, CA 95449                  | 3 DCFC<br>1 L2     | 1                |
|                                      |  | Site 5: 33 Healdsburg Avenue<br>Healdsburg, CA 95448            | 1 DCFC<br>1 L2     | 2                |
| ChargePoint, Inc.<br>Application #13 | Tahoe-Truckee<br>Express<br>Interregional<br>Corridor Project    | Site 1: 13358 Lincoln Way<br>Auburn, CA 95607                   | 2 DCFC<br>1 L2     | 1                |
|                                      |  | Site 2: 400 S. Canyon Way<br>Colfax, CA 95713                   | 2 DCFC<br>1 L2     | 1                |
|                                      |  | Site 3: 25 Canyon Creek Road<br>Dutch Flat, CA 95714            | 2 DCFC<br>1 L2     | 1                |
|                                      |  | Site 4: 90 Cisco Road<br>Soda Springs, CA 95728                 | 2 DCFC<br>1 L2     | 0                |
|                                      |  | Site 5: 10527 Cold Stream Road<br>Truckee, CA 96161             | 2 DCFC<br>1 L2     | 0                |
| ChargePoint, Inc.<br>Application #14 | South Lake<br>Tahoe Express<br>Interregional<br>Corridor Project | Site 1: 1200 Broadway<br>Placerville, CA 95667                  | 2 DCFC<br>1 L2     | 3                |
|                                      |  | Site 2: 6529 Pony Express Trail<br>Pollock Pines, CA 95726      | 1 DCFC<br>1 L2     | 1                |
|                                      |  | Site 3: 17510 US-50<br>Kyburz, CA 95720                         | 1 DCFC<br>1 L2     | 1                |
|                                      |  | Site 4: 1001 Heavenly Village Way<br>South Lake Tahoe, CA 96150 | 2 DCFC<br>1 L2     | 2                |
| ChargePoint, Inc.<br>Application #30 | High Desert<br>Express<br>Corridor Project                       | Site 1:49901 Highway 14<br>Inyokern, CA 93527                   | 1 DCFC<br>1 L2     | 1                |

| Applicant                            | Project Name   | Project Address   | Number of Chargers | EJ Indicator (s) |
|--------------------------------------|--|---|--------------------|------------------|
|                                      |  | Site 2: 15668 Sierra Highway<br>Mojave, CA 93501            | 1 DCFC<br>1 L2     | 4                |
|                                      |  | Site 3: 2301 W. Lancaster Boulevard<br>Lancaster, CA 93536  | 2 DCFC<br>1 L2     | 3                |
|                                      |  | Site 4: 19105 Golden Valley Road<br>Santa Clarita, CA 91387 | 2 DCFC<br>1 L2     | 1                |
| EV Connect, Inc.<br>Application #24  | GFO-15-603 DC<br>Fast Chargers<br>for California<br>Interregional<br>Corridors | Site 1: 1669 Airport Road<br>Inyokern, CA 93527             | 1 DCFC<br>1 L2     | 1                |
|                                      |  | Site 2: 1434 Flight Line<br>Mojave, CA 93501                | 1 DCFC<br>1 L2     | 4                |
|                                      |  | Site 3: 45116 Valley Central Way<br>Lancaster, CA 93536     | 1 DCFC<br>1 L2     | 3                |
|                                      |  | Site 4: 1261 Rancho Vista Boulevard<br>Palmdale, CA 93551   | 1 DCFC<br>2 L2     | 4                |
| ChargePoint, Inc.<br>Application #19 | East-West<br>Edwards<br>Express<br>Interregional<br>Corridor Project           | Site 1: 5037 E. Brundage Lane<br>Bakersfield, CA 93307      | 2 DCFC<br>1 L2     | 4                |
|                                      |  | Site 2: 500 Steuber Road<br>Tehachapi, CA 93561             | 1 DCFC<br>1 L2     | 3                |
|                                      |  | Site 3: 15900 Sierra Highway<br>Mojave, CA 93501            | 2 DCFC<br>1 L2     | 4                |
|                                      |  | Site 4: 5852 CA-58<br>Boron, CA 93516                       | 1 DCFC<br>1 L2     | 2                |
| ChargePoint, Inc.<br>Application #15 | San Luis<br>Express<br>Interregional<br>Corridor Project                       | Site 1: 140 S. 15th Street<br>Chowchilla, CA 93610          | 1 DCFC<br>1 L2     | 3                |
|                                      |  | Site 2: 1405 W. Pacheco Boulevard<br>Los Banos, CA 93635    | 2 DCFC<br>1L2      | 4                |

