THE PACIFIC AIRSHOW HUNTINGTON BEACH

Draft Environmental Impact Report

Prepared for
City of Huntington Beach

February 2025

ESA

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ABBREVIATIONS

Abbreviation	Definition
AAM	annual arithmetic mean
AB	Assembly Bill
ABS	acrylonitrile butadiene styrene
AB52	Assembly Bill 52
AC	Advisory Circular
ADA	Americans with Disabilities Act
AGL	above ground level
ALUC	Airport Land Use Commission
AQMP	air quality management plan
AVP	Association of Volleyball Professionals
BCER	Bolsa Chica Ecological Reserve
BMX	bicycle motocross
BRTR	biological resources technical report
BSA	biological study area
CAA	Clean Air Act of 1970
CAAQS	California Ambient Air Quality Standards
CalEPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
CARB	California Air Resources Board
CCAA	California Clean Air Act of 1988
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFG Code	California Fish and Game Code
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level

Abbreviation	Definition
CNPPA	California Native Plant Protection Act of 1977
CNPS	California Native Plant Society
CO	carbon monoxide
CWA	Clean Water Act of 1972
dB	weighted in decibels
dBA	A-weighted decibels
DPM	diesel particulate matter
DTSP	Downtown Specific Plan
EDW	Edwards Air Force Base
EIR	environmental impact report
EMFAC	EMissions FACtor
EOP	emergency operations plan
ESA	Environmental Science Association
EV	electric vehicle
FAA	Federal Aviation Administration
FESA	federal Endangered Species Act
FHSZ	fire hazard severity zone
FHWA	Federal Highway Administration
FHWA-TNM	Federal Highway Administration's Highway Traffic Noise Model
FUL	Fullerton Municipal Airport
GHG	greenhouse gas
GIS	Geographic Information System
GPS	global positioning system
GUA	Guatemala City Airport
H_2S	hydrogen sulfide
HBFD	Huntington Beach Fire Department
HBPD	Huntington Beach Police Department
HCP	habitat conservation plan
HMPC	Hazard Mitigation Planning Committee
I-405	Interstate 405, San Diego Freeway
IPaC	Information for Planning and Consultation
ISA	International Surfing Association
KSLI	Joint Forces Training Base Los Alamitos Airfield
LAX	Los Angeles International Airport
LGB	Long Beach, CA

Abbreviation	Definition
LHMP	local hazard mitigation plan
LOS	level of service
MBTA	Migratory Bird Treaty Act of 1918
MSL	mean sea level
NAAQS	national ambient air quality standard
NAHC	California Native American Heritage Commission
NCCP	natural community conservation plan
NIST	U.S. National Institute of Standards and Technology
NM	nautical mile
NMFS	National Marine Fisheries Service
NO	nitrogen monoxide
NO_2	nitrogen dioxide
NOA	notice of availability
NOC	notice of completion
NOP	notice of preparation
NO_X	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
O_3	ozone
OCFA	Orange County Fire Authority
OCHCS	Orange County Habitat Classification System
OEHHA	California Office of Environmental Health Hazard Assessment
OPR	California Governor's Office of Planning and Research
PA	Public Address
Pb	lead
PCH	Pacific Coast Highway
PM10	respirable particulate matter with diameters that are generally 10 micrometers and smaller
PM2.5	fine particulate matter with diameters that are generally 2.5 micrometers and smaller
PPV	peak particle velocity
PRC	California Public Resources Code
PST	Pacific standard time
PTY	Panama City Airport
PVC	polyvinyl chloride
RIV	March Air Reserve Base
RTP/SCS	regional transportation plan/sustainable communities strategy

Abbreviation	Definition
RV	recreational vehicle
SAN	San Diego International Airport
SBP	San Luis Obispo Airport
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SEL	sound exposure level
SFO	San Francisco Airport
SIP	state implementation plan
SLF	Sacred Lands File
SLM	sound level meter
SNA	John Wayne Airport
SO_2	sulfur dioxide
SO_4^2	sulfates
SR	state route
SR55	State Route 55
SRA	Source Receptor Area
STOL	short takeoff and landing
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TFR	temporary flight restriction
TNM	traffic noise model
TOA	Torrance Airport
TRACON	Southern California Terminal Radar Approach Control
UAM	urban air mobility
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VMT	vehicle miles traveled
VOC	volatile organic compound
WHA	wildlife hazard analysis
WHMP	wildlife hazard management plan
WHSV	wildlife hazard site visit

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EXECUTIVE SUMMARY

ES.1 Introduction

The City of Huntington Beach (City) has prepared this Draft Environmental Impact Report (Draft EIR) to inform decision-makers and the general public of the potential environmental impacts resulting from the Pacific Airshow (Airshow or Project). This Draft EIR has been prepared pursuant to the California Environmental Quality Act (CEQA).

This Draft EIR is being circulated to local, state and federal agencies, and to interested organizations and individuals who may wish to review and comment on the document. Publication of this Draft EIR marks the beginning of a 45-day public review period (public review period ends Saturday, April 5, 2025, during which written comments may be directed to the City at address below. Comments on the Project should be directed to:

Mail: Connor Hyland
Senior Deputy City Attorney
City of Huntington Beach, Office of the City Attorney
2000 Main Street, Fourth Floor
Huntington Beach, CA 92648

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ES.2 Project Background

As permitted by the City's Specific Event Permit Process, the Airshow has been held annually in the City for three (3) days during the fall season each year since 2016, except in 2020 during the COVID-19 pandemic. During the 2021 Airshow, an unrelated oil spill from a pipeline leak off the Orange County coast resulted in the cancelation of the final day. The most recent Airshow took place from September 29 to October 1, 2023. A detailed description of the historic and anticipated future Airshow events, activities, and schedules are provided below.

Regionally, the Airshow is located in the City of Huntington Beach, which is in coastal Orange County in Southern California. The Show Center Area is the location where primary on-the-ground events and activities of the Airshow take place. Locally, the approximate boundaries of the Show Center Area from northwest to southeast are 7th Street and Pacific Coast Highway (State Route 1 or SR-1) to Beach Boulevard (State Route 39 or SR-39) and Pacific Coast Highway to the Pacific Ocean including a portion of the Huntington Beach Pier landward of the State Lands Commission mean high tide line.

ES.3 Project Objectives

The Project would provide a spectacle-scale airshow in Huntington Beach that attracts attendees throughout the Southern California area (and perhaps beyond) and features civilian and military aircraft flybys and aerial acrobatics, air racing, helicopter landing/runway displays comprised of temporary ABS foundation (stadium flooring) or wood or aluminum flooring, electric vehicle (EV) and drone displays with hangars and aerial competitions and drone shows, displays of other emerging aviation/mobility technology, and visitor-serving entertainment, services, and amenities (e.g., variety of viewing areas, vehicle and aircraft demonstrations and displays, illustrations, flight simulations, merchandise tents, concessions, food trucks, live music entertainment, wave pool surf competitions, skateboard and bicycle motocross (BMX) bowl competitions, sandcastle building competitions, art installations, and pyrotechnic shows).

The Preliminary Project objectives include:

- Continue to provide a family-oriented, safe, educational, fun, and entertaining Airshow experience with an emphasis on outdoor lifestyle and popular culture elements.
- Continue to provide a gathering place where locals and visitors can come together to enjoy civilian and military aircraft flybys and aerial acrobatics, illustrations, displays, food, and music.
- Provide an event that promotes careers and opportunities in the Defense Forces and in aviation.
- Provide an event that promotes coastal access.
- Continue to promote awareness and use of the Huntington Beach Pier and beaches.
- Continue to promote awareness of the Huntington Beach hotels, restaurants, stores, and businesses across the City.
- Continue to promote Huntington Beach and Southern California as a welcoming global tourism destination.
- Create a net positive direct economic impact on the City and surrounding communities as a result of spending by incremental visiting attendees, the event organizer, and event sponsors.
- Increase in tax revenues (i.e., sales tax, transit occupancy tax, and property tax) to the City.
- Continue to provide temporary and full-time jobs associated with the Airshow.
- Provide an event that reduces potential impacts to the surrounding sensitive habitat including the Bolsa Chica Ecological Reserve, the Huntington Beach Wetlands, the Magnolia Marsh, and special-status wildlife species such as the federally endangered California least tern and western snowy plover.

ES.4 Historic and Continued Airshow Activities and Events

The Airshow has historically been held annually in the City for three (3) days (Friday through Sunday), with aircraft flight familiarization and flight practice flyovers beginning as early as Monday of the week of the Airshow, during the fall season, typically towards the end of September/beginning of October.

The following activities and events have occurred in association with the Airshow since 2016 and are anticipated to generally continue as described for the next 10 years of future Airshows (through 2034).

After arrival to the aircrafts designated airports (airport locations further described below) for staging/maintenance/preparation, the aircraft conduct flight familiarization and flight practice flyovers throughout the Airshow Performance Area beginning as early as Monday of the week of the Airshow leading up to the opening day (Wednesday, Thursday, or Friday). Historically, the Airshow has attracted attendees throughout Southern California. Historical and future Airshows are anticipated to employ approximately 300 daily event staff and unpaid volunteers to assist with all event activities and Airshow operations.

On the day prior to the start of the Airshow, typically Thursday, the Airshow holds several events that are collectively referred to as "media day," which typically takes place at the Lyon Air Museum, located in Santa Ana, California, from approximately 10:00 AM to 12:00 PM for civilian performers and then relocates to the Joint Forces Training Base Los Alamitos Airfield, located in Los Alamitos, California, from approximately 1:00 PM to 4:00 PM for military performers. The media day events are considered private events. For all Airshow event days, which are open to the public, the Airshow admission, venue, and festival areas are open from 9:00 AM to 6:00 PM with civilian and military aircraft flybys and aerial acrobatics performing from approximately 10:00 AM to 5:00 PM. Saturday night, a private party is hosted for the Airshow performers from 6:00 PM – 10:00 PM at a single private undisclosed location. During the Airshow, demonstrations and vehicle and aircraft displays, illustrations, flight simulations, sponsorship booths, merchandise tents, concessions, and food trucks are located throughout the venue. During the 2021 Airshow, the Afterburner Music Festival, the Official After Party of the Pacific Airshow, took place within the southernmost portion of the Show Center Area for two evenings following the Airshow (Friday, October 1, and Saturday, October 2, 2021). Nighttime flyovers by designated aircraft including parachute jumps onto the beach occurred during the evening hours of the of the music festival. The media day and Airshow performer party are private events that do not require approval by the City; as such, these events are not subject to CEQA and therefore, are not analyzed in this Draft EIR. Any potential noise impacts to the City generated by these events would be regulated by the City's Noise Ordinance. The Airshow and all other associated events and activities that are open to the public are analyzed throughout this Draft EIR.

ES.5 New Airshow Activities Anticipated for 2024 through 2034

In addition to the activities and events described above for historic and continued Airshows, the following new public activities and events are anticipated to take place during future Airshow weekends:

- Multi-day air racing (i.e., aircraft competing over a fixed course) to occur within the Airshow Performance Area during the hours of the Airshow.
- Helicopter and aircraft landing/runway display (approximately 4,500-foot-long by 40-foot-wide) on a temporary landing surface to be generally located within an open area directly in front of the Main Hospitality Area (Area D) during the hours of the Airshow. The landing/runway area would be constructed from drivable ABS foundation (stadium flooring) to stabilize the sand and mitigate sand blowing.
- Aircraft static, drone and other urban air mobility (UAM) technology displays and aerial competitions to occur within both the Show Center Area and Airshow Performance Area during the hours of the Airshow.
- Public viewing locations of the aircraft hangars to be generally located just north of the Main Hospitality Area (Area D).
- During the 2021 Airshow, the Afterburner Music Festival, the Official After Party of the Pacific Airshow, took place for two evenings following the Airshow. Now, becoming an annual component of the Airshow, a multi-day music festival would be located generally within the northernmost portion of the Show Center Area within Concert Area #1 (Area A) or alternatively the southernmost portion of the Show Center Area within Concert Area #2/Additional Seating/Activations Area (Area E). The multi-day music festival would occur following the conclusion of the Airshow up to 11:00 PM over three (3) days over the weekend directed towards the ocean (with separately sold tickets).
- During the Afterburn Music Festival in 2021, nighttime flyovers occurred. Now, becoming an annual component of the Airshow, nighttime flyovers or displays by designated aircraft including parachute jumps onto the beach within the Performance Area would be relatively quick in duration (similar to the 2021 Airshow), even if multiple flyovers occurred, during the evening hours and potentially simultaneously with the music or between music acts. Nighttime flyovers and aircraft activity including drone shows and pyrotechnics could also occur in the evenings if no music festival would occur. These nighttime activities could run each day of the event, or be limited to only certain evenings. The loudest aircrafts to participate in such nighttime activities would be similar in type to the F-22 or F-34A.
- Wave pool surf competitions to be generally located within the Seating/Activations Area (Area C) during the hours of the Airshow.
- Skateboard and BMX bowl competitions and motorcross demonstrations to be generally located within the Seating/Activations Area (Area C) during the hours of the Airshow.
- Sandcastle building competitions to be generally located within the Seating/Activations Area (Area C) during the hours of the Airshow.
- Art installations to be generally located throughout the Show Center Area.

- Vehicle ride and drive in generally located within the Parking/Potential Activations Area (Area F), Activations/Parking/RV Camping Area (Area G), or the Parking/Activations Area (Area H).
- Side-by-side ride and drive on the sand generally located within the Seating/Activations Area (Area C).
- Pyrotechnic daily shows to be discharged from either aircraft or discharged from the Huntington Beach Pier or an ocean barge during the days and hours of the Airshow.
- Pyrotechnic nightly shows to be discharged from either aircraft (nighttime flyovers) or discharged from the Huntington Beach Pier or an ocean barge concluding by 11:00 PM each evening of the Airshow.
- Beach camping generally to take place with the Seating/Activations Area (Area C) and may involve using more ABS flooring to allow for recreational vehicles to park on the sand for the duration of the Airshow weekend, generally arriving Thursday and departing Sunday after the conclusion of the Airshow or Monday morning.

ES.6 Issued Raised During Notice of Preparation Process

Section 15123 (b)(2) of the CEQA Guidelines requires that an EIR summary identify areas of controversy known to the Lead Agency, including issues raised by other agencies and the public.

On February 1st, 2024, in accordance with Sections 15063 and 15082 of the CEQA Guidelines, the City published an Initial Study/Notice of Preparation (IS/NOP) of a Draft EIR, and circulated it to governmental agencies, organizations, and persons who may be interested in the Project, including nearby landowners, homeowners, and tenants. The IS/NOP requested comments on the scope of the Draft EIR and asked those agencies with regulatory authority over any aspect of the Project to describe that authority. The comment period extended through March 4th, 2024. The NOP provided a general description of the Project Site, a description of the proposed action, and a preliminary list of potential environmental impacts.

The NOP included notification that both an in-person EIR scoping meeting for the public and a virtual EIR scoping meeting for agencies would be held. In accordance with the CEQA Guidelines, the purpose of the EIR scoping meeting was for the City to solicit input and written comments from agencies and the public on environmental issues or alternatives they believe should be addressed in this Draft EIR. The in-person public EIR scoping meeting was held on Wednesday, February 21, 2024, from 5:00 PM to 6:00 PM at the Huntington Beach City Hall, Lower-Level Rooms B-7 and B-8, 2000 Main Street, Huntington Beach, CA 92648. The virtual agencies EIR scoping meeting was held on February 22, 2024, from 12:00 PM. to 2:00 PM. The virtual EIR scoping meeting was held in an online format using zoom and provided interested public agencies the opportunity to view materials and ask questions regarding the scope and focus of this Draft EIR as described in the NOP and Initial Study. The following list provides the key issues raised during the NOP comment period (refer to **Appendix A**, in this Draft EIR):

- Concerns with biological resources, impacts to the Bolsa Chica Ecological Reserve (BCER), and bird strikes (refer to Section 3.2, Biological Resources, and Section 3.3, Hazards and Hazardous Materials);

- Concerns with noise and vibration (refer to Section 3.4, Noise);
- Concerns with public access and recreation (refer to Chapter 5.0, Other CEQA Consequences);
- Concerns with trash (refer to Section 3.3, Hazards and Hazardous Materials);
- Concerns with air quality (refer to Section 3.1, Air Quality);
- Concerns with greenhouse gas emissions (refer to Chapter 5.0, Other CEQA Consequences)
- Concerns with hazardous materials (refer to Section 3.3, Hazards and Hazardous Materials);
- Recommended consultation with California Native Tribes (refer to Section 3.6, Tribal Cultural Resources);
- Concerns with transportation and emergency access (refer to Section 3.5, Transportation);
- Recommended range of reasonable alternatives to the Project (refer to Chapter 4, Alternatives).

This Draft EIR addresses each of the aforementioned areas of concern or controversy in detail; examines Project-related and cumulative environmental impacts, identifies significant adverse environmental impacts, proposes mitigation measures designed to reduce or eliminate potentially significant impacts, and identifies residual impacts after mitigation measures are identified.

ES.7 Significant and Unavoidable Environmental Impacts

As required by CEQA Guidelines Section 15126.2(b), an EIR must describe any significant impacts that cannot be avoided, including those impacts that can be mitigated but not reduced to a less than significant level. Chapter 3 of this Draft EIR describes the potential environmental impacts of the Project and recommends mitigation measures to reduce impacts, where feasible. As discussed in this Draft EIR, implementation of the Project would result in significant impacts to air quality, hazards and hazardous materials, and noise. Even with incorporation of mitigation measures, air quality, hazards and hazardous materials, and noise would have significant and unavoidable impacts with implementation of the Project.

The significant air quality impact that cannot be mitigated to a less than significant level and, therefore, is considered a significant, unavoidable impact is related to a cumulatively considerable net increase in VOC, NOx, and CO emissions for vehicular sources. The significant and unavoidable noise impact is related to a substantial increase in ambient noise levels due to event speakers, even with implementation of Mitigation Measure NOI-1. Additionally, Project-specific impacts regarding groundborne vibration or groundborne noise levels would be significant and unavoidable with no additional feasible mitigation measures available. The significant and unavoidable hazards and hazardous materials impact is related to emergency evacuation with no feasible mitigation measures available. These unavoidable adverse impacts would require a Statement of Overriding Consideration by the City.

ES.8 Analysis of Alternatives

Three alternatives are analyzed in Chapter 4 of this Draft EIR. These three alternatives are summarized, as follows:

Alternative 1: No Project/No Airshow Alternative

Under the No Project/No Airshow Alternative, the Airshow and the associated activities are not occurring in 2024 or for the foreseeable future.

Alternative 2: 2023 Airshow Alternative

Under the 2023 Airshow Alternative, the annual event would take place over 3 days, and would not include a music festival, helicopter and aircraft runway/display, skateboard/BMX competition, pyrotechnic shows, sandcastle building competition, and beach camping, among other activities/features noted in *New Airshow Activities Anticipated for 2024 through 2034* in Section 1.6, *Historic and Future Airshow Activities and Events Schedule*. The Airshow would continue to be held annually Friday through Sunday during the fall season with aircraft flight familiarization and flight practice flyovers beginning as early as Monday of the week of the Airshow.

Alternative 3: Reduced Project Alternative

The Reduced Project Alternative would include a reduced size of the Airshow with no military aircraft or equivalent noise-producing jets being included in the Airshow. Based on information received from the President of the International Council of Airshows, John Cudahy, airshows without military performers have less than half of the attendance of shows that include military aircraft (Cudahy, pers. comm., 2024; in Appendix H of this Draft EIR). In fact, in 2013, when the United States Department of Defense cancelled its participation in civilian airshows, attendance decreases of 75 percent to 80 percent occurred. In addition, without military aircraft, the noise impacts from the flyovers would be reduced. Therefore, the Reduced Project Alternative is aimed to reduce noise impacts due to the type of aircraft being used. Additionally, evacuation impacts would be reduced to both a decreased number of employees and a decreased number of attendees.

Environmentally Superior Alternative

Of the alternatives analyzed in the EIR, the No Project Alternative is considered the environmentally superior alternative as it would avoid or reduce most of the potential impacts associated with operation of the Project. However, it would not meet the objectives of the Project.

CEQA Guidelines require that, if the No Project Alternative is determined to be the environmentally superior alternative, an environmentally superior alternative must also be identified among the remaining alternatives. As such, the 2023 Airshow Alternative would result in the fewest environmental impacts as compared to the Project and is considered the Environmentally Superior Alternative. However, this alternative would not meet all of the Project Objectives. Furthermore, the 2023 Airshow Alternative would reduce the ability to gather since fewer events would be held over fewer days.

The 2023 Airshow Alternative would not meet the following Project objectives in their entirety:

- Continue to provide a family-oriented, safe, educational, fun, and entertaining Airshow experience with an emphasis on outdoor lifestyle and popular culture elements.
- Continue to provide a gathering place where locals and visitors can come together to enjoy civilian and military aircraft flybys and aerial acrobatics, illustrations, displays, food, and music.
- Create a net positive direct economic impact on the City and surrounding communities as a result of spending by incremental visiting attendees, the event organizer, and event sponsors.
- Increase in tax revenues (i.e., sales tax and transit occupancy tax) to the City.
- Continue to provide temporary and full-time jobs associated with the Airshow.

Since the 2023 Airshow Alternative would not include a music festival, helicopter and aircraft runway/display, skateboard/BMX competition, pyrotechnic shows, sandcastle building competition, and beach camping, among other activities/features, fewer family-oriented events would be offered. With fewer activities, it is anticipated that the positive economic impact, the potential tax revenues, and the number of employees needed to staff the airshow would each potentially be reduced. In addition, without offering the events promoting the beach community, including beach camping and sandcastle building among others, there would be a reduced positive impact to the promotion of the Huntington Beach Pier and beaches.

In conclusion, the 2023 Airshow Alternative is the Environmentally Superior Alternative; however, it does not meet all the Project Objectives.

ES.9 Summary of Environmental Impacts

The analysis contained in the Draft EIR uses the words “significant” and “less than significant” in the discussion of impacts. These terms specifically define the degree of impact in relation to thresholds used to determine significance of impact identified in each environmental impact section of this Draft EIR. As required by CEQA, mitigation measures have been included in this Draft EIR to avoid or substantially reduce the level of significant impacts. Certain significant impacts, even with the inclusion of mitigation measures, cannot be reduced to a level below significance. Such impacts are identified as “significant and unavoidable impacts.”

Table ES-1 presents a summary of the impact statements, identified mitigation measures, and level of impact remaining after mitigation. A complete discussion of impacts and mitigation measures is presented in Chapter 3, Environmental Setting, Impacts, and Mitigation Measures, of this Draft EIR. The level of significance for each impact was determined using significance criteria (thresholds) developed for each category of impacts; these criteria are presented in the appropriate sections of Chapter 3. Significant impacts are those adverse environmental impacts that meet or exceed the significance thresholds.

TABLE ES-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Significance Determination after Mitigation
3.1 Air Quality		
Impact 3.1-1: The Project would result in a significant impact if it would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.	There are no feasible mitigation measures that would reduce operational VOC, NO_X, and CO emissions for vehicular sources to below the significance thresholds.	Significant and Unavoidable.
3.2 Biological Resources		
Impact 3.2-1: The project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	No mitigation measures are required.	Less than Significant.
Impact 3.2-2: The project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	No mitigation measures are required.	Less than Significant.
3.3 Hazards and Hazardous Materials		
Impact 3.3-1: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, the project would not result in a safety hazard or excessive noise for people residing or working in the project area.	**Mitigation Measure HAZ-1:** A qualified avian biologist will conduct one Wildlife Hazard Site Visit (WHSV) prior to the start of the each annual Airshow (beginning in 2024) following the protocol developed by the FAA in the *Protocol for the Conduct and Review of Wildlife Hazard Site Visits, Wildlife Hazard Assessments, and Wildlife Hazard Management Plans* (Federal Aviation Administration, Advisory Circular 150/5200-38, August 2018 to evaluate potential risk of wildlife strikes at airports, specifically for the proposed temporary aircraft landing pad on the beach during all future Airshow events. The WHSV shall include field observations conducted over one day at dawn, noon, and dusk from a variety of pre-determined locations to ensure complete visual coverage of the location of the temporary runway and immediate surroundings. All signs of birds, mammals, habitat attractants, and wildlife/habitat relationship observations shall be recorded. A wildlife hazard site visit memorandum shall be prepared and include a list of wildlife species or signs observed during the surveys, federal and state status of the species observed, habitat features that may encourage wildlife, natural and artificial wildlife attractants, strike data analysis, and recommendations to reduce wildlife hazards. Recommendations may include developing a long-term management strategy that includes wildlife hazard management and/or reduction in flights under 500 feet above ground level.	Less than Significant with Mitigation.

TABLE ES-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Significance Determination after Mitigation
	Mitigation Measure HAZ-2: A qualified biological monitor will be on-site during event performances for the duration of the event (3-5 days) to document bird activity during aircraft flyovers and take-off and landing within the Show Center Area. Biological monitoring will also inform the recommendations to reduce wildlife hazards. Based on monitoring observations, recommendations may include following standard best management practices such as properly disposing of trash to avoid attracting wildlife to the Show Center Area and/or employing means of harassment (e.g., lasers) to disperse birds.	
Impact 3.3-2: The project could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	There are no feasible mitigation measures that would reduce impacts to emergency evacuation plan.	Significant and Unavoidable.
3.4 Noise		
Impact 3.4-1: The Project would result in a significant impact if it would generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	**Mitigation Measure NOI-1:** The applicant shall implement the following measures for the duration of the event: • The nearest speaker shall be placed at least 475 feet away from any nearby sensitive receptor and any subsequent speakers shall be separated from other speakers by 25 feet parallel to Pacific Coast Highway. Speakers shall also be positioned in a manner that would not point directly towards any nearby sensitive receptor and, instead, face the beach/ocean. • A temporary noise barrier of at least 10 feet in height and constructed of plywood or using a sound blanket shall be installed on public property nearest to the sensitive receptors to the west of the proposed music festival area (Huntington Pacific Beach House Condo complex at 701 Pacific Coast Highway). The temporary noise barriers shall block the line-of-sight between the music festival attendees and similarly elevated ground-level noise-sensitive receptors.	Significant and Unavoidable.
Impact 3.4-2: The Project will result in a significant impact if it generates excessive groundborne vibration or groundborne noise levels.	Implementation of Mitigation Measure NOI-1.	Significant and Unavoidable.
3.5 Transportation		
Impact 3.5-1: The project would have a less than significant impact as it relates to VMT.	No mitigation measures are required.	Less than Significant.
Impact 3.5-2: The project would not result in inadequate emergency access.	No mitigation measures are required.	Less than Significant.

TABLE ES-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Significance Determination after Mitigation
3.6 Tribal Cultural Resources		
Impact 3.6-1: The Project would not result in a significant tribal cultural resources impact because it would not cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k); or ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	No mitigation measures are required.	No Impact.

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CHAPTER 1
Introduction

This Draft Environmental Impact Report (EIR) has been prepared for the Pacific Airshow (Airshow or Project) which has historically been held annually in the City for three (3) days (Friday through Sunday), with aircraft flight familiarization and flight practice flyovers beginning as early as Monday of the week of the Airshow, during the fall season, typically towards the end of September/beginning of October. Future Airshows are anticipated to be held annually for three (3) days to up to five (5) days, generally Friday through Sunday or up to Wednesday through Sunday, with aircraft flight familiarization and flight practice flyovers beginning as early as Monday of the week of the Airshow.

The Airshow does not propose construction of new permanent development; instead, the Project consists of temporary event structures, all of which would be removed immediately following the conclusion of the Airshow. The Project would provide a spectacle-scale airshow in Huntington Beach that attracts attendees throughout the Southern California area (and perhaps beyond) and features civilian and military aircraft flybys and aerial acrobatics, air racing, helicopter and aircraft landing/runway displays comprised of temporary acrylonitrile butadiene styrene (ABS) foundation (stadium flooring) or wood or aluminum flooring, electric vehicle (EV) and drone displays with hangars and aerial competitions and drone shows, displays of other emerging aviation/mobility technology, and visitor-serving entertainment, services, and amenities (e.g., variety of viewing areas, vehicle and aircraft demonstrations and displays, illustrations, flight simulations, merchandise tents, concessions, food trucks, live music entertainment, wave pool surf competitions, skateboard and bicycle motocross (BMX) bowl competitions, sandcastle building competitions, art installations, and pyrotechnic shows). The Project would include an event program for the continuation of the Airshow for up to ten (10) additional years beginning from year 2024 through 2034 as permitted by the City's Specific Event Permit Process.

Regionally, the Airshow is located in the City of Huntington Beach, which is in coastal Orange County in Southern California. The Show Center Area is the location where primary on-the-ground events and activities of the Airshow take place. Locally, the approximate boundaries of the Show Center Area from northwest to southeast are 7th Street and Pacific Coast Highway (State Route 1 or SR-1) to Beach Boulevard (State Route 39 or SR-39) and Pacific Coast Highway to the Pacific Ocean including a portion of the Huntington Beach Pier landward of the State Lands Commission mean high tide line. The Airshow Performance Area, the primary area for civilian and military aircraft flybys and aerial acrobatics, is located adjacent to the Show Center Area over the Pacific Ocean with an east-west length of approximately 3,000 feet from the shoreline and a north-south length of approximately 12,000 feet. A majority of the civilian and military aircraft flybys and aerial acrobatics occur within approximately 500 and 1,500 feet from the shoreline. The Show Center Area and Airshow Performance Area collectively comprise of the

Project Site. The Show Center Area consists of the beach, the Huntington Beach Pier, parking lots, commercial/restaurant uses, bicycle and walking trails along Pacific Coast Highway.

1.1 Purpose of the Draft EIR

The purpose of this Draft EIR is to inform decision-makers and the general public of the potential environmental impacts resulting from the Project. The City of Huntington Beach is the Lead Agency under the California Environmental Quality Act (CEQA) and is responsible for preparing this Draft EIR. This Draft EIR has been prepared in conformance with CEQA (California Public Resources Code [PRC] Section 21000 et seq.), and the CEQA Guidelines (California Code of Regulations [CCR], Title 14, Section 15000 et seq.). The principal CEQA Guidelines sections governing content of this document are Sections 15120 through 15132 (Contents of an EIR), and Section 15161 (Project EIR).

The City is responsible for processing and approving the Project pursuant to CEQA Statute Section 21067. The City will consider the information in this Draft EIR, along with other information that may be presented during the CEQA process, including but not limited to the Initial Study and Final EIR. The Draft EIR will be used in connection with other permits and approvals necessary for the operation of the Project. In accordance with CEQA Guidelines Section 15121, this Draft EIR is an informational document that will inform public agency decision-makers and the public generally of the environmental effects associated with the Project, and ways to minimize significant environmental effects through mitigation measures or reasonable alternatives to the Project. For some effects, significant environmental impacts cannot be mitigated to a level considered less than significant; in such cases, impacts are considered significant and unavoidable. In accordance with CEQA Guidelines Section 15093(b), if a public agency approves a project that has significant impacts that are not substantially mitigated (i.e., significant unavoidable impacts where impacts cannot be mitigated to less than significant levels), the agency must state in writing the specific reasons for approving the project, based on the Draft EIR and any other information in the public record for the project. This is known as a "statement of overriding considerations."

This Draft EIR analyzes the environmental effects of the Project to the degree of specificity appropriate to the activities proposed by the Project, as required under CEQA Guidelines Section 15146. This analysis considers the activities associated with the Project, to determine the short-term and long-term effects associated with their implementation. This Draft EIR discusses both the direct and indirect impacts of this Project, as well as the cumulative impacts associated with other past, present, and reasonably foreseeable future projects in the vicinity. CEQA requires the preparation of an objective, full disclosure document to inform agency decision-makers and the general public of the direct and indirect environmental effects of the Project, including mitigation measures and reasonable alternatives that can reduce or eliminate any identified significant adverse impacts.

1.2 CEQA Environmental Review Process

In compliance with the State CEQA Guidelines, the City has taken steps to provide opportunities to participate in the environmental review process. In association with preparation of this Draft EIR, efforts were made to contact various State, regional, and local government agencies and other interested parties to solicit comments and inform the public of the Project. As further described below, this included the distribution of an Initial Study and Notice of Preparation (NOP) of an EIR.

1.2.1 Initial Study

In accordance with CEQA Guidelines Section 15063(a), the City prepared an Initial Study to identify potential environmental impacts. The Initial Study determined that the Project had the potential to result in significant impacts associated with a number of environmental issues. As a result, the Initial Study led to a determination that a Draft EIR should be prepared to address those issues where the Project could result in significant environmental impacts, and to consider feasible mitigation measures and alternatives to the Project.

This Draft EIR focuses primarily on changes in the environment that would result from the Project, individually and cumulatively with other development projects. This Draft EIR identifies potentially significant direct and indirect impacts resulting from the operation of the Project and provides mitigation measures to reduce or avoid such effects. Based on public input and the results of the Initial Study, this Draft EIR addresses environmental effects in the following areas:

- Air Quality
- Biological Resources
- Hazards and Hazardous Materials
- Noise
- Transportation
- Tribal Cultural Resources

Based on the Initial Study, issues for which no significant impacts are anticipated to occur are discussed briefly as a part of Chapter 6, *Other CEQA Considerations*, of this Draft EIR. The analyses supporting these determinations are provided in the Initial Study included as **Appendix B**, of this Draft EIR.

1.2.2 Notice of Preparation

Pursuant to the provision of CEQA Guidelines Section 15082, the City circulated a NOP of a Draft EIR to State, regional, and local agencies, and members of the public for a 30-day review period commencing February 1st, 2024, and ending March 4th, 2024. The purpose of the NOP was to formally notice that the City was preparing a Draft EIR for the Project, and to solicit input regarding the scope and content of the environmental information to be included in this Draft EIR. **Appendix A**, of this Draft EIR, includes a copy of the NOP and written and oral comments

submitted on the NOP. The written and oral comments are also summarized in the Executive Summary, of this Draft EIR.

1.2.3 EIR Scoping Meetings

The NOP included notification that both an in-person EIR scoping meeting for the public and a virtual EIR scoping meeting for agencies would be held. In accordance with the CEQA Guidelines, the purpose of the EIR scoping meeting was for the City to solicit input and written comments from agencies and the public on environmental issues or alternatives they believe should be addressed in this Draft EIR. The in-person public EIR scoping meeting was held on Wednesday, February 21, 2024, from 5:00 PM to 6:00 PM at the Huntington Beach City Hall, Lower-Level Rooms B-7 and B-8, 2000 Main Street, Huntington Beach, CA 92648. The virtual agencies EIR scoping meeting was held on February 22, 2024, from 12:00 PM. to 2:00 PM. The EIR scoping meeting was held in an online format using zoom and provided interested public agencies the opportunity to view materials and ask questions regarding the scope and focus of this Draft EIR as described in the NOP and Initial Study.

1.2.4 Draft EIR

As discussed above, the purpose of this Draft EIR is to conduct an environmental review of the Airshow to determine whether the Project would introduce significant environmental effects. The significant environmental effects are the focus of this Draft EIR.

This Draft EIR provides a description of the Project, environmental setting, Project impacts, and mitigation measures for impacts found to be significant, as well as an analysis of Project alternatives. Significance criteria have been developed for each environmental resource analyzed in this Draft EIR and are defined for each impact analysis section. Impacts are categorized as follows:

- Significant and unavoidable;
- Potentially significant, but can be mitigated to a less-than-significant level;
- Less than significant (mitigation is not required under CEQA, but may be recommended); or
- No impact.

CEQA requires that Draft EIRs evaluate ways of avoiding or minimizing identified environmental effects where feasible through the application of mitigation measures or Project alternatives.

1.2.5 Public Review

This Draft EIR is subject to a 45-day review period in which the document is made available to responsible and trustee agencies and interested parties. In compliance with the provision of CEQA Guidelines Sections 15085(a) and 15087, the City, serving as the Lead Agency: (1) prepared and transmitted a Notice of Completion (NOC) to the State Clearinghouse; (2) published a Notice of Availability (NOA) of a Draft EIR which indicated that this Draft EIR was available for public review at the City's Community Development Department, Clerk's Office, the Huntington Beach Central Library, the Huntington Beach Public Library Banning Branch, and the

City's Website; (3) provided copies of the NOA and Draft EIR to the City's Community Development Department, Clerk's Office, the Huntington Beach Central Library, and the Huntington Beach Public Library Banning Branch; (4) posted the NOA and the Draft EIR on the City's Website: www.huntingtonbeachca.gov; (5) published legal notice (1/8th page) in the Huntington Beach Wave; (6) sent a NOA to the last known name and address of all organizations and individuals who previously requested such notice in writing or attended public meetings about the Project; and (7) filed the NOA with the County Clerk. Proof of publication is available at the City of Huntington Beach Planning Division. The public review period commenced on Thursday, February 20, 2025, and will end on Saturday, April 5, for a total of 45 days.

Any public agency or members of the public desiring to comment on this Draft EIR must submit their comments in writing or send them via email to the following address prior to the end of the public review period:

Mail: Connor Hyland
Senior Deputy City Attorney
City of Huntington Beach, Office of the City Attorney
2000 Main Street, Fourth Floor
Huntington Beach, CA 92648

Email: connor.hyland@surfcity-hb.org

1.2.6 Final EIR

Upon the close of the public review period for this Draft EIR, the City will proceed to evaluate and prepare responses to all relevant oral and written comments received from public agencies and other interested parties during the public review period. A Final EIR will then be prepared. The Final EIR will consist of this Draft EIR, any necessary revisions to this Draft EIR, comments submitted by responsible agencies or reviewing parties during the public circulation period for this Draft EIR, and City responses to those comments. After the Final EIR is completed and at least 10 days prior to its certification by the City Council[1], responses to comments made by public agencies on this Draft EIR will be provided to the commenting agencies.

