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**CC-2.** *The Initial Study identifies a key impact but fails entirely to analyze the impacts of those emissions. The IS must assess the impacts of these peak emissions near soccer fields and in environmental disadvantaged communities and evaluate whether less polluting alternatives may mitigate those impacts.*

**Staff Response:**

As discussed in the **Environmental Justice** section of Staff's Initial Study/Mitigated Negative Declaration (IS/MND), the minority population in the six-mile radius around the proposed project constitutes an environmental justice (EJ) population. **Environmental Justice Figure 1** in the IS/MND shows the presence of an EJ population based on race and ethnicity within the six-mile radius of the project site. **Environmental Justice Figure 2 and Table 1** in the IS/MND show that those living in the school districts of Campbell Union, San Jose Unified, and Luther Burbank are considered an EJ population based on a low income population.
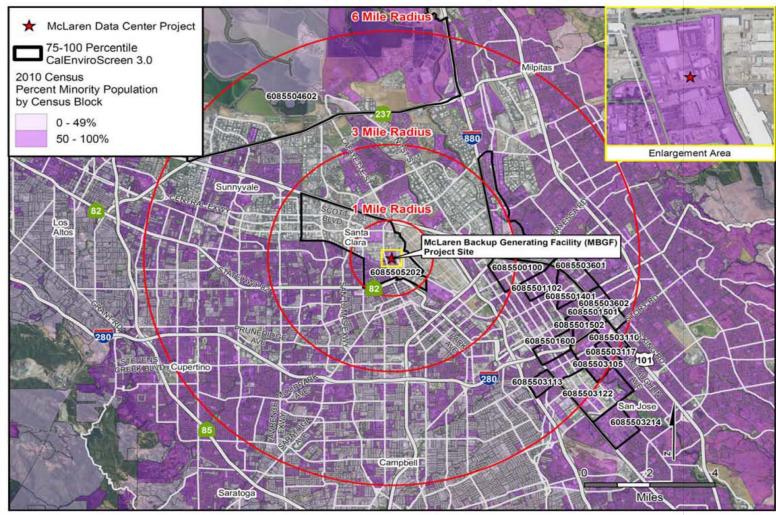
## Criteria Pollutant Issues

The air quality impact assessment found the proposed project is not likely to cause adverse impacts to air quality. With respect to ozone and particulate matter less than 2.5 microns in diameter (PM2.5), Staff's evaluation concludes that ozone and PM2.5 impacts would be less than significant. However, these air quality impacts could potentially cause disproportionate impacts on EJ communities by contributing to the cumulative risks of existing pollution sources. Furthermore, environmental risks could potentially burden those of the community who are vulnerable due to health conditions or socioeconomic factors (e.g., individuals with poor diets, limited or no access to healthcare).

## Disadvantaged Communities

The CalEnviroScreen indicators are used to measure factors that affect the potential[11] for pollution impacts in communities (OEHHA 2017). Staff used CalEnviroScreen 3.0 to identify disadvantaged communities[12] in the vicinity of the proposed project and better understand the characteristics of the areas where impacts would occur (see **Augmented Environmental Justice Figure 1**, which Staff revised to include CalEnviroScreen-defined disadvantaged communities by census tracts).

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[11] It is important to note that CalEnviroScreen is not an expression of health risk and does not provide quantitative information on increases of impacts for specific sites or project. CalEnviroScreen uses the criteria of "proximity" to a hazardous waste site, a leaking underground tank, contaminated soil, an emission stack (industry, power plant, etc.) to determine that a population is "impacted". It does not address general principles of toxicology: dose/response and exposure pathways. For certain toxic chemicals to pose a risk to the public, offsite migration pathways must exist (through ingestion, inhalation, dermal contact, etc.) and contact to a certain amount – not just any amount – must exist.