| Applicant                            | Project Name                                     | Project Address   | Number of Chargers | EJ Indicator (s) |
|--------------------------------------|--|---|--------------------|------------------|
|                                      |  | Site 3: 10021 Pacheco Pass Highway<br>Hollister, CA 95023 | 2 DCFC<br>1 L2     | 3                |
| Recargo, Inc.<br>Application #34     | Recargo California Electric Highway - Corridor 9 | Site 1: 10021 Pacheco Pass Highway<br>Hollister, CA 95023 | 1 DCFC<br>1 L2     | 3                |
|                                      |  | Site 2: 28821 Gonzaga Road<br>Santa Nella, CA 95322       | 2 DCFC<br>1 L2     | 3                |
|                                      |  | Site 3: 16447 Elgin Avenue<br>Dos Palos, CA 93620         | 1 DCFC<br>1 L2     | 4                |
| ChargePoint, Inc.<br>Application #18 | Yosemite Express Interregional Corridor Project  | Site 1: 10040 CA-120<br>Oakdale, CA 95361                 | 2 DCFC<br>1 L2     | 2                |
|                                      |  | Site 2: 18990 CA-120<br>Groveland, CA 95321               | 2 DCFC<br>1 L2     | 2                |
|                                      |  | Site 3: 34001 Highway 120<br>Groveland, CA 95321          | 1 DCFC<br>1 L2     | 2                |
| ChargePoint, Inc.<br>Application #32 | Central Valley Express Corridor Project          | Site 1: 40530 CA-41<br>Oakhurst, CA 93644                 | 2 DCFC<br>1 L2     | 2                |
|                                      |  | Site 2: 7663 N. Blackstone Avenue<br>Fresno, CA 93720     | 2 DCFC<br>1 L2     | 4                |
|                                      |  | Site 3: 44 N. 19 1/2 Avenue<br>Lemoore, CA 93245          | 1 DCFC<br>1 L2     | 3                |
| ChargePoint, Inc.<br>Application #31 | Solano Express Corridor Project                  | Site 1: 2059 Cadenasso Drive<br>Fairfield, CA 94533       | 2 DCFC<br>1 L2     | 0                |
|                                      |  | Site 2: 300 California 12<br>Rio Vista, CA 94571          | 1 DCFC<br>1 L2     | 2                |
|                                      |  | Site 3: 2355 W. Kettleman Lane<br>Lodi, CA 95242          | 2 DCFC<br>1 L2     | 3                |

| Applicant                            | Project Name   | Project Address   | Number of Chargers | EJ Indicator (s) |
|--------------------------------------|--|---|--------------------|------------------|
| EV Connect, Inc.<br>Application #26  | GFO-15-603 DC Fast Chargers for California Interregional Corridors | Site 1: 278 Sunset Avenue, Suite B<br>Suisun City, CA 94585 | 1 DCFC<br>1 L2     | 0                |
|                                      |  | Site 2: 6428 West Banner Street<br>Lodi, CA 95242           | 1 DCFC<br>1 L2     | 3                |
|                                      |  | Site 3: 2415 Kettleman Lane<br>Lodi, CA 95242               | 1 DCFC<br>1 L2     | 3                |
| ChargePoint, Inc.<br>Application #16 | Berryessa Express Interregional Corridor Project                   | Site 1: 130 Browns Valley Parkway<br>Vacaville, CA 95688    | 2 DCFC<br>1 L2     | 0                |
|                                      |  | Site 2: 4040 County Road 89<br>Dunnigan, CA 95937           | 1 DCFC<br>1 L2     | 3                |
| ChargePoint, Inc.<br>Application #20 | Empire Express Interregional Corridor Project                      | Site 1: 2700 Bell Road<br>Auburn, CA 95603                  | 2 DCFC<br>1 L2     | 1                |
|                                      |  | Site 2: 290 Sierra College Drive<br>Grass Valley, CA 95945  | 2 DCFC<br>1 L2     | 3                |
| ChargePoint, Inc.<br>Application #33 | Altamont Express Corridor Project                                  | Site 1: 3010 West Grant Line Road<br>Tracy, Ca 95304        | 2 DCFC<br>1 L2     | 2                |

Source: California Energy Commission staff

# CHAPTER 2:

## Approach

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The *Localized Health Impact Report (LHI Report)* Assessment Method in Appendix A assesses communities potentially impacted by air pollution and possibly benefitted by the DC fast chargers 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 connote 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 in this report.