1.2.7 Mitigation Monitoring and Reporting Program

CEQA requires lead agencies to adopt a reporting and mitigation monitoring program for the changes to the Project which it has adopted or made a condition of Project approval in order to mitigate or avoid significant effects on the environment (CEQA Section 21081.6, CEQA Guidelines Section 15097). The Mitigation Monitoring and Reporting Program will be available to the public at the same time as the Final EIR.

[1] Prior to approval of the Project, the City, as Lead Agency and decision-making entity, is required to certify that the Final EIR has been completed in compliance with CEQA, that the Project has been reviewed and the information in the Final EIR has been considered, and that the Final EIR reflects the independent judgement of the City.

1.3 Organization of this Draft EIR

This Draft EIR has been organized into the following sections:

Executive Summary. This chapter of the Draft EIR provides an overview of the entire document in a concise, summarized format. It briefly describes the Project (location and key Project features), the CEQA review process and focus, identifies effects found to be significant and unavoidable, identifies areas of controversy, provides a summary of the Project alternatives (descriptions and conclusions regarding comparative impacts), and provides a summary of Project impacts, Project Design Features and mitigation measures, and the level of impact significance following implementation of mitigation measures.

1. **Introduction.** This chapter provides a summary of the Project, describes the purpose of the EIR, including CEQA compliance requirements, steps undertaken to date regarding implementation of the CEQA process, and also summarizes the Draft EIR's organization.

2. **Environmental Setting.** This chapter presents an overview of the Project's environmental setting, including on-site and surrounding land uses. This section also provides a list and the mapped locations of past, present, and probable future related projects considered in the analysis of potential Project contributions to cumulative impacts.

3. **Environmental Impact Analysis.** This chapter contains the environmental setting, regulatory framework, methodology, thresholds to determine level of significance, Project Characteristics, Project-specific and cumulative impact analyses, mitigation measures, and conclusions regarding the level of significance after mitigation for each of the following environmental issues: 1) Air Quality; 2) Biological Resources; 3) Hazards and Hazardous Materials; 4) Noise; 5) Transportation; and 6) Tribal Cultural Resources. This chapter also includes a separate section which describes the potential cumulative impacts of the Project when considered together with other projects in the Project area.

4. **Alternatives.** This chapter describes a reasonable range of alternatives to the Project, including the (1) No Project/No Airshow Alternative, (2) 2023 Airshow Alternative; and (3) Reduced Project Alternative. This chapter also evaluates the environmental effects of the alternatives for each issue area analyzed in the Draft EIR, though not at the same level of detail as analyzed for the Project.

5. **Other CEQA Considerations.** This chapter includes a discussion of issues required by CEQA that are not covered in other chapters. This includes irreversible environmental changes, significant unavoidable impacts, reasons why the Project is being proposed notwithstanding significant unavoidable impacts, growth-inducing impacts, potential secondary effects related to Project mitigation measures, effects found not to be significant in the Initial Study, and effects found to be less than significant in the Draft EIR (before mitigation).

7. **List of EIR Preparers and Organizations and Persons Contacted.** This chapter lists the persons, public agencies, and organizations that were consulted or who contributed to the preparation of this Draft EIR.

8. **References.** This chapter lists the references and sources used in the preparation of this Draft EIR.

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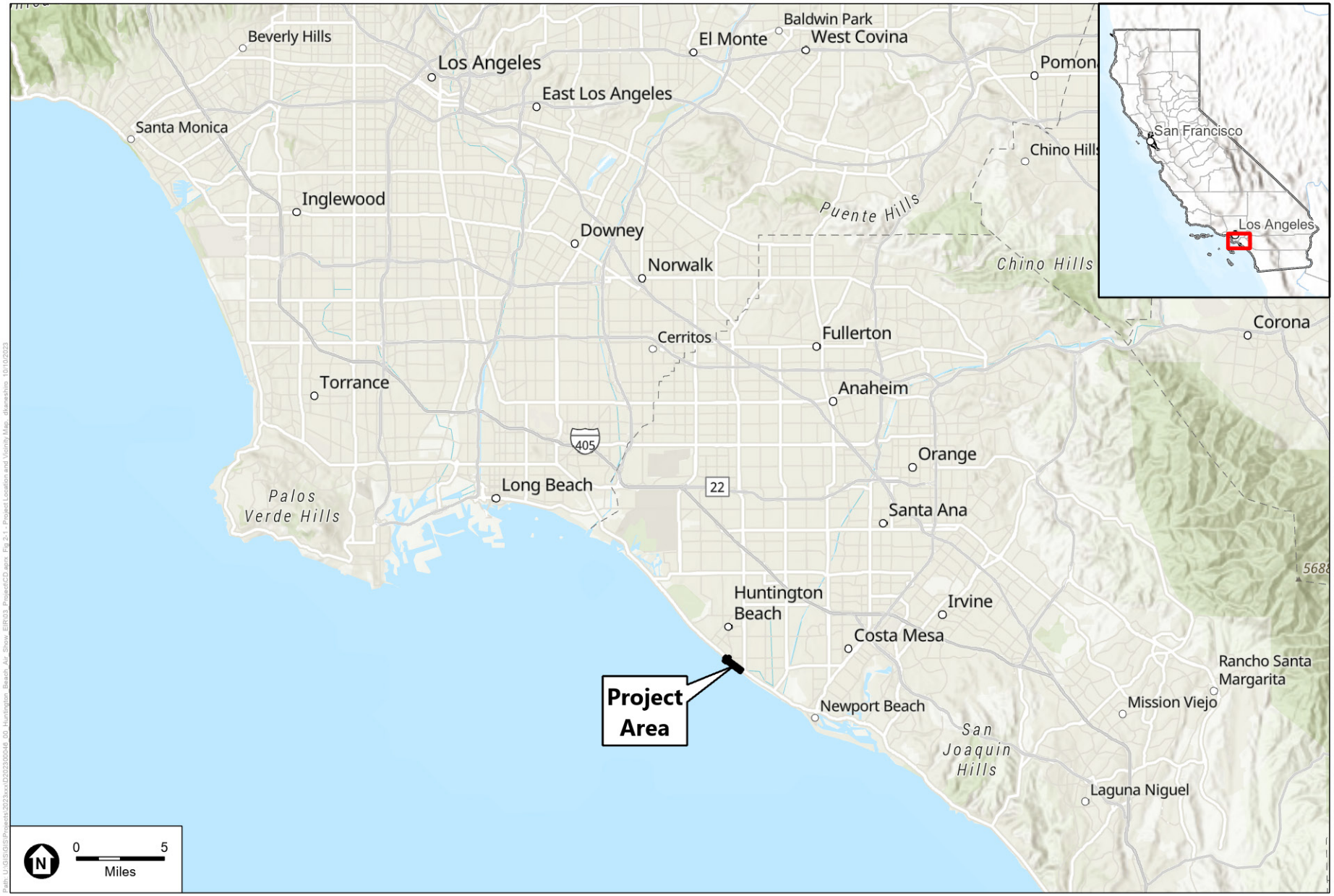
CHAPTER 2
Project Description

2.1 Project Location

Regionally, the Airshow is located in the City of Huntington Beach, which is in coastal Orange County in Southern California; refer to **Figure 2-1**. The Show Center Area is the location where primary on-the-ground events and activities of the Airshow take place. Locally, the approximate boundaries of the Show Center Area from northwest to southeast are 7th Street and Pacific Coast Highway (State Route 1 or SR-1) to Beach Boulevard (State Route 39 or SR-39) and Pacific Coast Highway to the Pacific Ocean including a portion of the Huntington Beach Pier landward of the State Lands Commission mean high tide line; refer to **Figure 2-2**. The Airshow Performance Area, the primary area for civilian and military aircraft flybys and aerial acrobatics, is located adjacent to the Show Center Area over the Pacific Ocean with an east-west length of approximately 3,000 feet from the shoreline and a north-south length of approximately 12,000 feet; refer to **Figure 2-3**. A majority of the civilian and military aircraft flybys and aerial acrobatics occur within approximately 500 and 1,500 feet from the shoreline. The Airshow Performance Area, or the aerobatic box, is identified by large marker buoys placed in the ocean that identify this area. However, many of the aircraft maneuvers, particularly for the military, spill out into the temporary flight restriction (TFR) airspace controlled by the Airshow. The TFR, as issued by the Federal Aviation Administration (FAA) for the Airshow, is a five nautical mile (NM) ring centered on the center of the Airshow's aerobatic box. The restricted airspace within the ring extends from the surface to 15,000 feet above mean sea level (MSL). The Show Center Area and Airshow Performance Area collectively comprise of the Project Site. For the purposes of the technical analysis within this Draft Environmental Impact Report (EIR), a broader study area may be defined that extends beyond the Project Site to reflect the potential impacts associated with civilian and military aircraft flybys and aerial acrobatics transiting to/from the Airshow Performance Area.

2.2 Existing Site Conditions and Surrounding Land Uses

The Show Center Area consists of the beach, the Huntington Beach Pier landward of the State Lands Commission mean high tide line, parking lots, commercial/restaurant uses, bicycle and walking trails along Pacific Coast Highway. Land uses surrounding the Show Center Area comprise of commercial/restaurant uses, hotel uses, parking lots, bicycle and walking trails, Pacific Coast Highway, and the beach.



SOURCE: ESA, 2023

Pacific Airshow Huntington Beach

Figure 2-1
Project Location and Vicinity Map

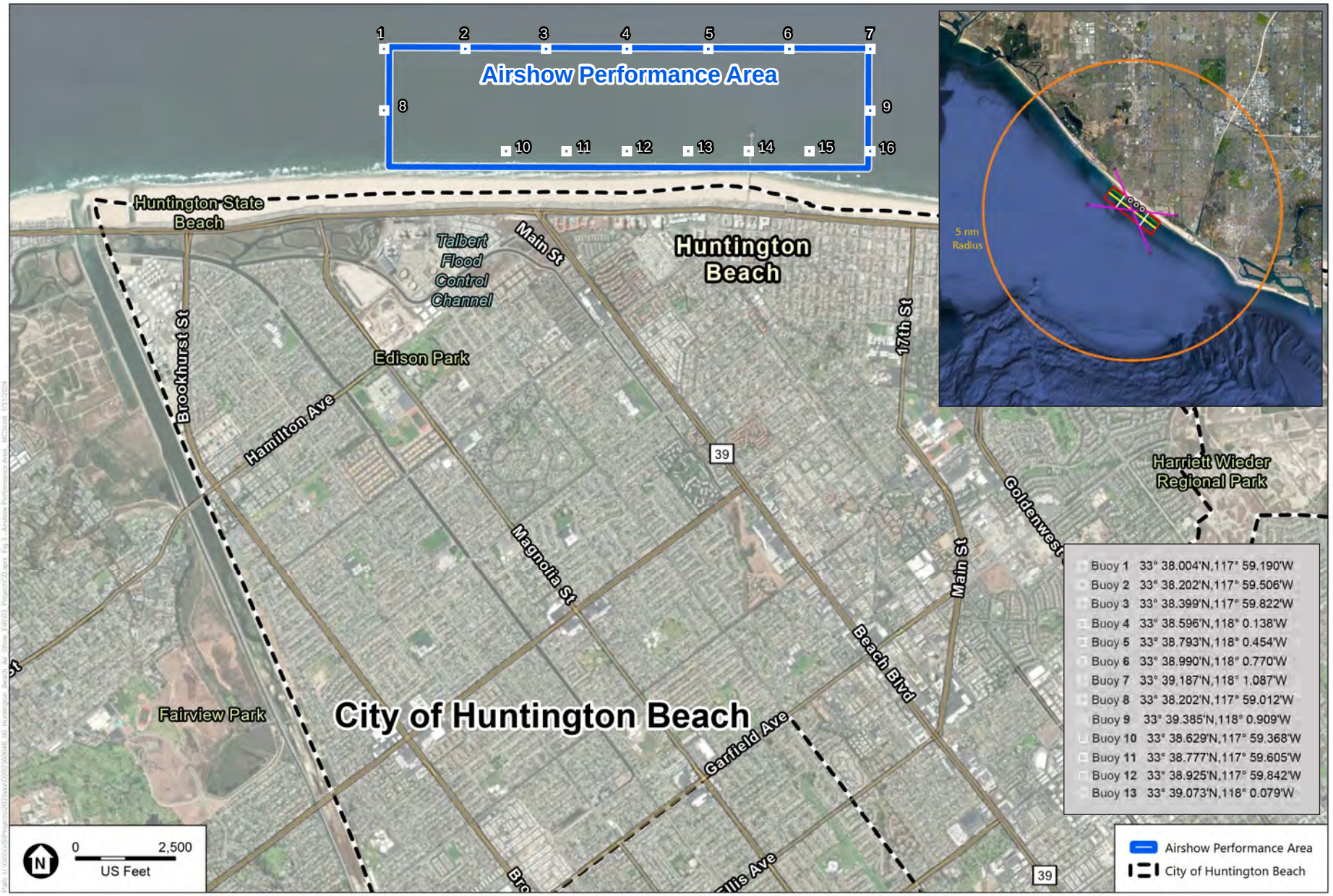
ESA

SOURCE: ESA, 2023

Pacific Airshow Huntington Beach

Figure 2-2
Show Center Area

ESA



SOURCE: ESA, 2023

Pacific Airshow Huntington Beach

Figure 2-3
Airshow Performance Area

ESA

2.3 Land Use and Zoning Designations

According to the City's General Plan Land Use Plan, the Project Site is located within the OS-S Shore land use designation. The Shore designation provides for coastal beaches operated by the City and state, and publicly or privately operated ancillary uses (e.g., food stands, recreational equipment rentals, and maintenance equipment storage).

According to the City's Zoning Map, the Project Site is located within the Specific Plan Designation, Specific Plan 5, Downtown. The Downtown Specific Plan (DTSP) is comprised of a 336-acre area that extends from the intersection of Goldenwest Street and Pacific Coast Highway and curves along the coastline, including the Huntington Beach Pier landward of the mean high tide line, down to Beach Boulevard. The purpose of the DTSP is to create a unique and identifiable downtown for the City that capitalizes on the unique location and features of the City's beachside downtown and is an economically vibrant and pedestrian-oriented destination for both residents and visitors. The goals of the DTSP are to establish the vision and create a land use plan for reuse of critical parcels so that the next phase of the community investment and improvement can begin; create an environment that promotes tourism to maximize public access and recreation; increase revenues to support community services; and transform the City's economy.

2.4 Project Background

As permitted by the City's Specific Event Permit Process, the Airshow has been held annually in the City for three (3) days during the fall season each year since 2016, except in 2020 during the COVID-19 pandemic. During the 2021 Airshow, an unrelated oil spill from a pipeline leak off the Orange County coast resulted in the cancelation of the final day. The most recent Airshow took place from September 29 to October 1, 2023. A detailed description of the historic and anticipated future Airshow events, activities, and schedules are provided in Section 2.7, *Project Characteristics.*

2.5 Project Purpose and Objectives

A statement of Project objectives and a description of the underlying purpose of the Project is required by California Environmental Quality Act (CEQA) Guidelines Section 15124. The Project objectives and underlying Project purpose are established to guide the lead agency in developing a reasonable range of alternatives to evaluate in the Draft EIR and aid the decision makers in preparing findings or a statement of overriding considerations, if necessary.

The underlying purpose of the Project is to provide a spectacle-scale airshow in Huntington Beach that attracts attendees throughout the Southern California area (and perhaps beyond) and features civilian and military aircraft flybys and aerial acrobatics, air racing, helicopter and aircraft landing/runway displays comprised of temporary acrylonitrile butadiene styrene (ABS) foundation (stadium flooring) or wood or aluminum flooring, electric vehicle (EV) and drone displays with hangars and aerial competitions and drone shows, displays of other emerging aviation/mobility technologies, and visitor-serving entertainment, services, and amenities (e.g., variety of viewing areas, vehicle and aircraft demonstrations and displays, illustrations,

flight simulations, merchandise tents, concessions, food trucks, live music entertainment, wave pool surf competitions, skateboard and bicycle motocross (BMX) bowl competitions, sandcastle building competitions, art installations, pyrotechnic shows, and recreational vehicle camping).

The Preliminary Project objectives include:

- Continue to provide a family-oriented, safe, educational, fun, and entertaining Airshow experience with an emphasis on outdoor lifestyle and popular culture elements.
- Continue to provide a gathering place where locals and visitors can come together to enjoy civilian and military aircraft flybys and aerial acrobatics, illustrations, displays, food, and music.
- Prove an event that promotes careers and opportunities in the Defense Forces and in aviation.
- Provide an event that promotes coastal access.
- Continue to promote awareness and use of the Huntington Beach Pier and beaches.
- Continue to promote awareness of the Huntington Beach hotels, restaurants, stores, and businesses across the City.
- Continue to promote Huntington Beach and Southern California as a welcoming global tourism destination.
- Create a net positive direct economic impact on the City and surrounding communities as a result of spending by incremental visiting attendees, the event organizer, and event sponsors.
- Increase in tax revenues (i.e., sales tax, transit occupancy tax, and property tax) to the City.
- Continue to provide temporary and full-time jobs associated with the Airshow.
- Provide an event that reduces potential impacts to the surrounding sensitive habitat including the Bolsa Chica Ecological Reserve, the Huntington Beach Wetlands, the Magnolia Marsh, and special-status wildlife species such as the federally endangered California least tern and western snowy plover.

2.6 Project Characteristics

2.6.1 Historic and Future Airshow Activities and Events Schedule

As discussed above, the Airshow has historically been held annually in the City for three (3) days (Friday through Sunday), with aircraft flight familiarization and flight practice flyovers beginning as early as Monday of the week of the Airshow, during the fall season, typically towards the end of September/beginning of October. The approximate times the TFR is in effect during the week of the Airshow are typically Tuesday 12:45 PM to 2:30 PM (to accommodate flight familiarization for the Thunderbirds), Friday 9:00 AM to 5:00 PM, Saturday 9:00 AM to 5:00 PM, and Sunday 10:00 AM to 5:00 PM. The hours of historic Airshow flights typically occurred between 10:00 AM and 5:00 PM; however, other Airshow-related activities have extended as late as 10:00 PM (Airshow performer private party and live music entertainment with nighttime flyovers by designated aircraft including parachute jumps onto the beach occurring during the evening hours of the of the music festival), as further described below. Future Airshows are

anticipated to be held annually for three (3) days to up to five (5) days, generally Friday through Sunday or up to Wednesday through Sunday, with aircraft flight familiarization and flight practice flyovers beginning as early as Monday of the week of the Airshow. New Airshow activities for future Airshows could also extend as late as 11:00 PM, as further described below. The City's Noise Ordinance, Chapter 8.40 Noise Control, Section 8.40.130 Permit Process, allows noise from temporary events to be exempt from provisions of the Ordinance if the event has a permit. As discussed above, the Project would include an event program for the continuation of the Airshow for up to ten (10) additional years beginning from year 2024 through 2034 as permitted by the City's Specific Event Permit Process.

Historic and Continued Airshow Activities and Events

The following activities and events have occurred in association with the Airshow since 2016 and are anticipated to generally continue as described for the next 10 years of future Airshows (through 2034).

After arrival to the aircrafts designated airports (airport locations further described below) for staging/maintenance/preparation, the aircraft conduct flight familiarization and flight practice flyovers throughout the Airshow Performance Area beginning as early as Monday of the week of the Airshow leading up to the opening day (Wednesday, Thursday, or Friday). Historically, the Airshow has attracted attendees throughout Southern California. Historical and future Airshows are anticipated to employ approximately 300 daily event staff and unpaid volunteers to assist with all event activities and Airshow operations.

On the day prior to the start of the Airshow, typically Thursday, the Airshow holds several events that are collectively referred to as "media day," which typically takes place at the Lyon Air Museum, located in Santa Ana, California, from approximately 10:00 AM to 12:00 PM for civilian performers and then relocates to the Joint Forces Training Base Los Alamitos Airfield, located in Los Alamitos, California, from approximately 1:00 PM to 4:00 PM for military performers. The media day events are considered private events. For all Airshow event days, which are open to the public, the Airshow admission, venue, and festival areas are open from 9:00 AM to 6:00 PM with civilian and military aircraft flybys and aerial acrobatics performing from approximately 10:00 AM to 5:00 PM. Saturday night, a private party is hosted for the Airshow performers from 6:00 PM – 10:00 PM at a single private undisclosed location. During the Airshow, demonstrations and vehicle and aircraft displays, illustrations, flight simulations, sponsorship booths, merchandise tents, concessions, and food trucks are located throughout the venue During the 2021 Airshow, the Afterburner Music Festival, the Official After Party of the Pacific Airshow, took place within the southernmost portion of the Show Center Area for two evenings following the Airshow (Friday, October 1, and Saturday, October 2, 2021). Nighttime flyovers by designated aircraft including parachute jumps onto the beach occurred during the evening hours of the of the music festival. The media day and Airshow performer party are private events that do not require approval by the City; as such, these events are not subject to CEQA and therefore, are not analyzed in this Draft EIR. Any potential noise impacts to the City generated by these events would be regulated by the City's Noise Ordinance. The Airshow and all other associated events and activities that are open to the public are analyzed throughout this Draft EIR.

New Airshow Activities Anticipated for 2024 through 2034

In addition to the activities and events described above for historic and continued Airshows, the following new public activities and events are anticipated to take place during future Airshow weekends:

- Multi-day air racing (i.e., aircraft competing over a fixed course) to occur within the Airshow Performance Area during the hours of the Airshow.
- Helicopter and aircraft landing/runway display (approximately 4,500-foot-long by 40-foot-wide) on a temporary landing surface to be generally located within an open area directly in front of the Main Hospitality Area (Area D) during the hours of the Airshow. The landing/runway area would be constructed from drivable ABS foundation (stadium flooring) to stabilize the sand and mitigate sand blowing.
- Aircraft static, drone and other urban air mobility (UAM) technology displays and aerial competitions to occur within both the Show Center Area and Airshow Performance Area during the hours of the Airshow.
- Public viewing locations of the aircraft hangars to be generally located just north of the Main Hospitality Area (Area D).
- During the 2021 Airshow, the Afterburner Music Festival, the Official After Party of the Pacific Airshow, took place for two evenings following the Airshow. Now, becoming an annual component of the Airshow, a multi-day music festival would be located generally within the northernmost portion of the Show Center Area within Concert Area #1 (Area A) or alternatively the southernmost portion of the Show Center Area within Concert Area #2/Additional Seating/Activations Area (Area E). The multi-day music festival would occur following the conclusion of the Airshow up to 11:00 PM over three (3) days over the weekend directed towards the ocean (with separately sold tickets).
- During the Afterburn Music Festival in 2021, nighttime flyovers occurred. Now, becoming an annual component of the Airshow, nighttime flyovers or displays by designated aircraft including parachute jumps onto the beach within the Performance Area would be relatively quick in duration (similar to the 2021 Airshow), even if multiple flyovers occurred, during the evening hours and potentially simultaneously with the music or between music acts. Nighttime flyovers and aircraft activity including drone shows and pyrotechnics could also occur in the evenings if no music festival would occur. These nighttime activities could run each day of the event, or be limited to only certain evenings. The loudest aircrafts to participate in such nighttime activities would be similar in type to the F-22 or F-34A.
- Wave pool surf competitions to be generally located within the Seating/Activations Area (Area C) during the hours of the Airshow.
- Skateboard and BMX bowl competitions and motorcross demonstrations to be generally located within the Seating/Activations Area (Area C) during the hours of the Airshow.
- Sandcastle building competitions to be generally located within the Seating/Activations Area (Area C) during the hours of the Airshow.
- Art installations to be generally located throughout the Show Center Area.
- Vehicle ride and drive in generally located within the Parking/Potential Activations Area (Area F), Activations/Parking/RV Camping Area (Area G), or the Parking/Activations Area (Area H).

- Side-by-side ride and drive on the sand generally located within the Seating/Activations Area (Area C).
- Pyrotechnic daily shows to be discharged from either aircraft or discharged from the Huntington Beach Pier or an ocean barge during the days and hours of the Airshow.
- Pyrotechnic nightly shows to be discharged from either aircraft (nighttime flyovers) or discharged from the Huntington Beach Pier or an ocean barge concluding by 11:00 PM each evening of the Airshow.
- Beach camping generally to take place with the Seating/Activations Area (Area C) and may involve using more ABS flooring to allow for recreational vehicles to park on the sand for the duration of the Airshow weekend, generally arriving Thursday and departing Sunday after the conclusion of the Airshow or Monday morning.

2.6.2 Airshow Performer Schedule

From prior years, typically each day the Airshow begins around 10:00 AM with the MV-22 Osprey streamer drop, then the Orange County Fire Authority (OCFA) water drop, followed by the Australian Anthem, Canadian Anthem, and the United States Anthem, and then followed by the U.S. Navy Leap Frog Parachute Team with American Flag banner tow. The official start of the Airshow is immediately after, at approximately 10:30 AM, when the below-mentioned Airshow civilian and military performers display aircraft flybys and aerial acrobatics in designated time slots with the final performer being the U.S. Air Force Thunderbirds or the U.S. Navy Blue Angels concluding by 5:00 PM. Aircraft flight familiarization and flight practice flyovers could potentially occur as early as 9:00 AM on Airshow event days. The Airshow performer schedule and the Airshow performers are subject to change each year for the Airshow.

The Applicant would conduct scheduled drone flights throughout the event days for capture of event promotional footage and documentation of event layouts in various areas. These drone flights would take place during the Airshow performance schedule within the Airshow Performance Area. In addition, the Applicant would also have aerial assets such as helicopters and jets with cameras conducting flights during the Airshow performance schedule within the Airshow Performance Area for the same purpose. In addition, the Applicant would have a photo flight (i.e., a flight made for the purpose of aerial photography, with a photographer manually taking pictures), which typically occurs on the Wednesday or Thursday between 3:00 PM and 6:00 PM prior to the Airshow. Further, there could potentially be other photo missions and flights such as a VIP experience or media flights. Further, the Applicant has had parachute jumps land onto the beach during their event setup. These jumps are typically conducted by one of the military parachute teams and can be single or tandem jumpers.

2.6.3 Airshow Performers

The previous performers and anticipated performers for future Airshows include, but are not limited to, display teams from the United States Air Force (U.S. Air Force), United States Navy (U.S. Navy), United State Marine Corps (U.S. Marine Corps), the United States Army (U.S. Army), the United States Coast Guard (U.S. Coast Guard), as well as performances by fan-favorite civilian performers. The performers typically include the following: U.S. Air Force Thunderbirds, U.S. Air Force F-15 Eagle, U.S. Airforce F-22 Heritage Flight, U.S. Airforce

Rockwell B-1 Lancer Bomber, U.S. Air Force T-33 Ace Maker, U.S. Air Force Boeing C-17 Globemaster III, U.S. Air Force Boeing KC-135 Stratotanker, Red Bull U.S. Chambliss and Fitzgerald Red Bull Jumpers, U.S. Navy Blue Angels, U.S. Navy F/A-18F Super Hornet (Rhino), U.S. Navy F-35C Lightning, U.S. Navy Growler Legacy Team, U.S. Navy Leap Frogs Parachute Team, U.S. Marine Corp MV-22 Osprey, U.S. Army Golden Knights, Royal Canadian Forces Snowbirds, Lyon Air Museum – Flybys C-47 and B-25, FedEx Boeing B757 and B767, SubSonex Mini Jet, Matt Hall & Emma McDonald Racing, Sammy Mason Edge 540 (N540SA), Michael Goulian Extra 330SC, Jet Waco, Yak 110, and OCFA water drop. As mentioned above, the Airshow list of performers is subject to change each year for the Airshow.

2.6.4 Airport Origin, Airshow Flight Paths, and Airshow Performance Duration.

As discussed above, future Airshows are anticipated to be held annually for three (3) days to up to five (5) days, generally Friday through Sunday or up to Wednesday through Sunday, with aircraft flight familiarization and flight practice flyovers beginning as early as Monday of the week of the Airshow. A majority of the aircraft originate from, but are not limited to, the Joint Forces Training Base Los Alamitos Airfield (KSLI) located in Los Alamitos, California (approximately 12 aircraft in 2023) and John Wayne Airport (SNA) located in Santa Ana, California (approximately 9 aircraft in 2023). Other airports to originate one to two aircraft are March Air Reserve Base (RIV) located Riverside County (approximately 2 aircraft for 2023), Fullerton Municipal Airport (FUL) located in Fullerton, California (1 aircraft for 2023), Los Angeles International Airport (LAX) located in Los Angeles, California (1 aircraft for 2023), San Diego International Airport (SAN) located in San Diego, California (0 aircraft for 2023), Channel Islands Air National Guard Station located at Port Hueneme, California (1 aircraft for 2023), and Edwards Air Force Base (EDW) located in Kern County (1 aircraft for 2023). Many of the aircraft, particularly the larger ones, hold out over the water and only make a few passes in front of the Show Center Area before returning to their origin airports. Typically, the duration of the aircraft over the Show Center Area ranges between approximately two minutes to up to 45 minutes.

Numerous daily flights by commercial and private aircraft currently fly over the Bolsa Chica Ecological Reserve (BCER) and helicopters regularly land at a helipad located within the BCER. However, the Project could increase the amount of air traffic that occurs over the BCER. The Applicant will provide mandatory in-person or virtual daily formal briefings each day of the Airshow to all pilots about the location, nature, and sensitivity of the BCER and will request avoidance of overflights over this area. In addition, the Applicant will advise Southern California Terminal Radar Approach Control Facilities (TRACON) and the Joint Forces Training Base Los Alamitos Airfield Tower on the location, nature, and sensitivity of the BCER and will request avoidance of overflights in this area. The Applicant will work with Southern California TRACON to establish routes in/out of the Airshow airspace and supporting airfields to avoid overflight of the BCER. When overflights of the BCER cannot be avoided, the Applicant will request that that overflights occur at 1,000 feet above ground level or above. Because pilots could be instructed by the FAA to fly over the BCER, preactivity surveys and biological monitoring will be conducted each year as part of the Project, at least one day prior to the Airshow as well as during the

operation of the Airshow to determine whether Airshow activity is impacting bird behavior and to ensure that no Airshow-related debris drifts into the sensitive ecological areas. The Airshow airport origins, Airshow flight paths, and Airshow performance durations are subject to change each year for the Airshow.

2.6.5 Show Center Area Layout and Event Viewing

The Show Center Area is collectively comprised of the Concert Area #1 (Area A), Pier Seating Area (Area B), Seating/Activations Area (Area C), Main Hospitality Area (Area D), Concert Area #2/Additional Seating/Activations Area (Area E), Parking/Potential Activations Area (Area F), Activations/Parking/RV Camping Area (Area G), and Parking/Activations Area (Area H; refer to **Figure 2-4**. Access to the pier ocean ward of the seating area shall remain open to the public. The Main Hospitality Area (Area D) for ticket purchases includes a tented pavilion comprised of all-inclusive premier club seating with unreserved seating and all-day hosted food and beverages; all-inclusive premiere club reserved tables for up to 10 guests with all-day hosted food and beverages; private-viewing and fully furnished cabanas for up to 20 guests; and fully furnished chalets for up to 85 to 135 guests (two size chalets available as standard and other sizes offered as customized packages). The ticketed general admission viewing areas with unreserved standing room access are located throughout the Seating/Activations Area (Area C). The Airshow offers a recreation vehicle (RV) camping area (Area G) with camping check-in offered on the day prior to the start of the Airshow check-out the Monday following the Airshow. Located throughout the Seating/Activations Area (Area C) are catering tents, food trucks, merchandise booths, bars serving beer, wine, and spirits, public safety stations, security check tables, volunteer tents, over one-hundred (100) portable and Americans with disability act (ADA) bathrooms and several restroom trailers, barricades, ABS foundation (stadium flooring) or wood or aluminum flooring helicopter landing/runways and walkways, and trash receptacles/dumpsters. Speakers for the public address (PA) system and generators are stationed throughout the venue to amplify the live Airshow broadcast. The amplified sound would occur between 9:00 AM and 6:00 PM for civilian and military aircraft flybys and aerial acrobatics and up to 11:00 PM for the music festival during the event days. In addition to the above-mentioned viewing areas, the event is also available to the public. It is anticipated that public beach areas located beyond the Show Center Area would be used by both spectators and beachgoers, as well as boaters within the Pacific Ocean located beyond the Airshow Performance Area. The area in front of the Main Hospitality Area (Area D) is reserved for the parachute

D202300046.01 - Huntington Beach Air Show EIR\05 Graphics-GIS-Modeling-USE AZURE

SOURCE: Pacific Airshow, 2024

Pacific Airshow Huntington Beach

Figure 2-4
Overall Conceptual Site Plan

ESA

landing area/landing surface. Located throughout the venue are emergency vehicle staging areas and access lanes, first aid stations, and lost and found stations. The Parking/Activations Area (Area H) (free for the public) features vehicle and aircraft demonstrations and displays, illustrations, flight simulations, sponsorship booths, merchandise tents, concessions, and food trucks. The Activations/Parking/RV Camping Area (Area G) and the Parking/Potential Activation Area (Area F) could also include additional activations, vehicle and aircraft demonstrations and displays, and illustrations in addition to parking and RV camping. The Pier Seating Area (Area B) includes temporary seats for purchase and includes umbrellas, cocktail tables and two cash bars. All Pier Seating is landward of the State Lands Commission mean high tide line. Public access (for non-ticket holders) to the Pier would remain open during future Airshows. Only a portion of the Pier would be reserved for seated ticketholders and pier ingress and egress would still be provided. The Show Center Control Area located within the center of the Main Hospitality Area (Area D) includes the elevated show control and broadcast room, production and sound tents, and a public safety station. Following each future Airshow, the Show Center Area would be restored to pre-Project conditions.

2.6.6 Access, Ingress/Egress, Road Closures, and Parking

The primary vehicular travel corridors to access the Show Center Area are from Interstate 405 (I-405) to either Beach Boulevard, Magnolia Street, Brookhurst Street, or Goldenwest Street; State Route 55 (SR-55) to Pacific Coast Highway; or Seal Beach Boulevard to Pacific Coast Highway. Based on previous Airshows, temporary changes to vehicular ingress and egress of the Airshow area are anticipated to result from the following restrictions: establishment of a staging area for emergency response personnel between the 200-300 block of southbound 1st Street; installation of staging equipment for the Airshow on Main Street between Walnut Avenue and Pacific Coast Highway; and temporary use of an auxiliary lane to facilitate exiting vehicles from the public parking lots on southbound Pacific Coast Highway approximately 300 feet before the intersection at Beach Boulevard. Future Airshows do not propose substantial or permanent changes to the existing circulation elements, or temporary road closures, which would affect transit vehicles, automobiles, bicycles, or pedestrians beyond what has occurred for historic Airshows.

Patrons arriving by vehicle are permitted to park within the Huntington Beach public parking areas, where the Applicant coordinates with the City to reserve parking spaces dedicated to Airshow attendees. Access to the public parking lots adjacent to the Show Center Area are located along Pacific Coast Highway at the intersection of 6th Street, 1st Street, Huntington Street, Beach Boulevard, and a right-in-right out driveway mid-block between Main Street and 1st Street. Additional public parking southeast of the Show Center Area can be accessed at Newland Street, Magnolia Street, and Brookhurst Street. On-street parking in the general vicinity is allowed except where the temporary restrictions are implemented along Pacific Coast Highway, along with other streets with temporary closures as described above. The Applicant and City could implement future event shuttle programs that would allow attendees to park at designated public locations and ride a free shuttle to the Show Center Area. It is anticipated the City would close the parking entrance located at Huntington Street and Pacific Coast Highway for the Airshow's exclusive use during event set up, event days, and event breakdown. The RV camping lot at this location would be reserved for curation and sale of the Airshow's RV Camping Experience with

camping check-in offered on the day prior to the start of the Airshow check-out the Monday following the Airshow. The Airshow would also have 15 RV camping spaces reserved for production use and set up beginning prior to the start of the Airshow up to the Friday following the end of the Airshow.

2.6.7 Airshow Set Up and Site Breakdown

The Airshow set up would be limited to the Show Center Area. Set up of event facilities is anticipated to begin up to two weeks prior to the start of the Airshow with a typical day of set up beginning at 6:00 AM and ending by 8:00 PM.

Site breakdown would involve removal of all equipment and temporary facilities. Required equipment would include rubber-tired loaders, forklifts, pick-up trucks with trailers, 4-wheel drive all-terrain carts, and construction light towers. All materials, trash, and debris would be removed from the beach and disposed of off-site daily and at the conclusion of the Airshow. Site breakdown would begin on the final event day (Sunday) following the end of the Airshow from 5:00 PM through 12:00 AM and would continue on the Monday through Friday, from 6:00 AM to 8:00 PM, each day following the Airshow until completed.

2.6.8 Event Security and Evacuation

In addition to foot and motor patrols provided by the City of Huntington Beach Police Department (HBPD) during the event days, private security would also be provided by the Applicant. The private security company would coordinate crowd control, internal security, venue safety, and emergency evacuation in coordination with the HBPD. In addition, HBPD motor officers and parking control officers would be deployed to maintain traffic flow along Pacific Coast Highway and to enforce parking restrictions in the vicinity. Fire and medical services would be provided by the Huntington Beach Fire Department (HBFD). Located throughout the venue are emergency vehicle staging areas and access lanes, first aid stations, and lost and found stations. Access lanes throughout the Show Center Area would be restricted for emergency vehicles and personnel throughout the Airshow.