[12] The California Environmental Protection Agency (CalEPA), for purposes of its Cap-and-Trade Program, has designated "disadvantaged communities" as census tracts having a CalEnviroScreen score at or above the 75th percentile (CALEPA 2017). As a comparative screening tool, it is not intended to be used as a health or ecological risk assessment for a specific area or site.

AUGMENTED ENVIRONMENTAL JUSTICE - FIGURE 1
McLaren Backup Generating Facility (MBGF) - Census 2010 Minority Population by Census Block

CALIFORNIA ENERGY COMMISSION - SITING, TRANSMISSION AND ENVIRONMENTAL PROTECTION DIVISION
SOURCES: Census 2010 PL 94-171 Data. CalEnviroscreen 3.0

Because a CalEnviroScreen score evaluates multiple pollutants and factors collectively, Staff examined individual contributions of indicators that are relevant to air quality (see **Air Quality Table EJ-1**). Values are shown as percentiles, which indicate the percent of all census tracts with a lower score. A higher percentile indicates a higher potential relative burden.[13] The census tract where the McLaren site is located is shaded in the tables below.

**Air Quality Table EJ-1**
**CalEnviroScreen 3.0 Indicator Percentile Scores**

| Census Tract[1] | Overall Score Range[2] | Ozone Concentration[3] ($\mu g/m^3$) | Ozone Percentile[4] (%) | PM2.5 Concentration[5] ($\mu g/m^3$) | PM2.5 Percentile[4] (%) |
|---|---|---|---|---|---|
| 6085503601 | 85-90% | 0.035 | 17 | 10.37 | 53 |
| 6085503110 | 80-85% | 0.038 | 22 | 10.37 | 53 |
| 6085503113 | 75-80% | 0.038 | 22 | 10.37 | 53 |
| 6085503602 | 80-85% | 0.038 | 22 | 10.37 | 53 |
| 6085503105 | 90-95% | 0.038 | 22 | 10.37 | 53 |
| 6085500100 | 85-90% | 0.035 | 17 | 10.37 | 53 |
| 6085505202 | 75-80% | 0.035 | 17 | 10.37 | 53 |
| 6085501501 | 75-80% | 0.038 | 22 | 10.37 | 53 |
| 6085501401 | 75-80% | 0.035 | 17 | 10.37 | 53 |
| 6085501502 | 70-75% | 0.035 | 17 | 10.37 | 53 |
| 6085503117 | 75-80% | 0.038 | 22 | 10.37 | 53 |
| 6085501600 | 80-85% | 0.035 | 17 | 10.37 | 53 |
| 6085503122 | 85-90% | 0.038 | 22 | 10.37 | 53 |
| 6085501102 | 80-85% | 0.035 | 17 | 10.37 | 53 |
| 6085504318 | 85-90% | 0.035 | 17 | 10.37 | 53 |
| 6085504602 | 80-85% | 0.035 | 17 | 9.96 | 43 |

(Source: CalEnviroScreen 3.0 Data, https://oehha.ca.gov/calenviroscreen/maps- data/download-data)
Notes:
1. Census tract locations are shown in **Augmented Environmental Justice Figure 1**.
2. Overall Score Range incorporates all indicators in OEHHA 2017.
3. Ozone concentrations are below the 8-hour ambient air quality standard of 0.070 ppm.
4. Census tracts were ordered by concentration values and assigned a percentile based on the statewide distribution of values. Only concentrations over the federal standard from 2012-2014 were used by CalEnviroScreen to determine a percentile.
5. PM2.5 concentrations are all below the Annual Mean ambient air quality standard of 12 $\mu g/m^{^3}$.

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[13] Each census tract was assigned a score based on the relative concentrations of different contaminants and whether multiple contaminants are present. A census tract with a drinking water contaminant score in the 75 percentile indicates that its burden is higher than 75 percent of all California census tracks.

The indicator scores presented in **Air Quality Table EJ-1** are similar among census tracts.

