

3.5 Greenhouse Gas Emissions

3.5.1 Introduction

This section describes the environmental and regulatory settings addressing greenhouse gas (GHG) emissions and global climate change in California. The section identifies the federal, state, and local plans and policies developed to reduce GHG emissions. The analysis within this section discusses the inventory of GHG emissions associated with the implementation of the Arroyo Seco Music and Arts Festival Project (proposed Project), evaluates the potential climate change impacts, and, if applicable, discusses mitigation measures to reduce potential impacts. Calculations and assumptions associated with the GHG analysis are included in Appendix E of this EIR.

3.5.2 Existing Conditions

Gases that trap heat in the atmosphere are called GHGs. The major concern with GHGs is that increases in their concentrations are causing global climate change. Global climate change is a change in the average weather on Earth that can be measured by wind patterns, storms, precipitation, and temperature. Although there is disagreement as to the rate of global climate change and the extent of the impacts attributable to human activities, most in the scientific community agree that there is a direct link between increased emissions of GHGs and long term global temperature increases.

The principal GHGs are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), perfluorocarbons (PFCs), and hydrofluorocarbons (HFCs). Because different GHGs have different warming potential and CO₂ is the most common reference gas for climate change, GHG emissions are often quantified and reported as CO₂ equivalents. For example, SF₆ is a GHG commonly used in the utility industry as an insulating gas in circuit breakers and other electronic equipment. SF₆, while comprising a small fraction of the total GHGs emitted annually world-wide, is a much more potent GHG with 22,800 times the global warming potential as CO₂. Therefore, an emission of one metric ton (MT) of SF₆ could be reported as an emission of 22,800 MT of CO₂e.¹ Large emission sources are reported in million metric tons (MMT) of CO₂e.¹

Some of the potential effects in California of global warming may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more forest fires, and more drought years (CARB, 2009). Globally, climate change has the potential to impact numerous environmental resources through potential, though uncertain, impacts related to future air temperatures and precipitation patterns. The projected effects of global warming on weather and climate are likely to vary regionally, but are expected to include the following direct effects (IPCC, 2007):

¹ A metric ton is 1,000 kilograms; it is equal to approximately 1.1 U.S. tons and approximately 2,204.6 pounds.

- Higher maximum temperatures and more hot days over nearly all land areas;
- Higher minimum temperatures, fewer cold days and frost days over nearly all land areas;
- Reduced diurnal temperature range over most land areas;
- Increase of heat index over land areas; and
- More intense precipitation events.

Also, there are many secondary effects that are projected to result from global warming, including global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity. While the possible outcomes and the feedback mechanisms involved are not fully understood and much research remains to be done, the potential for substantial environmental, social, and economic consequences over the long term may be great.

California produced 459 gross MMTCO₂e in 2012 (CARB, 2014a). Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2012, accounting for 36 percent of total GHG emissions in the state (CARB, 2014a). This sector was followed by the electric power sector (including both in-state and out-of-state sources) (21 percent) and the industrial sector (19 percent) (CARB, 2014a).

3.5.3 Regulatory Framework

Federal

The federal Clean Air Act (CAA) does not specifically regulate GHG emissions; however, the United States (U.S.) Supreme Court has determined that GHGs are pollutants that can be regulated under the federal CAA. There are currently no federal regulations that set ambient air quality standards for GHGs.

State

Executive Order S-3-05

In 2005, in recognition of California's vulnerability to the effects of climate change, Governor Schwarzenegger established Executive Order S-3-05, which set forth a series of target dates by which statewide emissions of GHGs would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

Assembly Bill 32 – California Global Warming Solutions Act

California Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006, requires the California Air Resources Board (CARB) to establish a statewide GHG emissions cap for 2020 based on 1990 emission levels. AB 32 required CARB to adopt and enforce programs and regulations that identify and require selected sectors or categories of emitters of GHGs to report and verify their statewide GHG emissions. In December 2007 CARB adopted 427 MT CO₂e as the statewide GHG emissions limit equivalent to the statewide levels for 1990. This is approximately 28 percent below forecasted 2020 “business-as-usual” emissions of 596 MMT of CO₂e, and about 10 percent below average annual GHG emissions during the period of 2002 through 2004 (CARB, 2009).