2.6.9 Utilities

Trash/waste (i.e., general waste/trash, recycling waste, food waste, restroom waste), water, and wastewater are the responsibility of the Applicant to work directly with the City for coordination and execution. Consistent with the City's franchise agreement, the Applicant would contract and coordinate refuse needs with the City's waste management provider, Republic Services. Republic Services would provide cardboard general waste and recycling bins with lids to be located throughout the Show Center Area including the reserved parking lot areas and would place dumpster bins in accordance with expected attendance. Dedicated food waste bins would be placed in the hospitality areas throughout the venue. The Applicant would be responsible to replace all full trash can liners throughout the venue and to place the trash from the bins into the dumpsters to then be removed by Republic Services following the conclusion of the Airshow. The Applicant would encourage all food vendors to avoid plastics (straws, cups, lids) and recommended to use paper straws or straw less lids. For non-potable water demand, the Applicant

would use a water coupler to access the irrigation in the planters in the City's parking lots for the Airshow's parking lot activation activities. For potable water, the Applicant would bring in their own water tank and utilize it for filling the wave pool, luxury restroom trailers, washing stations, and catering. The water tank would be filled using the City's hydrants. Alternatively, through an agreement with the Utilities Division in the Public Works Department of the City, a water meter could be installed on the hydrants in the City's parking lots to allow the Airshow to connect directly into the hydrant for potable water to fill the Applicant's water tank and to pay the event's water bill according to Airshow usage on the meter. Restrooms available for the Airshow would consist of the existing restrooms, over one-hundred (100) portable and ADA bathrooms, and several restroom trailers located throughout the venue. All restroom facilities would be cleaned and serviced at the conclusion of the Airshow each day. Each of the single portable restrooms would sit in a containment tray on top of plywood (or other suitable flooring) and would not be within 50 feet of an existing storm drain. Wastewater generated from the Airshow would be hauled off by the Applicant's vendors (i.e., portable bathrooms and restroom trailers). Propane would be used for cooking and heating. Electrical power connections to the City's electric grid would be provided throughout the venue.

2.7 Review and Approvals

The Airshow is anticipated to require the following review and approval by the City of Huntington Beach:

- Certification of the Final Environmental Impact Report.
- Issuance of a Coastal Development Permit (CDP) from the California Coastal Commission (CCC).
- Approval of the Specific Event Permit Application.

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CHAPTER 3
Environmental Setting, Impacts, and Mitigation Measures

3.0 Introduction to the Analysis

This Draft Environmental Impact Report (EIR) is prepared in accordance with California Environmental Quality Act (CEQA) (California Public Resources Code, Section 21000 et seq.), the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 et seq.), and applicable rules and regulations of regional and local entities. This Draft EIR evaluates the potential environmental impacts associated with the implementation of the Project. This Draft EIR is intended to serve as an informational document for the public agency decision-makers and the public regarding the Project.

3.0.1 Scope of the Environmental Impact Analysis

In accordance with Section 15126 of the CEQA Guidelines, this chapter provides an analysis of the direct and indirect environmental effects associated with the Project. These impacts are evaluated with respect to existing conditions at the time the Notice of Preparation (NOP) was published on February 1, 2024 (refer to **Appendix A**). The determination of whether an impact is significant is based on the significance thresholds and methodology identified for each environmental issue. In accordance with Appendix G of the CEQA Guidelines, this chapter assesses the Project's potential effects on the following environmental resources:

- Air Quality
- Biological Resources
- Hazards and Hazardous Materials (Wildlife Hazard Assessment and Evacuation).
- Noise
- Transportation
- Tribal Cultural Resources

3.0.2 Approach to Environmental Analysis

Sections 3.1 through 3.6 of this Draft EIR contain discussions of the environmental setting, regulatory setting and potential impacts related to the implementation of the Project. The project-level analysis will estimate the impacts to each resource category before the implementation of applicable mitigation measures. The analyses will then estimate the impacts to each resource category after the implementation of applicable mitigation measures. Cumulative analyses of Sections 3.1 through 3.6 are contained within Section 3.7, *Cumulative Impacts*.

3.0.3 Organization of Environmental Issue Area

The Project is expected to achieve the objectives outlined in Section 2.5, of Chapter 2, *Project Description*, of this Draft EIR. Environmental resources that are addressed in Chapter 3 include a discussion of the environmental setting, regulatory setting, thresholds of significance, methodology, and impacts (which includes a discussion of applicable mitigation measures). A brief description of these components that are addressed in Sections 3.1 through 3.6 of this Draft EIR is provided below.

3.0.3.1 Environmental Setting

This section identifies and describes the existing physical environmental conditions of the Project area as it pertains to each impact section. Pursuant to CEQA Guidelines Section 15125(a)(1), an EIR must include a description of the existing physical environmental conditions in the vicinity of the proposed project from both a local and regional perspective. This description provides the "baseline condition" against which project-related impacts are compared. Normally, the baseline condition is the physical condition that exists when the NOP is published. The NOP for the Project was published on February 1, 2024, so February 1, 2024, will serve as the baseline for the environmental impact analysis contained in this Draft EIR. [Note to City: Section 3.1, Air Quality

3.0.3.2 Regulatory Setting

The Regulatory Setting section provides a summary of the regulatory environment as it currently exists. The regulatory framework used in this Draft EIR included federal, state, regional, and local regulations and policies applicable to the Project.

3.0.3.3 Existing Conditions

For Section 3.1, *Air Quality*, this section describes the regional air quality and local air quality. For Section 3.4, *Noise*, this section identifies noise sensitive receptor locations and noise measurement data from each location, existing roadway noise levels, vibration sensitive receptor locations and existing groundbourne vibration levels.

3.0.3.4 Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, significance criteria have been developed for each environmental resource and are defined at the beginning of each impact analysis section. The significance of potential impacts is categorized as follows:

- **Significant and Unavoidable**: mitigation might be recommended but impacts are still significant;
- **Less than Significant with Mitigation**: potentially significant impact but mitigated to a less-than-significant level;
- **Less than Significant**: mitigation is not required under CEQA; or

3.0.3.5 Methodology

This section describes the methodology and approach used to evaluate the potential environmental effects associated with the implementation of the Project.

3.0.3.6 Impacts and Mitigation Measures

This section discusses the changes that may occur to existing physical conditions if the Project is implemented, and evaluates these changes based upon the identified significance criteria. This section also includes a project-level impact analysis and a cumulative impact analysis. The analysis estimates the magnitude of each impact without the adoption of any mitigation measures, but also identifies feasible mitigation measures for any potentially significant project-level or cumulative impacts. Mitigation measures are those measures that could avoid, minimize, or reduce an environmental impact. This section also analyzes the expected significance of impact if the identified applicable mitigation measures are implemented.

3.0.4 Level of Significance

Determining the severity of project and cumulative impacts is fundamental to achieving the objectives of CEQA. CEQA Guidelines Section 15091 requires that decision makers mitigate, as completely as is feasible, the significant impacts identified in this EIR. If the EIR identifies any significant unmitigated impacts, CEQA Guidelines Section 15093 requires decision makers in approving a project to adopt a statement of overriding considerations that explains why the benefits of the project outweigh the adverse environmental consequences identified in the EIR.

The level of significance for each impact examined in this EIR is determined by considering the predicted magnitude of the impact against the applicable threshold. Thresholds are developed using criteria from the CEQA Guidelines and checklist; State, federal, and local regulatory schemes; local/regional plans and ordinances; accepted practice; consultation with recognized experts; and other professional opinions.

3.0.5 Cumulative Analysis

For the cumulative analysis, please refer to Section 3.7, *Cumulative Analysis*.

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3.1 Air Quality

This section evaluates the potential local and regional environmental impacts on air quality from the Project, including potential impacts related to a cumulatively considerable net increase in criteria pollutants. As discussed in the Initial Study, **Appendix B**, of this Draft EIR, potential impacts related to conflict with or obstruction of air quality plans, exposing sensitive receptors to substantial pollutant concentrations, and resulting in other emissions (such as those leading to odors) adversely affecting a substantial number of people were found to have a less than significant impact and are not addressed further in this Draft EIR. This section estimates the air pollutant emissions generated by Project construction and operation and assesses whether Project emissions would result in a cumulatively considerable net increase of any criteria pollutant in non-attainment of federal or state ambient air quality standard. This section relies on the information, data, assumptions, calculation worksheets, and model outputs provided in **Appendix C**, of this Draft EIR.

Comments received in response to the Notice of Preparation (NOP) for the EIR can be found in **Appendix A**, of this Draft EIR. The air quality-related comments in response to the NOP included comments regarding Project construction of a temporary runway and temporary aircraft landing pad and associated emissions, Project vehicle miles traveled (VMT) and associated air quality emissions, and encouraging increased transit use to reduce congestion/VMT, and Project aircraft-related air emissions.

3.1.1 Environmental Setting

3.1.1.1 Air Quality Background

Air Quality and Public Health

Certain air pollutants have been recognized to cause notable health problems and consequential damage to the environment either directly or in reaction with other pollutants, due to their presence in elevated concentrations in the atmosphere. Such pollutants have been identified and regulated as part of an overall endeavor to prevent further deterioration and to facilitate improvement in air quality. The National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been set at levels considered safe to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly with a margin of safety, and to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings (USEPA 2023a). As the scientific methods for the study of air pollution health effects have progressed over the past decades, adverse effects have been shown to occur at lower levels of exposure. For some pollutants, no clear thresholds for effects have been demonstrated. New findings over time have, in turn, led to the revision and lowering of NAAQS, which, in the judgment of the U.S. Environmental Protection Agency (USEPA), are necessary to protect public health. Ongoing assessments of the scientific evidence from health studies continue to be an important part of setting and informing revisions to federal and state air quality standards (SCAQMD 2022a). The NAAQS and CAAQS are listed in Table 3.1-1 in *Regulatory Framework*.

At the regional level, the South Coast Air Quality Management District (SCAQMD) is the regulatory agency responsible for improving air quality for large areas of Los Angeles, Orange County, Riverside and San Bernardino Counties, including the Coachella Valley (SCAQMD 2024). Huntington Beach is located within the South Coast Air Basin (Air Basin) which is a distinct geographic subarea within the SCAQMD's jurisdiction. The SCAQMD, together with the Southern California Association of Governments (SCAG), has the responsibility for ensuring that national and state ambient air quality standards are achieved and maintained for the Air Basin. Failure to comply with these standards puts state and local agencies at risk for penalties in the form of lawsuits, fines, a federal takeover of state implementation plans, and a loss of funds from federal agencies such as the Federal Highway Administration and Federal Transit Administration.

To meet the air quality standards, regional plans are developed, including the SCAQMD's AQMP, which incorporates regional demographic projections and integrated regional land use and transportation strategies from SCAG's Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). These plans work together to examine multiple pollutants, cumulative effects, and transport issues related to attaining healthful air quality in the region. In addition, a host of regulatory standards at the federal, state, regional, and local level function to identify and limit exposure of air pollutants and toxic air contaminants (TACs).

Local Air Quality and Air Pollution Sources

As mentioned previously, Huntington Beach is in the Air Basin, which is an approximately 6,745-square-mile area bounded by the Pacific Ocean to the west; the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east; and San Diego County to the south. The Air Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the Coachella Valley area in Riverside County. The regional climate within the Air Basin is considered semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. The air quality within the Air Basin is primarily influenced by meteorology and a wide range of emissions sources, such as dense population centers, heavy vehicular traffic, and industry.

The Air Basin experiences a persistent temperature inversion (increasing temperature with increasing altitude) as a result of the Pacific high. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed in mid to late afternoons on hot summer days. Winter inversions frequently break by midmorning.

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly onshore into Riverside and San Bernardino Counties. In the winter, the greatest pollution problem is the accumulation of carbon monoxide (CO) and nitrogen oxides (NO_X) due to low inversions and air stagnation during the night and

early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and NO_X to form photochemical smog.

Air pollutant emissions within the Air Basin are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and include such sources as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products. Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment, such as when high winds suspend fine dust particles.

3.1.1.2 Air Pollutant Types

Criteria Pollutants and Effects

The six principal pollutants for which national and state criteria and standards have been promulgated, known as "criteria pollutants", and which are most relevant to current air quality planning and regulation in the Air Basin include O_3, respirable and fine particulate matter (PM10 and PM2.5, respectively), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead (Pb). These pollutants are referred to as "criteria air pollutants" as a result of the specific standards, or criteria, which have been adopted for them.

Ozone (O_3). Ozone is a secondary pollutant formed by the chemical reaction of volatile organic compounds (VOCs) and nitrogen oxides (NO_X) in the presence of sunlight under favorable meteorological conditions, such as high temperature and stagnation episodes. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable. According to USEPA, ozone can cause the muscles in the airways to constrict potentially leading to wheezing and shortness of breath (USEPA 2023b). Ozone can make it more difficult to breathe deeply and vigorously; cause shortness of breath and pain when taking a deep breath; cause coughing and sore or scratchy throat; inflame and damage the airways; aggravate lung diseases such as asthma, emphysema and chronic bronchitis; increase the frequency of asthma attacks; make the lungs more susceptible to infection; continue to damage the lungs even when the symptoms have disappeared; and cause chronic obstructive pulmonary disease (USEPA 2023b). Long-term exposure to ozone is linked to aggravation of asthma, and is likely to be one of many causes of asthma development and long-term exposures to higher concentrations of ozone may also be linked to permanent lung damage, such as abnormal lung development in children (USEPA 2023b). According to the California Air Resource Board (CARB), inhalation of ozone causes inflammation and irritation of the tissues lining human airways, causing and worsening a variety of symptoms and exposure to ozone can reduce the volume of air that the lungs breathe in and cause shortness of breath (CARB 2023).

USEPA states that people most at risk from breathing air containing ozone include people with asthma, children, older adults, and people who are active outdoors, especially outdoor workers (USEPA 2023b). Children are at greatest risk from exposure to ozone because their lungs are still developing and they are more likely to be active outdoors when ozone levels are high, which increases their exposure (USEPA 2023b). According to CARB, studies show that children are no more or less likely to suffer harmful effects than adults; however, children and teens may be more susceptible to ozone and other pollutants because they spend nearly twice as much time outdoors and engaged in vigorous activities compared to adults (CARB 2024a). Children breathe more rapidly than adults and inhale more pollution per pound of their body weight than adults and are less likely than adults to notice their own symptoms and avoid harmful exposures (CARB 2024a). Further research may be able to better distinguish between health effects in children and adults (CARB 2024a).

Nitrogen Dioxide (NO_2) and Nitrogen Oxides (NO_X). NO_X is a term that refers to a group of compounds containing nitrogen and oxygen. The primary compounds of air quality concern include NO_2 and nitric oxide (NO). Ambient air quality standards have been promulgated for NO_2, which is a reddish-brown, reactive gas (CARB 2024b). The principal form of NO_X produced by combustion is NO, but NO reacts quickly in the atmosphere to form NO_2, creating the mixture of NO and NO_2 referred to as NO_X (CARB 2024b). Major sources of NO_X include emissions from cars, trucks and buses, power plants, and off-road equipment (USEPA 2023c). The terms NO_X and NO_2 are sometimes used interchangeably. However, the term NO_X is typically used when discussing emissions, usually from combustion-related activities, and the term NO_2 is typically used when discussing ambient air quality standards. Where NO_X emissions are discussed in the context of the thresholds of significance or impact analyses, the discussions are based on the conservative assumption that all NO_X emissions would oxidize in the atmosphere to form NO_2.

According to USEPA, short-term exposures to NO_2 can potentially aggravate respiratory diseases, particularly asthma, leading to respiratory symptoms (such as coughing, wheezing or difficulty breathing), hospital admissions and visits to emergency rooms while longer exposures to elevated concentrations of NO_2 may contribute to the development of asthma and potentially increase susceptibility to respiratory infections (USEPA 2023c). According to CARB, controlled human exposure studies that show that NO_2 exposure can intensify responses to allergens in allergic asthmatics (CARB 2024b). In addition, a number of epidemiological studies have demonstrated associations between NO_2 exposure and premature death, cardiopulmonary effects, decreased lung function growth in children, respiratory symptoms, emergency room visits for asthma, and intensified allergic responses (CARB 2024b). Infants and children are particularly at risk from exposure to NO_2 because they have disproportionately higher exposure to NO_2 than adults due to their greater breathing rate for their body weight and their typically greater outdoor exposure duration while in adults, the greatest risk is to people who have chronic respiratory diseases, such as asthma and chronic obstructive pulmonary disease (CARB 2024b). CARB states that much of the information on distribution in air, human exposure and dose, and health effects is specifically for NO_2 and there is only limited information for NO and NO_X, as well as large uncertainty in relating health effects to NO or NO_X exposure (CARB 2024b).

Carbon Monoxide (CO): Carbon monoxide (CO) is primarily emitted from combustion processes and motor vehicles due to the incomplete combustion of fuel, such as natural gas, gasoline, or wood, with the majority of outdoor CO emissions from mobile sources (CARB 2024c). According to USEPA, breathing air with a high concentration of CO reduces the amount of oxygen that can be transported in the blood stream to critical organs like the heart and brain and at very high levels, which are possible indoors or in other enclosed environments, CO can cause dizziness, confusion, unconsciousness and death (USEPA 2023d). Very high levels of CO are not likely to occur outdoors; however, when CO levels are elevated outdoors, they can be of particular concern for people with some types of heart disease since these people already have a reduced ability for getting oxygenated blood to their hearts and are especially vulnerable to the effects of CO when exercising or under increased stress (USEPA 2023d). In these situations, short-term exposure to elevated CO may result in reduced oxygen to the heart accompanied by chest pain also known as angina (USEPA 2023d). According to CARB, the most common effects of CO exposure are fatigue, headaches, confusion, and dizziness due to inadequate oxygen delivery to the brain (USEPA 2023d). For people with cardiovascular disease, short-term CO exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress; inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance (USEPA 2023d). Unborn babies, infants, elderly people, and people with anemia or with a history of heart or respiratory disease are most likely to experience health effects with exposure to elevated levels of CO (USEPA 2023d).

Sulfur Dioxide (SO_2). According to USEPA, the largest source of sulfur dioxide (SO_2) emissions in the atmosphere is the burning of fossil fuels by power plants and other industrial facilities while smaller sources of SO_2 emissions include industrial processes such as extracting metal from ore; natural sources such as volcanoes; and locomotives, ships and other vehicles and heavy equipment that burn fuel with a high sulfur content (USEPA 2023e). In 2006, California phased-in the ultra-low-sulfur diesel regulation limiting vehicle diesel fuel to a sulfur content not exceeding 15 parts per million (ppm), down from the previous requirement of 500 ppm, substantially reducing emissions of sulfur from diesel combustion (CARB 2004). According to USEPA, short-term exposures to SO_2 can harm the human respiratory system and make breathing difficult (USEPA 2023e). According to CARB, health effects at levels near the state 1-hour standard are those of asthma exacerbation, including bronchoconstriction accompanied by symptoms of respiratory irritation such as wheezing, shortness of breath and chest tightness, especially during exercise or physical activity and exposure at elevated levels of SO_2 (above 1 ppm) results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality (CARB 2024d). Children, the elderly, and those with asthma, cardiovascular disease, or chronic lung disease (such as bronchitis or emphysema) are most likely to experience the adverse effects of SO_2 (CARB 2024d; USEPA 2023e).

Particulate Matter (PM10 and PM2.5). Particulate matter air pollution is a mixture of solid particles and liquid droplets found in the air (USEPA 2023f). Some particles, such as dust, dirt, soot, or smoke, are large or dark enough to be seen with the naked eye while other particles are so small they can only be detected using an electron microscope (USEPA 2023f). Particles are defined by their diameter for air quality regulatory purposes: inhalable particles with diameters that are generally 10 micrometers and smaller (PM10); and fine inhalable particles with diameters

that are generally 2.5 micrometers and smaller (PM2.5) (USEPA 2023f). Thus, PM2.5 comprises a portion or a subset of PM10. Sources of PM10 emissions include dust from construction sites, landfills and agriculture, wildfires and brush/waste burning, industrial sources, and wind-blown dust from open lands (CARB 2024e). Sources of PM2.5 emissions include combustion of gasoline, oil, diesel fuel, or wood (CARB 2024e). PM10 and PM2.5 may be either directly emitted from sources (primary particles) or formed in the atmosphere through chemical reactions of gases (secondary particles) such as SO_2, NO_X, and certain organic compounds (CARB 2024e). According to CARB, both PM10 and PM2.5 can be inhaled, with some depositing throughout the airways; PM10 is more likely to deposit on the surfaces of the larger airways of the upper region of the lung while PM2.5 is more likely to travel into and deposit on the surface of the deeper parts of the lung, which can induce tissue damage, and lung inflammation (CARB 2024e). Short-term (up to 24 hours duration) exposure to PM10 has been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease, leading to hospitalization and emergency department visits (CARB 2024e). The effects of long-term (months or years) exposure to PM10 are less clear, although studies suggest a link between long-term PM10 exposure and respiratory mortality. The International Agency for Research on Cancer published a review in 2015 that concluded that particulate matter in outdoor air pollution causes lung cancer (CARB 2024e). Short-term exposure to PM2.5 has been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days and long-term exposure to PM2.5 has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children (CARB 2024e). According to CARB, populations most likely to experience adverse health effects with exposure to PM10 and PM2.5 include older adults with chronic heart or lung disease, children, and asthmatics and children and infants are more susceptible to harm from inhaling pollutants such as PM10 and PM2.5 compared to healthy adults because they inhale more air per pound of body weight than do adults, spend more time outdoors, and have developing immune systems (CARB 2024e).

Lead (Pb). Major sources of lead emissions include ore and metals processing, piston-engine aircraft operating on leaded aviation fuel, waste incinerators, utilities, and lead-acid battery manufacturers (USEPA 2023g). In the past, leaded gasoline was a major source of lead emissions; however, the removal of lead from gasoline has resulted in a decrease of lead in the air by 98 percent between 1980 and 2014 (USEPA 2023g). Lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems and the cardiovascular system, and affects the oxygen carrying capacity of blood (USEPA 2023g). The lead effects most commonly encountered in current populations are neurological effects in children, such as behavioral problems and reduced intelligence, anemia, and liver or kidney damage (CARB 2024f). Excessive lead exposure in adults can cause reproductive problems in men and women, high blood pressure, kidney disease, digestive problems, nerve disorders, memory and concentration problems, and muscle and joint pain (CARB 2024f).

Additional Criteria Pollutants (California Only)

In addition to the national standards, the State of California regulates state-identified criteria pollutants, including sulfates (SO_4^2), hydrogen sulfide (H_2S), visibility-reducing particles, and

vinyl chloride. With respect to the state-identified criteria pollutants, most land use development projects either do not emit them (i.e., H_2S [nuisance odor] and vinyl chloride), or otherwise account for these pollutants (i.e., SO_4^2 and visibility reducing particles) through other criteria pollutants. For example, SO_4^2 are associated with SO_X emissions, and visibility-reducing particles are associated with particulate matter emissions. A description of the health effects of the state-identified criteria air pollutants is provided below.

Sulfates (SO_4^2): SO_4^2 are the fully oxidized ionic form of sulfur. SO_4^2 occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized during the combustion process and subsequently converted to SO_4^2 in the atmosphere. Effects of sulfate exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms, and an increased risk of cardio-pulmonary disease. SO_4^2 are particularly effective in degrading visibility, and, due to the fact that they are usually acidic, can harm ecosystems and damage materials and property.

Hydrogen Sulfide (H_2S): H_2S is a colorless gas with the odor of rotten eggs. The most common sources of H_2S emissions are oil and natural gas extraction and processing, and natural emissions from geothermal fields. Industrial sources of H_2S include petrochemical plants and kraft paper mills. H_2S is also formed during bacterial decomposition of human and animal wastes, and is present in emissions from sewage treatment facilities and landfills (CARB 2024g). Exposure to H_2S can induce tearing of the eyes and symptoms related to overstimulation of the sense of smell, including headache, nausea, or vomiting; additional health effects of eye irritation have only been reported with exposures greater than 50 ppm, which is considerably higher than the odor threshold (CARB 2024g). H_2S is regulated as a nuisance based on its odor detection level; if the standard were based on adverse health effects, it would be set at a much higher level (CARB 2024g).

Visibility-Reducing Particles: Visibility-reducing particles come from a variety of natural and manmade sources and can vary greatly in shape, size, and chemical composition. Visibility reduction is caused by the absorption and scattering of light by the particles in the atmosphere before it reaches the observer. Certain visibility-reducing particles are directly emitted to the air, such as windblown dust and soot, while others are formed in the atmosphere through chemical transformations of gaseous pollutants (e.g., SO_4^2, nitrates, organic carbon particles) which are the major constituents of particulate matter. As the number of visibility-reducing particles increases, more light is absorbed and scattered, resulting in less clarity, color, and visual range (CARB 2024h). Exposure to some haze-causing pollutants have been linked to adverse health impacts similar to PM10 and PM2.5, as discussed above (CARB 2024h).

Vinyl Chloride: Vinyl chloride is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products and is generally emitted from industrial processes. Other major sources of vinyl chloride have been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents (CARB 2024i). Short-term health effects of exposure to high levels of vinyl chloride in the air include central nervous system effects, such as dizziness, drowsiness, and headaches while long-

term exposure to vinyl chloride through inhalation and oral exposure causes liver damage and has been shown to increase the risk of angiosarcoma, a rare form of liver cancer in humans (CARB 2024i). Most health data on vinyl chloride relate to carcinogenicity and control methodologies applied to industrial facilities generally prevent emissions to the ambient air. There are no known sources of vinyl chloride emissions outside of occupational or industrial settings (CARB 2024i).

Volatile Organic Compounds and Toxic Air Contaminants

Although the SCAQMD's primary mandate is attaining the NAAQS and the CAAQS for criteria pollutants within the Air Basin, SCAQMD also has a general responsibility to control emissions of air contaminants and prevent endangerment to public health. As a result, the SCAQMD has regulated pollutants other than criteria pollutants such as VOCs, TACs, greenhouse gases (GHGs), and stratospheric O_3-depleting compounds.

VOCs: VOCs are organic chemical compounds of carbon and are not "criteria" pollutants themselves; however, in combination with NO_X they form ozone, and are regulated to prevent the formation of ozone (USEPA 2023h). According to CARB, some VOCs are highly reactive and play a critical role in the formation of ozone, other VOCs have adverse health effects, and in some cases, VOCs can be both highly reactive and have adverse health effects (CARB 2024j). VOCs are typically formed from combustion of fuels and/or released through evaporation of organic liquids, internal combustion associated with motor vehicle usage, and consumer products (e.g., architectural coatings) (USEPA 2023h).

TACs: TACs is a term used to describe airborne pollutants that may be expected to result in an increase in mortality or serious illness or which may pose a present or potential hazard to human health and includes both carcinogens and non-carcinogens. CARB and the California Office of Environmental Health Hazard Assessment (OEHHA) determine if a substance should be formally identified, or "listed," as a TAC in California. CARB has listed approximately 200 toxic substances, including those identified by USEPA, which are identified on the California Air Toxics Program's TAC List. TACs are also not classified as "criteria" air pollutants. The greatest potential for TAC emissions during construction is related to diesel particulate matter (DPM) emissions associated with heavy-duty equipment. During long-term operations, sources of DPM may include heavy duty diesel-fueled delivery trucks and stationary emergency generators. The effects of TACs can be diverse and their health impacts tend to be local rather than regional; consequently, ambient air quality standards for these pollutants have not been established, and analysis of health effects is instead based on cancer risk and exposure levels.

3.1.2 Regulatory Framework

3.1.2.1 Federal

Federal Clean Air Act

The federal Clean Air Act (CAA) was enacted in 1970 and has been amended numerous times in subsequent years, with the latest amendments occurring in 1990 (42 U.S.C. 7401 et seq.). The CAA is the comprehensive federal law that regulates air emissions in order to protect public health and welfare (USEPA 2023i). USEPA is responsible for the implementation and enforcement of the CAA, which establishes NAAQS, specifies future dates for achieving

compliance, and requires USEPA to designate areas as attainment, nonattainment, or maintenance. The CAA also mandates that each state submit and implement a State Implementation Plan (SIP) for each criteria pollutant for which the state has not achieved the applicable NAAQS. The SIP includes pollution control measures that demonstrate how the standards for those pollutants will be met. The sections of the CAA most applicable to land use development projects include Title I (Nonattainment Provisions) and Title II (Mobile Source Provisions) (USEPA 2023j).

Title I requirements are implemented for the purpose of attaining NAAQS for criteria air pollutants. **Table 3.1-1** shows the NAAQS currently in effect for each criteria air pollutant. The Air Basin fails to meet national standards for O_3 and PM2.5 and, therefore, is considered a federal "non-attainment" area for these pollutants.

Title II pertains to mobile sources, which includes on-road vehicles (e.g., cars, buses, motorcycles) and non-road vehicles (e.g., aircraft, trains, construction equipment). Reformulated gasoline and automobile pollution control devices are examples of the mechanisms USEPA uses to regulate mobile air emission sources. The provisions of Title II have resulted in tailpipe emission standards for vehicles, which have been strengthened in recent years to improve air quality. For example, the standards for NO_X emissions have been lowered substantially and the specification requirements for cleaner burning gasoline are more stringent.

The NAAQS, and the CAAQS for the California criteria air pollutants (discussed above), have been set at levels considered safe to protect public health, including the health of sensitive populations and to protect public welfare.

3.1.2.2 State

California Clean Air Act

The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the state to achieve and maintain the CAAQS by the earliest practicable date. CARB, a part of the California Environmental Protection Agency (CalEPA), is responsible for the coordination and administration of both state and federal air pollution control programs within California. In this capacity, CARB conducts research, sets the CAAQS, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products, and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. Table 3.1-1 includes the CAAQS currently in effect for each of the criteria pollutants, as well as other pollutants recognized by the state. As shown in Table 3.1-1, the CAAQS have more stringent standards than the NAAQS. The Air Basin fails to meet state standards for O_3, PM10, and PM2.5 and, therefore, is considered "non-attainment" for these pollutants.

TABLE 3.1-1
AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Period	Federal Standard[a,b]	California Standard[a,b]	South Coast Air Basin Attainment Status[c]	
				Federal Standard[d]	California Standard[d]
Ozone (O_3)	1-hour	—	0.09 ppm (180 µg/m^3)	—	Non-Attainment
	8-hour	0.070 ppm (137 µg/m^3)	0.07 ppm (137 µg/m^3)	Non-Attainment (Extreme)	Non-Attainment
Respirable Particulate Matter (PM10)	24-hour	150 µg/m^3	50 µg/m^3	Attainment	Non-Attainment
	Annual	—	20 µg/m^3		
Fine Particulate Matter (PM2.5)	24-hour	35 µg/m^3	—	Non-Attainment (Serious)	Non-Attainment
	Annual	12 µg/m^3	12 µg/m^3		
Carbon Monoxide (CO)	1-hour	35 ppm (40 mg/m^3)	20 ppm (23 mg/m^3)	Attainment	Attainment
	8-hour	9 ppm (10 mg/m^3)	9.0 ppm (10 mg/m^3)		
Nitrogen Dioxide (NO_2)	1-hour	0.10 ppm (188 µg/m^3)	0.18 ppm (339 µg/m^3)	Unclassified/ Attainment	Attainment
	Annual	0.053 ppm (100 µg/m^3)	0.030 ppm (57 µg/m^3)		
Sulfur Dioxide (SO_2)	1-hour	0.075 ppm (196 µg/m^3)	0.25 ppm (655 µg/m^3)	Unclassified/ Attainment	Attainment
	3-hour	0.5 ppm (1,300 µg/m^3)	—		
	24-hour	0.14 ppm (365 µg/m^3)	0.04 ppm (105 µg/m^3)		
	Annual	0.03 ppm (80 µg/m^3)	—		
Lead (Pb)	30-day average	—	1.5 µg/m^3	Partial Non-Attainment[e]	Attainment
	Rolling 3-month average	0.15 µg/m^3	—		
Sulfates	24-hour	—	25 µg/m^3	—	Attainment
Hydrogen Sulfide (H_2S)	1-hour	—	0.03 ppm (42 µg/m^3)	—	Unclassified

NOTES: ppm = parts per million by volume; µg/m^3 = micrograms per cubic meter

a. An ambient air quality standard is a concentration level expressed in either ppm or µg/m^3 and averaged over a specific time period (e.g., 1 hour). The different averaging times and concentrations are meant to protect against different exposure effects. Some ambient air quality standards are expressed as a concentration that is not to be exceeded. Others are expressed as a concentration that is not to be equaled or exceeded.
b. Ambient Air Quality Standards set by USEPA and CARB as displayed in the 2022 AQMP.
c. "Attainment" means that the regulatory agency has determined based on established criteria, that the Air Basin meets the identified standard. "Non-attainment" means that the regulatory agency has determined that the Air Basin does not meet the standard. "Unclassified" means there is insufficient data to designate an area, or designations have yet to be made.
d. California and federal standard attainment status as determined by USEPA and CARB as displayed in SCAQMD's 2022 AQMP and 2022 updates from CARB. https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations.
e. An attainment re-designation request is pending.

SOURCES: USEPA. 2023a. NAAQS Table. Last updated March 15, 2023. Accessed January 2024. https://www.epa.gov/criteria-air-pollutants/naaqs-table; CARB. 2016. Ambient Air Quality Standards. May 4, 2016. Accessed January 2024. https://ww2.arb.ca.gov/sites/default/files/2020-07/aaqs2.pdf.

3.1.2.3 Regional

South Coast Air Quality Management District

The SCAQMD is primarily responsible for planning, implementing, and enforcing air quality standards for the Air Basin. The Air Basin is a subregion within the western portion of the SCAQMD jurisdiction, as the SCAQMD also regulates portions of the Salton Sea Air Basin and Mojave Desert Air Basin within Riverside County. The SCAQMD's primary regulatory authority is over stationary sources of emissions.

Air Quality Management Plan and Regional Transportation Plan/Sustainable Communities Strategy

To meet the NAAQS and CAAQS, the SCAQMD has adopted a series of Air Quality Management Plans (AQMPs), which serve as a regional blueprint to develop and implement an emission reduction strategy that will bring the Air Basin into attainment with the standards in a timely manner. The most current AQMP is the *2022 Air Quality Management Plan* (2022 AQMP) (SCAQMD 2022b), which was adopted on December 2, 2022. The goal of the 2022 AQMP is to provide a regional roadmap to help the Air Basin achieve USEPA's NAAQS 2015 8-hour ozone standard (70 parts per billion).

On January 26, 2023, CARB adopted Resolution 23-4, which directs the CARB Executive Officer to submit the 2022 AQMP to USEPA for inclusion in the California SIP to be effective, for purposes of federal law, after notice and public hearing as required by CAA Section 110(l) and 40 Code of Federal Regulations Section 51.102 and approval by USEPA. USEPA approval has not yet occurred.

The 2022 AQMP builds upon measures already in place from previous AQMPs. It also includes a variety of additional strategies such as regulation, accelerated deployment of available cleaner technologies (e.g., zero-emissions technologies, when cost-effective and feasible, and low NOx technologies in other applications), best management practices, co-benefits from existing programs (e.g., climate and energy efficiency), incentives, and other CAA measures to achieve the 2015 8-hour ozone standard.

The 2022 AQMP incorporates the transportation strategy and transportation control measures from SCAG's Connect SoCal 2020 (*2020–2045 Regional Transportation Plan/Sustainable Communities Strategy* [2020–2045 RTP/SCS]) (SCAG 2020). SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties, and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG coordinates with various air quality and transportation stakeholders in Southern California to ensure compliance with the federal and state air quality requirements. Pursuant to California Health and Safety Code Section 40460, SCAG has the responsibility of preparing and approving the portions of the AQMP relating to the regional demographic projections and integrated regional land use, housing, employment, and transportation programs, measures, and strategies. SCAG is required by law to ensure that transportation activities "conform" to, and are supportive of, the goals of regional and state air quality plans to attain the NAAQS. The RTP/SCS includes transportation programs, measures, and strategies generally designed to reduce VMT, which are contained in the AQMP.

The 2022 AQMP forecasts future emissions inventories with growth based on SCAG's 2020–2045 RTP/SCS. According to the 2022 AQMP, the Air Basin is projected to see a 12 percent growth in population, 17 percent growth in housing units, 11 percent growth in employment, and an 8 percent growth in VMT between 2018 and 2037. Despite regional growth in the past, air quality has improved substantially over the years, primarily due to the effects of air quality control programs at the local, state, and federal levels (SCAQMD 2022b, Table 3-3).

The SCAQMD published the *CEQA Air Quality Handbook* (approved by the SCAQMD's Governing Board in 1993) to provide local governments with guidance for analyzing and mitigating project-specific air quality impacts (SCAQMD 1993). The *CEQA Air Quality Handbook* provides standards, methodologies, and procedures for conducting air quality analyses.

SCAQMD Rules and Regulations

The SCAQMD has adopted several rules and regulations to regulate sources of air pollution in the Air Basin and to help achieve air quality standards for land use development projects, which include, but are not limited to the following:

Regulation IV – Prohibitions: This regulation sets forth the restrictions for visible emissions, odor nuisance, fugitive dust, various air emissions, fuel contaminants, start-up/shutdown exemptions, and breakdown events. The following list of rules apply to the Project:

- **Rule 401 – Visible Emissions:** This rule states that a person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than 3 minutes in any 1 hour that is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart or of such opacity as to obscure an observer's view.
- **Rule 402 – Nuisance:** This rule states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any such persons or the public, or that cause or have a natural tendency to cause injury or damage to business or property.
- **Rule 403 – Fugitive Dust:** This rule requires projects to prevent, reduce, or mitigate fugitive dust emissions from a site. Rule 403 restricts visible fugitive dust to the project property line, restricts the net PM10 emissions to less than 50 micrograms per cubic meter ($\mu g/m^3$), and restricts the tracking out of bulk materials onto public roads. Additionally, projects must utilize one or more of the best available control measures (identified in the tables within the rule). Mitigation measures may include adding freeboard to haul vehicles, covering loose material on haul vehicles, watering, using chemical stabilizers, and/or ceasing all activities. Finally, a contingency plan may be required if so determined by USEPA.