**Ozone Impacts**

Ozone is known to cause numerous health effects which can potentially affect EJ communities due to:

- Adverse effects of ozone, including lung irritation, inflammation and exacerbation of existing chronic conditions, can be seen at even low exposures (Alexis *et al.* 2010, Fann *et al.* 2012, Zanobetti and Schwartz 2011).;

- Studies have shown that the increased risk of asthma is higher among children under 2 years of age, young males, and African American children that have been exposed to ambient ozone concentrations (Lin *et al.*, 2008, Burnett *et al.*, 2001); and,

- Increases in ambient ozone levels have also been associated with higher mortality, particularly in the elderly, women and African Americans (Medina-Ramon, 2008).

Ambient air quality standards (AAQS) are established to protect the health of even the most sensitive individuals in our communities. An air quality standard defines the maximum amount of a pollutant that can be present in outdoor air without harm to the public's health. Both the California Air Resources Board (ARB) and the U.S. Environmental Protection Agency (U.S. EPA) are authorized to set ambient air quality standards. Even though ozone is not directly emitted from the emission sources such as at McLaren, the precursor pollutants that create ozone such as nitrogen oxides (NOx) and volatile organic compounds (VOCs) are expected to be emitted.

For CalEnviroScreen, the indicator ozone is determined by the amount of daily maximum 8-hour ozone concentration over the California 8-hour standard (0.070 parts per million (ppm)), averaged over three years (2012-2014). According to CalEnviroScreen data from 2002-2014, ozone concentrations in the census tracts in **Air Quality Table EJ-1** were all below the 8-hour ozone health-based standard of 0.070 ppm.

For this reason, the proposed project would not individually or cumulatively contribute to disproportionate ozone air quality impacts to the EJ population.

**PM2.5 Impacts**

Particulate matter (PM) is a complex mixture of aerosolized solid and liquid particles including such substances as organic chemicals, dust, allergens and metals. These particles can come from many sources, including cars and trucks, industrial processes, wood burning, or other activities involving combustion. The composition of PM depends on the local and regional sources, time of year, location and weather[14].

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[14] California Communities Environmental Health Screening Tool, Version 3.0 (CalEnviroScreen 3.0) Guidance And Screening Tool, January 2017.

PM2.5 refers to particles that have a diameter of 2.5 micrometers or less. PM2.5 is known to cause numerous health effects which can potentially affect EJ communities. Particles in this size range can have adverse effects on the heart and lungs, including lung irritation, exacerbation of existing respiratory disease, and cardiovascular effects.

For CalEnviroScreen, the indicator PM2.5 is determined by the annual mean concentration of PM2.5 (average of quarterly means), averaged over three years (2012-2014). According to CalEnviroScreen data from 2012-2014, PM2.5 concentrations in the census tracts in **Air Quality Table EJ-1** were all below the annual mean PM2.5 health based ambient air quality standard of 12 µg/m$^3$.

For this reason, the proposed project would not individually or cumulatively contribute to disproportionate PM2.5 air quality impacts to the EJ population.

**Environmental Justice Air Quality Conclusion**

Staff has considered the environmental justice population surrounding the site depicted in **Environmental Justice Figure 1** and **Figure 2** in the IS/MND, which show environmental justice populations based on race/ethnicity and low income within portions of the 6-mile radius around the proposed site. In addition, Staff has considered the project's effects on disadvantaged communities as defined by CalEnviroScreen and shown in **Augmented Environmental Justice Figure 1** included in this document. Staff does not expect adverse air quality impacts to members of the public, recreational users, or EJ population.

Air quality impacts, specifically with regards to ozone and PM2.5, would not contribute to disproportionate impacts to the EJ population. Also, air quality impacts from the project on the EJ population would be less than significant.

## Public Health and Toxic Air Contaminant Issues

The following section responds to the portion of the comment that focuses on toxic air contaminant issues. This focus includes ozone and PM2.5, but also includes additional public health indicators. See **Public Health Table EJ-2**.