CARB published the *Expanded List of Early Action Measures To Reduce Greenhouse Gas Emissions In California Recommended For Board Consideration* in September 2007 (CARB, 2007). CARB adopted nine Early Action Measures for implementation, including Ship Electrification at Ports, Reduction of High Global-Warming-Potential Gases in Consumer Products, Heavy-Duty Vehicle Greenhouse Gas Emission Reduction (Aerodynamic Efficiency), Reduction of Perfluorocarbons from Semiconductor Manufacturing, Improved Landfill Gas Capture, Reduction of Hydrofluorocarbon-134a from Do-It-Yourself Motor Vehicle Servicing, Sulfur Hexafluoride Reductions from the Non-Electric Sector, a Tire Inflation Program, and a Low Carbon Fuel Standard.

As of January 1, 2012, the GHG emissions limits and reduction measures adopted in 2011 by CARB became enforceable. In designing emission reduction measures, CARB must aim to minimize costs, maximize benefits, improve and modernize California’s energy infrastructure, maintain electric system reliability, maximize additional environmental and economic co-benefits for California, and complement the state’s efforts to improve air quality.

Climate Change Scoping Plan

In December 2008, CARB approved the AB 32 Scoping Plan outlining the state’s strategy to achieve the 2020 GHG emissions limit (CARB, 2009). This Scoping Plan, developed by CARB in coordination with the Climate Action Team (CAT), proposes a comprehensive set of actions designed to reduce overall GHG emissions in California, improve the environment, reduce dependence on oil, diversify California’s energy sources, save energy, create new jobs, and enhance public health.

As required by AB 32, the Scoping Plan must be updated at least every five years to evaluate the mix of AB 32 policies to ensure that California is on track to meet the targets set out in the legislation. In October 2013, a draft Update to the initial Scoping Plan was developed by CARB in collaboration with the California Climate Action Team (CCAT). The draft Update builds upon the initial Scoping Plan with new strategies and expanded measures, and identifies opportunities to leverage existing and new funds to drive GHG emission reductions through strategic planning and targeted program investments. The draft Update to the initial Scoping Plan was presented to CARB’s

Board for discussion at its February 20, 2014 meeting. Subsequently, the first update to the AB 32 Scoping Plan was approved on May 22, 2014 by CARB.

As part of the update to the Scoping Plan, the emissions reductions required to meet the 2020 statewide GHG emissions limit were further adjusted. The primary reason for adjusting the 2020 statewide emissions limit was based on the fact that the original Scoping Plan relied on the Intergovernmental Panel on Climate Change's (IPCC) 1996 Second Assessment Report (SAR) to assign the global warming potentials (GWPs) of greenhouse gases. Recently, in accordance the United Nations Framework Convention on Climate Change (UNFCCC), international climate agencies have agreed to begin using the scientifically updated GWP values in the IPCC's Fourth Assessment Report (AR4) that was released in 2007. Because CARB has begun to transition to the use of the AR4 100-year GWPs in its climate change programs, CARB recalculated the Scoping Plan's 1990 GHG emissions level with the AR4 GWPs. As the recalculation resulted in 431 MMTCO₂e, the 2020 GHG emissions limit established in response to AB 32 is now slightly higher than the 427 MMTCO₂e in the initial Scoping Plan. Considering that the update also adjusted the 2020 BAU forecast of GHG emissions to 509 MMTCO₂e, a 15 percent reduction below the estimated BAU levels was determined to be necessary to return to 1990 levels by 2020 (CARB, 2014b).

Executive Order S-1-07

Executive Order S-1-07, which was signed by Governor Schwarzenegger in 2007, proclaims that the transportation sector is the main source of GHG emissions in California. It establishes a goal to reduce the carbon intensity of transportation fuels sold in California by at least 10 percent by 2020. As a result of this order, CARB approved a proposed regulation to implement the low carbon fuel standard (LCFS) on April 23, 2009, which will reduce GHG emissions from the transportation sector in California by about 16 MMT in 2020. The LCFS is designed to reduce California's dependence on petroleum, create a lasting market for clean transportation technology, and stimulate the production and use of alternative, low-carbon fuels in California. The LCFS is designed to provide a durable framework that uses market mechanisms to spur the steady introduction of lower carbon fuels. The framework establishes performance standards that fuel producers and importers must meet each year beginning in 2011.