The cities where the projects will be located are in nonattainment zones for ozone, PM<sup>4</sup> 2.5, and PM 10. Table 1 shows the EJ indicators for the 21 projects covering 61 cities, 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. Forty-one cities are classified high-risk communities, according to the Environmental Justice Screening Method (EJSM). Twenty cities are not classified as high-risk.

Staff collected information about predicted emissions from all the project proposals. Activities conducted are not expected to have significant impact on emissions. Expanding the DC fast charging interregional corridor network in California will lead to reduced greenhouse gas emissions and reduced petroleum use.

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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 is a chief component of exhaust emissions from heavy-duty diesel engines.

## CHAPTER 3: Summary

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If funded, the proposed projects would result in 61 cities establishing or expanding the DC fast charging interregional corridor network and will help achieve both energy and climate change goals. The sites will increase the widespread use of electric vehicles. As more electric vehicles enter the market and begin to displace gasoline and diesel vehicles, tailpipe pollutants will decrease significantly, especially in a critical area of the state such as the San Joaquin Valley.

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

As indicated in Table 1, with further detail in Table 2, 41 cities/towns are high-risk communities, as identified in Appendix A. The demographic data presented in this *LHI* indicate higher concentrations of minority populations, especially Hispanic, along with children under 5, and those with low incomes and/or facing high employment. The anticipated health benefits from the proposed projects for the people in these communities, especially the disadvantaged communities, is highly likely, if not certain, to be positive.

# CHAPTER 4:

## Acronyms

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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 (DC)

Direct current fast charger (DCFC)

Electric charger highway corridor (EHC)

Electric vehicle (EV)

Environmental justice (EJ)

Environmental justice screening method (EJSM)

Grant funding opportunity (GFO)

Greenhouse gas (GHG)

Kilowatt (kW)

Level 2 (L2)

Localized health impact (LHI)

Notice of proposed awards (NOPA)

Particulate matter (PM)

State Implementation Plan (SIP)

United States Highway 50 (US-50)

United States Highway 101 (US-101)



**Table 2: Environmental Justice (EJ) Indicators Compared With California**

Yellow highlighted areas indicate numbers (percentages) that meet the definition for EJ indicators.

An asterisk may signify a default to county demographics and/or labor information.

|                   | Number of EJ Indicators by Category | Below Poverty Level (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 (September 2015) |
|-------------------|-------------------------------------|----------------------------|----------------------|---|--------------------------------------|---|-------------------------------------|-------------------------------------|------------------------------------|
| <b>California</b> |                                     | 16.4%                      | 6.2%                 | 1.0%  | 13.0%                                | 37.6%                                       | 6.8%                                | 11.4%                               | 5.5%                               |
|                   |                                     | >16.4%                     | >30%                 | >30%  | >30%                                 | >30%  | >8.16%                              | >13.8%                              | >5.5%                              |
| Arcata            | 2                                   | 37.1%                      | 2.0%                 | 2.3%  | 2.6%                                 | 11.6%                                       | 3.6%                                | 8.2%                                | 5.8%                               |
| Auburn            | 1                                   | 12.2%                      | 0.8%                 | 1.0%  | 1.8%                                 | 10.0%                                       | 5.1%                                | 19.0%                               | 5.2%                               |
| Baker*            | 4                                   | 17.9%                      | 0.3%                 | 0.8%  | 1.8%                                 | 68.3%                                       | 11.6%                               | 2.9%                                | 5.9%                               |
| Bakersfield       | 4                                   | 19.3%                      | 8.2%                 | 1.5%  | 6.3%                                 | 45.5%                                       | 9.0%                                | 8.4%                                | 8.2%                               |
| Barstow           | 4                                   | 30.2%                      | 14.6%                | 2.1%  | 3.2%                                 | 42.8%                                       | 9.2%                                | 10.7%                               | 5.5%                               |
| Beaumont          | 2                                   | 11.3%                      | 6.2%                 | 1.5%  | 7.7%                                 | 40.3%                                       | 9.1%                                | 10.5%                               | 3.8%                               |
| Blythe            | 3                                   | 23.2%                      | 15.0%                | 1.2%  | 1.5%                                 | 53.2%                                       | 5.3%                                | 8.6%                                | 7.2%                               |
| Boron*            | 2                                   | 37.3%                      | 7.2%                 | 2.2%  | 2.1%                                 | 18.0%                                       | 7.3%                                | 13.1%                               | 9.2%                               |
| Chiriaco Summit*  | 2                                   | 17.1%                      | 6.4%                 | 1.1%  | 6.0%                                 | 45.5%                                       | 7.4%                                | 11.8%                               | 6.5%                               |
| Chowchilla        | 3                                   | 30.0%                      | 12.6%                | 2.0%  | 2.1%                                 | 37.8%                                       | 5.4%                                | 7.0%                                | 7.7%                               |
| Cloverdale        | 2                                   | 7.0%                       | 0.6%                 | 1.8%  | 1.1%                                 | 32.8%                                       | 6.6%                                | 16.0%                               | 3.2%                               |
| Colfax            | 1                                   | 10.4%                      | 0.2%                 | 0.1%  | 1.5%                                 | 9.1%  | 7.4%                                | 11.4%                               | 8.5%                               |
| Crescent City     | 3                                   | 30.0%                      | 11.9%                | 4.8%  | 4.4%                                 | 30.6%                                       | 4.6%                                | 7.7%                                | 9.5%                               |
| Dos Palos         | 4                                   | 37.5%                      | 3.4%                 | 1.3%  | 0.7%                                 | 62.1%                                       | 8.3%                                | 10.8%                               | 11.8%                              |
| Dunnigan*         | 3                                   | 21.4%                      | 7.6%                 | 0.5%  | 1.3%                                 | 41.2%                                       | 6.9%                                | 19.8%                               | 5.1%                               |