3.1.2.4 Local

City of Huntington Beach General Plan

The City of Huntington Beach General Plan, adopted on October 2, 2017, serves as a blueprint for the community through the year 2040 (City of Huntington Beach 2017). The plan provides a roadmap for new housing and job growth, while protecting those characteristics and values that make Huntington Beach a desirable and distinctive place to live, work, and visit. The plan

addresses air quality under the Circulation and Environmental Resources and Conservation Element. The applicable goals and policies to the operation of the Project are discussed below. Consistency with these goals and policies have the potential to reduce single occupancy vehicle trips and VMT, thus reducing air pollutants from mobile sources.

Circulation Element

Goal CIRC-5. The City's active transportation system integrates seamlessly with transit and vehicle circulation as part of a Complete Streets system.

Policy A. Maximize use of transportation demand management strategies to reduce total vehicle miles traveled and improve regional air quality.

Environmental Resources and Conservation Element

Goal ERC-4. Air quality in Huntington Beach continues to improve through local actions and interagency cooperation.

Policy A. Continue to cooperate with the South Coast Air Quality Management District and other regional, state, and national agencies to enforce air quality standards and improve air quality.

Policy E. Continue to explore and implement strategies to minimize vehicle idling, including traffic signal synchronization and roundabouts.

3.1.3 Existing Conditions

3.1.3.1 Regional Air Quality

The Southern California region lies in the semi-permanent high-pressure zone of the eastern Pacific that leads to mild climate, moderated by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle) play a major role in degree and severity of the air pollution problem in the Air Basin where factors, such as wind, sunlight, temperature, humidity, rainfall, and topography, affect the accumulation and dispersion of air pollutants throughout the Air Basin, making it an area of high pollution potential.

The greatest air pollution throughout the Air Basin occurs from June through September that is generally attributed to light winds, shallow vertical atmospheric mixing, as well as the large amount of pollutant emissions. This frequently reduces pollutant dispersion, resulting in elevated air pollution levels. In addition, pollutant concentrations in the Air Basin vary with location, season, and time of day. For instance, O_3 concentrations tend to be lower along the coast, higher in the near inland valleys, and lower in the far inland areas of the Air Basin and adjacent desert. While substantial progress has been made in reducing air pollution levels in Southern California, the Air Basin still fails to meet the national standards for O_3 and PM2.5 and, therefore, is considered a federal "non-attainment" area for these pollutants.

As described above, at the regional level, SCAQMD is the regulatory agency responsible for improving air quality for large areas of Los Angeles, Orange County, Riverside and San

Bernardino Counties. Specifically, the SCAQMD has the responsibility for ensuring that all national and state ambient air quality standards are achieved and maintained throughout the Air Basin. To meet the standards, SCAQMD has adopted a series of AQMPs. The 2022 AQMP builds upon measures already in place from previous AQMPs and includes a variety of additional strategies such as regulation, accelerated deployment of available cleaner technologies (e.g., zero emissions technologies and low NOx technologies), best management practices, co-benefits from existing programs (e.g., climate and energy efficiency), incentives, and other CAA measures to achieve the 2015 8-hour ozone standard by 2037. However, the 2037 NO_X limit is 60 tons per day and emissions from federal and international sources are estimated to be 85 tons per day in 2037; thus, federal sources alone would emit more than the 60 tons per day limit in 2037. The SCAQMD and CARB cannot sufficiently reduce NO_X emissions to meet the standard without federal action.

The 2022 AQMP states that despite the projected growth in the region, air quality has improved substantially over the years. This is largely because of local, state, and federal air quality control programs as described above. As seen in Figure 1-4 on AQMP page 1-9, the percent change in air quality is shown along with demographic data for the 4-county region from the 2022 AQMP where in particular, the trends since 1995 of the 8-hour O_3 levels, the 1-hour O_3 levels, and annual average PM2.5 concentrations (since 2001), compared to the regional gross domestic product, total employment and population. In addition, the O_3 and particulate matter levels continue to trend downward as the economy and population increase, demonstrating that it is possible to maintain a healthy economy while improving public health through air quality improvements (SCAQMD 2022b).

Attainment Status

The extent and severity of pollutant concentrations in the Air Basin are a function of the area's natural physical characteristics (weather and topography) and man-made influences (development patterns and lifestyle). Factors, such as wind, sunlight, temperature, humidity, rainfall, and topography, all affect the accumulation and dispersion of pollutants throughout the Air Basin, making it an area of high pollution potential. The Air Basin's meteorological conditions, in combination with regional topography, are conducive to the formation and retention of ozone, which is a secondary pollutant that forms through photochemical reactions in the atmosphere. California Health and Safety Code Section 39607(e) requires CARB to establish and periodically review area designation criteria. **Table 3.1-2** provides a summary of the attainment status of the Orange County portion of the Air Basin with respect to the federal and state standards. The Air Basin is designated as attainment for the California standards for sulfates and unclassified for hydrogen sulfide and visibility-reducing particles.[1] The Air Basin is currently in non-attainment for O_3, PM10, and PM2.5 under the CAAQS and O_3, and PM2.5 under the NAAQS. Since vinyl chloride is a carcinogenic TAC, CARB does not classify attainment status for this pollutant. Health and Safety Code Section 39607(e) requires CARB to establish and periodically review area designation criteria.

[1] Unclassified is the category designation of an area for a pollutant with insufficient data (CARB 2017).

TABLE 3.1-2
SOUTH COAST AIR BASIN ATTAINMENT STATUS (ORANGE COUNTY)

Pollutant	Federal Standards	California Standards
O_3 (1-hour standard)	N/A[a]	Non-attainment
O_3 (8-hour standard)	Non-attainment – Extreme	Non-attainment
CO	Attainment	Attainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
PM10	Attainment	Non-attainment
PM2.5	Non-attainment – Serious	Non-attainment
Lead	Attainment	Attainment
Visibility Reducing Particles	N/A	Unclassified
Sulfates	N/A	Attainment
Hydrogen Sulfide	N/A	Unclassified
Vinyl Chloride	N/A	N/A[c]

NOTES: N/A = not applicable

a. The NAAQS for 1-hour ozone was revoked on June 15, 2005, for all areas except Early Action Compact areas.
b. Partial Nonattainment designation – Los Angeles County portion of the Air Basin only for near-source monitors.
c. In 1990, CARB identified vinyl chloride as a TAC and determined that it does not have an identifiable threshold. Therefore, CARB does not monitor or make status designations for this pollutant.

SOURCES: USEPA. 2023k. The Green Book Non-Attainment Areas for Criteria Air Pollutants. Last updated July 31, 2024. Accessed January 2024. https://www.epa.gov/green-book; CARB. 2022. Area Designations Maps/State and National. November 2022. Accessed January 2024. http://www.arb.ca.gov/desig/adm/adm.htm.

Trace amounts of hydrogen sulfide may be emitted by common municipal solid waste such as household food wastes. Vinyl chloride is used in the process of making PVC plastic and vinyl products and is primarily emitted from industrial processes (CARB 2024i). Vinyl chloride generally is not emitted directly during operations or during construction of a land use development project. The Project does not include vinyl chloride emitting processes. Land developments only emit trace amounts or otherwise account for sulfates and visibility-reducing particles through other criteria pollutants. As previously stated, sulfates are associated with SO_2 emissions and visibility-reducing particles are associated with particulate matter emissions. Therefore, these pollutants will not independently be evaluated as they are associated with other criteria pollutants.

Sources of Emissions

As detailed in the AQMP, the major sources of air pollution in the Air Basin are divided into four major source classifications: point stationary sources, area stationary sources, on-road mobile sources, and off-road mobile sources. Point and area sources are the two major subcategories of stationary sources (SCAQMD 2022b, p. 3-1). Point sources are permitted facilities that contain one or more emission sources at an identified location (e.g., power plants, refineries, emergency generator exhaust stacks). Area sources consist of many small emission sources (e.g., residential water heaters, architectural coatings, and consumer products), which are distributed across the region. Mobile sources consist of two main subcategories: On-road sources (such as cars and trucks) and off-road sources (such as heavy construction equipment).

3.1.3.2 Local Air Quality

Existing Criteria Pollutant Levels at Nearby Monitoring Stations

The SCAQMD maintains a network of air quality monitoring stations located throughout the Air Basin to measure ambient pollutant concentrations. The Project Site is located in the SCAQMD Source Receptor Area (SRA) 18; therefore, the monitoring station most representative of the Project Site is the North Orange County Coastal monitoring station, located in SRA 18. However, the North Orange County Coastal monitoring station stopped reporting values in 2019. Therefore, the next most representative monitoring station of the Project Site is the South Los Angeles County Coastal monitoring station, located in SRA 4. Criteria pollutants monitored at this station include ozone, NO_2, SO_2, PM10, PM2.5, and Pb.[2] CO is measured at the Southwest Los Angeles County Coastal monitoring station, located in SRA 3. However, the Southwest Los Angeles County Coastal monitoring station stopped reporting values in 2022. Therefore, CO values for year 2022 are reported from the Central Orange County Coastal monitoring station in SRA 17.[3] The most recent data available from the SCAQMD is from the years 2020 to 2022. The pollutant concentration data for these years are summarized in **Table 3.1-3**.

Existing Project Site Emissions

As permitted by the City's Specific Event Permit Process, the Airshow has been held annually in the city for 3 days with aircraft flight familiarization and flight practice flyovers beginning as early as Monday of the week of the Airshow during the fall season each year since 2016, except in 2020 during the COVID-19 pandemic. The Project, which would include an event program for the continuation of the Airshow for up to 10 additional years beginning from year 2024 through 2034 as permitted by the City's Specific Event Permit Process, would continue to have similar aircraft activities as prior airshows. The future Airshows associated with the Project are anticipated to be held annually for 3 days to up to 5 days, generally Friday through Sunday or up to Wednesday through Sunday, with aircraft flight familiarization and flight practice flyovers beginning as early as Monday of the week of the Airshow. Thus, the future Airshows would be expected to have similar daily aircraft activities including aircraft staging, maintenance, and preparation activities, aircraft flight familiarization and flight practice flyovers, and performance flyovers throughout the Airshow Performance Area as have occurred during previous Airshows and, therefore, would result in similar daily emissions. The competitions and art installations under the Project are expected to be similar as those featured in prior Airshows or would not result in new emissions; therefore no additional operational emissions are expected from on-site activities as compared to prior Airshows. The temporary event structures under the Project would also be similar in scale and location to previous Airshows since 2016 (except in 2020) and would not result in new emissions from on-site activities. The multi-day music festival located within the Project Site following the conclusion of the Airshow each evening would include the use of

[2] The South Los Angeles County Coastal Monitoring station, SRA 4, ambient air data for ozone, NO_2, SO_2, PM10, PM2.5 and Pb is reported for years 2020, 2021, and 2022, except the SO_2 value in 2020. The South Los Angeles County Coastal monitoring station SO_2 values are incomplete for year 2020, therefore SO_2 values from the Southwest Los Angeles County Coastal monitoring station for year 2020 are reported.

[3] The Southwest Los Angeles County Coastal monitoring station, SRA 3, ambient air data for CO is reported for years 2020 and 2021. However, the Southwest Los Angeles County Coastal monitoring station stopped reporting values in 2022. Therefore, CO values for year 2022 are reported from the Central Orange County Coastal monitoring station, SRA 17, for year 2022.

amplified speakers but would not result in new emissions from on-site activities. The temporary Airshow pyrotechnic display would occur over water, similar to the City's annual 4th of July Fireworks Over The Ocean and would not result in new or different emissions over or permanent effects to the marine environment. Therefore, since the Project's future Airshow aircraft activities, competitions and art installations, temporary event structures, multi-day music festivals and temporary Airshow pyrotechnic display are expected to be similar as those featured in prior Airshows or would not result in new emissions, these emissions are not considered further in this Draft EIR. However, as discussed in Section 3.5, *Transportation*, of this Draft EIR, the Project's future Airshows may result in an increase in vehicle trips and VMT when compared to prior Airshow events. As such, existing mobile source emissions for the latest Airshow in which VMT data were available were also calculated.

Mobile source emissions estimates were calculated using CARB's latest on-road vehicle EMissions FACtor (EMFAC) model, EMFAC2021, and daily 2022 VMT for existing conditions was provided by the Project's Traffic Consultant (Fehr & Peers). As described in Section 3.5, *Transportation*, of this Draft EIR,, the trip characteristics, such as number of trips taken and average trip distance, were collected in the form of anonymized location-based data to calculate the change in daily total VMT within the City of Huntington Beach during the 2022 Airshow. As shown in Table 3.5-8, of Section 3.5, *Transportation*, the existing VMT due to the 2022 Airshow ranged from 844,000 VMT on Friday to 1,663,000 on Saturday. Existing criteria pollutant mobile source emissions based on this VMT are presented in **Table 3.1-4**, which identifies the mobile source emissions from the 2022 Airshow.

Under the Project, , the additional VMT associated with expanded night concert events for the Project Airshow operational years, which would be the continuation of the Airshow for up to 10 additional years beginning from year 2024 through 2034, would be 185,000 daily VMT. This additional VMT is further discussed and evaluated below.

3.1.4 Thresholds of Significance

According to Appendix G of the State CEQA Guidelines, impacts to air quality would be considered significant if the Project would:

- Conflict with or obstruct implementation of the applicable air quality plan (determined to be less than significant in the IS/NOP for construction and operations).
- Result in a cumulatively considerable net increase of any criteria air pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (determined to be less than significant in the IS/NOP for construction; operations analyzed in this Draft EIR section).
- Expose sensitive receptors to substantial pollutant concentrations (determined to be less than significant in the IS/NOP for construction and operations).
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people (determined to be less than significant in the IS/NOP for construction and operations).

TABLE 3.1-3
AMBIENT AIR QUALITY DATA

Pollutant/Standard	2020	2021	2022
O_3 (1-hour)			
Maximum Concentration (ppm)	0.105	0.086	0.108
Days > CAAQS (0.09 ppm)	4	0	1
O_3 (8-hour)			
Maximum Concentration (ppm)	0.083	0.064	0.077
4th High 8-hour Concentration (ppm)	0.071	0.060	0.058
Days > CAAQS (0.070 ppm)	4	0	1
Days > NAAQS (0.070 ppm)	4	0	1
NO_2 (1-hour)			
Maximum Concentration (ppm)	0.075	0.060	0.058
98th Percentile Concentration (ppm)	0.056	0.055	0.048
NO_2 (Annual)			
Annual Arithmetic Mean (0.030 ppm)	0.013	0.013	0.013
CO (1-hour)			
Maximum Concentration (ppm)	1.6	1.7	2.6
CO (8-hour)			
Maximum Concentration (ppm)	1.3	1.3	1.9
SO_2 (1-hour)			
Maximum Concentration (ppm)	0.006	0.006	0.006
99th Percentile Concentration (ppm)	0.003	0.004	0.004
SO_2 (24-hour)			
Maximum Concentration (ppm)	—	—	—
PM10 (24-hour)			
Maximum Concentration (µg/m^3)	59	48	128
Samples > CAAQS (50 µg/m^3)	2	0	33
Samples > NAAQS (150 µg/m^3)	0	0	0
PM10 (Annual Average)			
Annual Arithmetic Mean (20 µg/m^3)	24.9	22.7	34.4
PM2.5 (24-hour)			
Maximum Concentration (µg/m^3)	39.0	42.9	28.8
98th Percentile Concentration (µg/m^3)	28.0	32.8	28.8
Samples > NAAQS (35 µg/m^3)	1	4	0
PM2.5 (Annual)			
Annual Arithmetic Mean (12 µg/m^3)	11.38	11.47	10.80
Lead			
Maximum 30-day average (µg/m^3)	0.008	0.006	0.007

NOTES:

a. ppm = parts per million; µg/m^3 = micrograms per cubic meter
b. CAAQS are based on a not to exceed standard. NAAQS are based on a 3-year average of the annual 4th highest daily maximum 8-hour concentration for ozone; 98th percentile of 1-hour daily maximum concentrations averaged over 3 years for 1-hour NO_2; and not to be exceeded more than once per year on average over 3 years for 24-hour PM.
c. State annual average (AAM) PM10 standard is > 20 µg/m^3. Federal annual PM10 standard (AAM > 50 µg/m^3) was revoked in 2006.
d. Both federal and state standards are annual average (AAM) > 12.0 µg/m^3.

SOURCES: SCAQMD. n.d. Historical Data by Year. Accessed January 2024. https://www.aqmd.gov/home/air-quality/historical-air-quality-data/historical-data-by-year; USEPA. 2024. AirData. Accessed January 2024. www.epa.gov/airdata/ad_rep_mon.html.

TABLE 3.1-4
ESTIMATED EXISTING MOBILE SOURCE EMISSIONS (POUNDS PER DAY)

Source	VOC	NO_X	CO	SO_2	PM10	PM2.5
Regional Mobile Source Emissions for Existing Airshow	598	951	5,721	14	1,194	306

NOTE: Emissions are calculated based on the 2022 Airshow Saturday VMT. Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in **Appendix C,** of this Draft EIR.
SOURCE: Data compiled by ESA, 2024.

As detailed in the Initial Study, impacts related to conflicting with or obstructing implementation of the applicable air quality plan, resulting in a cumulatively considerable net increase of any criteria air pollutant for which the project region is non-attainment under an applicable federal or state air quality standards for project construction, exposing sensitive receptors to substantial pollutant concentrations, and resulting in other emissions, such as those leading to odors, were determined to be less than significant in the IS/NOP and, therefore, are not addressed in this Draft EIR.

An approximately 4,500-foot-long by 40-foot-wide temporary runway is planned to be located along the southern edge of the Project Show Center Area with an associated 40-foot by 40-foot temporary aircraft landing pad. These temporary structures would be placed in the Project Show Center Area and would not be newly constructed structures; thus, their placement would not generate a considerable net increase in emissions of ozone precursors (VOC and NO_X), PM10, and PM2.5.

3.1.4.1 Operational Emission Air Quality Standards

A significant impact may occur if a project would add a cumulatively considerable contribution of a federal or state non-attainment pollutant. The Air Basin is currently in non-attainment for O_3, PM10, PM2.5, and lead (which is only in non-attainment for the Los Angeles County portion of the Basin).[4] SCAQMD methodology recommends that numerical significance thresholds be used to determine the potential cumulative impacts to regional air quality along with a project's consistency with the current AQMP.

SCAQMD's numerical significance thresholds for operational activities are based on the recognition that the Air Basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards have been promulgated to protect public health (SCAQMD 1993). Based on the thresholds in the SCAQMD CEQA Air Quality Handbook, the Project would potentially result in a significant impact of a federal or state non-attainment pollutant if emissions of O_3 precursors (VOC and NOx), PM10, or PM2.5 would exceed the values shown in **Table 3.1-5** (SCAQMD 2023).

[4] SCAQMD has the Partial Nonattainment designation – Los Angeles County portion of the Basin resulted from localized emissions from the two sources in the City of Vernon and the City of Industry that are no longer in operation. It is expected that this area would receive redesignation to attainment based on current monitoring data. SCAQMD, NAAQS, and CAAQS Attainment Status for South Coast Air Basin.

TABLE 3.1-5
SCAQMD REGIONAL OPERATIONAL EMISSIONS THRESHOLDS (POUNDS PER DAY)

Activity	VOC	NO_X	CO	SO_2	PM10	PM2.5
Operation	55	55	550	150	150	55

SOURCE: SCAQMD. 2023. SCAQMD Air Quality Significance Thresholds. March 2023. Accessed January 2024. https://www.aqmd.gov/docs/default-source/ceqa/handbook/south-coast-aqmd-air-quality-significance-thresholds.pdf?sfvrsn=25.

3.1.5 Methodology

The evaluation of potential impacts to regional air quality that may result from long-term operations of the Project is discussed below. Additional details are provided in the Air Quality Calculations provided in **Appendix C**, of this Draft EIR.

3.1.5.1 Project Operational Emissions Methodology

As previously explained, during the future Airshow events, the Project would continue to have similar aircraft activities including, aircraft staging, maintenance, preparation activities, aircraft flight familiarization and aircraft flight practice flyovers, and performance flyovers throughout the Airshow Performance Area as have occurred during previous Airshows since 2016 (except in 2020). The prior Airshows have been held annually in the city for 3 days with aircraft flight familiarization and flight practice flyovers beginning as early as Monday of the week of the Airshow. The future Airshows associated with the Project are anticipated to be held annually for 3 days to up to 5 days, generally Friday through Sunday or up to Wednesday through Sunday, with aircraft flight familiarization and flight practice flyovers also beginning as early as Monday of the week of the Airshow. Therefore, future Project Airshow daily aircraft emissions would be expected to be substantially similar to those of past Airshows. The Project's competitions and art installations would not result in new emissions from on-site activities as compared to prior Airshows. The temporary event structures under the Project would be similar in scale and location to previous Airshows since 2016 (except in 2020) and would not result in new emissions from on-site activities as compared to prior Airshows. The multi-day music festival located within the Project Site following the conclusion of the Airshow each evening would include the use of amplified speakers but would not result in new emissions from on-site activities. The temporary Airshow pyrotechnic display would occur over water, similar to the City's annual Fourth of July Fireworks Over the Ocean and would not result in new or different emissions over or permanent effects to the marine environment. Therefore, since the Project's future Airshow aircraft activities, competitions and art installations, temporary event structures, multi-day music festivals and temporary Airshow pyrotechnic display are expected to be similar as those featured in prior Airshows or would not result in new emissions, these emissions are not considered further in this Draft EIR. For informational purposes, the air quality emissions from existing VMT forecasted for year 2024 and future year 2034 were estimated using CARB's EMFAC2021 on-road vehicle emissions factor model to determine emission factors for those years to display

the range emissions from existing VMT that would occur under future conditions. Daily VMT for existing conditions was provided by the Project's Traffic Consultant.[5]

However, as discussed in Section 3.5, *Transportation*, of this Draft EIR, the future Airshows of the Project may result in an increase in vehicle trips and VMT as compared to the prior and existing Airshow events that have occurred previously. Thus, operation of the Project has the potential to generate increased criteria pollutant emissions as a result of additional vehicle and truck trips traveling to and from the Project Site. The additional VMT associated with expanded night concert events for the Project Airshow operational years for up to 10 additional years beginning from year 2024 through 2034, would be 185,000 daily VMT. Therefore, the Project's mobile source operational emissions was analyzed based on the maximum additional daily VMT estimated for the future Airshows. The EMFAC2021 model was run in the emissions mode (also referred to as the "Burden" mode) and used to generate Air Basin-specific vehicle fleet emission factors in units of pounds or metric tons per mile. These emission factors were then applied to the additional daily VMT to obtain maximum additional daily operational mobile source emissions from future Airshows.

Operational air quality impacts were assessed based on the incremental increase in emissions compared to baseline conditions due to the increase in vehicle trips and VMT when compared to prior Airshow events. As discussed previously, the Airshow has been in operation since 2016. Therefore, the net change in operational emissions is based on the additional daily VMT resulting from the expanded night concerts for Project future airshows compared to prior Airshows. The maximum daily net mobile source emissions from the additional daily VMT from operation of the future Project Airshow are compared to the SCAQMD daily regional operational significance thresholds to determine significance.

3.1.6 Impact Analysis

3.1.6.1 Violation of Air Quality Standards

Impact 3.1-1: The Project would result in significant impact if it would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

For informational purposes, the air quality emissions from existing Airshow VMT forecasted for year 2024 and future year 2034 were estimated based on the methodology described above. Regional criteria pollutant emission calculations for VOC, NO_X, CO, SO_X, PM10, and PM2.5 for the existing Airshow VMT mobile sources are presented in **Table 3.1-6**.

[5] The emissions were presented for the bookend years of the future Airshows to show the range of emissions that would occur from existing Airshow VMT in future years. Emissions from existing VMT for years 2025 through 2033 would be between emissions displayed for year 2024 and 2034.

TABLE 3.1-6
ESTIMATED FORECASTED REGIONAL MOBILE SOURCE EMISSIONS FOR CONTINUATION OF EXISTING AIRSHOW (POUNDS PER DAY)

Source	VOC	NO_X	CO	SO_2	PM10	PM2.5
Forecasted Regional Mobile Source Emissions for Continuation of Existing Airshow – Year 2024	530	766	4,938	14	1,193	305
Forecasted Regional Mobile Source Emissions for Continuation of Existing Airshow – Year 2034	359	486	3,241	11	1,191	303

NOTE: Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in **Appendix C**, of this Draft EIR.
SOURCE: Data compiled by ESA, 2024.

Operational criteria pollutant emissions were calculated for future Project Airshow mobile sources associated with additional daily VMT from the expanded night concerts as compared to prior Airshows. The change in operational emissions is based on the additional daily VMT resulting from the expanded night concerts that would occur during the Project's future Airshows compared to prior Airshows without night concerts. The additional daily VMT as compared to prior Airshows were provided in Section 3.5, *Transportation*, of this Draft EIR, for the expanded night concerts. Additional details are provided in the Air Quality Calculations in **Appendix C**, of this Draft EIR.

The results of the regional criteria pollutant emission calculations for VOC, NO_X, CO, SO_X, PM10, and PM2.5 for the Project's mobile sources are presented in **Table 3.1-7**. As shown in Table 3.1-7, the Project's operational-related mobile source daily emissions would exceed the SCAQMD thresholds of significance for VOC, NO_X, and CO. It is also noted that, as shown in Table 3.1-6, the operational-related mobile source daily emissions for the airshow (without the proposed expanded night concerts) already exceed the SCAQMD thresholds of significance for VOC, NO_X, CO, PM10, and PM2.5. Therefore, the Project's net regional operational mobile emissions impacts would be potentially significant.

TABLE 3.1-7
ESTIMATED MAXIMUM UNMITIGATED REGIONAL MOBILE SOURCE EMISSIONS FOR EXPANDED NIGHT CONCERTS (POUNDS PER DAY)

Source	VOC	NO_X	CO	SO_2	PM10	PM2.5
Night Concerts Mobile Source Emissions – Year 2024	59	85	550	2	133	34
Night Concerts Mobile Source Emissions – Year 2034	40	54	361	1	133	34
SCAQMD Significance Threshold	55	55	550	150	150	55
Exceeds Thresholds?	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**

NOTE: Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in **Appendix C**, of this Draft EIR.
SOURCE: Data compiled by ESA, 2024.

It is noted that the mobile source emissions from the additional VMT from the Project's night concerts would decline in future years as vehicle technology improves and older vehicles are replaced with newer vehicles that emit fewer pollutants.

Mitigation Measures

Significance before Mitigation: Potentially Significant

Mitigation: There are no feasible mitigation measures that would reduce operational VOC, NO_X, and CO emissions for vehicular sources to below the significance thresholds. Vehicles would be utilized by Project attendees and employees to future Project Airshow events and the Project has no ability to regulate the personal choices made by future Project attendees and employees who may purchase and use any vehicles legally sold to travel to and from the site. In addition, as stated in Section 3.5, *Transportation*, there are no additional feasible mitigation measures to further reduce Project VMT. Thus, there are no additional feasible mitigation measures that would reduce operational VOC, NO_X, and CO emissions and impacts related to regional VOC, NO_X, and CO operational emissions would remain significant and unavoidable.

Resulting Level of Significance: The Project's future Airshows would result in an increase in vehicle trips and VMT when compared to prior Airshow events due to increased events at future Airshows. The Project has no ability to regulate the personal vehicle usage made by future Project attendees or require specific modes of transportation. Thus, there are no feasible mitigation measures that would reduce operational VOC, NO_X, and CO emissions and impacts related to regional VOC, NO_X, and CO operational emissions would remain significant and unavoidable.

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3.2 Biological Resources

This section describes and evaluates potential impacts to biological resources that could result from implementation of the Project. For purposes of this biological resources technical analysis, a broader biological study area (BSA) was defined, which includes the Show Center Area (where primary on-the-ground events and activities of the Airshow take place) but also extends beyond this area to reflect the potential impacts associated with civilian and military aircraft flybys and aerial acrobatics. The BSA is generally based on likely flight paths to and from Joint Forces Training Base Los Alamitos (KSLI) and John Wayne Airport (SNA). It should be noted that each flight path can change based on weather conditions, flight traffic, and other factors considered by air traffic controllers; therefore, the BSA encompasses a larger area to account for potential flight path variances. Existing biological conditions within the BSA, applicable policies, ordinances, and regulations, potential environmental impacts, and mitigation measures, where appropriate, are described.

A Biological Resources Technical Report (BRTR) was prepared in September 2023 to document the results of a literature review and biological surveys and describe the environmental setting, including plant communities, habitats, and special-status species, that have been documented within the BSA (ESA 2023). The BRTR includes an analysis of potential direct or indirect Project-related impacts to sensitive biological resources within the context of applicable environmental regulations and provides recommendations to mitigate these effects to inform the Biological Resources section of this Draft EIR. The BRTR can be found in **Appendix D**, of this Draft EIR. It should be noted that the BSA for the Project has expanded beyond the area analyzed within the BRTR, which previously did not include SNA. Project components for future Airshows have been added since finalization of the BRTR, which have resulted in a larger BSA analyzed within this document to include SNA, with corresponding impacts and mitigation measures not included within the BRTR.

Comments received in response to the Notice of Preparation (NOP) for the Draft EIR can be found in **Appendix A**, of this Draft EIR.

3.2.1 Environmental Setting

Regionally, the Project is located in the City of Huntington Beach, which is in coastal Orange County in Southern California; refer to **Figure 2-1**. The Show Center Area is the location where primary on-the-ground events and activities of the Airshow take place. Locally, the approximate boundaries of the Show Center Area from northwest to southeast are 7th Street and Pacific Coast Highway (State Route 1 or SR-1) to Beach Boulevard (State Route 39 or SR-39) and Pacific Coast Highway to the Pacific Ocean, including a portion of the Huntington Beach Pier landward of the State Lands Commission mean high tide line; refer to **Figure 2-2**. The Show Center Area consists of the beach, the Huntington Beach Pier, parking lots, commercial/restaurant uses, bicycle and walking trails along Pacific Coast Highway. An approximately 4,500-foot-long by 40-foot-wide temporary runway is planned to be located along the southern edge of the Show Center Area with an associated 40-foot by 40-foot temporary aircraft landing pad. The Airshow Performance Area, which is the primary area for civilian and military aircraft flybys and aerial

acrobatics, is located adjacent to the Show Center Area over the Pacific Ocean with an east-west length of approximately 3,000 feet from the shoreline and a north-south length of approximately 12,000 feet; refer to **Figure 2-3**. A majority of the civilian and military aircraft flybys and aerial acrobatics occur within approximately 500 to 1,500 feet from the shoreline. Many of the aircraft maneuvers, particularly for the military, spill out into the temporary flight restriction (TFR) airspace controlled by the Airshow. The TFR, as issued by the Federal Aviation Administration (FAA) for the Airshow, is a 5-nautical-mile (NM) ring centered on the center of the Airshow's aerobatic box. The restricted airspace within the ring extends from the surface to 15,000 feet above mean sea level (MSL), and flights will primarily take place above 500 feet above MSL. Flight altitudes discussed throughout this document will be provided from perspective of MSL. The Show Center Area and Airshow Performance Area are directly adjacent and occur within the BSA.

The BSA spans across the cities of Los Alamitos, Seal Beach, Huntington Beach, and Newport Beach and includes communities and areas owned by cities, state and federal governments, land conservancies, and private landowners. The BSA also includes the general flight path to and from two of the primary locations for aircraft: KSLI and SNA; it is anticipated the majority of flights will originate from and return to KSLI; refer to **Figure 3.2-1A** through **Figure 3.2-1J**. For this majority of flights, the modeled flight path assumed that aircraft would depart from KSLI, fly southwest towards the Pacific Ocean along the general path of the San Gabriel River in Seal Beach, follow the coast south towards the Show Center Area in Huntington Beach, fly further south, then east to SNA. Public beaches including (i.e., Seal Beach Pier and the Huntington Beach Pier), concessions, and parking lots are found along the length of the BSA along the western side of Pacific Coast Highway and residential neighborhoods, commercial developments, and public open spaces are located on the east side of Pacific Coast Highway. It should be noted that some key biological resource areas occurs within the BSA, including the Bolsa Chica Ecological Reserve (BCER) which occurs partially within and adjacent to the proposed flightpath buffer zone.

Climate conditions in the region are mild and are representative of the coastal California Mediterranean climate. Average temperatures during the winter range from 63 to 65 degrees Fahrenheit. Average temperatures during the hottest summer months range from 75 to 77 degrees Fahrenheit. Average precipitation is 0.36 inches per year (Weather Underground 2023). The BSA is within the Anaheim Bay/Huntington Harbor and Newport Bay watersheds and elevations at the site range from sea level to approximately 50 feet above MSL.

3.2.1.1 Methodology

The analysis for biological resources was developed from existing documentation for the BSA as well as various biological surveys conducted for the Project (including preactivity surveys and biological monitoring during the 2023 Airshow) to determine the general habitat on site as well as the presence of sensitive biological resources. Existing documentation of biological resources within the BSA and previously conducted surveys for the Project are discussed in detail below.

SOURCE: ESA, 2024

Pacific Airshow Huntington Beach

Figure 3.2-1A
Biological Study Area (Map Page 1)

ESA

SOURCE: ESA, 2024

Pacific Airshow Huntington Beach

Figure 3.2-1B
Biological Study Area (Map Page 2)

ESA

SOURCE: ESA, 2024

Pacific Airshow Huntington Beach

Figure 3.2-1C
Biological Study Area (Map Page 3)

ESA

SOURCE: ESA, 2024

Pacific Airshow Huntington Beach

Figure 3.2-1D
Biological Study Area (Map Page 4)

ESA

Path: U:\GIS\GIS\Projects\2023xxx\D202300046_00_Huntington_Beach_Air_Show_EIR\03_ProjectBio.aprx DEIR Fig 3.2-1 - Biological Study Area, MCScott 4/1/2024

SOURCE: ESA, 2024

Pacific Airshow Huntington Beach

Figure 3.2-1E
Biological Study Area (Map Page 5)

ESA

SOURCE: ESA, 2024

Pacific Airshow Huntington Beach

Figure 3.2-1F
Biological Study Area (Map Page 6)

ESA

SOURCE: ESA, 2024

Pacific Airshow Huntington Beach

Figure 3.2-1G
Biological Study Area (Map Page 7)

ESA

SOURCE: ESA, 2024

Pacific Airshow Huntington Beach

Figure 3.2-1H
Biological Study Area (Map Page 8)

ESA

SOURCE: ESA, 2024

Pacific Airshow Huntington Beach

Figure 3.2-1I
Biological Study Area (Map Page 9)

ESA

SOURCE: ESA, 2024

Pacific Airshow Huntington Beach

Figure 3.2-1J
Biological Study Area (Map Page 10)

ESA

Existing Literature

Existing literature was reviewed to assist in determining baseline conditions on the site and surrounding area include the California Natural Diversity Database (CNDDB), a California Department of Fish and Wildlife (CDFW) species account database was queried for information regarding known observations of special-status species and habitats within the BSA, which included the Huntington Beach 7.5-minute USGS quadrangle map and the surrounding five USGS quadrangle maps including Newport Beach, Seal Beach, Anaheim, Tustin, and Laguna Beach (CDFW 2023a).

Species data provided by the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) and the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants were also reviewed (USFWS 2023a; CNPS 2023). Other data sources reviewed included USFWS critical habitat maps (USFWS 2023b), National Wetland Inventory maps (USFWS 2020c), the United States Department of Agriculture Natural Resources Conservation Service soils maps (NRCS 2023), current and historical aerial photographs (Google Earth 2023), and regional flora and fauna field guides to assist in the identification of species and suitable habitats. Biological resources data collected from existing literature as well as documentation of biological resources within the BSA were also reviewed from Project-specific surveys as described below.

In order to understand ambient conditions of aircraft traffic, biologists reviewed live flight information from the Flight Aware website where a live map of the BCER was viewed to note if aircraft were observed over Bolsa Chica Ecological Reserve or within the vicinity of BCER that overlaps the BSA (Flight Aware 2024).

Biological Surveys

General Biological Surveys

On July 19 and 20, 2023, ESA biologists Brenda McMillan and Brandon Mukogawa conducted a general biological reconnaissance survey and vegetation mapping survey to document existing conditions and natural communities present within the BSA.

During the biological survey, meandering transects were walked on Huntington City Beach to identify wildlife species that may use the area and assess biological resources that may be impacted by the Project. Potential interactions between observed bird species and aircraft (both airplanes and helicopters) were noted to assess the sensitivity of wildlife species to aerial disturbances and potential for wildlife strikes to occur during the Airshow.

Natural communities were identified based on the presence of dominant plant species observed on-site following the standards in the Manual of California Vegetation (Sawyer 2009) and *Methods Used to Survey the Vegetation of Orange County Parks and Open Space Areas and The Irvine Company Property* (Jones & Stokes 1993). Natural communities were mapped directly in the field using a handheld GPS unit and the ArcGIS Field Maps application to collect spatial data. Natural community classifications and descriptions follow *A Manual of California Vegetation, Second Edition* (Sawyer et al. 2009); comparable names used in the Orange County Habitat Classification System (OCHCS) for the same communities were included in natural community

descriptions (Gray and Bramlet 1992). The natural community polygons were digitized using Geographic Information System (GIS) technology to calculate acreages.

Focused rare plant and wildlife surveys were not conducted during the July 2023 surveys; however, all species observations, including visual observations of flora and fauna and audible detections of birds were documented. Plant species observed during surveys were either identified in the field or collected and later identified using taxonomic keys. Plant taxonomy followed Roberts (2008) and Baldwin et al. (2012). Wildlife species were identified during the field reconnaissance by sight, call, or other evidence of presence, such as tracks, nests, scat, and remains, and with use of binoculars and taxonomic keys where appropriate. Vertebrate taxonomy followed Crother (2020), CalHerps (2023), and Stebbins (2003) for amphibians and reptiles, the American Ornithologists' Union for birds (AOU 2023), and Kaufman et al. (2004) for mammals. Because common names vary significantly between references, scientific names are included in this report upon initial mention of each species, and common names are used thereafter. Aerial photography and global positioning system (GPS) technology was used to accurately locate and map any sensitive biological resources incidentally detected.