Senate Bill 375

SB 375, which establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions, was adopted by the state on September 30, 2008. On September 23, 2010, CARB adopted the vehicular GHG emissions reduction targets that had been developed in consultation with the metropolitan planning organizations (MPOs); the targets require a 7 to 8 percent reduction by 2020 and between 13 to 16 percent reduction by 2035 for each MPO. SB 375 recognizes the importance of achieving significant GHG reductions by working with cities and counties to change land use patterns and improve transportation alternatives. Through the SB 375 process, MPOs, such as the Southern California Council of Governments

(SCAG) will work with local jurisdictions in the development of sustainable communities strategies (SCS) designed to integrate development patterns and the transportation network in a way that reduces greenhouse gas emissions while meeting housing needs and other regional planning objectives. SCAG's reduction target for per capita vehicular emissions is 8 percent by 2020 and 13 percent by 2035 (CARB 2010). The MPOs will prepare their first SCS according to their respective regional transportation plan (RTP) update schedule with the SCAG RTP/SCS adopted on April 4, 2012.

Senate Bill 97

Senate Bill (SB) 97, enacted in August 2007, required the Office of Planning and Research (OPR) to develop guidelines for the mitigation of GHG emissions, or the effects related to releases of GHG emissions. On April 13, 2009, the OPR submitted proposed amendments to the Natural Resources Agency in accordance with SB 97 regarding analysis and mitigation of GHG emissions. As directed by SB 97, the Natural Resources Agency adopted Amendments to the CEQA Guidelines for GHG emissions on December 30, 2009. On February 16, 2010, the Office of Administrative Law approved the Amendments, and filed them with the Secretary of State for inclusion in the California Code of Regulations. The Amendments became effective on March 18, 2010.

California Green Building Standard Code

In January 2010, the State of California adopted the 2010 California Green Building Standards Code (CALGreen), which became effective in January 2011. Building off of the initial 2008 California Green Building Code, the 2010 CALGreen Code represents a more stringent building code that requires, at a minimum, that new buildings and renovations in California meet certain sustainability and ecological standards. The 2010 CALGreen Code has mandatory Green Building provisions for all new residential buildings that are three stories or fewer (including hotels and motels) and all new non-residential buildings of any size that are not additions to existing buildings.

In early 2013 the California Building Standards Commission adopted the 2013 California Building Standards Code that also included the latest 2013 CALGreen Code, which became effective on January 1, 2014. The mandatory provisions of the code are anticipated to reduce 3 MMT of GHG emissions by 2020, reduce water use by 20 percent or more, and divert 50 percent of construction waste from landfills. The 2013 California Energy Code (Title 24, Part 6), which is also part of the CALGreen Code (Title 24, Part 11, Chapter 5.2), became effective on July 1, 2014.

Local

South Coast Air Quality Management District (SCAQMD)

As a method for determining significance under CEQA, SCAQMD developed a draft tiered flowchart in 2008 for determining significance thresholds for GHGs for industrial projects where SCAQMD is acting as the lead agency. In December 2008, SCAQMD adopted a 10,000 MTCO₂e/year for industrial facilities, but only with respect to projects

where SCAQMD is the lead agency. SCAQMD has not adopted a threshold for residential or commercial projects at the time of this writing.

The SCAQMD flowchart uses a tiered approach in which a proposed project is deemed to have a less than significant impact related to GHG emissions when any of the following conditions are met:

- GHG emissions are within GHG budgets in an approved regional plan;
- Incremental increases in GHG emissions due to the project are below the defined Significance Screening Levels, or Mitigated to Less than the Significance Screening Level;
- Performance standards are met by incorporating project design features and/or implementing emission reduction measures; and
- Carbon offsets are made to achieve target significance screening level.

City of Pasadena

General Plan

The Open Space and Conservation Element of the City of Pasadena General Plan, which was adopted on January 23, 2012, provides a blueprint to assure efficient stewardship of the City's green spaces, recreation facilities, and natural resources. In particular, one of the main purposes of the Open Space and Conservation Element is to develop policies that promote the conservation of energy, air, water, and natural resources, and in doing so, enhance the overall quality of life in Pasadena (City of Pasadena, 2012).