|                   | Number of EJ Indicators by Category | Below Poverty Level (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 (September 2015) |
|-------------------|-------------------------------------|----------------------------|----------------------|---|--------------------------------------|---|-------------------------------------|-------------------------------------|------------------------------------|
| <b>California</b> |                                     | <b>16.4%</b>               | <b>6.2%</b>          | <b>1.0%</b>                                 | <b>13.0%</b>                         | <b>37.6%</b>                                | <b>6.8%</b>                         | <b>11.4%</b>                        | <b>5.5%</b>                        |
|                   |                                     | <b>&gt;16.4%</b>           | <b>&gt;30%</b>       | <b>&gt;30%</b>                              | <b>&gt;30%</b>                       | <b>&gt;30%</b>                              | <b>&gt;8.16%</b>                    | <b>&gt;13.8%</b>                    | <b>&gt;5.5%</b>                    |
| Dutch Flat*       | 1                                   | 0.0%                       | 0.0%                 | 1.9%  | 0.6%                                 | 2.5%  | 3.1%                                | 26.9%                               | 4.5%                               |
| Eureka            | 1                                   | 23.5%                      | 1.9%                 | 3.7%  | 4.2%                                 | 11.6%                                       | 6.1%                                | 11.8%                               | 4.5%                               |
| Fairfield         | 0                                   | 12.7%                      | 15.7%                | 0.8%  | 14.9%                                | 27.3%                                       | 7.4%                                | 10.2%                               | 4.8%                               |
| Fresno            | 4                                   | 30.6%                      | 8.3%                 | 1.7%  | 12.6%                                | 46.9%                                       | 8.9%                                | 9.3%                                | 9.0%                               |
| Garberville*      | 0                                   | 14.4%                      | 1.5%                 | 3.2%  | 1.9%                                 | 5.9%  | 4.7%                                | 13.7%                               | 4.6%                               |
| Grass Valley      | 3                                   | 28.3%                      | 0.4%                 | 1.6%  | 1.5%                                 | 10.4%                                       | 5.9%                                | 23.5%                               | 5.5%                               |
| Groveland*        | 2                                   | 14.3%                      | 0.6%                 | 1.6%  | 0.7%                                 | 4.9%  | 3.5%                                | 28.8%                               | 5.8%                               |
| Healdsburg        | 2                                   | 11.5%                      | 0.5%                 | 1.8%  | 1.1%                                 | 33.9%                                       | 5.6%                                | 15.0%                               | 3.3%                               |
| Hollister         | 3                                   | 12.8%                      | 1.0%                 | 1.8%  | 2.7%                                 | 65.7%                                       | 8.5%                                | 7.4%                                | 6.0%                               |
| Hopland*          | 1                                   | 12.9%                      | 0.5%                 | 5.0%  | 1.3%                                 | 34.8%                                       | 7.3%                                | 7.5%                                | 4.7%                               |
| Indio             | 3                                   | 22.3%                      | 2.4%                 | 1.0%  | 2.2%                                 | 67.8%                                       | 8.5%                                | 12.4%                               | 7.0%                               |
| Inyokern          | 1                                   | 2.3%                       | 1.3%                 | 2.2%  | 2.3%                                 | 10.6%                                       | 4.5%                                | 17.8%                               | 4.3%                               |
| Klamath           | 4                                   | 32.3%                      | 0.1%                 | 41.7%                                       | 0.4%                                 | 11.6%                                       | 7.6%                                | 18.5%                               | 13.5%                              |
| Kyburz*           | 1                                   | 11.4%                      | 1.0%                 | 1.1%  | 3.5%                                 | 12.1%                                       | 4.3%                                | 14.6%                               | 4.9%                               |
| Lancaster         | 3                                   | 22.7%                      | 20.5%                | 1.0%  | 4.3%                                 | 38.0%                                       | 8.0%                                | 8.1%                                | 5.8%                               |
| Laytonville       | 2                                   | 35.7%                      | 1.3%                 | 19.9%                                       | 0.0%                                 | 11.5%                                       | 5.2%                                | 12.2%                               | 15.0%                              |
| Leggett*          | 0                                   | 5.6%                       | 0.0%                 | 2.5%  | 0.0%                                 | 3.3%  | 6.6%                                | 9.8%                                | 4.7%                               |
| Lemoore           | 3                                   | 14.1%                      | 6.4%                 | 1.4%  | 8.2%                                 | 40.0%                                       | 9.0%                                | 7.3%                                | 7.4%                               |
| Lodi              | 3                                   | 19.3%                      | 0.8%                 | 0.9%  | 6.9%                                 | 36.4%                                       | 7.9%                                | 13.5%                               | 8.3%                               |
| Loleta*           | 1                                   | 20.1%                      | 1.5%                 | 2.0%  | 0.6%                                 | 14.6%                                       | 6.8%                                | 8.7%                                | 4.6%                               |