## Public Health Table EJ-2

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|---|---|---|---|---|---|---|---|---|---|---|---|
| **CalEnviroScreen 3.0 Indicator Percentile Scores of Disadvantaged Communities by Census tract in the Project's Six-Mile Radius[1]** | | | | | | | | | | | |
| **Census Tract** | **Total Population** | **CES 3.0 Percentile** | **Ozone** | **PM 2.5** | **Diesel PM** | **Pesticides** | **Toxic Release** | **Traffic Density** | **Asthma** | **Low Birth Weight** | **Cardiovascular Disease** |
| 6085503601 | 2992 | 85-90% | 17 | 53 | 88 | 0 | 44 | 83 | 57 | 64 | 51 |
| 6085503110 | 4618 | 80-85% | 22 | 53 | 88 | 0 | 36 | **97** | 65 | 37 | 81 |
| 6085503113 | 4760 | 75-80% | 22 | 53 | **91** | 0 | 33 | 76 | 38 | 47 | 35 |
| 6085503602 | 4741 | 80-85% | 22 | 53 | 89 | 0 | 40 | **92** | 74 | 87 | 71 |
| 6085503105 | 2484 | 90-95% | 22 | 53 | 89 | 0 | 35 | 88 | 51 | 81 | 53 |
| 6085500100 | 6339 | 85-90% | 17 | 53 | **92** | 0 | 48 | 82 | 71 | 49 | 65 |
| 6085505202 | 5867 | 75-80% | 17 | 53 | **90** | 0 | 57 | 72 | 35 | 80 | 52 |
| 6085501501 | 4278 | 75-80% | 22 | 53 | 89 | 0 | 40 | **96** | 64 | 20 | 57 |
| 6085501401 | 3295 | 75-80% | 17 | 53 | 89 | 0 | 43 | **90** | 53 | 68 | 38 |
| 6085501502 | 4549 | 70-75% | 17 | 53 | 89 | 0 | 39 | **96** | 44 | 42 | 31 |
| 6085503117 | 3120 | 75-80% | 22 | 53 | 89 | 0 | 35 | 55 | 65 | 12 | 82 |
| 6085501600 | 6854 | 80-85% | 17 | 53 | 89 | 0 | 37 | **96** | 68 | 77 | 52 |
| 6085503122 | 3449 | 85-90% | 22 | 53 | **90** | 0 | 32 | 44 | 28 | **92** | 14 |
| 6085501102 | 4477 | 80-85% | 17 | 53 | 89 | 0 | 44 | 64 | 68 | 42 | 60 |
| 6085504318 | 5265 | 85-90% | 17 | 53 | **92** | 0 | 54 | 88 | 41 | 61 | 44 |
| 6085504602 | 2144 | 80-85% | 17 | 43 | 26 | 38 | 35 | 88 | 80 | **100** | 34 |

[1]Disadvantaged Communities census tracts that intersect or are within a six-mile radius of the project site. Indicators with percentiles that are shown as **bold** text are in the 90 percentile or higher. **Source:** OEHHA 2017

## Diesel PM

This indicator represents how much diesel particulate matter (PM) is emitted into the air within and near the census tract. The data are from 2012 California Air Resources Board's (ARB's) emission data from on-road vehicles (trucks and buses) and off-road sources (ships and trains, for example). Among these 16 census tracts, five are higher than the 90th percentile. The highest percentile is 92 (in census tracts 6085500100 and 6085504318), meaning these two are higher than 92 percent of the census tracts in California. However, according to the results of the health risk assessment (HRA)

conducted for this project, impacts associated with diesel PM from the proposed project construction and operation activities (diesel-fueled equipment) would be less than significant and would not have a significant cumulative contribution to the diesel PM levels in the disadvantaged communities.