The Open Space section of the Element prescribes goals and objectives to protect and increase the City's natural open space and support the City's conservation efforts by protecting watersheds, improving air quality, and reducing energy needs in the City. The goals and objectives that are most relevant to reducing Climate Change include:

Goal: Preserve, Acquire, and Create Open Space

Objectives:

- Preserve currently zoned open spaces, natural open spaces, hillsides, viewsheds, watersheds, and recreational areas.
- Develop criteria, prioritize, and plan to acquire additional open space.
- Create additional open spaces through reclamation and restoration.
- Participate in regional, state, and federal programs designed to preserve, maintain, and acquire open space.
- Direct organized recreation to existing parks, fields, and school facilities and away from natural open spaces.

Goal: Urban Forest – Protect and enhance Pasadena’s trees on public and privately owned land.

Objectives:

- Increase the number of trees in the City to diminish the urban heat sink, and improve air quality.

In addition, the Environmental Quality, Conservation, and Sustainable Use Practices section of the Open Space and Conservation Element tracks current efforts to conserve the natural and urban environment through sustainable practices in energy, water, air, and land. The following key goal and objectives listed in the Environmental Quality, Conservation, and Sustainable Use Practices section are relevant to both GHG emissions:

Goal: Establish Pasadena as a national and international leader on energy and water conservation and environmental stewardship efforts, including air quality protection, energy efficiency requirements, renewable energy standards, natural resource conservation, and greenhouse gas emission standards in the areas of energy, water, air, and land.

Objectives:

- Protect and conserve natural resources.
- Improve the quality of the natural environment through increased conservation and sustainable practices.
- Improve the quality of the urban environment through increased conservation and sustainable practices.
- Effectively manage environmental health and reduce solid waste utilizing best practices and the most current technologies.
- Increase public, private, and governmental awareness of the natural environment and environmental health.

Green City Action Plan

The City of Pasadena Green City Action Plan, which was approved by the City Council on September 18, 2006, is a progressive list of environmental initiatives for the City to take in its quest to become a sustainable and green community and follows the framework of the United Nations Green Cities Declaration and Urban Environmental Accords. The United Nations Green Cities Declaration is a collaborative platform and a call to action for cities across the globe to take in recognition that a majority of the world’s population now reside in cities, and that cities consume 75 percent of the world’s natural resources creating environmental challenges. The Urban Environmental Accords contain 21 action items that lay the groundwork for addressing universal urban

environmental issues on energy, waste reduction, urban design, urban nature, transportation, environmental health, and water issues. The initiatives contained in the Green City Action Plan include developing a green fleet of City vehicles, using only environmentally friendly cleaning products in City buildings, and buying “green” goods where possible.

City of Arcadia

General Plan

The Resource Sustainability Element of the City of Arcadia General Plan, which was adopted in November 2010, establishes policies that will help to use resources in a manner that protects and even enhances them for future residents. In particular, the Resource Sustainability Element addresses air quality, water resources, energy, waste management and recycling, mineral resources, and the hillsides (City of Arcadia, 2010). The goals and policies that are most relevant to the Project for reducing Climate Change include:

Goal RS-1: Continued improvement in local and regional air quality.

Policy RS-1.4: Lower the emissions caused by motor vehicles through Transportation Demand Management strategies and land use patterns that reduce vehicle miles traveled.

Policy RS-1.5: Promote the reduction of vehicular traffic and improved efficiency of the City’s circulation system (i.e. roadways) as a means to improving air quality.

Goal RS-2: Reduce Arcadia’s carbon footprint in compliance with SB375 and AB32.

Policy RS-2.1: Cooperate with the state to implement AB 32, which calls for reducing greenhouse gas emissions to 1990 levels by 2020, and Executive Order S-3-05, which calls for 1990 levels by 2020 and 80 percent below 1990 levels by 2050.

Policy RS-2.2: Reduce per capita greenhouse gas emissions to 15 percent below 2005 levels by 2020, and total municipal greenhouse gas emissions to 15 percent below 2005 levels by 2020.

Policy RS-2.3: Participate in regional strategies and plan to implement SB 375, and in particular, use the legislatively authorized incentives, such as grants and transportation funding and waivers to environmental assessments, to encourage infill and transit-oriented development.

Policy RS-2.5: Pursue the enhancement of bicycle and pedestrian infrastructure set forth in the Circulation and Infrastructure Element to help decrease vehicle miles traveled and vehicle trips.

Goal RS-3: Promoting and utilizing clean form of transportation to reduce Arcadia's carbon footprint.

Policy RS-3.2: Incorporate energy-efficient vehicles into the City's transit system.