|                   | Number of EJ Indicators by Category | Below Poverty Level (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 (September 2015) |
|-------------------|-------------------------------------|----------------------------|----------------------|---|--------------------------------------|---|-------------------------------------|-------------------------------------|------------------------------------|
| <b>California</b> |                                     | <b>16.4%</b>               | <b>6.2%</b>          | <b>1.0%</b>                                 | <b>13.0%</b>                         | <b>37.6%</b>                                | <b>6.8%</b>                         | <b>11.4%</b>                        | <b>5.5%</b>                        |
|                   |                                     | <b>&gt;16.4%</b>           | <b>&gt;30%</b>       | <b>&gt;30%</b>                              | <b>&gt;30%</b>                       | <b>&gt;30%</b>                              | <b>&gt;8.16%</b>                    | <b>&gt;13.8%</b>                    | <b>&gt;5.5%</b>                    |
| Los Banos         | 4                                   | 24.5%                      | 3.8%                 | 1.4%  | 3.2%                                 | 64.9%                                       | 9.0%                                | 8.6%                                | 8.4%                               |
| Miranda*          | 1                                   | 31.0%                      | 0.8%                 | 2.5%  | 0.8%                                 | 14.4%                                       | 7.7%                                | 11.5%                               | 4.6%                               |
| Mojave            | 4                                   | 31.5%                      | 15.1%                | 1.3%  | 1.3%                                 | 37.6%                                       | 10.0%                               | 10.4%                               | 16.7%                              |
| Nipton*           | 3                                   | 20.4%                      | 8.9%                 | 2.0%  | 7.4%                                 | 49.2%                                       | 7.8%                                | 8.9%                                | 5.9%                               |
| Oakdale           | 2                                   | 17.5%                      | 0.8%                 | 1.0%  | 2.2%                                 | 26.1%                                       | 7.5%                                | 12.3%                               | 6.0%                               |
| Oakhurst          | 2                                   | 10.0%                      | .08%                 | 2.2%  | 1.6%                                 | 16.7%                                       | 5.2%                                | 26.5%                               | 7.4%                               |
| Orick*            | 2                                   | 29.9%                      | 0.0%                 | 10.9%                                       | 0.0%                                 | 5.6%  | 4.2%                                | 18.2%                               | 4.6%                               |
| Palm Desert       | 1                                   | 10.5%                      | 1.8%                 | 0.5%  | 3.4%                                 | 22.8%                                       | 4.2%                                | 32.9%                               | 4.6%                               |
| Palmdale          | 4                                   | 21.3%                      | 14.8%                | 0.9%  | 4.3%                                 | 54.4%                                       | 8.3%                                | 6.6%                                | 7.0%                               |
| Placerville       | 3                                   | 17.6%                      | 0.8%                 | 1.6%  | 0.9%                                 | 17.9%                                       | 6.4%                                | 17.7%                               | 6.6%                               |
| Pollock Pines     | 1                                   | 11.6%                      | 0.3%                 | 1.9%  | 0.8%                                 | 10.4%                                       | 5.7%                                | 16.4%                               | 3.9%                               |
| Rio Dell          | 1                                   | 15.8%                      | 0.4%                 | 3.7%  | 0.7%                                 | 11.4%                                       | 6.7%                                | 13.2%                               | 6.3%                               |
| Rio Vista         | 2                                   | 10.1%                      | 5.1%                 | 0.7%  | 4.9%                                 | 12.4%                                       | 3.7%                                | 32.3%                               | 10.6%                              |
| Santa Clarita     | 1                                   | 8.5%                       | 2.6%                 | 0.7%  | 32.0%                                | 26.9%                                       | 7.0%                                | 11.1%                               | 4.8%                               |
| Santa Nella       | 3                                   | 39.6%                      | 1.6%                 | 1.8%  | 2.2%                                 | 70.1%                                       | 8.0%                                | 6.7%                                | 8.2%                               |
| Smith River*      | 4                                   | 27.0%                      | 0.1%                 | 6.8%  | 0.6%                                 | 33.8%                                       | 9.0%                                | 12.4%                               | 6.5%                               |
| Soda Springs*     | 0                                   | 0.0%                       | 0.0%                 | 2.5%  | 0.0%                                 | 8.6%  | 4.9%                                | 9.9%                                | 4.6%                               |
| South Lake Tahoe  | 2                                   | 18.5%                      | 0.9%                 | 1.1%  | 5.5%                                 | 31.0%                                       | 6.3%                                | 9.8%                                | 5.4%                               |
| Suisun City       | 0                                   | 12.9%                      | 20.3%                | 0.7%  | 19.0%                                | 24.0%                                       | 7.5%                                | 7.7%                                | 4.6%                               |