**Pesticide Use**

This indicator represents the reported use of 70 hazardous and volatile pesticides in the years 2012-2014 collected by the California Department of Pesticide Regulation. Only pesticides used on agricultural commodities are included in the indicator. Among these 16 census tracts, none are higher than the 90th percentile; therefore, pesticide use is not a concern.

**Toxic Releases from Facilities**

This indicator represents modeled air concentrations of chemical releases from large facility emissions in and near the census tract. The U.S. Environmental Protection Agency (US EPA) provides public information on the amount of chemicals released into the environment from many facilities. This indicator uses the modeled air concentration and toxicity of the chemical to determine the toxic release score. The data are from 2010. Among these 16 census tracts, none are higher than the 90th percentile; therefore, toxic releases from facilities are not a concern.

**Traffic Density**

This indicator represents the sum of traffic volumes adjusted by road segment length. It is calculated by dividing the traffic volumes by the total road length within 150 meters of the census tract boundary. It is not a measure of level of service (LOS) on roadways. The data are from 2013. Among the 16 census tracts of Staff's focus, five are higher than the 90th percentile. The highest one is 97 (in census tract 6085503110), meaning it is higher than 97 percent of the census tracts in California. Traffic Density is related to the diesel PM emitted from vehicles. However, according to the results of the HRA conducted for the project, impacts associated with diesel PM from the proposed project construction and operation activities (diesel-fueled equipment) would be less than significant and would not have a significant cumulative contribution to the diesel PM-related traffic density in the disadvantaged communities.

**Asthma ER Visits**

This indicator is a representation of an asthma rate. It measures the number of emergency room visits for asthma per 10,000 people over the years 2011 to 2013. The information was collected by the California Office of Statewide Health Planning and Development. Among these 16 census tracts, none are higher than the 90th percentile; therefore, asthma is not a concern.

**Low Birth Weight Infants**

This indicator represents the percent of low birth weight babies in the census tract. It measures the percentage of babies born weighing less than 2500 grams (about 5.5 pounds) out of the total number of live births over the years 2006 to 2012. The information was collected by the California Department of Public Health. Among these 16 census tracts, Census Tract 6085504602 has the highest potential relative burden. The low birth weight percentile for this census tract is 100, meaning the percent low birth weight is higher than all other census tracts in California. In its total of 2,144 people, 10.38 percent of births in this census tract were of low birth weight. Staff's HRA was based on a highly conservative health-protective methodology that accounts for impacts on the most sensitive individuals in a given population. According to the results of the HRA, the risk of the nearest sensitive receptor (i.e. Maximally Exposed Individual Sensitive Receptor [MEISR]) is below health-based thresholds. Therefore, the toxic emissions from the project would not cause significant health effects for the low birth weight infants in these disadvantaged communities or have a significant cumulative contribution to these disadvantaged communities.

**Cardiovascular Disease**

This indicator represents the rate of heart attacks. It measures the number of emergency department visits for acute myocardial infarction (or heart attack) per 10,000 people over the years 2011 to 2013. Among these 16 census tracts, none are higher than the 90 percentile; therefore, cardiovascular disease is not a concern.

**Environmental Justice Public Health Conclusion**

Staff concluded that no one (including the public, off-site nonresidential workers, recreational users, and EJ populations) would experience any acute or chronic cancer or non-cancer effects of health significance during construction and operation of the proposed project. Further, construction and operation of the project would not cause significant adverse direct, indirect, or cumulative public health impacts from the project's toxic air emissions. As the public health impacts are calculated for sensitive populations, including the EJ population, and the project's toxic air emissions would not have a significant impact on the most sensitive population, the project's impact would not disproportionately impact the EJ population represented in **Augmented Environmental Justice Figure 1**.

Staff concludes that the project would not have a significant cumulative contribution to the indicators of ozone, PM2.5, diesel PM, pesticide use, toxic releases from facilities, traffic density, asthma ER visits, low birth weight infants, or cardiovascular disease in the disadvantaged community census tracts in the vicinity of the proposed project.