Goal RS-5: Wise and creative energy use that incorporates new technologies for energy generation and new approaches to energy conservation.

Policy RS-5.9: Facilitate the provision of energy-efficient modes of transportation and fixed facilities which establish transit, bicycle, and pedestrian modes as viable alternatives.

Goal RS-6: A higher level of waste reduction and recycling city-wide relative to 2009 achievements.

Policy RS-6.1: Pursue efforts that increase composting and recycling, and reduce waste generation, focusing especially on large commercial and industrial waste producers.

City of Los Angeles

General Plan

In November 1992, the City of Los Angeles adopted its General Plan. The General Plan Air Quality Element's primary objectives were to aid the region in attaining and maintaining the National Ambient Air Quality Standards while continuing to foster economic growth and the improvement of the quality of life of City residents. Further the Air Quality Element described how the City planned to implement local programs that were contained in the regional plan. The following goals in the 1992 Los Angeles General Plan pertain to GHG emissions:

Goal 1: Good air quality and mobility in an environment of continued population growth and healthy economic structure;

Goal 2: Less reliance on single occupant vehicles with fewer commute and non-work trips;

Goal 3: Efficient management of transportation facilities and system infrastructure using cost effective system management and innovative demand-management techniques;

Goal 4: Minimal impact of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation, and air quality;

Goal 5: Energy efficiency through land use and transportation planning, the use of renewable resources and less polluting fuels, and the implementation of conservation measures including passive methods such as site orientation and tree planting; and

Goal 6: Citizen awareness of the linkages between personal behavior and air pollution, and participation in efforts to reduce air pollution.

Green LA Plan

The City of Los Angeles Green LA Plan (Los Angeles, 2007) is the framework for the City to confront global climate change. The Green LA Plan engages residents and the City alike to create a cleaner, greener, sustainable Los Angeles and to grow a green economy. The initiatives contained in the Green LA Plan include greening the power from the largest municipal utility in the United States, making Los Angeles a worldwide leader in green buildings, transforming Los Angeles into a model of energy efficiency, helping Angelinos to be more energy efficient, decrease per capita water use, lower environmental impact and carbon intensity of transportation, shift from waste disposal to recourse recovery, “greening” ports and the airport, increasing open space, create demand and catalyze growth of the green economic sector, and improve the ability of the City to respond to climate change. The Green LA Plan sets a goal of reducing Citywide CO₂ emissions to 35 percent below 1990 levels by 2030.

ClimateLA Program Document

The ClimateLA Program Document is the implementation program that provides the detailed information on each action identified in the Green LA Plan. ClimateLA is a living document that reflects a process of ongoing learning and continuous improvement as technology advances and City departments develop expertise in the methods of lowering GHG emissions.

3.5.4 Impacts

This section describes the impact analysis relating to air quality and GHG emissions for the proposed Project. It describes the methods and applicable thresholds used to determine the impacts of the proposed Project.

Methodology

At the time of writing of this report, SCAQMD has not formally adopted a significance threshold for GHG emissions generated by a proposed project (for which SCAQMD is not the lead agency), or a uniform methodology for analyzing impacts related to GHG emissions on global climate change. Similarly, the City also has not adopted any significance criteria or guidelines for GHG analysis at the time of this writing. Pursuant to full disclosure and according to OPR’s CEQA Guidelines that state, “A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of GHG emissions resulting from a

project,” the setup/breakdown and operational emissions associated with the Project have been quantified using methods described below.

Setup/breakdown related GHG emissions were estimated using the California Emissions Estimator Model (CalEEMod) where appropriate to estimate emissions with use of CARB emission factors for gasoline vehicle emissions operating onsite during setup/breakdown and Festival operations. CalEEMod incorporates the most recently approved (2011) versions of the Emission FACTors (EMFAC) and Off-Road Emissions (OFF-ROAD) models developed by CARB. CalEEMod estimates the emissions of CO₂, CH₄, and N₂O as well as the resulting total CO₂e emissions associated with construction-related GHG sources such as off-road construction equipment, material delivery trucks, soil haul trucks, and construction worker vehicles. As CalEEMod currently uses IPCC's 1996 SAR to assign the GWPs for CH₄ and N₂O, the emissions for these two GHGs were taken from the CalEEMod outputs and converted to CO₂e emissions outside of CalEEMod using the updated GWPs from IPCC's AR4. The GHG analysis incorporates similar assumptions as the air quality analysis for consistency. Based on SCAQMD's 2008 *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold* document, SCAQMD recommends that for construction GHG emissions the total emissions for a project be amortized over a 30-year period and added to its operational emission estimates (SCAQMD, 2008). However, as the setup and breakdown activities would occur annually for the duration of the Project implementation, the emissions are not amortized for this Project.