During the surveys, a habitat evaluation was also conducted to determine the potential for each habitat area to support native species. Special attention was paid to habitats having the potential to support special-status biological resources (e.g., special-status plant and wildlife species and sensitive natural communities).

The evaluation of potential wildlife movement corridors or other habitat linkages within or throughout the BSA and immediate vicinity was based on the conditions documented during the field surveys, as well as information compiled from literature and an analysis of physical barriers observed on aerial photographs. This information was used to identify whether the BSA and immediate vicinity could function as a wildlife movement corridor connecting large open space areas in the vicinity of the BSA.

Focused aquatic resources surveys were not conducted during the July 2023 site visit. All visual observations of wetland characteristics and associated flora and fauna were documented and mapped during the assessment. Coastal wetlands including coastal salt marsh, tidal wetlands, and river outflow areas were found throughout the BSA. These areas are known to support a diverse array of birds and are important breeding and rest areas for several sensitive and endangered species that are well documented along the coastal region. While not directly in the airshow flight path, these areas were investigated for existing conditions and wildlife activity.

Preactivity Surveys and Biological Monitoring

Preactivity surveys and biological monitoring were conducted for the 2023 Airshow on September 29 and 30, 2023, during Airshow events, from 8:30 am to 4:30 pm each day. Monitoring was focused on areas with documented sensitive biological resources and included BCER, areas known to support historic or existing state and/or federally listed species like western snowy plover and California least tern, and the Show Center Area. During monitoring visits, all birds and wildlife species detected or observed were listed, as well as whether flyovers affected wildlife behavior.

3.2.1.2 Vegetation and Habitat

Plant communities are generally described by the assemblages of plant species that occur together in the same area forming habitat types. Descriptions of vegetation were generally characterized based on dominant species, according to *A Manual of California Vegetation* (Sawyer et al. 2009). Details of each vegetation community, disturbed areas, and land use observed within the BSA are described below. Plant names used in this report follow the Jepson Manual (Baldwin et al. 2012) and *The Vascular Plants of Orange County, California. An Annotated Checklist* (Roberts 2008). The BSA encompasses six natural communities in upland and wetland areas and six land cover types including beach habitat that supports native wildlife species. The Show Center Area consists primarily of sandy beach, open water, and urban/developed land cover types. **Table 3.2-1** shows the acreage by habitat type. Each of the natural communities and land covers found within the Show Center Area and the BSA is discussed further below.

TABLE 3.2-1
VEGETATION COMMUNITIES AND LAND USE TYPES WITHIN THE SHOW CENTER AREA AND BSA

Vegetation Communities/Land Use Types	Show Center Area (Acres)	Biological Study Area (Acres)	State Rank[a]
Southern Coastal Foredune*	0.00	57.63	S3
Southern Coastal Salt Marsh*	0.00	295.08	S3
Cismontane Alkali Marsh*	0.00	0.61	S2
Coastal Scrub*	0.00	57.27	S3
Southern Coastal Bluff Scrub*	0.00	13.38	S3
Mule Fat Scrub	0.00	0.37	S4
Sandy Beach	66.12	827.45	None
Rock Jetty	0.00	22.09	None
Open Water (including Pacific Ocean, flood channels and tidal sand bars)	14.05	8,610.85	None
Parks and Ornamental Plantings	0.00	94.69	None
Disturbed	0.00	88.45	None
Urban/Developed	40.84	5,222.81	None
Total	***121.01***	***15,292.68***	

NOTES:

S1 = Critically Imperiled – At very high risk of extirpation due to very restricted range, very few populations or occurrences, very steep declines, severe threats, or other factors.

S2 = Imperiled – At high risk of extirpation due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors.

S3 = Vulnerable – At moderate risk of extirpation due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.

S4 = Apparently Secure – At a fairly low risk of extirpation due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.

S5 = Secure – At very low or no risk of extirpation due to a very extensive range, abundant populations or occurrences, with little to no concern from declines or threats.

a. CDFW state rank denotes the rarity of a natural type within the state as follows:
* Asterisk indicates that an alliance/association is considered sensitive by CDFW.
SOURCE: Sawyer et al. 2009; ESA 2024.

Southern Coastal Foredune

Southern coastal foredune (i.e., *Ambrosia chamissonis-Abronia maritima-Cakile maritima* Herbaceous Association; *Eriogonum parvifolium* Provisional Association [OCHCS 1.1]) is characterized by open stabilized dunes with low growing shrubby vegetation and sparse to continuous herbaceous layer; some emergent shrubs such as coyote brush (*Baccharis pilularis*) may be present in low cover. This community is dominated by beach bur sage (*Ambrosia chamissonis*), beach sun cup (*Camissonia cheiranthifolia*), bluff buckwheat (*Eriogonum parvifolium*), and sea rocket (*Cakile maritima*). This association is typically found on coastal sand dunes and at river mouths along the immediate coastline (Sawyer et al. 2009). A total of 57.63 acres of southern coastal foredune occurs within the BSA adjacent to the Pacific Coast Highway. Southern coastal foredune was not found within the Show Center Area. Southern coastal foredune (21.102.02, *Ambrosia chamissonis-Abronia maritima-Cakile maritima* Herbaceous Association) is considered a sensitive natural community by CDFW (CDFW 2023b).

Southern Coastal Salt Marsh

Southern coastal salt marsh (i.e., *Sarcocornia pacifica* Herbaceous Alliance; Southern Coastal Salt Marsh [OCHCS 6.1]) is characterized by a dominance of pickleweed (*Sarcocornia pacifica*), salty Susan (*Jaumea carnosa*), scattered cord grass (*Spartina foliosa*), and salt grass (*Distichlis spicata*). This alliance is typically found in the middle and upper marsh zones. The coastal salt marshes within the BSA experience some tidal influence due to seawater entering the marsh through flood control channels and culverts. Mudflats and intertidal zones are unvegetated features that are exposed at lower tides and inundated during high tides. These areas provide valuable resting and foraging habitat for resident and migratory birds. A total of 295.08 acres of southern coastal salt marsh occurs in the BSA and was identified within BCER and Brookhurst Marsh. Southern coastal salt marsh was not found within the Show Center Area. Southern coastal salt marsh (52.215.00, *Pickleweed Mats*) is considered a sensitive natural community by CDFW (CDFW 2023b).

Cismontane Alkali Marsh

Cismontane alkali marsh (i.e., *Frankenia salina* Herbaceous Alliance – Alkali heath marsh; Alkali meadow [OCHCS 5.2] is characterized by an abundance of alkali heath (*Frankenia salina*) as a co-dominant with salt grass (*Distichlis spicata*) and Parish's pickleweed (*Arthrocnemum subterminale*) with an open to continuous cover. This alliance is typically found in upper marsh vegetation zones on saline soils in association with other halophytic vegetation types. Cismontane alkali marsh provides valuable resting and foraging habitat for resident and migratory birds. A total of 0.61 acres of cismontane alkali marsh occurs within the BSA in BCER. Cismontane alkali marsh was not found within the Show Center Area. Cismontane alkali marsh (52.500.04, *Frankenia salina – Distichlis spicata*) is considered a sensitive natural community by CDFW (CDFW 2023b).

Coastal Scrub

Coastal scrub (i.e., *Eriogonum fasciculatum* Shrubland Alliance; California sagebrush-California buckwheat scrub [OCHCS 2.3.1]) is characterized by California buckwheat (*Eriogonum fasciculatum*) intermixed with goldenbush (*Isocoma menzeisii*), California sagebrush (*Artemesia*

californica), and a variable herbaceous layer and is found throughout California. Coastal scrub is typically found on dry slopes that are usually steep and rarely flooded on a variety of soils throughout the range (Sawyer et al. 2009). Within the BSA, coastal scrub includes California buckwheat dominated coastal sage scrub and associated species including California sagebrush (*Artemisia californica*), coyote brush (*Baccharis pilularis*), deerweed (*Acmispon glaber*), and lemonadeberry (*Rhus integrifolia*), as well as non-native black mustard (*Brassica nigra*) and red brome (*Bromus rubens*). A total of 57.27 acres of coastal scrub occurs within the BSA. Coastal scrub was not found within the Show Center Area. Coastal scrub including the *Eriogonum fasciculatum* Alliance is not considered a sensitive natural community by CDFW (32.040.00, *Eriogonum fasciculatum*) (CDFW 2023b).

Coastal Scrub is the dominant vegetation type described as critical habitat for the federally threatened coastal California gnatcatcher (*Polioptila californica californica*); however, the coastal scrub found within the BSA is not considered critical habitat.

Southern Coastal Bluff Scrub

Southern coastal bluff scrub (*Eriogonum fasciculatum* Shrubland Alliance; [OCHCS 2.3.1]) is a variation of coastal scrub which typically occurs on exposed bluffs and cliffs in coastal southern California. This vegetation community is characterized by sparse and low growing vegetation and often includes both native and non-native plant species. Within the BSA, Goldenbush and Seacliff wild buckwheat (*Eriogonum parvifolium*) dominate the shrub layer, with red brome and ice plant (*Carpobrotus* spp.) in the herbaceous layer. This vegetation community was found along exposed coastal cliffs from south of 17th Street to 9th Street on the west side of the Pacific Coast Highway. A total of 13.38 acres of coastal scrub occurs within the BSA. Southern coastal bluff scrub was not found within the Show Center Area. This vegetation community is considered a sensitive natural community by CDFW (CDFW 2023b).

Mulefat Scrub

Mulefat scrub (i.e., mulefat thickets [*Baccharis salicifolia*] Shrubland Alliance; Mulefat scrub [OCHCS 7.3]) is characterized by large shrub cover dominated by mulefat and variable herbaceous layer. This alliance is typically found within canyon bottoms, floodplains, lake margins, and stream channels with soils of mixed alluvium (Sawyer et al. 2009). A small dense stand of mulefat scrub was observed along the upper salt marsh zone around the perimeter of the BCER parking lot on the east side of the Pacific Coast Highway. A total of 0.37 acres of mule fat scrub was found within the BSA and was not found within the Show Center Area. Mule fat scrub (*Baccharis salicifolia* Alliance; 63.510.00 mule fat thickets) is not considered a sensitive natural community by CDFW (CDFW 2023b).

Sandy Beach

Sandy beaches occur within the BSA, including the Show Center Area, and are characterized by shores that are repeatedly washed by tidal action, creating sandy, gravelly, or cobbly soils devoid of vegetation. This is the dominant land cover type within the BSA.

Open Water

Open water (OCHCS 11.1) within the BSA consists of the Pacific Ocean, Bolsa Chica Bay, Bolsa Chica Basin State Marine Conservation Area, Anaheim Bay, Alamitos Bay, the San Gabriel River and Santa Ana River flood control channels, tidal openings at BCER, and Brookhurst Marsh. Natural vegetation present within this land cover type is negligible, but open water provides resting and foraging habitat for resident and migratory bird species.

Open water includes flood control channels (OCHCS 13.4) and controlled waterways with steep concrete sides and either a concrete or natural substrate bottom; the San Gabriel and Santa Ana Rivers are considered flood control channels; within the BSA they are barren along the banks. Both flood control channels have a bike path along one or both sides of the channel. The San Gabriel River mouth is deep and acts as an entrance into Los Alamitos Bay. The Santa Ana River mouth supports tidal bars and sand bars and provides a tidal influence for the Brookhurst Marsh. A smaller flood-controlled area is found at the mouth of the Talbert Marsh inlet, providing a tidal influence for the Brookhurst Marsh. Tidal sand bar areas are found in the mouth of the Santa Ana River flood control channel.

Urban/Developed

The urban/developed land cover occurs throughout the BSA and is characterized by commercial developments, paved parking lots, recreational paths, residential communities, municipal piers, and roadways.

Ambient Overflight Conditions

ESA biologist Brandon Mukogawa reviewed flight data on the Flight Aware program on March 11, 2024. **Table 3.2-2** provides a summary of observations of aircraft flying near BCER.

3.2.1.3 Sensitive Biological Resources

Sensitive biological resources include sensitive natural communities as well as special status species.

Sensitive Natural Communities

Sensitive natural communities are designated as such by various resource agencies, such as the CDFW, or in local policies and regulations. These communities are generally considered to have important functions or values for wildlife and are recognized as declining in extent or distribution and may be considered threatened enough to warrant some level of protection. Sensitive natural communities include those that are identified in the CDFW *California Natural Community List* (CDFW 2023b).

TABLE 3.2-2
FLIGHT AWARE AIRCRAFT FLIGHT OBSERVATIONS WITHIN BSA ON 3/11/2024

Time Stamp of Departure (PST)	Airfield of Departure	Aircraft Type	Tail No./ Flight No.	Altitude Passing Bolsa Chica Ecological Reserve (ft)
6:20 a.m.	Panama City, Panama (PTY)	Boeing 737 MAX (twin-jet) (B39M)	CMP360	6,800
7:58 a.m.	Guatemala City, Guatemala (GUA)	Airbus 320neo (twin-jet) (A20N)	LRC640	6,900
11:28 a.m.	San Luis Obispo, CA (SBP)	Cessna Skyhawk (piston-single)	N6137Q	1,900
12:06 p.m.	Los Angeles, CA (LAX)	Airbus A321neo (twin-jet) (A21N)	AAL1105	19, 600
12:08 p.m.	Long Beach, CA (LGB)	Cessna Skyhawk (piston-single)	N75840	1,300
12:17 p.m.	San Francisco, CA (SFO)	Boeing 737-800 (twin-jet) (B738)	ASA1428	37,000
12:40 p.m.	Fullerton, CA (FUL)	Cessna Skyhawk (piston-single)	N733ZY	3,400
12:44 p.m.	Torrance, CA (TOA)	Unavailable	N863SL	2,400
12:46 p.m.	Los Angeles, CA (LAX)	Bombardier Challenger 300 (twin-jet) (CL360)	VJA2	22,000
12:50 p.m.	Torrance, CA (TOA)	Unavailable	N432R	2,900
12:57 p.m.	La Verne, CA (POC)	Cirrus SR22 Turbo (single-piston)	N675CM	2,400
1:07 p.m.	Fullerton, CA (FUL)	Helicopter	N191CH	2,000
1:29 p.m.	Santa Ana, CA (SNA)	Cessna Skyhawk (piston-single)	N733HA	4,700
1:35 p.m.	Santa Ana, CA (SNA)	Boeing 737-700 (twin-jet) (B737)	SWA1435	17,000
1:42 p.m.	Santa Ana, CA (SNA)	Unavailable	N863SL	2,300
1:44 p.m.	Long Beach, CA (LGB)	Piper Cherokee (piston-single) (P28A)	N5368H	1,500
2:14 p.m.	Santa Ana, CA (SNA)	Cessna Skyhawk (piston-single)	N6396D	4,500

SOURCE: Flight Aware 2024.

The following four communities/habitats are found on the CDFW *California Natural Community List* and recorded in the CNDDB within a 3-mile radius/six quadrangle CNDDB search for the Show Center Area:

- Southern Coastal Foredune
- Southern Coastal Salt Marsh
- Cismontane Alkali Marsh
- Southern Coastal Bluff Scrub

Four sensitive natural communities occur within the BSA: southern coastal foredune, southern coastal salt marsh, coastal bluff scrub, and cismontane alkali marsh. None of these four natural communities were found in the Show Center Area.

Special-Status Species

Special-status species are those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) under the federal Endangered Species Act (FESA); those considered "species of concern" by the USFWS; those listed or proposed for listing as rare, threatened, or endangered by the California Department of Fish and Wildlife (CDFW) under the California Endangered Species Act (CESA); animals designated as "Species of Special Concern" by the CDFW; species covered under a Natural Community Conservation Plan (NCCP)/Habitat Conservation Plan (HCP); and plants occurring on Lists 1B, 2, and 4 of the California Native Plant Society (CNPS) Inventory of Rare and Endangered Vascular Plants of California (CNPS 2023). Natural Communities of Special Concern are habitat types considered rare and worthy of tracking in the California Natural Diversity Database (CNDDB) by the CDFW because of their limited distribution or historic loss over time.

The potential for each special-status species to occur in the BSA are based on the following definitions:

- **No Potential:** The BSA does not provide the habitat type or soils to hold this species, or is not in the known range of the species.
- **Low Potential:** The BSA provides low quality habitat for a particular species, such as improper soils, disturbed or otherwise degraded habitat, improper assemblage of desired vegetation, and/or the site is outside of the known elevation range of the species.
- **Moderate Potential:** The BSA provides suitable habitat for a particular species. For example, proper soils may be present, but the desired vegetation assemblage or density is less than ideal; or soils and vegetation are suitable, but the site is outside of the known elevation range of the species.
- **High Potential:** The BSA provides high quality or ideal habitat (i.e., soils, vegetation assemblage, and topography) for a particular species and/or there are known occurrences in the general vicinity of the Project area.
- **Present:** The species or vegetation community/habitat was observed within the BSA during surveys or the species has been previously reported within the BSA.

Special-Status Plants

Numerous special-status plant species have previously been recorded within a search area that includes the Huntington Beach 7.5-minute USGS quadrangle map and the surrounding five USGS quadrangle maps and evaluated for potential occurrence on the Show Center Area based on elevations, and the type and quality of soils and habitats present at the Show Center Area. The potential for special-status plants to occur within the Show Center Area are distinguished because the Show Center Area is the only project component where ground-based activity would occur that has the potential to impact plants. A total of 21 special-status plant species were recorded in the CNDDB database search and evaluated for potential occurrence on the Show Center Area based on the type and quality of habitat present at the Show Center Area. Additionally, three special-status species recorded in the CNDDB were observed within the BSA but not found within the Show Center Area including southern tarplant (*Centromadia parryi* ssp. *australis*), coast wooly heads (*Nemacaulis denudata* var. *denudata*), and southwestern spiny rush (*Juncus*

acutus ssp. *leopoldii*). These species are described in more detail below. Based on the absence of suitable habitat, known geographic distributions, and range restrictions, it was determined that many do not have potential to occur within the Show Center Area and BSA. The majority of species evaluated for the Project are included in the CNPS Inventory of Rare and Endangered Vascular Plants of California, although a few are federal, and state listed species. A list of special-status plants that could potentially occur in the Show Center Area, as well as the three special-status plants that were observed in the BSA, as well as their specific life history requirements and potential for occurrence on the Show Center Area are included in **Table 3.2-3**.

Southern Tarplant. Southern tarplant is considered a species that is rare, threatened or endangered in California and elsewhere by CNPS (CRPR List 1B.1) and is not covered under the NCCP/HCP. Southern tarplant is an annual herb that grows in valley and foothill grassland and along the margins of marshes in mesic soils between 0 and 480 meters in elevation. The species was observed at the BCER along the trails in the upland vegetation communities adjacent to the parking lot. Several patches were positively identified in the field during surveys (ESA 2023).

Coast Woolly Heads. Coast woolly heads is considered a species that is rare, threatened or endangered in California and elsewhere by CNPS (CRPR List 1B.2) and is not covered under the NCCP/HCP. Coast woolly heads is an annual herb that grows in dry foothills and mesas between 0 and 100 meters in elevation, within sandy and dune habitats. Individuals were positively identified in the field during surveys along the fenced California least tern and western snowy plover nesting area in sparsely vegetation dunes at the mouth of the Santa Ana River (ESA 2023).

Southwestern Spiny Rush. Southwestern spiny rush is considered a species with a limited distribution by CNPS (CRPR List 4.2) and is not covered under the NCCP/HCP. Southwestern spiny rush is a perennial species that grows in coastal dunes and scrub and along marshes and alkaline meadows between 3 and 900 meters in elevation. Spiny rush was observed at the BCER in the cismontane alkali marsh habitat adjacent to the coastal salt marsh (ESA 2023).

Special-Status Wildlife

Numerous special-status wildlife species have previously been recorded within a search area that includes the Huntington Beach 7.5-minute USGS quadrangle map and the surrounding five USGS quadrangle maps and evaluated for potential occurrence on the Show Center Area based on elevations, and the type and quality of habitats present at the Show Center Area. The potential for special-status wildlife to occur within the Show Center Area is distinguished because the Show Center Area is the only project component where ground-based activity would occur that has the potential to impact wildlife. Based on the absence of suitable habitat, known geographic distributions, and range restrictions, it was determined that many wildlife species do not have potential to occur within the Show Center Area and BSA. A total of 35 special-status wildlife species were recorded in the CNDDB and evaluated for potential occurrence on the Show Center Area based on the type and quality of habitat present at the Show Center Area. Nine special-status wildlife species were observed within the BSA; however, none were observed within the Show Center Area. These species are discussed in more detail below. Many of the species with potential to occur are strongly associated with particular habitat conditions and may be present nearby but not within the Show Center Area. A list of special-status wildlife evaluated for the Show Center

Area and BSA, as well as their specific habitat requirements and potential for occurrence within the Show Center Area are included in **Table 3.2-4**.

California Least Tern. The California least tern is a federal and state listed endangered species (CDFW 2023d). The California least tern inhabits open flat beaches along lagoon and estuary margins and forages over open water along the coast in southern California. Suitable habitat within the BSA includes open beaches, estuaries, and lagoons located throughout the Show Center Area and BSA. California least tern was observed in protected, fenced nesting areas at the south end of Huntington State Beach adjacent to the mouth of the Santa Ana River.

Western Snowy Plover. The western snowy plover is listed as federally threatened and is a Species of Special Concern on the CDFW Special Animals list (CDFW 2023d, CDFW 2008, CNDDB 2024). The western snowy plover inhabits coastal beaches, sparsely vegetated beach dunes, estuaries, and beaches at river mouths. Suitable habitat onsite includes beaches, sparsely vegetated dunes, estuaries, and beaches at river mouths located throughout the Show Center Area and BSA. Western snowy plover was observed in protected, fenced nesting areas at the south end of Huntington State Beach along the shore at the mouth of the Santa Ana River.

Belding's Savannah Sparrow. Belding's savannah sparrow is listed as endangered under the California Endangered Species Act (CDFW 2023d). Belding's savannah sparrow is endemic to coastal southern California and northern Baja California and inhabits pickleweed dominated salt marshes. Suitable habitat includes marshes along Pacific Coast Highway and dense pickleweed patches in BCER located north of the Show Center Area and within the BSA. Belding's savannah sparrow was observed in the low growing vegetation in the upper reaches of the coastal salt marshes at BCER and Magnolia Street Marsh.

Osprey. The Osprey is on the CDFW Watch List (CNDDB 2024). The Osprey inhabits open water, salt marshes, estuaries, rivers, and lakes. Suitable habitat onsite includes costal shoreline, beaches, estuaries, and salt marshes located throughout the BSA. The osprey was observed flying overhead and foraging along the shoreline, over the coastal marshes, and BCER.

California Brown Pelican. The California brown pelican is on the CDFW Special Animals List (S3) and is considered vulnerable due to a restricted range and fragmentated suitable nesting habitats but has been delisted from the FESA list (CNDDB 2024). The California brown pelican inhabits estuaries, open water, and coastal marine habitats. Suitable habitat onsite includes costal shoreline, beaches, estuaries, and salt marshes located throughout the BSA. The California brown pelican was observed flying along the shore on Huntington Beach south of the pier, floating in the surf at Huntington State Beach, and resting in the water in Bolsa Chica Bay.

California Gull. The California gull is on the CDFW Watch List (CNDDB 2024). The California gull inhabits costal shoreline, beaches, open water, estuaries, salt marshes, and inland areas. Suitable habitat onsite includes costal shoreline, beaches, open water, estuaries, and salt marshes located within the Show Center Area and BSA. The California gull was observed foraging and resting along the shoreline throughout the BSA but were not directly observed within the Show Center Area.

TABLE 3.2-3
SPECIAL-STATUS PLANT SPECIES

Common Name *Scientific Name*	Sensitivity Status[a]	Flowering Period	Preferred Habitat/Known Elevation and Distribution[b]	Presence/Potential to Occur within Biological Study Area
ANGIOSPERMS (DICOTYLEDONS)				
Asteraceae (Sunflower Family)				
Orcutt's pincushion *Chaenactis glabriuscula* var. *orcuttiana*	Federal: None State: None Local: 1B.1	Jan.–Aug.	Coastal bluff scrub (sandy), coastal dunes. Elevation range extends from 0 to 100 meters. Found in Los Angeles, San Diego, Ventura counties, possibly Orange County.	**Not Expected.** This species is not expected to occur within the BSA due to fragmented habitat and degraded habitat conditions as a result of development at the location of its last observance. This species was historically known to occur within 5 miles of the BSA (CDFW 2023).
Los Angeles sunflower *Helianthus nuttallii* ssp. *parishii*	Federal: None State: None Local: 1A	Aug.–Oct.	Freshwater marsh, salt marsh. Elevation range extends from 10 to 1,675 meters. Found in Los Angeles, Orange, San Bernardino counties.	**Not Expected.** This species is not expected to occur within the BSA due to being possibly extirpated due to human development at the location of its last observance. This species was historically known to occur within 5 miles of the BSA (CDFW 2023).
decumbent goldenbush *Isocoma menziesii* var. *decumbens*	Federal: None State: None Local: 1B.2	Apr.–Nov.	Chaparral and coastal scrub; sandy, often in disturbed areas. Elevation range extends from 10 to 135 meters. Found in Los Angeles, Orange, San Diego counties.	**Not Expected.** This species is not expected to occur due to the absence of suitable habitat in the BSA. This species would have been visible at the time surveys were conducted. This species has not been known to occur within 5 miles of the BSA (CDFW 2023).
Coulter's goldfields *Lasthenia glabrata* ssp. *coulteri*	Federal: None State: None Local: 1B.1 MSHCP (d)	Feb.–Jun.	Salt-marsh, playas, vernal-pools, coastal; usually occurs in wetlands but occasionally in non-wetlands. Elevation range extends from 1 to 1,220 meters. Found in Orange, Riverside, Ventura, San Diego, and possibly Los Angeles, Kern and San Bernardino counties.	**Moderate Potential.** This species has a moderate potential to occur due to marginally suitable salt marsh habitat within the BSA but was not observed during surveys. This species is known to occur 2 miles of the BSA (CDFW 2023).
big-leaved crownbeard *Verbesina dissita*	Federal: FT State: CT Local: 1B.1	Apr.–Jul.	Maritime chaparral and coastal scrub. Elevation range extends from 45 to 205 meters. Found in Orange County.	**Not Expected.** This species is not expected to occur in the BSA. This species would have been visible at the time surveys were conducted. This species has not been known to occur within 5 miles of the BSA (CDFW 2023).
Boraginaceae (Borage Family)				
mud nama *Nama stenocarpum*	Federal: None State: None Local: 2.B2 MSHCP(d)	Jan.–Jul.	Marches and swamps (lake margins, riverbanks). Elevation range extends from 5 to 500 meters. Found in Orange, Riverside, San Diego, possibly Los Angeles counties.	**Low Potential.** This species has a low potential to occur due to the presence of marginally suitable marsh habitat within the BSA. This species is not currently known to occur within 5 miles of the BSA (CDFW 2023).

TABLE 3.2-3
SPECIAL-STATUS PLANT SPECIES

Common Name *Scientific Name*	Sensitivity Status[a]	Flowering Period	Preferred Habitat/Known Elevation and Distribution[b]	Presence/Potential to Occur within Biological Study Area
south coast branching phacelia *Phacelia ramosissima* var. *austrolitoralis*	Federal: None State: None Local: 3.2	Mar.–Aug.	Chaparral, coastal dunes, coastal scrub, marshes and swamps (coastal salt). Elevation range extends from 5 to 300 meters. Found in Los Angeles, Orange, San Diego, Ventura counties.	**Low Potential.** This species has a low potential to occur due to a restricted range and the presence of suitable marsh habitat found within the BSA. This species is not known to occur within 5 miles of the BSA (CDFW 2023).
Brassicaceae (Cabbage Family)				
Gambel's water cress *Nasturtium gambelii*	Federal: FE State: CT Local: 1B.1	Apr.–Oct.	Marshes or swamps. Elevation range extends from 5 to 330 meters. Found in Los Angeles, Orange, San Diego, possibly San Bernardino counties.	**Not Expected.** This species is not expected to occur due to the absence of suitable marsh habitat within the BSA. This species has been observed within 1 mile of the BSA (CDFW 2023).
Chenopodiaceae (Goosefoot Family)				
Aphanisma *Aphanisma blitoides*	Federal: None State: None Local: 1B.2	Mar.–Jun.	Sandy. Coastal bluff scrub, Coastal dunes, Coastal scrub. Elevation range extends from 1 to 305 meters. Found in Los Angeles, Orange, Ventura, San Diego counties.	**Low Potential.** This species has a low potential to occur due to the presence of disturbed and marginally suitable habitat in coastal dunes and coastal scrub. This species is not currently known to occur within 5 miles of the BSA (CDFW 2023).
Coulter's saltbush *Atriplex coulteri*	Federal: None State: None Local: 1B.2	Mar.–Oct.	Alkaline or clay soils; coastal bluff scrub, coastal dunes, Coastal scrub, Valley and foothill grassland. Elevation range extends from 3 to 460 meters. Found in Los Angeles, Orange, San Diego, San Bernardino, Ventura counties.	**Low Potential.** This species has a low potential to occur due to a lack of suitable habitat within the BSA. However, open alkaline soils are present within the BSA. This species is not currently known to occur within 5 miles from the BSA (CDFW 2023).
south coast saltscale *Atriplex pacifica*	Federal: None State: None Local: 1B.2	Mar.–Oct.	Coastal bluff scrub, Coastal dunes, Coastal scrub, Playas. Elevation range extends from 0 to 140 meters. Found in Los Angeles, Orange, Riverside, San Diego, Ventura counties.	**Low Potential.** This species has a low potential to occur due to a lack of suitable habitat within the BSA. However, open alkaline soils are present within the BSA. This species is not currently known to occur within 5 miles from the BSA (CDFW 2023).
Parish's brittlescale *Atriplex parishii*	Federal: None State: None Local: 1B.1	Jun.–Oct.	Shadscale scrub, alkali sinks, freshwater wetlands, wetland-riparian; playas, vernal pools. Elevation range extends from 25 to 1,900 meters. Found in Orange, Riverside, San Diego, and possibly Los Angeles and San Bernardino counties.	**Low Potential.** This species has a low potential to occur due to a lack of suitable habitat within the BSA. However, open alkaline soils are present within the BSA. This species is not known to occur within 5 miles from the BSA and is believed to be extirpated (CDFW 2023).

TABLE 3.2-3
SPECIAL-STATUS PLANT SPECIES

Common Name *Scientific Name*	Sensitivity Status[a]	Flowering Period	Preferred Habitat/Known Elevation and Distribution[b]	Presence/Potential to Occur within Biological Study Area
estuary seablite *Suaeda esteroa*	Federal: None State: None Local: 1B.2	May–Oct.	Marshes and swamps. Elevation range extends from 0 to 5 meters. Found in Los Angeles, Orange, San Diego, Ventura counties.	**Moderate Potential.** This species has a moderate potential to occur within the BSA due to the presence of suitable habitat in marshes, however it was not observed during surveys. This species is known to occur within 5 miles of the BSA (CDFW 2023).
woolly seablite *Suaeda taxifolia*	Federal: None State: None Local: 4.2	Jan.–Dec.	Coastal bluff scrub, coastal dunes, marshes and swamps. Elevation range extends from 0 to 50 meters. Found in Los Angeles, San Diego, Orange, Ventura counties.	**High Potential.** This species has a high potential to occur due to the presence of suitable coastal dushes and marsh habitat. This species was not observed during 2023 biological resources surveys. This species is known to occur within 5 miles of the project or BSA (CDFW 2023).
Fabaceae (Legume Family)				
Horn's milk-vetch *Astragalus hornii* var. *hornii*	Federal: None State: None Local: 1B.1	May–Oct	Meadows and seeps, Playas/lake margins, alkaline Elevation range extends from 60 to 850 meters. Found in Kern, San Bernardino* counties, Nevada.	**Not Expected.** This species is not expected to occur within the BSA. This species was historically known to occur within the BSA and is considered extirpated. The BSA is outside of the current known range of the species. This species was historically known to occur within the BSA (CDFW 2023).
Ventura marsh milk-vetch *Astragalus pycnostachyus* var. *lanosissimus*	Federal: FE State: CE Local: 1B.1	Jun.–Oct.	Coastal dunes, coastal scrub, marshes and swamps (edges, coastal salt or brackish). Elevation range extends from 1 to 35 meters. Found in Los Angeles, Orange, Santa Barbara, and Ventura counties.	**Low Potential.** This species has a low potential to occur due to the presence of marginally suitable habitat in the coastal marshes and coastal dunes within the BSA. This species has been known to historically occur within the BSA (CDFW 2023).
Orobanchaceae (Broomrape Family)				
Salt marsh bird's beak *Chloropyron maritimum* ssp. *maritimum*	Federal: FE State: SE Local: 1B.2	May–Oct.	Coastal dunes, marshes, and swamps. Elevation range extends from 0 to 30 meters. Found in Los Angeles, Orange, San Diego, San Bernardino, Ventura counties.	**Moderate Potential.** This species has a moderate potential to occur within the BSA due to presence of marsh habitat. This species is known to occur within 4 miles of the BSA (CDFW 2023).
Solanaceae (Nightshade Family)				
California box-thorn *Lycium californicum*	Federal: None State: None Local: 4.2	Mar.–Aug.	Coastal bluff scrub, coastal scrub. Elevation range extends from 10 to 300 meters.	**Low Potential.** This species has a low potential to occur due to a lack of suitable, undisturbed coastal bluff scrub habitat within the BSA. This species is known to occur within 5 miles of the BSA (CDFW 2023).

TABLE 3.2-3
SPECIAL-STATUS PLANT SPECIES

Common Name *Scientific Name*	Sensitivity Status[a]	Flowering Period	Preferred Habitat/Known Elevation and Distribution[b]	Presence/Potential to Occur within Biological Study Area
ANGIOSPERMS (MONOCOTYLEDONS)				
Cyperaceae (Sedge Family)				
dwarf spikerush *Eleocharis parvula*	Federal: None State: None Local: 4.3	Jul.–Aug.	Marshes and swamps, coastal salt marsh Elevation range extends from 0 to 173 meters.	**High Potential.** This species has a high potential to occur due to the presence of suitable coastal salt marsh habitat. This species was not observed during 2023 biological resources surveys. This species is known to occur within 5 miles of the BSA (CDFW 2023).

NOTES:

a. Sensitivity Status

Federal
- FE Federally Endangered
- FT Federally Threatened
- FC Federal Candidate
- FPE Federally Proposed as Endangered
- FPT Federally Proposed as Threatened
- FPD Federally Proposed for Delisting

State
- SE State Listed as Endangered
- ST State Listed as Threatened
- SCE State Candidate for Endangered
- SCT State Candidate for Threatened
- SR State Rare

Local
- CRPR *California Rare Plant Ranks:*
  - Rank 1A Plants presumed extirpated in California and either rare or extinct elsewhere.
  - Rank 1B Plants rare, threatened, or endangered in California and elsewhere.
  - Rank 2A Plants presumed extirpated in California but common elsewhere.
  - Rank 2B Plants rare, threatened, or endangered in California, but common elsewhere.
  - *Threat Code extensions and their meanings:*
    - 0.1 Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
    - 0.2 Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
    - 0.3 Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

b. SOURCES:
Calflora, Information on Wild California Plants, 2023, accessed May 25, 2023. https://www.calflora.org/.
CDFW, California Natural Diversity Database (CNDDB), RareFind, Version 5.0 (Commercial Subscription), Sacramento, CA: CDFW, Biogeographic Data Branch, 2023, accessed May 25, 2023, https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data.
California Department of Fish and Wildlife (CDFW), California Natural Diversity Database (CNDDB) RareFind 6, Electronic database, Sacramento, CA, 2023, accessed July 27, 2023, https://wildlife.ca.gov/Data/CNDDB/Maps-and-Data.
ESA 2023

TABLE 3.2-4
SPECIAL-STATUS WILDLIFE SPECIES

Common Name Scientific Name	Sensitivity Status[a]	Preferred Habitat/Known Distribution[b]	Presence/Potential to Occur within Biological Study Area/Show Center Area
INVERTEBRATES			
Snails, Slugs, and Abalone (Class Gastropoda)			
mimic tryonia (California brackishwater snail) *Tryonia imitator*	Federal: None State: None	Inhabits coastal lagoons, estuaries, and salt marshes, from Sonoma County south to San Diego County.	**High Potential.** This species has a high potential to occur in the BSA due to the presence of suitable estuaries and salt marshes within the BSA. This species is known to occur within 1 mile of the BSA (CDFW 2023); it does not have potential to occur within the Show Center Area.
Order Coleoptera (beetles) (Class Insecta)			
Western beach tiger beetle *Cicindela latesignata latesignata*	Federal: None State: None Local: None Other: S1	Coastal habitats, primarily beaches.	**Low Potential.** This species has a low potential to occur due to a lack of suitable coastal habitat within the BSA. This species is known to occur within 4 miles of the BSA (CDFW 2023); it does not have potential to occur within the Show Center Area.
globose dune beetle *Coelus globosus*	Federal: None State: None Local: None Other: S1S2	Coastal dunes; Inhabits foredunes and sand hummocks; it burrows beneath the sand surface and is most common beneath dune vegetation.	**Moderate Potential.** This species has a moderate potential to occur due to the presence of suitable coastal foredune habitat within the BSA. This species is known to occur within 5 miles of the BSA (CDFW 2023); it does not have potential to occur within the Show Center Area.
Dorothy's El Segundo Dune weevil *Trigonoscuta dorothea dorothea*	Federal: None State: None Local: None Other: S1	Coastal sand dunes in Los Angeles County	**Not Expected.** This species is not expected to occur due to patchiness of suitable coastal sand dune habitat within the BSA. This species is known to occur within 5 miles of the BSA (CDFW 2023); it does not have potential to occur within the Show Center Area.
Order Lepidoptera (butterflies & moths) (Class Insecta)			
monarch butterfly – California overwintering population *Danaus plexippus pop. 1*	Federal: FC State: None Local: None	Wintering sites in California are associated with wind-protected groves of large trees (primarily eucalyptus or pine [*Pinus* spp.]) with nectar and water sources nearby that are generally near the coast.	**Not Expected.** This species is not expected to occur within the BSA due to lack of suitable wind-protected tree groves near the coast within the BSA. This species is known to occur within 5 miles of the BSA (CDFW 2023); it does not have potential to occur within the Show Center Area.
wandering (= saltmarsh) skipper *Panoquina errans*	Federal: None State: None Local: (County of Orange NCCP/HCP) Covered	Southern California coastal salt marshes.	**High Potential.** This species has a high potential to occur due to the presence of suitable coastal salt marshes within the BSA. This species was not observed during 2023 biological resource surveys. This species is known to occur within 2 miles of the BSA (CDFW 2023); it does not have potential to occur within the Show Center Area.