|                   | Number of EJ Indicators by Category | Below Poverty Level (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 (September 2015) |
|-------------------|-------------------------------------|----------------------------|----------------------|---|--------------------------------------|---|-------------------------------------|-------------------------------------|------------------------------------|
| <b>California</b> |                                     | <b>16.4%</b>               | <b>6.2%</b>          | <b>1.0%</b>                                 | <b>13.0%</b>                         | <b>37.6%</b>                                | <b>6.8%</b>                         | <b>11.4%</b>                        | <b>5.5%</b>                        |
|                   |                                     | <b>&gt;16.4%</b>           | <b>&gt;30%</b>       | <b>&gt;30%</b>                              | <b>&gt;30%</b>                       | <b>&gt;30%</b>                              | <b>&gt;8.16%</b>                    | <b>&gt;13.8%</b>                    | <b>&gt;5.5%</b>                    |
| Tehachapi         | 3                                   | 17.4%                      | 9.0%                 | 1.4%  | 1.7%                                 | 37.9%                                       | 5.2%                                | 8.8%                                | 7.0%                               |
| Tracy             | 2                                   | 9.7%                       | 7.2%                 | 0.9%  | 14.7%                                | 36.9%                                       | 8.0%                                | 6.9%                                | 6.3%                               |
| Truckee           | 0                                   | 8.6%                       | 0.4%                 | 0.6%  | 1.5%                                 | 18.6%                                       | 6.6%                                | 7.8%                                | 4.5%                               |
| Vacaville         | 0                                   | 9.6%                       | 10.3%                | 0.9%  | 6.1%                                 | 22.9%                                       | 6.0%                                | 10.5%                               | 4.3%                               |
| Victorville       | 4                                   | 26.3%                      | 16.8%                | 1.4%  | 0.4%                                 | 47.8%                                       | 8.9%                                | 8.1%                                | 6.3%                               |
| Willits           | 2                                   | 26.2%                      | 0.7%                 | 4.4%  | 1.4%                                 | 20.6%                                       | 7.1%                                | 15.2%                               | 3.7%                               |
| Yermo*            | 3                                   | 20.4%                      | 8.9%                 | 1.1%  | 6.3%                                 | 49.2%                                       | 7.8%                                | 8.9%                                | 5.9%                               |

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/PST045215/0664000.06.00> 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

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Based on the California Energy Commission's interpretation of the *California ARB AQIP Guidelines*, this *LHI Report* assesses the potential impacts to communities because 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's 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 freight transportation projects at California seaports 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.