Operational emissions of GHGs, including GHGs generated by direct and indirect sources, are estimated according to the recommended methodologies from SCAQMD. Direct sources include emissions such as vehicle trips and natural gas consumption. Indirect sources include off-site emissions occurring as a result of the Project's operations such as electricity and water consumption and solid waste disposal. The direct and indirect emissions generated during the proposed Project's operations were estimated using CalEEMod for all non-mobile sources. Mobile sources were calculated outside of CalEEMod using CARB provided emission factors. Similar to the calculation of the Project's setup/breakdown related GHG emissions, the operational emissions of CH₄ and N₂O were extracted from the CalEEMod output file and converted to CO₂e emissions using the GWPs from IPCC's AR4. Modeling was based on Project-specific data (e.g., size and type of proposed use) and vehicle trip information from the trip generation study prepared for the Project by the City of Pasadena.

The methodology used to analyze the Project's contribution to global climate change includes evaluating the Project's total annual GHG emissions (setup, breakdown, and operational) against the proposed GHG emissions screening level for commercial or residential projects in SCAQMD's 2008 *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold* document. Although no formal significance threshold for GHG emissions has been adopted by SCAQMD at this juncture, Section 15064.7(c) of the State CEQA Guidelines states “when adopting

thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies....” SCAQMD’s recommended 3,000 MTCO₂e per year screening level was intended to achieve the same policy objective of capturing 90 percent of the GHG emissions from new development projects in the residential/commercial sectors.

Thresholds of Significance

Implementation of the Project would result in a significant GHG-related impact if it would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

As noted previously, the increased concentration of GHGs in the atmosphere has been linked to global warming, which can lead to climate change. Setup, breakdown, and operation of the proposed Project would incrementally contribute to GHG emissions along with past, present, and future activities, and the CEQA Guidelines acknowledge this as a cumulative impact. As such, impacts of GHG emissions are analyzed here on an inherently cumulative basis.

Currently, while SCAQMD has issued proposed standards and guidelines, there is no adopted state or local standard for determining the cumulative significance of the proposed Project’s GHG emissions on global climate change. However, as discussed previously, the SCAQMD has proposed a screening level of 3,000 MTCO₂e per year for residential and commercial projects in its 2008 *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold* document. For purposes of this analysis, the Festival is considered a commercial project. It is estimated that this screening threshold would capture 90 percent of the GHG emissions from new residential or commercial projects. Since the City also has not adopted any significance criteria or guidelines for GHG analysis at the time of this writing, it is reasonable under CEQA for the City, as the lead agency, to consider using a screening level that is recommended by SCAQMD, which is the applicable air pollution control agency for the City. Thus, the annual threshold of 3,000 MTCO₂e proposed by the SCAQMD will be utilized as a screening level for determining the significance of the Project’s GHG emissions.

Impact Evaluation

The proposed Project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. (Significant and Unavoidable Impact)

Setup/Breakdown

The proposed Project would necessitate annual setup and breakdown activities associated with the preparation for and recovery from the Festival. The proposed Project would have a setup period that lasts two weeks and a breakdown period that would last seven days. These activities would result in the usage of onsite equipment as well as worker and delivery vehicles to complete the tasks. Total GHG emissions from the setup and breakdown of the Project would result in annual emissions of 545.37 MT CO₂e. **Table 3.5-1** shows the emissions breakdown for the setup/breakdown activities. Onsite equipment usage was combined in one CalEEMod run; therefore, the emissions estimates for the setup and breakdown are combined into one category.

**Table 3.5-1
 Estimated Total Setup/Breakdown Related GHG Emissions**

Emission Source	Estimated CO ₂ e Emissions
Unmitigated Construction Emissions	
Setup Vendor Trips	12.43
Setup Onsite Gasoline Mobile	40.57
Onsite Equipment (setup and breakdown)	456.33
Breakdown Onsite Gasoline Mobile	25.81
Breakdown Vendor Trips	10.24
Total	545.37

NOTES: CO₂e= carbon dioxide equivalent; MT =metric tons; MT/yr. = metric tons per year.