TABLE 3.2-4
SPECIAL-STATUS WILDLIFE SPECIES

Common Name Scientific Name	Sensitivity Status[a]	Preferred Habitat/Known Distribution[b]	Presence/Potential to Occur within Biological Study Area/Show Center Area
Quino checkerspot butterfly *Euphydryas editha quino*	Federal: FE State: None Local: County of Orange NCCP/HCP) Conditionally Covered	Sunny openings within native and non-native grasslands, coastal sage scrub, open chaparral, and other open plant community types with rocky outcroppings, cryptogrammic crusts, and presence of host plant species (*Plantago erecta*, *P. insularis*, and *Castilleja exserta*) and nectar sources. Hills and mesas near the coast.	**Not Expected.** This species is not expected to occur within the BSA due to lack of suitable habitat conditions within the BSA. This species was not observed during 2023 biological resource surveys. This species is known to occur within 5 miles of the BSA (CDFW 2023) it does not have potential to occur within the Show Center Area.
Order Hymenoptera (ants, bees, & wasps) (Class Insecta)			
Crotch bumble bee *Bombus crotchii*	Federal: None State: SCE Local: None	Open grassland and scrub habitats that support potential nectar sources such as plants within the Fabaceae, Apocynaceae, Asteraceae, Lamiaceae, and Boraginaceae families.	**Low Potential.** This species has a low potential to occur due to some suitable coastal scrub habitat outside the BSA. This species was not observed during 2023 biological resource surveys. This species is known to occur within 5 miles of the BSA (CDFW 2023); it does not have potential to occur within the Show Center Area.
REPTILES			
Legless Lizards (Family Anniellidae)			
southern California legless lizard [=silvery legless lizard] *Anniella stebbinsi* [=*Anniella pulchra*]	Federal: None State: SSC Local: None	Occurs in moist warm loose soil with plant cover. Moisture is essential. Occurs in sparsely vegetated areas of beach/coastal dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks. Leaf litter under trees and bushes in sunny areas and dunes stabilized with bush lupine and mock heather often indicate suitable habitat. Often can be found under surface objects such as rocks, boards, driftwood, and logs. Can also be found by gently raking leaf litter under bushes and trees. Sometimes found in suburban gardens in Southern California.	**Low Potential.** This species has a low potential to occur due to the presence of sparse vegetation with moist sandy coastal dune habitat within the BSA. This species was not observed during 2023 biological resources surveys. This species is known to occur within 5 miles of the BSA (CDFW 2023); it does not have potential to occur within the Show Center Area.
Sea Turtles (Family Cheloniidae)			
green turtle *Chelonia mydas*	Federal: Threatened State: None Local: None	Species mainly feeds on algae and seagrasses, primarily in various subtropical and temperate regions of the Atlantic, Pacific, and Indian Oceans with the Mediterranean Sea	**Moderate Potential.** This species has a moderate potential to occur suitable habitat found in the mouth of the San Gabriel River. This species was not observed during 2023 biological resources surveys. This species is known to occur within 9 miles of the BSA (CDFW 2023) it does not have potential to occur within the Show Center Area.

TABLE 3.2-4
SPECIAL-STATUS WILDLIFE SPECIES

Common Name Scientific Name	Sensitivity Status[a]	Preferred Habitat/Known Distribution[b]	Presence/Potential to Occur within Biological Study Area/Show Center Area
BIRDS			
Rails, Coots, & Gallinules (Family Rallidae)			
yellow rail *Coturnicops noveboracensis*	Federal: BCC State: SSC Local: None	Known to occur within freshwater marshlands, meadows, and seeps.	**Low Potential.** This species has a low potential to occur due to a lack of suitable freshwater marsh habitat within the BSA. This species was not observed during 2023 biological resources surveys. The species is known to occur within 5 miles of the BSA (CDFW 2023); it does not have potential to occur within the Show Center Area.
California black rail *Laterallus jamaicensis coturniculus*	Federal: BCC State: ST, FP Local: None	Known to occur in brackish and freshwater marshes. Inhabits riparian thickets of willow and other brushy tangles near watercourses. Needs water depths of about 1 inch that does not fluctuate during the year and dense vegetation for nesting habitat.	**High Potential.** This species has a high potential to occur due to the presence of suitable coastal salt marsh habitat within the BSA. This species was not observed during 2023 biological resource surveys. This species is known to occur within 4 miles of the BSA (CDFW 2023); it does not have potential to occur within the Show Center Area.
light-footed Ridgway's rail *Rallus obsoletus levipes*	Federal: FE State: SE, FP Local: None	Found in salt marshes traversed by tidal sloughs, where cordgrass and pickleweed are the dominant vegetation. Requires dense growth of either pickleweed or cordgrass for nesting or escape cover. Feeds on mollusks and crustaceans.	**High Potential.** This species has a high potential to occur due to the presence of suitable coastal salt marshes. Ridgway's rail is known to occur in the BCER. This species was not observed during 2023 biological resource surveys. The species is known to occur within 5 miles of the BSA (CDFW 2023); it does not have potential to occur within the Show Center Area.
Sandpipers and Relatives (Family Scolopacidae)			
Black skimmer *Rynchops niger*	Federal: None State: SSC Local: None	Inhabits coastal beaches and islands near oceans or Gulf of Mexico; occasionally seen inland, especially in sites such as Salton Sea.	**Moderate Potential.** This species has a moderate potential to occur since there is minimal habitat as coastal beaches are typically highly disturbed by public use, but it has historically bred in large populations in BCER. This species was not observed during 2023 biological resource surveys. This species is known to occur within 4 miles of the BSA (CDFW 2023); it does not have potential to occur within the Show Center Area.

TABLE 3.2-4
SPECIAL-STATUS WILDLIFE SPECIES

Common Name Scientific Name	Sensitivity Status[a]	Preferred Habitat/Known Distribution[b]	Presence/Potential to Occur within Biological Study Area/Show Center Area
Hawks, Kites, Harriers, & Eagles (Family Accipitridae)			
white-tailed kite *Elanus leucurus*	Federal: None State: FP Local: None	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes nest to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	**Low Potential.** This species has a low potential to occur due to the presence of marginally suitable marsh habitat for foraging and perching. This species was not observed during 2023 biological resource surveys. This species is known to occur within 5 miles of the BSA site (CDFW 2023); it does not have potential to occur within the Show Center Area.
True Owls (Family Strigidae)			
burrowing owl *Athene cunicularia*	Federal: BCC State: SSC Local: BLM Sensitive	Inhabits coastal prairie, coastal scrub, Great Basin scrub, Mojavean desert scrub, Sonoran Desert scrub, annual and perennial grasslands, bare ground, and disturbed habitats characterized by low-growing vegetation. A subterranean nester dependent upon burrowing mammals, particularly the California ground squirrel.	**Moderate Potential.** This species has a moderate potential to occur due to the presence of suitable open habitat and active burrow found less than 2 miles away from Show Center Area, at industrial facility in 2017. This species was not observed during 2023 biological resource surveys. This species is known to occur within 2 miles of the BSA (CDFW 2023); it does not have potential to occur within the Show Center Area.
Larks (Family Alaudidae)			
California horned lark *Eremophila alpestris actia*	Federal: None State: WL Local: None	Found from grasslands along the coast and deserts near sea level to alpine dwarf-shrub habitat above the tree line. During the winter, this species typically flocks in desert lowlands.	**Low Potential.** This species has a low potential to occur due to the presence of marginally suitable grassland habitat adjacent to the BSA. This species was not observed during 2023 biological resource surveys. This species is not known to occur within 5 miles of the BSA (CDFW 2023). This species has been reported as a wildlife strike at SNA (FAA 2023); it does not have potential to occur within the Show Center Area.

TABLE 3.2-4
SPECIAL-STATUS WILDLIFE SPECIES

Common Name Scientific Name	Sensitivity Status[a]	Preferred Habitat/Known Distribution[b]	Presence/Potential to Occur within Biological Study Area/Show Center Area
Swallows (Family Hirundinidae)			
bank swallow *Riparia riparia*	Federal: None State: ST Local: None	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	**Low Potential.** This species has a low potential to occur within the BSA due to the lack of suitable nesting habitat, however, this species may forage over the open water within the BSA. This species was not observed during 2023 biological resource surveys. This species is not known to occur within 5 miles of the BSA (CDFW 2023); it does not have potential to occur within the Show Center Area.
Gnatcatchers (Family Polioptilidae)			
coastal California gnatcatcher *Polioptila californica californica*	Federal: FT State: SSC Local: County of Orange NCCP/HCP) Covered	Species is an obligate, permanent resident of coastal sage scrub habitats dominated by California sagebrush and flat-topped buckwheat, mainly on cismontane slopes below 1,500 feet in elevation. Low coastal sage scrub in arid washes, on mesas and slopes.	**Low Potential.** This species has a low potential to occur within the BSA due to the lack of contiguous suitable coastal sage scrub habitat. Critical habitat has been designated in Newport Beach, east of the Santa Ana River outflow but is not within the BSA. This species was not observed during 2023 biological resources surveys. This species is known to occur within 5 miles of the BSA (CDFW 2023); it does not have potential to occur within the Show Center Area.
Blackbirds (Family Icteridae)			
tricolored blackbird *Agelaius tricolor*	Federal: None State: ST; SSC Local: None	Known to occur in freshwater marsh, marsh, swap, and wetland. Highly colonial species, most numerous in Central Valley and vicinity. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	**Low Potential.** This species has a low potential to occur because there is a lack of suitable freshwater wetlands in the BSA. This species was not observed during 2023 biological resources surveys. This species is known to occur within 2 miles of the BSA (CDFW 2023); it does not have potential to occur within the Show Center Area.
Wood-Warblers (Family Parulidae)			
yellow warbler *Setophaga petechia*	Federal: None State: SSC Local: None	Found in riparian forest, scrub, and woodland. Riparian plant associations near water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders.	**Not Expected.** This species is not expected to occur within the BSA due to the lack of riparian forest and tree cover habitat required for nesting and foraging and the BSA is outside the current known range. This species is not known to occur within 5 miles of the BSA (CDFW 2023) however, this species has been reported as a wildlife strike at SNA (FAA 2023) and it does not have potential to occur within the Show Center Area.

TABLE 3.2-4
SPECIAL-STATUS WILDLIFE SPECIES

Common Name Scientific Name	Sensitivity Status[a]	Preferred Habitat/Known Distribution[b]	Presence/Potential to Occur within Biological Study Area/Show Center Area
MAMMALS			
Shrews (Family Soricidae)			
southern California saltmarsh shrew *Sorex ornatus salicornicus*	Federal: None State: SSC Local: None	Coastal marshes in Los Angeles, Orange and Ventura counties. Requires dense vegetation and woody debris for cover.	**Moderate Potential.** This species has a moderate potential to occur due to the presence of suitable coastal salt marshes within the BSA. This species was not observed during 2023 biological resource surveys. This species is known to occur within 4 miles of the BSA (CDFW 2023); it does not have potential to occur within the Show Center Area.
Free-Tailed Bats (Family Molossidae)			
big free-tailed bat *Nyctinomops macrotis*	Federal: None State: SSC Local: None	Low-lying arid areas in Southern California within habitats such as desert shrub, woodlands, and evergreen forests. Need high cliffs or rugged, rocky outcrops or canyons for roosting sites. Feeds principally on large moths.	**Low Potential.** This species has a low potential to occur within the BSA due to the lack of suitable open foraging areas and lack of cliffs and rugged outcrops for roosting and the BSA is outside the current known range. This species has been known to occur within 5 miles of the BSA but has not been observed since 1988(CDFW 2023); it does not have potential to occur within the Show Center Area.
Pocket Mice and Kangaroo Rats (Family Heteromyidae)			
Pacific pocket mouse *Perognathus longimembris pacificus*	Federal: FE State: SSC Local: County of Orange NCCP/HCP Conditionally Covered	Found in the coastal scrub and maritime chaparral from the Mexican border north to El Segundo, Los Angeles County. Commonly associated with gravelly or fine alluvial soils within coastal plains in the immediate vicinity of the Pacific Ocean. Also found on coastal strand, coastal dunes, and ruderal vegetation on river alluvium, within open, sparsely vegetated areas.	**Not Expected.** This species is not expected to occur due to marginally suitable habitat and no known extant populations in BSA vicinity. This species was not observed during 2023 biological resource surveys. This species has been not known to occur within 5 miles of the BSA (CDFW 2023); it does not have potential to occur within the Show Center Area.
Mice, Rats, and Voles (Family Cricetidae)			
south coast marsh vole *Microtus californicus stephensi*	Federal: None State: SSC Local: None	Tidal marshes in Los Angeles, Orange and southern Ventura counties.	**High Potential.** This species has a high potential to occur due to the presence of suitable coastal salt marshes. This species was not observed during 2023 biological resource surveys. This species is known to occur within 2 miles of the BSA (CDFW 2023); it does not have potential to occur within the Show Center Area.

TABLE 3.2-4
SPECIAL-STATUS WILDLIFE SPECIES

Common Name Scientific Name	Sensitivity Status[a]	Preferred Habitat/Known Distribution[b]	Presence/Potential to Occur within Biological Study Area/Show Center Area
Weasels and Relatives (Family Mustelidae)			
American badger *Taxidea taxus*	Federal: None State: SSC Local: None	Found in a variety of habitats, including alkali marsh, desert wash, Great Basin scrub, marshes and swamps, meadows and seeps, Mojavean desert scrub, riparian scrub, riparian woodland, valley and foothill grassland. Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils, and open, uncultivated ground to dig burrows. Preys on burrowing rodents.	**Moderate Potential.** This species has a moderate potential to occur due to a lack of suitable friable soils despite availability of marsh habitat. Suitable habitat is found in the vicinity. This species was not observed during 2023 biological resources surveys. This species is known to occur within 2 miles of the BSA (CDFW 2023); it does not have potential to occur within the Show Center Area.

NOTES:

a. Sensitivity Status

Federal (USWFS)

BGEPA	Bald and Golden Eagle Protection Act
FE	Federally Endangered
FT	Federally Threatened
FPE	Federally Proposed as Endangered
FPT	Federally Proposed as Threatened

State

FP	Fully Protected
SE	State Endangered
ST	State Threatened
SCE	State Candidate as Endangered
SCT	State Candidate as Threatened
SSC	State Species of Special Concern
WL	Watch List

Other (NatureServe Conservation Status Ranks)

- S1 Critically Imperiled. At very high risk of extirpation in the jurisdiction due to very restricted range, very few populations or occurrences, very steep declines, severe threats, or other factors.
- S2 Imperiled. At high risk of extirpation in the jurisdiction due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors
- S3 Vulnerable. At moderate risk of extirpation in the jurisdiction due to a restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.

b. SOURCES:
CDFW, California Natural Diversity Database (CNDDB), RareFind, Version 5.0 (Commercial Subscription). Sacramento, CA: CDFW, Biogeographic Data Branch, 2023, accessed May 25, 2023, https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data.
CDFW, California Wildlife Habitat Relationships, 2023, accessed May 25, 2023, https://wildlife.ca.gov/Data/CWHR/Life-History-and-Range.
eBird, Species Maps, 2023, accessed May 23, 2023, https://ebird.org/map.
ESA 2023
iNaturalist, Observations, 2023, accessed May 23, 2023, https://www.inaturalist.org/observations.

Long-Billed Curlew. The long-billed curlew is on the CDFW Watch List (CNDDB 2024). Long-billed curlew inhabits wetlands, tidal estuaries, beaches, and flooded fields. Suitable habitat includes coastal shoreline, and beaches within the Show Center Area and estuaries, and salt marshes located and BSA. The long-billed curlew was observed foraging along the shoreline and beaches in the BSA but were not directly observed within the Show Center Area.

Double-Crested Cormorant. The double-crested cormorant is on the CDFW Watch List (CNDDB 2024). The double-crested cormorant inhabits open water in coastal areas and inland near rivers and lakes. Suitable habitat onsite includes open water along the coastline and within estuaries and marshes throughout the BSA but not within the Show Center Area. The double-crested cormorant was observed flying along the shore on Huntington Beach south of the pier, floating in the surf at Huntington State Beach, and resting in the water in Bolsa Chica Bay.

Orange-throated Whiptail. The orange-throated whiptail is on the CDFW Watch List and is a covered species under the NCCP\HCP (CNDDB 2024, R.J. Meade Consulting Inc. 1996). The orange-throated whiptail inhabits open coastal sage scrub and chaparral habitats. Suitable habitat within the BSA includes coastal sage scrub and coastal bluff scrub. The orange-throated whiptail was observed foraging in the BCER.

3.2.1.4 Natural Communities Conservation Plan/Habitat Conservation Plan

The Show Center Area and survey area are not located within any NCCP/HCP, including the County of Orange Central and Coastal Subregion NCCP/HCP (R.J. Meade Consulting Inc. 1996).

3.2.2 Regulatory Framework

The following provides a general description of the applicable regulatory requirements for the Project, including federal, state, and local policies and guidelines.

3.2.2.1 Federal

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918, as amended, is designed to protect birds that migrate and cross state lines to provide management of migratory birds at a federal level. The MBTA prohibits killing or transporting native migratory birds, or any part, nest, or egg of such bird unless allowed by another regulation adopted in accordance with the MBTA.

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) was established to protect wildlife species and habitats from extinction and diminishment. The FESA is administered by the USFWS and applies to federally listed species and habitat occupied by the federally listed species. FESA Section 9 forbids acts that directly or indirectly harm listed species. Specifically, Section 9 identified prohibited acts related to endangered species, and all persons, including federal, state, and local governments, from taking listed fish and wildlife species, except as specified under the provisions for exceptions (16 U.S.C. 1539). The term ‘take’ is defined as to harass, harm, pursue, hunt,

shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such activity (16 U.S.C. 1532[18]).

Clean Water Act

In 1948, Congress passed the Federal Water Pollution Control Act. The Act was later amended in 1972 and became known as the Clean Water Act (CWA). The CWA establishes the basic structure for regulating discharges of pollutants into the waters of the United States. The act specifies a variety of regulatory and non-regulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff.

- Sections 303 and 304 provide for water quality standards, criteria, and guidelines.
- Section 401 requires every applicant for a federal permit or license for any activity that may result in a discharge to a water body to obtain a water quality certification that the proposed activity will comply with applicable water quality standards. Under Section 401 of the CWA, the State Water Resources Control Board (SWRCB) must certify that actions receiving authorization under Section 404 of the CWA also meet state water quality standards.
- Section 402 regulates point- and nonpoint-source discharges to surface waters through the National Pollutant Discharge Elimination System (NPDES) program. In California, the SWRCB oversees the NPDES program, which is administered by the Regional Water Quality Control Boards. The NPDES program provides for both general permits (those that cover a number of similar or related activities) and individual permits. Anti-backsliding requirements provided for under CWA Sections 402(o)(2) and 303(d)(4) prohibit slackening of discharge requirements and regulations under revised NPDES permits. With isolated/limited exceptions, these regulations require effluent limitations in a reissued permit to be at least as stringent as those contained in the previous permit.
- Section 404 of the Clean Water Act establishes a program to regulate the discharge of dredged and fill material into waters of the U.S., including some wetlands. Activities in waters of the U.S. that are regulated under this program include fills for development, water resource projects (e.g., dams and levees), infrastructure development (e.g., highways and airports), and conversion of wetlands to uplands for farming and forestry. This program is administered by the U.S. Army Corps of Engineers.

3.2.2.2 State

California Endangered Species Act

The California Endangered Species Act (CESA) is similar in many ways to the FESA. CESA is administered by the CDFW. CESA provides a process for CDFW to list species as threatened or endangered in response to a citizen petition or by its own initiative (Fish and Game Code § 2070 et seq.). Section 2080 of CESA prohibits the take of species listed as threatened or endangered pursuant to the Act (Fish and Game Code § 2080). Section 2081 allows CDFW to authorize take prohibited under Section 2080 provided that (1) the taking is incidental to an otherwise lawful activity, (2) the taking will be minimized and fully mitigated, (3) the applicant ensures adequate funding for minimization and mitigation, and (4) the authorization will not jeopardize the continued existence of listed species (Fish and Game Code § 2081).

California Department of Fish and Game Code

The California Fish and Game (CFG) Code regulates the taking of birds, mammals, fish, amphibians, and reptiles, as well as natural resources such as wetlands and waters of the State. It includes the CESA (Sections 2050–2115) and Streambed Alteration Agreement regulations (Sections 1600–1616), as well as provisions for legal hunting and fishing, and tribal agreements involving the take of native wildlife. Any project impact to State-listed species within or adjacent to a project site would require a permit under CESA. Also, if a project proposes to alter a State-defined wetland, then a Streambed Alteration Agreement would be required from CDFW.

California Native Plant Protection Act

The California Native Plant Protection Act (CNPPA) of 1977 (Fish and Game Code Sections 1900–1913) is intended to preserve, protect, and enhance endangered or rare native plants in California and gives the CDFW authority to designate State endangered, threatened, and rare plants and provides specific protection measures for identified populations. The Act also directs the California Fish and Game Commission to adopt regulations governing taking, possessing, propagation, and sale of any endangered or rare native plant.

Vascular plants listed as rare or endangered by the California Native Plant Society but have no designated status or protection under federal or State endangered species legislation are defined as follows (CNPS 2024):

- Rank 1A: Plants Believed Extinct.
- Rank 1B: Plants Rare, Threatened, or Endangered in California and elsewhere.
- Rank 2: Plants Rare, Threatened, or Endangered in California, but more numerous elsewhere.
- Rank 3: Plants About Which More Information is Needed – A Review List.
- Rank 4: Plants of Limited Distribution – A Watch List.

Natural Community Conservation Planning Program

The Natural Community Conservation Program (NCCP) Act, Sections 2800-2840 of the California Fish and Game Code, authorized the preparation of NCCPs to protect natural communities and species while allowing a reasonable amount of economic development. The NCCP/HCP, adopted by the County of Orange on July 17, 1996, serves as a Habitat Conservation Plan (HCP) pursuant to the NCCP Act and pursuant to Section 10(a)(1)(B) of the FESA. The Project is not within the NCCP/HCP boundaries.

County of Orange Natural Communities Conservation Plan/ Habitat Conservation Plan

The *Central and Coastal Subregion Natural Community Conservation Plan/Habitat Conservation Plan* (NCCP/HCP) was prepared in cooperation with UFSWS and CDFW, who are the agencies responsible for implementing the FESA and CESA, respectively. Implementation of the NCCP/HCP in accordance with the terms of the Implementation Agreement allows for the conservation of large, diverse areas of natural habitat, including habitat for the coastal California gnatcatcher and other federally listed species; provides for the conservation, protection, and

management of three "Target Species" and 36 "Identified Species" and their habitats; and satisfies federal and state mitigation requirements for designated development.

For participating landowners, development activities and uses that are addressed by the NCCP/HCP are considered fully mitigated under the NCCP Act, FESA, and CESA for impacts to habitat occupied by listed and other species "identified" by the NCCH/HCP and Implementation Agreement. Satisfactory implementation of the NCCP/HCP under the terms of the Implementation Agreement means that no additional mitigation is required of the participating landowners for impacts to "identified" species and their habitat, or for species residing in specified non-coastal sage scrub habitats, or covered habitats (R.J. Meade Consulting Inc. 1996).

The City is not a participant in the NCCP/HCP; however, this document is noted here because it is a document applicable within the larger geography of the Project area.

3.2.2.3 Regional

There are no regional regulations, plans, or policies applicable to biological resources relevant to the Project.

3.2.2.4 Local

City of Huntington Beach General Plan

The City of Huntington Beach General Plan and associated Specific Plans state that "all future land use decisions (conditional use permit, coastal development permit, tentative tract, etc.) must be found consistent with the City of Huntington Beach General Plan and Specific Plans before they may be approved" (City of Huntington Beach 2017). The General Plan includes all lands within the city limits and unincorporated Orange County properties including the Bolsa Chica wetlands. The General Plan identifies the Bolsa Chica Wetlands and the Newland, Magnolia, and Brookhurst Marshes as areas of designated conservation which provides for environmental resource conservation and management and includes goals for restoration, enhancement, connectivity, and naturalizing flood control channels. The Shore designation within the General Plan includes beaches and bays with goals outlined for protection and enhancement of natural resources while also acknowledging the conflicting user needs. The coastal recreation and beach management elements of the General Plan outline policies to ensure environmentally conscious beach maintenance while continuing to improve its recreational, economic, and ecological value.

The California Coastal Act (California State Public Resources Code, Division 20, Section 30000 et seq.) directs each local government lying wholly or partially within the Coastal Zone, as defined by the Coastal Act, to prepare a Local Coastal Program for its portion of the Coastal Zone. Local Coastal Programs are used to carry out the policies and requirements of the Coastal Act by local governments. The City has a certified local coastal program which is used by decision makers within the coastal zone boundary.

The Airshow, including temporary Show Center facilities construction, aircraft performances and helicopter beach landing and take-off are in alignment with the Huntington Beach General Plan and Local Coastal Permit goals and policies.

3.2.3 Thresholds of Significance

According to Appendix G of the State CEQA Guidelines, impacts to biological resources would be considered significant if the Project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service (Impact 3.2-1);
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service (determined to be no impact in the IS/NOP);
- Have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means (determined to be no impact in the IS/NOP);
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites (Impact 3.2-2);
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (determined to be no impact in the IS/NOP); or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (determined to be no impact in the IS/NOP).

3.2.4 Methodology

Future development within the Project area could result in direct, indirect, temporary, or permanent impacts to biological resources. A direct impact would be a modification, disturbance, or destruction of a biological resource that would result from Project-related activities, such as the removal of a wetland. An indirect impact would be an impact to protected plant and wildlife species or habitat from Project-related activities that has the potential to indirectly affect the species or habitat, such as the introduction of invasive plant species or increased noise levels. Temporary impacts would be impacts that are considered to be reversible and short-term in nature, such as noise generated during construction. Permanent impacts are considered to be irreversible.

Potential project impacts were analyzed specific to the broader BSA outside of the Show Center Area. The larger BSA constitutes a generalized area of the flight paths and buffers connecting KSLI and SNA. The BSA also includes the vertical space above ground where aircraft would be flying. Impacts within the larger BSA at the ground level were assessed, as well as impacts above ground considering the altitudes of the aircraft. Impacts at the ground-level would be considered indirect, temporary impacts unless otherwise noted per the resource type being evaluated. Impacts within the larger BSA vertically would be considered direct, temporary impacts for special-status birds that may occur within the flight path.

The Show Center Area is where ground-based activities will occur that will include temporary placement of structures and increased human presence, as well as a temporary runway. Impacts within the Show enter Area would be considered direct, temporary impacts. As no structures or features of the Airshow would be permanently constructed, there are no permanent impacts anticipated.

3.2.5 Impact Analysis

3.2.5.1 Special-Status Species

Impact 3.2-1: The project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

Plants

BSA

Three special-status plant species within the BSA (southern tarplant, coast woollyheads, and spiny rush) were observed in cismontane alkali marsh and coastal salt marsh habitats at BCER. The BCER is approximately 6 miles north of the Show Center Area and associated Airshow activities. Due to this significant distance between the Project and the observed special-status plant species, the Project would have no impact to special-status plant species. No mitigation is required.

Show Center Area

No special-status plants were observed in the Show Center Area; therefore, no impact would occur to special-status plants, and no mitigation is required.

Wildlife

BSA

SNA and KSLI airports were analyzed for wildlife strikes using the FAA Wildlife Strike database. Various birds have been historically struck at these two airports, but raptor species (especially red-tailed hawk [*Buteo jamaicensis*]) and passerine birds had the most collisions. A total of 323 strikes were not identified to the species level between the two airports (FAA 2023). Only two sensitive species have been reported struck at SNA: yellow warbler and California horned lark (FAA 2023). No sensitive species were reported in the FAA Wildlife Strike Database at KSLI (FAA 2023). Continued compliance with the wildlife hazard management plans at each of these facilities would minimize potential bird strike impacts.

Special-Status Birds

Nine special-status birds are known to occur within the BSA including Belding's savannah sparrow, California gull, long-billed curlew, double-crested cormorant, osprey, and brown pelican.

At the ground level, these species use the beaches and coastal salt marshes for roosting, nesting, and foraging and have designated protected areas within the BSA. However, the protected nesting

or roosting areas within the BSA occur at a distance (over 6 miles) from the Show Center Area on the southmost edge of Huntington State Beach that is currently fenced off from public access to prevent disturbance to plover nesting and the protected California least tern nesting area, which is also fenced off from public access and would not be affected (**Figure 4m** in **Appendix D,** of this Draft EIR). Furthermore, suitable habitat for nesting does not occur within the Show Center Area, as it is an existing public beach that is commonly used by the public. Additionally, due to the mobile nature of these species, they would be able to move away from the Project activities to forage in adjacent open space areas. Indirect impacts as a result of noise/vibration or disturbance to breeding birds are not likely to occur as the Airshow is timed to occur September 29–October 1, after the breeding season for these bird species (March–September). Therefore, no significant impacts to special-status species would occur.

Above ground, flights associated with the Airshow could result in bird strikes. According to a 2006 study, the majority of bird strikes (74 percent) occur within 500 feet above ground level (Dolbeer 2006). In addition, the FAA reported that 70 percent of bird strikes from 1990 to 2022 occurred at 500 feet above ground level (FAA 2023). The majority of the flights planned for the Airshow are expected to fly 500 to 1,000 feet above MSL and would only occur during the Airshow hours (historically between 10:00 AM and 5:00 PM) and at nighttime, when bird activity is lower. As discussed above, numerous daily flights by commercial and private aircraft currently fly over the BCER and helicopters regularly land at a helipad located within the BCER next to the tidal inlet. Although the Applicant would provide daily formal briefings each day of the Airshow to all pilots about the sensitivity of BCER and would request avoidance of overflights over the area, the Project could increase the amount of air traffic that occurs over the Bolsa Creek Ecological Reserve. Because pilots could be instructed by the FAA to fly over the BCER, preactivity surveys and biological monitoring will be conducted each year as part of the Project, at least one day prior to the Airshow as well as during the operation of the Airshow to determine whether Airshow activity is impacting bird behavior and to ensure that no Airshow-related debris drifts into sensitive ecological areas. With implementation of these measures, impacts from potential overflights are not expected to be significant.

With the existing conditions of numerous daily flights by commercial and private aircraft that occur over BCER as well as the regular use of the helipad located within BCER from which flights regularly operate, the additional temporary activity of the annual operation of the Airshow would not significantly contribute to impacts to special-status birds within the BSA.

Other Special-Status Species

Other special-status species that have potential to occur within the BSA include the wandering (saltmarsh) skipper (*Panoquina errans*), south coast marsh vole (*Microtus californicus stephensi*), and orange-throated whiptail (*Aspidoscelis hyperythra*). Due to the distance of suitable habitat for these species from the Show Center Area, direct and indirect impacts to wandering skipper, south coast marsh vole, and orange-throated whiptail are not anticipated. However, there is potential for debris from the Airshow (streamers) to drift into the BSA from the Show Center Area. This has happened as one documented occurrence during a past Airshow, and the streamer was removed by the City's fire department within 15 minutes of it being detected. Because a biological monitor will be conducting preactivity surveys and biological monitoring at the BCER as well as

protected plover and tern nesting areas to confirm Airshow-related material like streamers does not move into these areas and they will coordinate with the City if material does drift into these areas, impacts are not expected to be significant.

Show Center Area

Special-Status Birds

Suitable nesting and roosting habitat for special-status birds is not present within the Show Center Area. The Project would not result in direct impacts from Project activities at the Show Center Area due to the distance of the Show Center Area from the BCER and protected nesting areas where tern and plover are known to occur.

During the Airshow, most aircraft are expected to fly 500 to 1,000 feet above MSL; however, select aircraft are planned to land on a temporary aircraft landing pad located within the Show Center Area requiring them to fly below 500 feet above MSL. Since a temporary aircraft landing pad has never been installed along Huntington Beach, no wildlife strike data resulting from landing and takeoff is available. Based on the wildlife hazard analysis (described in Section 3.3, *Hazards and Hazardous Materials*, of this Draft EIR) there is the potential for bird strike impacts to common species (many gull species were observed during 2023 preactivity surveys and biological monitoring); impacts to sensitive species are expected to be negligent as these species do not occur within the immediate vicinity of the Show Center Area. Additionally, it is expected that a small number of aircraft would take-off and land on the temporary aircraft landing pad and 2023 biological monitoring demonstrated that increased human activity within the Show Center Area decreased the presence of wildlife on the beach. Conditions are similar to what can be expected from recreational use during the summer season when crowds gather at the beach during the day. Additionally, Airshow flights have historically occurred mid-day (between 10:00 AM and 5:00 PM.) which is when the majority of flights would occur and may potentially occur at night; these are times when non-migratory bird flight activity is lower than it would be at dawn or dusk. Impacts from establishment of temporary structures within the Show Center area including the temporary runway, and the increased amount of people, are expected to be less than significant.

Other Special-Status Species

No other special status species have the potential to be impacted within the Show Center Area.

Mitigation Measures

Significance before Mitigation: Less than Significant.

Mitigation: None required.

Resulting Level of Significance: Less than Significant.

3.2.5.2 Migratory Wildlife Corridors

Impact 3.2-2: The project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

BSA

The Project may temporarily impact wildlife movement within the BSA as a result of aircraft flyovers. This increased presence could disrupt local movement and displace wildlife within the BSA. Natural reserves and open space areas including BCER and the Huntington Beach Wetlands found to the north and south of the Show Center Area offer refuge for displaced wildlife utilizing upland habitats can disperse to other upland areas in the vicinity, and the temporarily impacted areas would not significantly inhibit local or regional movement of wildlife within these avoided areas of the BSA. Wildlife that is more sensitive to human disturbances and noise may be deterred by the Project related activities. The BCER is an important area in the Pacific Flyway for migratory birds species which are protected under the Migratory Bird Treaty Act of 1918 (MBTA, 16.U.S.C 703–712). The BCER is also under the protection of California Fish and Wildlife Code Section 630(17) of Title 14 (CDFW 2023c), which states that "no aircraft operations are permitted in a reserve, and low flyovers are in violation." Sound pollution and repeated overhead flyovers can pose a threat to wildlife or harass wildlife species when they occur directly over an occupied area causing bird populations to take flight each time a plane or low flying aircraft fly over. While the proposed flight path to the Airshow Performance Area is planned to occur 500 to 1,000 feet west of the BCER, over the Pacific Ocean, a helicopter landing/runway display would occur on a temporary aircraft landing pad to be located within the Show Center Area during the hours of the Airshow. The Airshow Performance Area and the Show Center Area are located approximately 2.5 miles south of the BCER with performances scheduled to occur over the Pacific Ocean. Therefore, performances and flyovers will not take place directly over BCER. Also, during the Airshow, planes are expected to fly between 500 to 1,000 feet above MSL (as previously stated, most strikes occur below 500 feet) within the flight path to and from the Show Center Area. Aircraft would be instructed to avoid flying over BCER. A majority of the flights planned for the Airshow would occur 1,000 feet above MSL and would only occur during the Airshow hours (between 10:00 AM and 5:00 PM). Additionally, the operator will provide daily formal briefings each day of the Airshow to all operators on the sensitivity of BCER and request avoidance of overflights over the area. Because there is a chance that planes are instructed by the FAA to fly over BCER, each year, preactivity surveys and biological monitoring will be conducted as part of the Project, at least one day prior to the Airshow and during the operation of the Airshow to confirm if Airshow activity is impacting bird behavior, as well as watching that no Airshow-related debris drifts into sensitive ecological areas. Thus, it is not anticipated that the Project will result in temporary indirect impacts to BCER.

Show Center Area

The Project may temporarily impact movement within the Show Center Area as a result of the temporary aircraft landing pad, increased visitation (human disturbance), and the associated traffic and trash accumulation along the beaches. This increased presence could disrupt local movement and displace wildlife within the Show Center Area footprint. The Show Center Area

location avoids being in close proximity to natural reserves (approximately 2 miles away) and is located in an area with consistent year-round use that already restricts wildlife movement in the area. Natural reserves and open space including BCER and the Huntington Beach Wetlands areas found to the north and south offer refuge for displaced wildlife utilizing upland habitats can disperse to other upland areas in the vicinity, and the temporarily impacted areas would not significantly inhibit local or regional movement of wildlife within these areas. Wildlife that is more sensitive to human disturbances and noise may be deterred by the Project-related activities. Once completed, the Project-related infrastructure and debris will be removed off-site.

Noise

BSA

Disturbance due to increased noise levels over the marine environment is a potential impact from increased aircraft associated with the Airshow. While there is persistent low-level noise due to aircraft operations associated with the existing flights associated with SNA, the noise associated with the Airshow due to air traffic will undoubtedly increase the magnitude and duration of noise levels during the span of the Airshow (3-5 days). This has the potential to affect marine species that are likely to occur within the area of potential effect. The potential receptors in increased noise are those species that utilize marine waters (e.g., marine birds such as pelicans and sea gulls), marine mammals, especially those that sound to communicate and locate food (e.g., cetaceans), and fish with physoclistous swim bladders that are disproportionately susceptible to increases in underwater noise. The predominant source of increased noise for this event would be associated with fighter jets executing high velocity maneuvers. Examples of which would be the F/A 18 super hornet, F-16 fighting falcon, and F-35 Lighting.