Source: ESA, 2015 (CalEEMod Modeling provided in Appendix B)

Operational

The proposed Project would operate a 3-day music Festival. This would result in 93,000 individuals at the Project site daily, including attendees and employees. This results in operational emissions associated with vehicle travel, both personal cars as well as shuttle buses and vendor trip emissions; onsite area source emissions such as consumer product uses; energy consumption (i.e. electricity and natural gas) associated with the use of the Rose Bowl Stadium; water consumption and waste-water generation; and solid waste generation. Total GHG emissions from the operation of the Project would result in annual emissions of 7,149 MT CO₂e without the incorporation of setup/breakdown emissions. With inclusion of the set-up/tear-down annual emissions would equal 7,695 MT CO₂e. **Table 3.5-2** shows the emissions breakdown for the operational activities. As shown the combination of the operational, setup and

breakdown emissions would exceed the SCAQMD's 3,000 MT CO₂e screening threshold and, therefore, the Project impacts would be significant.

**Table 3.5-2
 Estimated Setup, Breakdown, and Operations-Related GHG Emissions**

Emission Source	Estimated Emissions CO₂e (MT/yr.)
Project Operations	
Area Sources	0.00
Energy Consumption	195.78
On-road vehicle emissions	88.40
On-road shuttle emissions	6,585
On-road vendor emissions	1.55
On-site diesel equipment emissions	178.81
On-site gasoline equipment emissions	16.52
Solid Waste	71.94
Water Consumption	2.23
<i>Total (setup/breakdown emissions)</i>	<i>545.37</i>
Total Net Increase in Emissions	7,695
Greater than 3,000 MTCO ₂ e per year?	Yes

NOTES: CO₂e= carbon dioxide equivalent; MT/yr. = metric tons per year; %=percent.

Source: ESA, 2015 (CalEEMod Modeling provided in Appendix B)

Mitigation Measures

Mitigation Measure GHG-1: Project-related emissions of greenhouse gases. For on-road shuttle vehicles used during operation of the Project, the Festival operator shall reduce greenhouse gas emissions to the maximum extent feasible through a mix of the following: the use of a maximum number of shuttle vehicles feasible that burn fuels such as Diesel High Performance Renewable (HPR), compressed natural gas (CNG), or equivalent emission reducing technology to the maximum extent feasible; and the purchase or other obtainable and verifiable GHG emissions credits of up to a combined total of up to 4,700 metric tons of CO₂e to offset GHG emissions associated with the Project. On an annual basis, prior to holding the Festival, the Festival operator shall submit to the RBOC an evaluation of its ability to reduce greenhouse gas emissions through use of alternative fuel shuttle vehicles to below the SCAQMD significance threshold, and the how much will be offset by mitigation credits. On an annual basis, the RBOC and the Festival operator shall discuss the utilization of new or different technologies or policies to further reduce impacts to below the SCAQMD significance threshold. **Significance after Mitigation:** Significant and Unavoidable. As shown in Table 3.5-2, the Project-related GHG emissions without mitigation would represent a significant and unavoidable significant impact. It is recognized that the Festival operator may not be able to obtain enough commercially available alternative fuel shuttles or

GHG offsets to demonstrate a reduction of GHG emissions below the SCAQMD significance threshold. Therefore, this impact is considered significant and unavoidable.

Significance Determination: Significant and Unavoidable.

The proposed Project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. (Less-than-Significant Impact)

Consistency with CARB Scoping Plan

Out of the Recommended Actions contained in CARB's Scoping Plan, the actions most applicable to the Project would be Action T-3 (Regional Transportation-Related GHG Targets). This action aims to reduce GHG emissions from vehicle use by shifting use from single occupancy vehicles to higher occupancy vehicles (increase in use of public transportation). Festival attendees and employees would be encouraged to use transit options such as those provided by the Metrolink, the Los Angeles Metropolitan Transportation Agency (MTA), Foothill Transit, Metro Gold Line, ridesharing (such as Uber and/or Lyft) and taxis. There would also be shuttle service from each of the off-site parking locations. Further, the Rose Bowl Operating Company (RBOC) and the Festival operator would also provide incentives to individuals who choose to use shuttles and other rideshare programs. Carpooling incentives may range from VIP upgrades, merchandise, and food vouchers to lifetime VIP passes for the Festival. Because the proposed Project includes several opportunities for alternative transportation, through location to existing transportation system as well as the establishment of shuttle busses to reduce the traffic reaching the site, the proposed Project would be compliant the CARB Scoping Plan.

Consistency with Green City Action Plan

The initiatives contained in the Green City Action Plan include getting people to utilize public transportation, walking, and biking to replace the use of single occupancy vehicles. As stated, the location of the proposed Project and the inclusion of offsite parking with shuttles to the Project site further the goals of the Green Action Plan and would reduce vehicle emissions associated with the Project. In addition, bicycle facilities would be provided at the Rose Bowl and the off-site parking areas, to support the use of bicycles during the Festival event. The Project does not include the development of permanent structures and, thus, there is no need to be compliant with the building efficiency standards or the City's Green Building Practices Ordinance. Because the proposed Project would support the transportation goals of reducing GHG emissions associated with the Project, the Project would be consistent with the Green City Action Plan.

Consistency with City of Arcadia Resource Sustainability Element

While the Festival site is located in the City of Pasadena, one offsite parking facility would be located at Santa Anita Park in the City of Arcadia. Thus, Festival shuttles would be traveling to and from this location to the Project site in Pasadena. The Resource Sustainability Element establishes policies that will help to use resources in a manner that protects and even enhances them for future residents. Because the proposed Project would not construct permanent structures, transportation is the only area in which compliance with the Resource Sustainability Element is possible. The proposed Project would be consistent with policies RS-1.4, RS-2.2, and RS-2.5 because it would limit vehicle access to the Project site, thereby reducing overall vehicle miles traveled by attendees and Festival staff. Additionally, the offsite parking facility in Arcadia would be accessible by local bus routes, as well as bicycle and pedestrian uses. This would provide an additional option for people to avoid the use of single occupancy vehicles. Because the proposed Project would support the transportation goals of reducing GHG emissions associated with the Project, the Project would be consistent with the Arcadia Resource Sustainability Element.

Consistency with Green LA Plan

As discussed previously, the Green LA Plan and associated Climate LA Program Document consist of a progressive list of environmental initiatives for the City of Los Angeles to implement in order to become a sustainable and green community. The initiatives contained in the Green LA Plan include reducing GHG emissions to 35 percent below 1990 levels by 2030, increasing the City's use of renewable energy, reducing the City's peak electric load, and advancing development that enhances the pedestrian and transit environment. The Project, which would only result in limited traffic into and through the City of Los Angeles, would not be subject to the building requirements of the City's Green Building Code. However, the inclusion of an off-site parking lot in the City of Los Angeles would decrease the overall transportation related emissions associated with the Project and, therefore, would support the City's effort of reducing GHG emissions. Thus, the Project would be consistent with the Green LA Plan's efforts to enhance the pedestrian and transit environment. Overall, development of the Project would be consistent with the Green LA Plan.

Therefore, as implementation of the proposed Project would not hinder or adversely affect the statewide or local attainment of GHG emission reduction goals of AB 32, this impact would be less than significant.

Mitigation Measures

Impacts would be less than significant and no mitigation measures are required.

Significance Determination: Less than Significant.

3.5.5 Cumulative Effects

Global climate change is a change in the average weather on Earth that can be measured by wind patterns, storms, precipitation, and temperature. Therefore, the geographic scope for the analysis of cumulative setup/breakdown- and operational-related impacts resulting from the emissions of GHG is worldwide. Setup, breakdown, and operation of the proposed Project would incrementally contribute to GHG emissions along with past, present, and future activities, and the CEQA Guidelines acknowledge this as a cumulative impact. As shown on Table 3.5-2 above, the emissions of GHG from the proposed Project would result in a significant impact above the SCAQMD screening threshold for GHG. Therefore, the proposed Project-related incremental impact associated with GHG emissions would be cumulatively considerable and the cumulative impact would be significant. Application of Mitigation Measure GHG-1 would reduce the Project's GHG emissions contribution to a level that would not be cumulatively considerable. However, as discussed for Mitigation Measure GHG-1, the ability of the Festival operator to obtain the necessary GHG reductions is uncertain. Therefore, this cumulative impact is considered significant and unavoidable.

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