A recent study published by Air Force Civil Engineer Center (2019) examined the noise impact from the operations of the F-22 Raptor program at Joint Base Elmendorf Richarson. This base, located in Anchorage, has takeoff and landing approaches that are in similar proximity to the Airshow scenario and is applicable for determining area of affect from general operations of a modern fighter jet in proximity to the shoreline. Their study found that the maximum area affected by F-22 operations (sound noise level above 65 dB at ground level) was approximately 144 acres and reduced to approximately 5.34 acres for a noise level above 75 dB. This is consistent with the noise analysis presented in the Aviation Noise Technical Report drafted by ESA. Given this, significant changes in in-air noise that would trigger detrimental behavioral modifications (avoidance, interruption of foraging, etc.) are expected to be negligible since these sound levels and areas are relatively small. Observations of marine birds reacting to in-air noise are generally 10 dB higher (e.g., pile driving). Similarly, in-water noise would also not be appreciably modified as there is not enough acoustic energy present at ground level, based on in-air estimates, to increase in-water noise levels above baseline underwater noise levels (between 100 and 120 dB re 1 micro-Pascals). This means that Airshow activities will have no measurable effect on marine species or resources relative to increased noise as a result of increased jet fighter flight activity.

Show Center Area

Proposed Airshow activities also include constructing a temporary aircraft landing pad in the Show Center Area. Responses to noise are specific to individual species due to varying

physiology—so it is difficult to determine exact responses of specific species unless previous studies were conducted on them. A study conducted at the Aransas National Wildlife Refuge in Texas described varying levels of disturbance in avian behavior from helicopter noise. They found that species such as Canada geese, turkey vultures, and great egrets did not exhibit altered behavior, but other species such as grebes and coots had a stronger adverse reaction (Edwards et al. 1979 cited in Newman and Beattie 1985). One study found that crested tern (*Sterna bergii*), a seabird species, exhibited their most extreme responses to a simulated aircraft overflight (measuring 65–95 dB): preparing to fly or dispersing when acoustic levels were over 86 dB (Brown 1990).

There is evidence of habituation to human activities and other disturbances like noise (Busnel 1978 cited in Burger 1981). Ospreys that nested near highways and other human development were more tolerant of jet noise from low-level overflights (median noise 89dB, ranging from 66.3 to 95.5 dB) than those that nested away from humans (Trimper et al. 1998). There were no significant differences in nesting osprey before or after jet flights and nesting pairs were found at the same monitored locations in the following year (Trimper et al.1998). However, these ospreys were subjected to at least two overflights per day and may have been habituated as while they did not react to the jets, they were observed dispersing due to infrequent float planes flying by (Trimper et al. 1998). This study and others suggest that visual stimuli of the aircraft approaching is a key trigger to their response (i.e., dispersal)—not just the presence of noise disturbance. Because the BSA occurs in relatively close proximity to KSLI and SNA, it is expected that migratory species occurring within the BSA are habituated to aircraft overflights. All aircraft overflights will occur over 500 to 1,000 feet above MSL from natural reserves and open spaces including BCER and the Huntington Beach Wetlands to the north and south of the Show Center Area.

Negative impacts to avian species are of greatest concern during nesting season and many studies have focused their experiments during this time period as the flushing or abandonment of adult birds can cause detrimental effects to eggs and nestling survival (Trimper et al. 1998). However, the Airshow is scheduled outside of the nesting season, so this is not a concern.

Fuel Dump

BSA

There is the potential for low probability, potentially high impact event of an emergency fuel dump from aircraft in the air for safety reasons. Typically, most of the fuel that is dumped turns into vapor within a few minutes. If jettisoned at a high enough altitude in above freezing temperature. Evaporation rate calculations show that over 90 percent will evaporate before reaching the ground (FAA 2015). The fuel vapors typically rapidly dissipate and diffuse in the atmosphere where they could be subject to photooxidation and contribute to regional pollution including the formation of smog. A typical F/A-18 super hornet has a fuel capacity of approximately 2,000 gallons and might require dumping approximately half of that for emergency reasons would result in a hypothetical fuel dump of approximately 1,000 gallons of which 100 gallons may reach the nearshore/offshore area of the Huntington Beach area. This would be considered a minor discharge and potentially result in a light surface sheen and would quickly evaporate. The most likely receptors to consider are marine birds that typically rest on the

water surface (e.g., pelicans, sea gulls, etc.), transiting cetaceans that must come to the surface to breath (e.g., humpback whales, Pacific white-sided dolphins, common bottlenose dolphin, etc.), fur bearing marine mammals (e.g., phocids and mustelids), planktonic organism (phytoplankton, zooplankton, planktonic larvae), and pelagic fish species transiting the area that often found near the surface of the water column (sardine, anchovy, mackerel, and bill fish). While a discharge of this nature may affect marine life especially sensitive life stages such larval fish, widespread impacts of an event of this nature are not expected due to relatively small length of time of potential exposure. Very small proportions of the overall population may be impacted (mortality and/or sublethal effects) as a result of limited exposure. This is more likely to occur with small organisms with high surface area to volume ratios. Exposure to aviation fuel for planktonic organisms and small/larval fish may result in limited mortality while mild temporary effects may be experienced by larger organisms such as billfish and whales. This may not be the case for fur bearing marine mammals (phocids and mustelids), and marine birds that engage in preening activities. Preening of feathers and grooming of fur may lead to ingestion of aviation fuel which would likely not be lethal but contribute to overall body burden of bio-accumulative chemicals found in aviation fuel such as PCBs and PAHs. However, based on the low probability of this event occurring, limited discharge amount reaching the water surface, and limited duration of exposure (i.e., rapid evaporation/dispersion), the negative impacts from an emergency fuel dump may affect local marine resources and populations, but is not likely to adversely affect these populations over the long term.

Show Center Area

The duration of the event is temporary (less than one week) and the Show Center Area will be restored to pre-Project conditions. Therefore, with the temporary nature of the impacts to local wildlife movement, and implementation of project design features such as preactivity surveys and biological monitoring, impacts to wildlife corridors are anticipated to be less than significant.

Mitigation Measures

Significance before Mitigation: Less than Significant.

Mitigation: None required.

Resulting Level of Significance: Less than Significant.

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3.3 Hazards and Hazardous Materials

This section describes and evaluates potential hazards and hazardous materials that could result from implementation of the Project.

Comments received in response to the Notice of Preparation (NOP) for the Draft EIR can be found in **Appendix A**, of this Draft EIR.

3.3.1 Environmental Setting

Most of the aircraft performing in the Airshow will originate from the Joint Forces Training Base Los Alamitos Airfield (KSLI) and John Wayne Airport (SNA). The Show Center Area is the location where primary on-the-ground events and activities of the Airshow would take place including a temporary aircraft landing pad and runway. The Show Center Area consists of the beach, the Huntington Beach Pier, parking lots, commercial/restaurant uses, and bicycle and walking trails along Pacific Coast Highway. An approximately 4,500-foot-long by 40-foot-wide temporary runway is planned to be located along the southern edge of the Show Center Area.

A majority of the civilian and military aircraft flybys and aerial acrobatics occur over the Pacific Ocean within the Airshow Performance Area approximately 500 to 1,500 feet from the shoreline. Many of the aircraft maneuvers, particularly for the military, spill out into the temporary flight restriction (TFR) airspace controlled by the Airshow. The TFR, as issued by the Federal Aviation Administration (FAA) for the Airshow, is a 5-nautical-mile (NM) ring centered on the center of the Airshow's aerobatic box. The restricted airspace within the ring extends from the surface to 15,000 feet above mean sea level (MSL). The Show Center Area and Airshow Performance Area are directly adjacent and collectively occur within the Wildlife Hazard Analysis (WHA) Study Area.

For the purposes of evaluating potential wildlife hazards to Project flight safety, a WHA was conducted within the WHA Study Area. The WHA encompasses the Show Center Area footprint and Airshow Performance Area and extends beyond these areas to reflect the potential impacts associated with civilian and military aircraft flybys and aerial acrobatics. The WHA is generally based on likely flight paths to and from Joint Forces Training Base Los Alamitos (KSLI) and John Wayne Airport (SNA). It should be noted that each flight path can change based on weather conditions, flight traffic, and other factors considered by air traffic controllers; therefore, the WHA encompasses a larger area to account for potential flight path variances. The WHA Study Area is consistent with the Biological Study Area (BSA) as described in Section 3.2, *Biological Resources*, of this Draft EIR. The WHA Study Area associated with the Show Center Area (refer to **Figure 3.3-1**) is provided as this area would be associated with a temporary helipad/runway. The following aircraft types may land on the temporary aircraft landing pad located within the Show Center Area during the Project event:

- All types of urban air mobility vehicles/electric "done taxi" type vehicles
- Single engine and twin-engine general aviation aircraft, such as Cirrus, Cessna, Piper, and Beechcraft
- Short takeoff and landing (STOL) type aircraft

- Light jet aircraft, such as Cirrus Vision Jet and Honda Jet
- Helicopters of all types
- Paraglider/paramotor
- Hot air balloons
- Gliders/power gliders

The above list is not representative of what will appear in the Airshow, or even representative of aircraft that would use the runway during the Airshow, but rather this list is representative of aircraft that could land and stay at the beach for display only. Many more aircraft types other than the above will appear in the show itself.

3.3.2 Regulatory Framework

3.3.2.1 Federal

Federal Aviation Administration Advisory Circular 150/5200-38

The Federal Aviation Administration (FAA) Advisory Circular (AC) 150/5200-38 defines the minimum acceptable standards to conduct and prepare Wildlife Hazard Site Visits (WHSV), Wildlife Hazard Assessments (Assessments), and Wildlife Hazard Management Plans (WHMP).

The methods employed for this WHA are similar to the guidelines for WHSV provided for in FAA AC 150/5200-38. The intent of a WHSV is to analyze an airport's wildlife hazards, determine whether a more comprehensive Assessment is warranted, and provide recommended actions to mitigate the hazards. The WHSV methods are appropriate for evaluating the Project because they provide guidelines, procedures, and recommendations for assessing wildlife attractants and movements near airfields. In addition, this analysis considers past wildlife airstrike data, presence of high-risk species, and expected future wildlife use of the Project.

The WHA analysis provides information sufficient to respond to relevant questions in CEQA Guidelines Appendix G, *Environmental Checklist*. The WHA also includes recommendations for minimizing and mitigating any potential hazards posed by a proposed land use action. This analysis is distinct from an Assessment as described by the FAA in AC 150/5200-38. A Wildlife Hazard Assessment report is prepared by an airport as a precursor to inform the Wildlife Hazard Management Plan. A Wildlife Hazard Analysis is intended to be less complex than a Wildlife Hazard Assessment.

3.3.2.2 State

There are no state regulations, plans, or policies applicable to hazards and hazardous materials relevant to the Project.

Path: U:\GIS\GIS\Projects\2023xxx\D202300046_00_Huntington_Beach_Air_Show_EIR\03_Project\Bio.aprx DEIR Fig 3.3-1 - Wildlife Hazards Analysis Study Area MCScott 3/27/2024

SOURCE: ESA, 2023; USGS, 2023, USFWS, 2023

Pacific Airshow Huntington Beach

Figure 3.3-1
Wildlife Hazard Analysis Study Area
(Associated with Show Center Area)

ESA

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3.3.2.3 Regional

Airport Land Use Plans

KSLI and SNA have both prepared airport land use plans as required by the Airport Land Use Commission (ALUC) (ALUC 1975a, 1975b). While portions of the flight path for the Airshow are located within the KSLI and SNA airport land use plan areas, the Show Center Area is located over 2 miles away from each airport; therefore, it occurs outside of an existing airport land use plan area. The temporary aircraft landing pad and Show Center Area is located approximately 7.25 miles east of KSLI and approximately 10.25 miles north of SNA. Although the Show Center Area is located outside of the KSLI and SNA airport land use plan areas, the following WHA was prepared to evaluate existing and potential future conditions for wildlife hazards to aircraft due to the Project.

3.3.2.4 Local

City of Huntington Beach Local Hazard Mitigation Plan

The City assembled a Hazard Mitigation Planning Committee (HMPC), which included representatives from City Departments and supported by key stakeholders, and technical consultants. Together, these participants formed the project team responsible for guiding the overall development of the Local Hazard Mitigation Plan (LHMP). The City of Huntington Beach Local Hazard Mitigation Plan was approved on December 20, 2022. The LHMP contains a summary and assessment of coastal hazards, dam failure, drought, flooding, geologic hazards, human-caused hazards, seismic hazards, and severe weather. The LHMP then lays out specific policy recommendations for the City to carry out, and how to maintain the LHMP.

3.3.3 Thresholds of Significance

According to Appendix G of the State CEQA Guidelines, impacts associated with hazards and hazardous materials would be considered significant if the Project would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials (determined to be no impact in the IS/NOP);
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment (determined to be no impact in the IS/NOP);
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school (determined to be no impact in the IS/NOP);
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment (determined to be no impact in the IS/NOP);

- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area[1] (Impact 3.3-1);
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (Impact 3.3-2).
- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fire (determined to be no impact in the IS/NOP).

3.3.4 Methodology

3.3.4.1 Wildlife Hazard Analysis

A wildlife hazard is defined as a potential for an aircraft to have a collision with wildlife on or near an airport. The WHA evaluated local wildlife populations and habitats and reviewed regional airport strike data to identify potential wildlife hazards to Project flight operations. The methods employed for the WHA were informed by the guidelines for a Wildlife Hazard Site Visit (WHSV) provided for in the *Protocol for the Conduct and Review of Wildlife Hazard Site Visits, Wildlife Hazard Assessments, and Wildlife Hazard Management Plans* (Federal Aviation Administration, Advisory Circular 150/5200-38, August 2018). The intent of a WHSV is to identify, evaluate and mitigate potential wildlife hazards on or near airports over a period of one to three days. This WHA considers past wildlife airstrike data, presence of high-risk species as observed during the general biological reconnaissance survey conducted in July 2023, biological monitoring conducted in September 2023 during the 2023 Airshow (as described in Section 3.2, *Biological Resources*, of this Draft EIR), and expected wildlife use during the Airshow. Because the Show Center Area will be a temporary location for aircraft movement, the current and historical FAA wildlife strike data from KSLI and SNA (FAA 2023, 2024a) were queried to determine the species most frequently struck locally and the species most likely to result in aircraft damage, as a proxy for identifying potential high-risk species that could occur within the WHA Study Area.

An additional site visit in support of the WHA is planned to occur within seven days prior to the 2024 Airshow.

3.3.4.2 Emergency Evacuation

Current legislative requirements related to evacuation pertain specifically to the adequacy of the safety element of general plans or local hazard mitigation plans. The intent of these planning requirements also suggests that adequate emergency access, identification of evacuation routes and locations, and an assessment of their capacity, safety, and viability under a range of emergency scenarios would also be appropriate considerations in an evacuation impact analysis. However, neither the CEQA Guidelines nor OPR recommendations (currently in draft format)[2]

[1] While the Project Site is not located within 2 miles of a public airport or public use airport, because there is the potential for Airshow-related aircraft and wildlife collisions, the lead agency has electively decided to conduct a wildlife hazard analysis to evaluate this potential impact.

[2] OPR. 2023. Draft Evacuation Planning Technical Advisory Released for Public Comment. Accessed April 2024. https://opr.ca.gov/news/2023/10-05.html.

suggest thresholds of significance for evacuation of temporary events, and the City has not adopted any thresholds. Therefore, absent applicable and quantifiable thresholds, the evaluation of the Airshow as it relates to evacuation relies on Appendix G of the State CEQA Guidelines to determine impact conclusions.

3.3.4.3 Existing Conditions

Wildlife Hazard Analysis

Aircraft Strike Data Review

Table 3.3-1 lists the 33 species of birds reported most frequently in aircraft strikes nationwide between 1990 and 2022 (FAA 2023), and of those, further identifies the species that were observed during the general biological reconnaissance survey conducted in July 2023 and biological monitoring conducted in September 2023 within the WHA Study Area. In addition to observations made by ESA biologists in July and September 2023, eBird was queried to determine which common bird species struck by civil aircraft have been reported by citizen scientists within the Show Center Area footprint and surrounding 500-foot buffer (eBird 2024).

TABLE 3.3-1
MOST COMMON BIRD SPECIES STRUCK BY CIVIL AIRCRAFT IN THE U.S. (1990–2022) AND BIRD OBSERVATIONS WITHIN THE WHA STUDY AREA

		Strikes in US		Observations within the WHA Study Area		
Rank	Bird Species	Total Number	% with Damage	General Biological Reconnaissance Survey (July 19–20, 2023)	Biological Monitoring (Sep. 29–30, 2023)	eBird Observations within the Show Center Area and 500-foot Buffer
1	Mourning dove *Zenaida macroura*	13,814	1.9	Present	Present	None Observed
2	Killdeer *Charadrius vociferus*	9,162	0.8	Present	Present	None Observed
3	Barn swallow *Hirundo rustica*	9,029	0.4	Present	None Observed	None Observed
4	American kestrel *Falco sparverius*	8,430	0.6	None Observed	None Observed	None Observed
5	Horned lark *Eremophila alpestris*	7,566	0.5	None Observed	None Observed	None Observed
6	European starling *Sturnus vulgaris*	5,916	2.9	None Observed	None Observed	Present
7	Rock dove (pigeon) *Columba livia*	4,107	7.3	Present	Present	None Observed
8	Eastern meadowlark *Sturnella magna*	3,942	0.8	None Observed	None Observed	None Observed
9	Red-tailed hawk *Buteo jamaicensis*	3,845	13.1	Present	None Observed	None Observed
10	Cliff swallow *Petrochelidon pyrrhonota*	2,684	0.3	None Observed	None Observed	None Observed
11	Western meadowlark *Sturnella neglecta*	2,318	1.3	None Observed	None Observed	Present
12	Ring-billed gull *Larus delawarensis*	2,147	6.7	Present	None Observed	None Observed

TABLE 3.3-1
MOST COMMON BIRD SPECIES STRUCK BY CIVIL AIRCRAFT IN THE U.S. (1990–2022) AND BIRD OBSERVATIONS WITHIN THE WHA STUDY AREA

		Strikes in US		Observations within the WHA Study Area		
Rank	Bird Species	Total Number	% with Damage	General Biological Reconnaissance Survey (July 19–20, 2023)	Biological Monitoring (Sep. 29–30, 2023)	eBird Observations within the Show Center Area and 500-foot Buffer
13	American robin *Turdus migratorius*	2,114	7.2	None Observed	None Observed	None Observed
14	Canada goose *Branta canadensis*	2,045	47.0	None Observed	None Observed	None Observed
15	Herring gull *Larus argentatus*	1,963	7.9	None Observed	None Observed	Present
16	Barn owl *Tyto alba*	1,938	3.1	None Observed	None Observed	None Observed
17	Chimney swift *Chaetura pelagica*	1,495	1.1	None Observed	None Observed	None Observed
18	Pacific golden-plover *Pluvialis fulva*	1,418	1.0	None Observed	None Observed	None Observed
19	Savannah sparrow *Passerculus sandwichensis*	1,377	0.8	Present	Present	None Observed
20	Mallard *Anas platyrhynchos*	1,320	19.8	None Observed	None Observed	Present
21	Common nighthawk *Chordeiles minor*	1,185	0.6	None Observed	None Observed	None Observed
22	Tree swallow *Tachycineta bicolor*	1,162	0.1	None Observed	None Observed	None Observed
23	Laughing gull *Leucophaeus atricilla*	1,139	2.5	None Observed	None Observed	Present
24	Turkey vulture *Cathartes aura*	1,101	48.7	None Observed	Present	None Observed
25	Short-eared owl *Asio flammeus*	819	1.8	None Observed	None Observed	None Observed
26	Cattle egret *Bubulcus ibis*	805	6.1	None Observed	None Observed	None Observed
27	Bank swallow *Riparia riparia*	774	0.3	None Observed	None Observed	None Observed
28	Red-winged blackbird *Agelaius phoeniceus*	707	1.0	None Observed	None Observed	None Observed
29	American crow *Corvus brachyrhynchos*	674	7.4	Present	Present	None Observed
30	Yellow-rumped warbler *Setophaga coronata*	639	0.36	None Observed	None Observed	Present
31	Osprey *Pandion haliaetus*	587	21.8	Present	Present	None Observed
32	Peregrine falcon *Falco peregrinus*	579	5.9	None Observed	None Observed	Present

TABLE 3.3-1
MOST COMMON BIRD SPECIES STRUCK BY CIVIL AIRCRAFT IN THE U.S. (1990–2022) AND BIRD OBSERVATIONS WITHIN THE WHA STUDY AREA

		Strikes in US		Observations within the WHA Study Area		
Rank	Bird Species	Total Number	% with Damage	General Biological Reconnaissance Survey (July 19–20, 2023)	Biological Monitoring (Sep. 29–30, 2023)	eBird Observations within the Show Center Area and 500-foot Buffer
33	Swainson's thrush *Catharus ustulatus*	577	5.5	None Observed	None Observed	None Observed

SOURCES: U.S. Department of Transportation, Federal Aviation Administration (FAA) 2023; eBird 2024

Of the top five most frequently struck species nationwide, three (mourning dove [*Zenaida macroura*], killdeer [*Charadrius vociferus*], and barn swallow [*Hirundo rustica*], respectively) were observed during the general biological reconnaissance survey and biological monitoring. Mourning doves are the most common species of bird struck by civil aircraft in the United States, accounting for nine percent of the bird strikes identified by species. In California, there were 10,261 wildlife strikes between 2013 and 2023 (FAA 2024a). About 53 percent of wildlife strikes occur from July to October, when young birds have recently fledged from nests and fall migration occurs (FAA 2024b).

Larger birds, particularly waterfowl and raptors, cause more damage to aircraft (FAA 2023). Nationally, strikes involving turkey vulture (*Cathartes aura*), Canada goose (*Branta canadensis*), osprey (*Pandion haliaetus*), mallard (*Anas platyrhynchos*), and red-tailed hawk (*Buteo jamaicensis*), respectively, resulted in over half of strikes that cause aircraft damage (FAA 2023). Turkey vulture, osprey, mallard, and red-tailed hawk have been observed within the WHA Study Area (refer to Table 3.3-1). In California, waterfowl (ducks and geese) accounted for less than 1 percent of strikes but were responsible for 24 percent of the strikes that caused damage to the aircraft between 2013 and 2023 (FAA 2024a). Other large species in California that cause higher damage include great blue heron (*Ardea herodias*), mule deer (*Odocoileus hemionus*), barn owls (*Tyto alba*), and California gulls (*Larus californicus*), respectively (FAA 2024a).

There have been 641 wildlife strikes during take-off, climb, descent, approach, and landing at SNA (approximately 7.25 miles east of the Show Center Area) and 32 wildlife strikes during take-off, climb, descent, approach, and landing at the Los Alamitos Army Airfield located at the KLSI (approximately 10.25 miles north of the Show Center Area) reported to the FAA strike database (FAA 2024a). A total of 40 bird strikes resulting in damage were reported at John Wayne Airport from 1990 to 2023. The majority of the damage occurred from impacts with medium-size unknown birds, rock doves, and red-tailed hawks. A total of 3 bird strikes resulting in damage were reported at the Los Alamitos Army Airfield from 2005 to 2023. Damage occurred from impacts with a hawk, a large-sized unknown bird, and a white-headed gull (*Larus heermanni*) complex.

Land Use and Habitat Types

Existing habitat types mapped for the WHA Study Area are described in Section 3.2, *Biological Resources*, of this Draft EIR and include sandy beach, open water, and urban/developed land cover types.

Wildlife Attractants

Wildlife attractants within the WHA Study Area include the sandy beach and Pacific Ocean as well as trash accumulation from increased human presence during the event. Bolsa Chica Ecological Reserve and Magnolia Street Marsh, which are large salt marsh habitats, are wildlife attractants located approximately 2.5 miles northwest and 0.7 miles southeast of the Show Center Area, respectively. Urban/developed land uses present to the northwest of the Show Center Area attract wildlife through the accumulation of trash and presence of landscaping such as large open grass areas and ornamental trees.

Migratory Birds

Four primary migratory bird corridors exist in North America: Atlantic Flyway, Mississippi Flyway, Central Flyway, and Pacific Flyway. The WHA Study Area occurs along the Pacific Flyway, which extends along the west coast through Washington, Oregon, and California. Additionally, many smaller migration routes exist that cross these major north-south migratory flyways. Migration occurs along the Pacific Flyway in the spring and fall. The FAA reports an increase in bird strike incidents resulting from migration during the months of March through April and August through November with 62 percent occurring during the day and 29 percent at night (FAA 2023). While birds are more likely to be struck during the day due to increased civil aircraft flight during the day (FAA 2023), seasonal migration is generally nocturnal.

Emergency Evacuation

Evacuation Related to Wildfire

According to CAL FIRE, the City of Huntington Beach is not a part of any Fire Hazard Severity Zones (FHSZ) within the State Responsibility Area or considered a FHSZ in Local Responsibility Areas[3].

Evacuation Related to Hazards and Hazardous Materials

In efforts to identify hazard events and corresponding plans to mitigate potential harm during emergencies, the City of Huntington Beach adopted a Local Hazard Mitigation Plan (LHMP) in 2022. In preparation to respond to a wide range of potential hazards, the City has developed the Emergency Operations Plan (EOP) to support response and recovery operations should the need arise.

[3] California Department of Forestry and Fire Protection (CalFire). 2024. Fire Hazard Severity Zones in State Responsibility Area. Accessed April 2024. https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=988d431a42b242b29d89597ab693d008.

3.3.5 Impact Analysis

3.3.5.1 Wildlife Hazard Analysis

Impact 3.3-1: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, the project would not result in a safety hazard or excessive noise for people residing or working in the project area.

As previously mentioned in Section 3.3.5, most bird strike incidents occur during March through April and August through November when seasonal migration typically occurs. While birds are more likely to be struck during the day due to increased civil aircraft flight during the day (FAA 2023), seasonal migration is generally nocturnal. Therefore, because no flights related to the Airshow are planned to occur at night, the potential for impacts to aircraft from collisions with migratory birds are expected to be less than significant.

Although the Show Center Area is located over 2 miles from an airport and, therefore, occurs outside of an existing airport land use plan area, the Project is proposing the creation of a temporary aircraft landing pad within the Show Center Area in 2024. The aircraft movements associated with the temporary landing pad present a potential hazard to Project flight safety, and significantly increases the safety risk caused by bird strikes as compared to past years when the Airshow was only conducting fly-bys over 500 feet above ground level. Dolbeer (2006) found that 74 percent of bird strikes occur at less than or equal to 500 feet above ground level, 19 percent from 501 to 3,500 feet above ground level, and 7 percent above 3,500 feet above ground level. This study also found that passerines, gulls/terns (Laridae), doves (Columbidae), and raptors (including vultures) were the species groups most frequently struck. As previously mentioned, in the Project vicinity, raptors (particularly red-tailed hawks) and passerines are among the most-struck birds reported at KSLI and SNA (FAA 2024a).

During the Airshow, most aircraft are expected to fly over 500 feet above ground level; however, select aircraft are planned to land on a temporary landing pad located within the Show Center Area requiring them to fly below 500 feet in altitude, which increases the potential for a bird strike. As identified in Table 3.3-1, common wildlife species that are high risk to flight safety, including mourning dove, killdeer, barn swallow, European starling, rock dove, and red-tailed hawk, were observed within the WHA Study Area. More specifically, various gull species were observed within the Show Center Area during 2023 biological monitoring prior to increased human activity resulting from the event. Since a temporary aircraft landing pad has never been installed along Huntington Beach, no wildlife strike data resulting from aircraft take-off and landing is available. Therefore, there is the potential for bird strike impacts to common species resulting in increased flight risk during take-off and landing. However, it is expected that a small number of aircraft would take-off and land on the temporary aircraft landing pad and 2023 biological monitoring demonstrated that increased human activity within the Show Center Area decreased the presence of wildlife on the beach. Additionally, Airshow flights have historically occurred midday (between 10 a.m. and 4:30 p.m.) when bird flight activity is lower than it would be at dawn or dusk. While impacts to aircraft may occur as a result of aircraft landing on the beach, with implementation of Mitigation Measures HAZ-1 and HAZ-2, impacts to flight safety

are anticipated to be less than significant as the proposed mitigation measures provide specific measures to reduce wildlife hazards.

Mitigation Measures

Significance before Mitigation: Potentially Significant Impact.

Mitigation:

Mitigation Measure HAZ-1: A qualified avian biologist will conduct one Wildlife Hazard Site Visit (WHSV) prior to the start of the annual Airshow (beginning in 2024) following the protocol developed by the FAA in the *Protocol for the Conduct and Review of Wildlife Hazard Site Visits, Wildlife Hazard Assessments, and Wildlife Hazard Management Plans* (Federal Aviation Administration, Advisory Circular 150/5200-38, August 2018 to evaluate potential risk of wildlife strikes at airports, specifically for the proposed temporary aircraft landing pad on the beach during all future Airshow events. The WHSV shall include field observations conducted over one day at dawn, noon, and dusk from a variety of pre-determined locations to ensure complete visual coverage of the location of the temporary runway and immediate surroundings. All signs of birds, mammals, habitat attractants, and wildlife/habitat relationship observations shall be recorded.

A wildlife hazard site visit memorandum shall be prepared and include a list of wildlife species or signs observed during the surveys, federal and state status of the species observed, habitat features that may encourage wildlife, natural and artificial wildlife attractants, strike data analysis, and recommendations to reduce wildlife hazards. Recommendations may include developing a long-term management strategy that includes wildlife hazard management and/or reduction in flights under 500 feet above ground level.

Mitigation Measure HAZ-2: A qualified biological monitor will be on-site during event performances for the duration of the event (3-5 days) to document bird activity during aircraft flyovers and take-off and landing within the Show Center Area. Biological monitoring will also inform the recommendations to reduce wildlife hazards. Based on monitoring observations, recommendations may include following standard best management practices such as properly disposing of trash to avoid attracting wildlife to the Show Center Area and/or employing means of harassment (e.g., lasers) to disperse birds.

Resulting Level of Significance: Less than Significant with Mitigation.

3.3.5.2 Emergency Evacuation

Impact 3.3-2: The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Evacuation Related to Wildfire

According to CAL FIRE, the City of Huntington Beach is not a part of any Fire Hazard Severity Zones (FHSZ) within the State Responsibility Area or considered a FHSZ in Local Responsibility

Areas[4] as the Project is located entirely within the City of Huntington Beach, and the nearest designated FHSZ within a State Responsibility Area is south of the City of Newport Beach.

The Project is not located in or near state responsibility areas of lands classified as very high fire hazard severity zone and, therefore, would result in no impact to evacuation related to potential wildfire impacts.

Evacuation Related to Hazards and Hazardous Materials

In efforts to identify hazard events and corresponding plans to mitigate potential harm during emergencies, the City of Huntington Beach adopted a Local Hazard Mitigation Plan (LHMP) in 2022. Each hazard included by the LHMP is "scored" based upon the probability, location, and the maximum probable extent of impacts (**Figure 3.3-2**). Among the highest scoring events (highest threat level) are seismic[5], drought, and coastal[6] related. Floods, severe weather, human caused hazards, methane containing soils, and dam failures are also assessed but resulted in lower hazard scores. Wildfire as a major hazard to the community was excluded from the LHMP as there are no Fire Hazard Severity Zones identified within the City. A prioritized list of mitigation measures for the various categories of hazards are identified by the LHMP. Also described by the LHMP are regional and local means of vehicular access as potential evacuation routes, including the San Diego Freeway (I-405), Pacific Coast Highway (SR-1), Beach Boulevard (SR-39), and other major roadways within the City.

In preparation to respond to such a wide range of potential hazards, the City has developed the Emergency Operations Plan (EOP) to support response and recovery operations should the need arise. Additional to emergency response plans such as the EOP, the City has also published resources to educate and assist in emergency preparedness for various situations. One example is a map of Tsunami Evacuation Routes, identifying major routes for evacuation from the coastline, safe areas outside of the designated tsunami inundation zones, and other useful information. This map is publicly available along with a brochure of Tsunami Emergency Information, which contains recommendations on emergency preparedness, how to identify a pending tsunami event, evacuation procedures, and other general information regarding tsunamis. Many other useful resources are also available on the City's website pertaining to disaster preparedness for a range of potential emergency events and the use of alert, warning, and notification systems.

Past Airshows have coordinated with the City to prepare a Public Safety Plan for each annual event, which establishes the protocol for responding to the need for a beach evacuation related to a variety of natural or man-made events. The plan identifies participants of the command and response team, their station, patrol, area of responsibility, and emergency responsive actions to notify the public, coordinate beach evacuation, and consider options to shelter in place. In addition to foot and motor patrols provided by the City of Huntington Beach Police Department (HBPD) during the Airshow days, the Applicant has provided private security for past Airshows.

4 California Department of Forestry and Fire Protection (CalFire). 2024. Fire Hazard Severity Zones in State Responsibility Area. Accessed April 2024. https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=988d431a42b242b29d89597ab693d008.

5 Fault rupture, seismic shaking, and liquefaction

6 Coastal erosion, sea level rise, and tsunami

The private security company has coordinated crowd control, internal security, venue safety, and emergency evacuation in coordination with the HBPD. In addition, HBPD motor officers and parking control officers have been deployed to maintain traffic flow along Pacific Coast Highway and to enforce parking restrictions in the vicinity. Fire and medical services have been provided by the Huntington Beach Fire Department (HBFD). A Public Safety Zone has been established and comprised of emergency vehicle staging areas and access lanes, first aid stations, and lost and found stations.

The Project does not propose any change that would impair implementation of or physically interfere with the adopted LHMP, published resources related to emergency preparedness (such as maps of Tsunami Evacuation Routes), or the Airshow Public Safety Plan. Therefore, the Project should be considered to result in less than significant impacts to evacuation related to Hazards and Hazardous Materials.

Transportation Related to Emergencies

However, due to the volume of people anticipated to gather on and near the beach during the Airshow, in the event of an emergency, ambient evacuation times would be increased and could affect emergency access. The circumstances resulting in the need to evacuate either the event area or the City will differ based upon the nature and magnitude of the emergency (fire, earthquake, tsunami), the location of the emergency (local or regional), and the timing relative to the event (are people coming in or leaving). For example, if there was a sizeable earthquake in the region, then the authorities may prefer that Airshow attendees stay in place until the safety of the roadway infrastructure can be assessed. If there was a tsunami warning, with several hours of notice, then an evacuation process would be somewhat broad and deliberate. In the case of a man-made event (someone causing a threat), the evacuation conditions are more immediate and localized.

The population group that attends the event is difficult to identify, as there is limited formal ticketing (only the reserved grandstands and beach). While many people gather near the beach, attendees also view from rooftops/balconies, restaurants, and other venues throughout the City. The ambiguity around the event population (size and location), combined with the range of potential evacuation events, results in unquantifiable evacuation times.

As a large number of people walk or bicycle to the Airshow, the speed of these cyclists and pedestrians ability to evacuate may contribute to increased evacuation times depending on the emergency event. Those who are already in the City for reasons unrelated to the Airshow (residents and employees in particular) would likely experience some increase in evacuation times due to the added population from the Project, as the roadway infrastructure is fixed.

Hazard Scores and Threat Level

Hazard Type*	Probability	Location	Primary Impact	Secondary Impacts	Total Score	Threat Level
Seismic Hazards[1]	4 (Highly Likely)	4 (Extensive)	4 (Extensive)	4 (High)	64.0	High
Drought	4 (Highly Likely)	4 (Extensive)	2 (Moderate)	2 (Limited)	48.8	High
Coastal Hazards[2]	3 (Likely)	3 (Significant)	3 (Severe}	4 (High)	39.0	Medium
Flood	3 (Likely)	3 (Significant)	3 (Severe}	3 (Moderate}	36.0	Medium
Severe Weather[3]	3 (Likely)	4 (Extensive)	2 (Moderate)	2 (Limited)	33.6	Medium
Human-Caused Hazards[4]	3 (Likely)	2 (Limited)	2 (Moderate)	2 (Limited)	24.0	Medium
Methane Containing Soils	3 (Likely)	2 (Limited)	2 (Moderate)	2 (Limited)	24.0	Medium
Dam Failure	1 (Unlikely)	4 (Extensive)	4 (Extreme)	4 (High)	16.0	Medium

* Climate Change considerations discussed as appropriate within this hazard.

1 Seismic Hazards includes: Fault Rupture, Seismic Shaking, Liquefaction

2 Coastal Hazards includes: Bluff Erosion, Fault Rupture, Liquefaction

3 Severe Weather includes: High Winds/Windstorm, Tornado

4 Human-Caused Hazards includes: Terrorism, Haz Materials Release

SOURCE: Fehr and Peers, 2024

Pacific Airshow Huntington Beach

Figure 3.3-2
Hazard Scores and Threat Level Assessment (LHMP)

The increased population as a result of the Project, combined with all other population unrelated to the Project, including residents, employees, students, and visitors, would likely be all concurrently subject to evacuation orders in case of an emergency event. Given the wide range of possible emergency conditions, difficulty in quantifying the number and location of population added by the Project, the probable increase in evacuation times, and the lack of significance threshold to measure such effects, the Project should be considered to result in significant and unavoidable impacts to emergency access but can be reduced with the incorporation of measures at the discretion of the Community and Library Services Director, or their designees, as described below.

As a compliment to the LHMP, a more detailed evacuation plan could be developed for the major events in the City (US Open of Surfing, AVP Volleyball Tournament, Airshow). The plan should at minimum further define how the range of emergency scenarios in the LHMP would relate to these major events, identify the evacuation needs and capacities, and evaluate strategies to reduce evacuation risks by including the following considerations:

- Apply the LHMP emergency scenarios during the time of a major short-term event, such as the Airshow, for planning purposes. The plans for evacuation should be based upon the location and dynamics of the emergency scenarios. A detailed evacuation plan should consider scenarios applicable to the Project area and define parameters such as: time and area of evacuation, evacuation routes, hazard event, evacuation population, evacuation destination, and relationship to existing plans (such as the LHMP).
- Assess the target population during an evacuation event to include community members and participants of special events or gatherings. The evacuation demand assessment should consider factors such as the time of day, automobile availability, route options, hazard behavior, and the locations of evacuation shelters or hotels. Key actions of the assessment should include establishing evacuation areas, identifying populations with mobility challenges, estimating the number of evacuation vehicle trips, and preparing an evacuation trip origin-destination matrix by time periods throughout an evacuation event.
- Evaluate the capacity of roadways to accommodate evacuation of events at Huntington Beach and nearby communities with shared emergency access. Roadways within the City identified by the LHMP as potential evacuation routes are discussed in the City's Circulation Element of the General Plan, including their classification and traffic-carrying capacities under normal conditions. The evaluation should also consider the safety and viability of identified evacuation routes during emergency events.
- Identify strategies to reduce evacuation times. Strategies to meaningfully reduce estimated evacuation times may address the supply of transportation capacity (such as temporary one-way streets or specialized signal timing), improve the effectiveness of communication to the public before and during an emergency event, and special provisions for vulnerable populations.

Mitigation Measures

Significance before Mitigation: Potentially Significant.

Mitigation: None required.

Resulting Level of Significance: Significant and Unavoidable.

3.4 Noise

This section evaluates the potential environmental impacts on noise and vibration from the Project. This analysis is based on the Aviation Noise Technical Report (Noise Analysis) completed in September 2023 and found in **Appendix E**, of this Draft EIR. The Noise analysis focuses on aircraft noise associated with the flyovers during the 2023 Airshow, noise from amplified speakers (such as from the Project music festival), and traffic noise due to an increase in vehicle trips to the Project. Additionally, vibrational impacts resulting from the music festival were also analyzed.

Comments received in response to the Notice of Preparation (NOP) for the Draft EIR can be found in **Appendix A**, of this Draft EIR. The noise-related comments in response to the NOP included comments regarding noise impacts evaluated against the appropriate standards of potentially impact receptors and operational noise and vibration from aircraft and operational event activities.

3.4.1 Environmental Setting

3.4.1.1 Fundamentals of Noise

This section presents fundamental terminology and noise metrics most commonly used to quantify noise. Noise metrics can be categorized into two primary types: (1) those describing isolated noise events, referred to as single-event metrics, and (2) metrics that gauge the overall noise exposure over a specified duration, referred to as cumulative noise metrics. Single-event metrics provide insights into the intrusiveness, loudness, or overall disturbance caused by individual aircraft or helicopter noises while cumulative metrics serve as indicators of community annoyance.

Environmental Noise

The measurement and human perception of sound involve two basic physical characteristics: intensity and frequency. Intensity is a measure of the acoustic energy of sound vibrations, expressed in terms of sound pressure. The higher the sound pressure, the more energy carried by the sound and the louder the perception of that sound. The second important physical characteristic is sound frequency, which is the number of times per second the air vibrates or oscillates. Low-frequency sounds are characterized as rumbles or roars, while high-frequency sounds are typified by sirens or screeches.

Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level), which is measured in decibels (dB). On this scale, 0 dB corresponds roughly to the threshold of human hearing and 120 to 140 dB corresponds to the threshold of pain. Pressure waves traveling through air exert a force registered by the human ear as sound. Noise is commonly defined as unwanted sound.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). When all the

audible frequencies of a sound are measured, a sound spectrum is plotted consisting of a range of frequencies spanning 20 to 20,000 Hz. The sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the sound frequency/sound power level spectrum.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential noise impacts on humans, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to extremely low and extremely high frequencies. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA). A-weighting follows an international standard methodology of frequency weighting and is typically applied to community noise measurements.

General Characteristics of Aircraft Noise

Outdoor sound levels decrease as a function of distance from the source and as a result of wave divergence, atmospheric absorption, and ground attenuation. If sound is radiated from a source in a homogenous and undisturbed manner, the sound travels as spherical waves. As the sound wave travels away from the source, the sound energy is distributed over a greater area, dispersing the sound power of the wave. Spherical spreading of the sound wave reduces the noise level, for most sound sources, at a rate of 6 dB per doubling of the distance.

Atmospheric absorption also influences the levels that are received by the observer. The greater the distance sound travels, the greater the influence of atmospheric effects. Atmospheric absorption becomes important at distances of greater than 1,000 feet. The degree of absorption is a function of the sound frequency, as well as the humidity and temperature of the air. For example, atmospheric absorption is lowest at high humidity and higher temperatures. Turbulence and gradients of wind, temperature, and humidity also play a significant role in determining the degree of attenuation. Certain conditions, such as inversions, can also result in higher sound levels that would result from spherical spreading as a result of channeling or focusing the sound waves.

Absorption effects in the atmosphere vary with frequency. The higher frequencies are more readily absorbed than the lower frequencies. Over large distances, the lower frequencies become the dominant sound as the higher frequencies are attenuated.

The effects of ground attenuation on aircraft noise propagation are a function of the height of the source and/or receiver and the characteristics of the terrain. The closer the source of the noise is to the ground, the greater the ground absorption. Terrain consisting of soft surfaces, such as vegetation, provides for more ground absorption than hard surfaces, such as a large parking lot.

Aircraft noise originates from both the engines and the airframe of an aircraft, but the engines are, by far, the more significant source of noise. Meteorological conditions affect the transmission of aircraft noise through the air. Wind speed and direction, and the temperature immediately above ground level, cause diffraction and displacement of sound waves. Humidity and temperature

materially affect the transmission of air-to-ground sound through absorption associated with the instability and viscosity of the air.

Noise Descriptors

The description, analysis, and reporting of noise levels is made difficult by the complexity of human response to sound and the myriad of sound-rating scales and metrics that have been developed for describing acoustic effects. Various rating scales have been devised to approximate the human response to the "loudness" or "noisiness" of a sound. Noise metrics have been developed to account for additional parameters, such as duration and cumulative effect of multiple events.

Noise metrics can be categorized as single-event metrics and cumulative metrics. Single-event metrics describe the noise from individual events, such as an aircraft flyover. Cumulative metrics describe the noise in terms of the total noise exposure over a period of time.

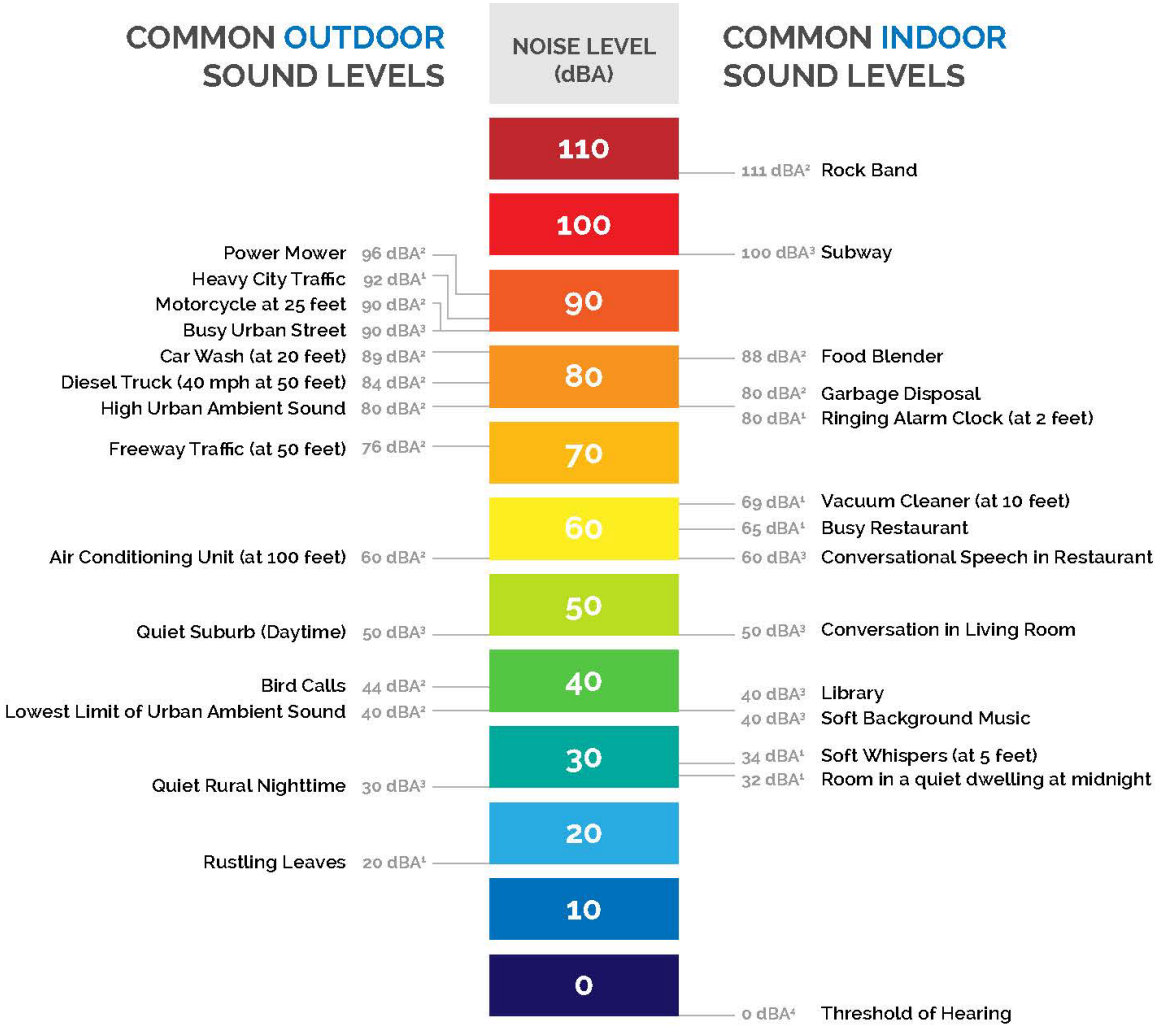
A-Weighted Sound Pressure Level (dBA)

The decibel is a unit used to describe sound pressure level. When expressed in dBA, the sound has been filtered to reduce the effect of very low and very high frequency sounds, much as the human ear filters sound frequencies. Without this filtering, calculated and measured sound levels would include events that the human ear cannot hear (e.g., dog whistles and low frequency sounds, such as the groaning sounds emanating from large buildings with changes in temperature and wind). With A-weighting, calculations and sound monitoring equipment approximate the sensitivity of the human ear to sounds of different frequencies.

Some common sound levels on the dBA scale are listed in **Figure 3.4-1**. As shown, the relative perceived loudness of a sound doubles for each increase of 10 dBA, although a 10-dBA change in the sound level corresponds to a factor of 10 in the change in relative sound energy. Generally, single-event sound levels with differences of 2 dBA or less are not perceived to be noticeably different by most listeners.

Maximum A-Weighted Level (L_{max})

L_{max} is the maximum, or peak, sound level during a noise event. The metric only accounts for the highest A-weighted sound level measured during a noise event, not for the duration of the event. For example, as an aircraft approaches, the sound of the aircraft begins to rise above ambient levels. The closer the aircraft gets, the louder the sound until the aircraft is at its closest point. As the aircraft passes, the sound level decreases until the sound returns to ambient levels. Some sound level meters measure and record the maximum sound level (L_{max}). The L_{max} for an aircraft flyover is illustrated on **Table 3.4-1**.



1 Aviation Noise Effects, FAA, AEE, March, 1985 (FAA-EE-85-2), Table 1.1
2 Federal Agency Review of Selected Airport Noise Analysis Issues (Federal Interagency Committee on Noise), August 1992, Table B.1
3 Children's health and the environment, A Global Perspective, World Health Organization, 2005, Table 15.1
4 OSHA Technical Manual, TED 01-00-015, Section III (Health Hazards), Chapter 5 (Noise, Updated 8/15/2013)

Source: Environmental Science Associates, 2023.

Figure 3.4-1
Common Sound on the A-Weighted Decibel Scale

TABLE 3.4-1
COMMON SOUND ON THE A-WEIGHT DECIBEL SCALE

Sound	Sound Pressure Level (dBA)	Relative Loudness (approximate)[a]	Relative Sound Energy
Rock music, with amplifier	120	64	1,000,000
Thunder, snowmobile (operator)	110	32	100,000
Boiler shop, power mower	100	16	10,000
Orchestral crescendo at 25 feet, noisy kitchen	90	8	1,000
Busy street	80	4	100
Interior of department store	70	2	10
Ordinary conversation, 3 feet away	60	1	1
Quiet automobiles at low speed	50	1/2	0.1
Average office	40	1/4	0.01
City residence	30	1/8	0.001
Quiet country residence	20	1/16	0.0001
Rustle of leaves	10	1/32	0.00001
Threshold of hearing	0	1/64	0.000001

NOTE:

a. Loudness refers to the subjective perception of sound pressure. Relative loudness is an approximation of how different sound pressure levels are perceived relative to each other. For example, a busy street is perceived as 4 times louder than ordinary conversation.

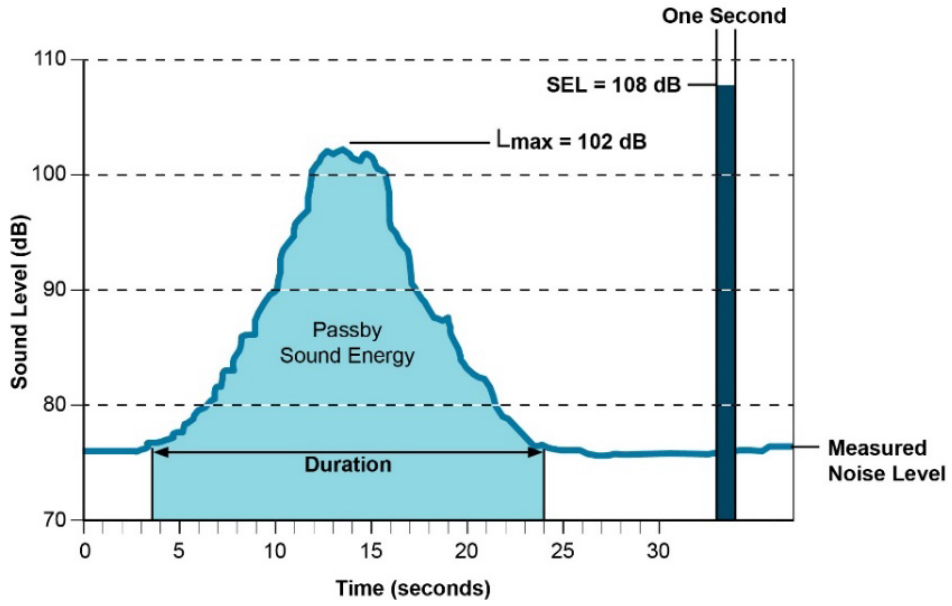
SOURCE: United States Department of Housing and Urban Development. 1972. *Aircraft Noise Impact—Planning Guidelines for Local Agencies*.

Sound Exposure Level (SEL)

Sound exposure level (SEL), is a time integrated measure, expressed in decibels, of the sound energy of a single noise event at a reference duration of one second. The sound level is integrated over the period that the level exceeds a threshold. Therefore, SEL accounts for both the maximum sound level and the duration of the sound. The standardization of discrete noise events into a one second duration allows calculation of the cumulative noise exposure of a series of noise events that occur over a period of time. The SEL of an aircraft noise event is typically 6 to 12 dBA greater than the L_{max} of the event. SELs for aircraft noise events depend on the location of the aircraft relative to the noise receptor, the type of operation (landing, takeoff, or overflight), and the type of aircraft. The SEL for an aircraft flyover is illustrated in **Figure 3.4-2**.

Equivalent A-Weighted Noise Level (L_{eq})

L_{eq} is the sound level corresponding to a steady state, A-weighted sound level containing the same total energy as a time-varying signal over a given sample period. L_{eq} is the "energy" average noise level during the time period of the sample. It is based on the observation that the potential for a noise to impact people is dependent on the total acoustical energy content of the noise. It is the energy sum of all the sound that occurs during that time period. This is graphically illustrated in the middle graph on Figure 3.4-2. L_{eq} can be measured for any time period, but is typically measured for 15 minutes, 1 hour, or 24 hours.



Source: ESA

Figure 3.4-2
Sound Exposure Level and Maximum Sound Level

L_{eq} is also used to represent average daytime and nighttime noise levels. Daytime L_{eq} is the 15-hour average sound level for each one hour between 7:00 a.m. to 10:00 p.m. Nighttime L_{eq} is the 9-hour average sound level for each one hour between 10:00 p.m. to 7 a.m.

Community Noise Equivalent Level (CNEL)

CNEL is the average A-weighted noise level during a 24-hour day that includes an addition of 5 dB to measured noise levels between the hours of 7:00 p.m. to 10:00 p.m. and an addition of 10 dB to noise levels between the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively.

Noise Exposure and Community Noise

An individual's noise exposure is a measure of noise over a period of time; a noise level is a measure of noise at a given instant in time, as presented in Figure 3.4-1. However, noise levels rarely persist at that level over a long period of time. Rather, community noise varies continuously over a period of time with respect to the sound sources contributing to the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with many of the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources, such as changes in traffic volume. What makes community noise variable throughout a day, besides the slowly changing background noise, is the addition of short-duration, single-event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual. These successive additions of sound to the community noise environment change the community noise level from instant to instant, requiring the noise exposure to be measured over periods of time to characterize an existing community noise environment.

With regard to the subjective effects, the responses of individuals to similar noise events are diverse and influenced by many factors, including the type of noise, the perceived importance of the noise, the appropriateness of the noise to the setting, the duration of the noise, the time of day and the type of activity during which the noise occurs, and individual noise sensitivity. Overall, there is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction on people. A wide variation in individual thresholds of annoyance exists, and different tolerances to noise tend to develop based on an individual's past experiences with noise. Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted. In general, the more a new noise level exceeds the previously existing ambient noise level, the less acceptable the new noise level will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships generally occur (Caltrans 2013, Section 2.2.1):

- Except in carefully controlled laboratory experiments, a change of 1 dBA in ambient noise levels cannot be perceived;
- Outside of the laboratory, a 3 dBA change in ambient noise levels is considered to be a barely perceivable difference;
- A change in ambient noise levels of 5 dBA is considered to be a readily perceivable difference; and
- A change in ambient noise levels of 10 dBA is subjectively heard as doubling of the perceived loudness.

These relationships occur in part because of the logarithmic nature of sound and the decibel scale. The human ear perceives sound in a non-linear fashion; therefore, the dBA scale was developed. Because the dBA scale is based on logarithms, two noise sources do not combine in a simple additive fashion, but rather logarithmically. Under the dBA scale, a doubling of sound energy corresponds to a 3 dBA increase. In other words, when two sources are each producing sound of the same loudness, the resulting sound level at a given distance would be approximately 3 dBA higher than one of the sources under the same conditions. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA. Under the dB scale, three sources of equal loudness together produce a sound level of approximately 5 dBA louder than one source, and ten sources of equal loudness together produce a sound level of approximately 10 dBA louder than the single source (Caltrans 2013, Section 2.2.1.1).

Noise Attenuation

When noise propagates over a distance, the noise level reduces with distance at a rate that depends on the type of noise source and the propagation path. Noise from a localized source (i.e., point source) propagates uniformly outward in a spherical pattern, referred to as "spherical spreading." Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (i.e., reduce) at a rate between 6 dBA for acoustically "hard" sites and 7.5 dBA for "soft" sites for each doubling of distance from the reference measurement, as their energy is continuously spread out over a spherical surface (e.g., for hard surfaces, 80 dBA at

50 feet attenuates to 74 at 100 feet, 68 dBA at 200 feet, etc.) (Caltrans 2013, Section 2.1.4.2). Hard sites are those with a reflective surface between the source and the receiver, such as asphalt or concrete surfaces or smooth bodies of water (Caltrans 2013, Section 2.1.4.2). No excess ground attenuation is assumed for hard sites and the reduction in noise levels with distance (drop-off rate) is simply the geometric spreading of the noise from the source (Caltrans 2013, Section 2.1.4.2). Soft sites have an absorptive ground surface, such as soft dirt, grass, or scattered bushes and trees, which in addition to geometric spreading, provides an excess ground attenuation value of 1.5 dBA (per doubling distance) (Caltrans 2013, Section 2.1.4.2).

Roadways and highways consist of several localized noise sources on a defined path, and hence are treated as "line" sources, which approximate the effect of several point sources (Caltrans 2013, Section 2.1.4.1). Noise from a line source propagates over a cylindrical surface, often referred to as "cylindrical spreading" (Caltrans 2013, Section 2.1.4.1). Line sources (e.g., traffic noise from vehicles) attenuate at a rate between 3 dBA for hard sites and 4.5 dBA for soft sites for each doubling of distance from the reference measurement (Caltrans 2013, Section 2.1.4.1). Therefore, noise due to a line source attenuates less with distance than that of a point source with increased distance.

Additionally, receptors located downwind from a noise source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels (Caltrans 2013, Section 2.1.4.3). Atmospheric temperature inversion (i.e., increasing temperature with elevation) can increase sound levels at long distances (e.g., more than 500 feet). Other factors such as air temperature, humidity, and turbulence can also have significant effects on noise levels (Caltrans 2013, Section 2.1.4.3).

3.4.1.2 Vibration

Vibration can be interpreted as energy transmitted in waves through the ground or man-made structures, which generally dissipate with distance from the vibration source. Because energy is lost during the transfer of energy from one particle to another, vibration becomes less perceptible with increasing distance from the source.

As discussed in the California Department of Transportation's (Caltrans) *Transportation and Construction Vibration Guidance Manual*, operation of construction equipment generates ground vibration (Caltrans 2020). Maintenance operations and traffic traveling on roadways can also be a source of such vibration (Caltrans 2020). If the amplitudes are high enough, ground vibration has the potential to damage structures, cause cosmetic damage or disrupt the operation of vibration-sensitive equipment such as electron microscopes and advanced technology production and research equipment (Caltrans 2020). Groundborne vibration and groundborne noise can also be a source of annoyance to individuals who live or work close to vibration-generating activities (Caltrans 2020). Traffic, including heavy trucks traveling on a highway, rarely generates vibration amplitudes high enough to cause structural or cosmetic damage (Caltrans 2020). However, there have been cases in which heavy trucks traveling over potholes or other discontinuities in the pavement have caused vibration high enough to result in complaints from nearby residents (Caltrans 2020).

In describing vibration in the ground and in structures, the motion of a particle (i.e., a point in or on the ground or structure) is used. The concepts of particle displacement, velocity, and acceleration are used to describe how the ground or structure responds to excitation. Although displacement is generally easier to understand than velocity or acceleration, it is rarely used to describe ground and structure-borne vibration because most transducers used to measure vibration directly measure velocity or acceleration, not displacement. Accordingly, vibratory motion is commonly described by identifying the peak particle velocity (PPV) (Caltrans 2020, p. 6). Caltrans has identified used by governmental agencies, including the Federal Transit Administration and reported by various researchers and organizations, that can be used as screening tools for assessing the potential for adverse vibration effects related to structural damage and human perception (Caltrans 2020, pp. 21–25, 38). The Caltrans Manual is meant to provide practical guidance to Caltrans engineers, planners, and consultants who must address vibration issues associated with the construction, operation, and maintenance of Caltrans projects (Caltrans 2020, p. 1). Structural damage can potentially result from vibration events that generate vibration levels of 0.2-inch per second PPV at fragile buildings, 0.5-inch-per-second PPV at older residential buildings or historic buildings, and 2.0-inch-per-second PPV at modern industrial or commercial buildings (Caltrans 2020, p. 38). Vibration events that generate a vibration level of 0.04-inch per second PPV is considered barely perceptible by a human (Caltrans 2020, p. 38).

Groundborne noise specifically refers to the rumbling noise emanating from the motion of building room surfaces due to vibration of floors and walls; it is perceptible only inside buildings (FTA 2018, p. 109). The relationship between groundborne vibration and groundborne noise depends on the frequency content of the vibration and the acoustical absorption characteristics of the receiving room. For typical buildings, groundborne vibration that causes low frequency noise (i.e., the vibration spectrum peak is near 30 Hz) results in a groundborne noise level that is approximately 40 dB lower than the velocity level. For groundborne vibration that causes mid-frequency noise (i.e., the vibration spectrum peak is near 60 Hz), the groundborne noise level will be approximately 25 dB lower than the velocity level (FTA 2018, p. 119). Therefore, for typical buildings, the groundborne noise dB level is lower than the groundborne vibration velocity level.

In general, manmade earth-borne vibrations attenuate rapidly with distance from the source. For instance, vibration of truck pass by is characterized by peaks that are considerably higher than those generated by automobiles (FTA 2018, Appendix A, p. 13). These peaks last no more than a few seconds and often only a fraction of a second, including a rapid drop-off with distance (FTA 2018, Appendix A, p. 13). Truck vibration levels at 50 feet from the centerline of the nearest lane would be about half of vibration levels measured at 15 feet from the centerline of the near lane (FTA 2018, Appendix A, p. 13). At 100 feet, vibration levels from trucks are about one fourth, at 200 feet about one tenth, and at 300 feet less than one twentieth (FTA 2018, Appendix A, p. 10). Because vibration drops off rapidly with distance, there is rarely a cumulative increase in groundborne vibration from the presence of multiple trucks (FTA 2018, Appendix A, p. 13).

3.4.2 Regulatory Framework

3.4.2.1 Federal

Federal Noise Standards

Under the authority of the Noise Control Act of 1972, the United States Environmental Protection Agency (USEPA) established noise emission criteria and testing methods published in Parts 201 through 205 of Title 40 of the Code of Federal Regulations (CFR) that apply to some transportation equipment (e.g., interstate rail carriers, medium trucks, and heavy trucks) and construction equipment. In 1974, USEPA issued guidance levels for the protection of public health and welfare in residential land use areas of an outdoor L_{dn} of 55 dBA and an indoor L_{dn} of 45 dBA. These guidance levels are not considered as standards or regulations and were developed without consideration of technical or economic feasibility (USEPA 1974). There are no federal noise standards that directly regulate environmental noise related to the construction or operation of the Project.

Federal Vibration Standards

The FTA has provided guidance associated with human annoyance and the human response to different levels of groundborne vibration. The general human response to different levels of groundborne vibration velocity levels is described in **Table 3.4-2**.

TABLE 3.4-2
HUMAN RESPONSE TO DIFFERENT LEVELS OF GROUNDBORNE VIBRATION

Vibration Velocity Level	Human Reaction
65 VdB	Approximate threshold of perception for many humans. Low-frequency sound: usually inaudible. Mid-frequency sound: excessive for quiet sleeping areas.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find transit vibration at this level annoying. Low-frequency noise: tolerable for sleeping areas. Mid-frequency noise: excessive in most quiet occupied areas.
85 VdB	Vibration tolerable only if there are an infrequent number of events per day. Low-frequency noise: excessive for sleeping areas. Mid-frequency noise: excessive even for infrequent events for some activities.

SOURCE: FTA (Federal Transit Administration). 2018. *Transit Noise and Vibration Impact Assessment Manual.* Accessed January 2024, https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf.

3.4.2.2 State

California Noise Standards

The State of California has established noise insulation standards for new multi-family residential units, hotels, and motels that would be subject to relatively high levels of transportation-related noise. These requirements are collectively known as the California Noise Insulation Standards (Title 24, California Code of Regulations). The noise insulation standards set forth an interior standard of 45 dBA CNEL in any habitable room. The standards require an acoustical analysis demonstrating that dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to exterior noise levels greater than 60 dBA CNEL. Title 24

standards are typically enforced by local jurisdictions through the building permit application process.

3.4.2.3 Regional

There are no regional regulations, plans, or policies applicable to noise relevant to the Project.

3.4.2.4 Local

City of Huntington Beach Noise Ordinance Standards

The City's Noise Ordinance standards are found in Huntington Beach, California Municipal Code Title 8: Health and Safety Chapter 8.40, *Noise Control*. The ordinance was codified into law to control unnecessary, excessive and annoying sounds emanating from incorporated areas of the City. The ordinance set specific noise standards, expressed in a-weighted decibels (dB), as shown in **Table 3.4-3**. Section 8.40.050, *Exterior Noise Standards*, states exterior noise levels that shall apply to the applicable land use such as: residential, educational, hospitals, churches, cultural, museum, library, public parks, recreational, and commercial). The code states:

> *It is unlawful for any person at any location within the incorporated area of the City to create any noise due to a fixed noise source (or any mobile source not pre-empted by State or Federal laws), or to allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level when measured at the property line of any residential, hotel, motel, public institutional, recreational, or commercial property, either within or outside the City, to exceed the applicable noise standards.*

TABLE 3.4-3
EXTERIOR NOISE LEVEL STANDARDS

Land Use	Time Period	L_{eq} Noise Levels (dB)[a]	L_{max} Noise Levels (dB)[b]
Low-Density Residential	7:00 a.m. to 10:00 p.m.	55	75
	10:00 p.m. to 7:00 a.m.	50	70
Medium-, High-Density Residential, Hotels, Motels	7:00 a.m. to 10:00 p.m.	60	80
	10:00 p.m. to 7:00 a.m.	50	70
School	Hours of Operations	55	75
Hospitals, Churches, Cultural, Museum, Library, Public Park, Recreational	Hours of Operations	60	80
Commercial Offices	Hours of Operations	65	85

NOTES:

a. A-weighted sound levels must be measured using a sound level meter of least Type 2 certification and for a duration of at least 15 minutes.
b. A-weighted L_{max} sound levels must be measured using a sound level meter of least Type 2.

SOURCE: Huntington Beach, California Municipal Code Section 8.40.050, *Exterior Noise Standards*.

City of Huntington Beach Noise Deviation Permit

As stated in Section 8.40.090, *Special Provisions*, of the Noise Ordinance, activities are considered exempt from the provisions if "*noise sources associated with temporary public or private events located on private or public property, provided that a permit has been obtained from the City.*" Section 8.40.130, *Permit Process*, outlines the application process to obtain a temporary permit to deviate from the noise ordinance. The section requires the following information from the applicant: all facts regarding the request for deviation, all actions the applicant took to comply with the provisions of the noise ordinance, an explanation of why compliance with the ordinance cannot be achieved, proposed methods to minimize noise during temporary activities, and any additional pertinent information.

City of Huntington Beach Vibration Ordinance Standards

The City's Noise Ordinance standards are found in Huntington Beach Municipal Code Title 8, *Health and Safety*, Chapter 8.40, *Noise Control*. The vibration standard is found in Section 8.40.113. The code states:

> *Notwithstanding other sections of this chapter, it is unlawful for any person to create, maintain or cause any operational ground vibration on any property which exceeds 72 VdB at nearby vibration-sensitive land uses. The vibration limit at vibration-sensitive uses with high sensitivity such as operations conducting medical research and imaging shall be 65 VdB.*

3.4.3 Existing Conditions

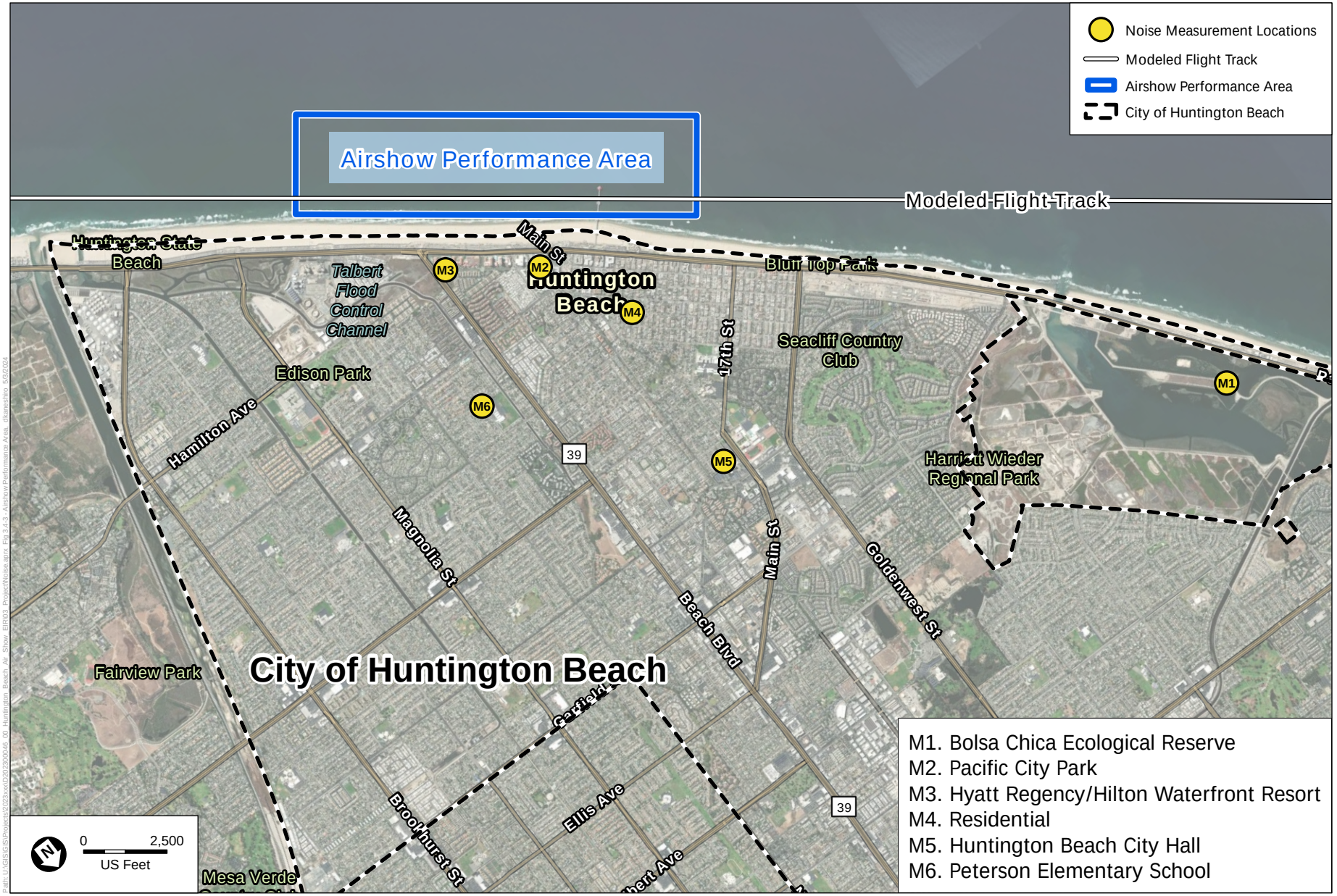
The Airshow mainstage is located on the beach between 7th Street and Beach Boulevard (SR-39) with mixed land use consisting of residential and commercial/office. While the Airshow mainstage is located downtown, aircraft flyovers occur throughout the city.

3.4.3.1 Noise

Noise Sensitive Receptor Locations

Ambient noise measurements were conducted during the 2023 Airshow within city limits as shown in **Figure 3.4-3**. Measurement sites were chosen based on the proximity of residential, mixed-use, municipal, and conservational land uses throughout the city.

The measurements were taken between September 29 and 30, 2023, and are presented in **Table 3.4-4**. The table presents site number and land use category, day of week the measurement took place, the time at which the measurements started and stopped, and the ambient L_{eq} at each site.



SOURCE: ESA, 2023

Pacific Airshow Huntington Beach

Figure 3.4-3
Noise Measurement Locations for the 2023 Airshow

TABLE 3.4-4
AMBIENT NOISE LEVELS DURING 2023 AIRSHOW

Site	Land Use	Day	Start	End	L_{eq} Noise Levels (dBA)[a]
M1	Public Park/Recreation	Friday	9:30 a.m.	4:21 p.m.	51.7
M2	Medium-Density Residential	Saturday	9:30 a.m.	4:08 p.m.	55.0
M3	Hotel	Saturday	9:50 a.m.	4:08 p.m.	57.8
M4	Medium-Density Residential	Saturday	9:30 a.m.	4:08 p.m.	52.7
M5	Municipal Offices (Commercial)	Friday	9:30 a.m.	4:23 p.m.	51.2
M6	School	Friday	9:36 a.m.	4:24 p.m.	51.2

NOTES:

a. A-weighted sound levels must be measured using a sound level meter of least Type 2 certification and for a duration of at least 15 minutes.

SOURCE: **Appendix F**, of this Draft EIR.

Aircraft Noise Levels during the 2023 Airshow

Continuous 1-second L_{eq} measurement data was obtained for the duration of the 2023 Airshow. ESA personnel monitored each site and noted aircraft flyovers and any notable community noise events (e.g., police sirens, ambulances, lawn mowing). To analyze the measurement data, each performance was considered a single noise event due to the overlapping noise signatures that resulted from the high frequency of aircraft pass-bys. The measurement data was split into events based on the performance schedule provided to ESA by the City, and each performance was reviewed by ESA. The 1-second L_{eq} measurement data, in conjunction with the observation notes taken by ESA staff during the 2023 Airshow, were used to determine appropriate noise thresholds above ambient levels for each Airshow performance. Any noise exceeding the threshold for a given performance was considered to be aircraft noise. Noise that did not exceed the threshold was considered to be ambient or "community" noise. Aircraft L_{max} were then computed based on these parameters.

The aircraft results presented below represent the loudest and quietest measured L_{max} event observed at each site that was logged in the datasheets. Additional details on all recorded flights can be found in **Appendix E**, of this Draft EIR. As mentioned in Section 3.3.1, L_{max} is the peak sound level during a noise event.

1. Site M1 – Bolsa Chica Basin State Marine Conservation Area

Bolsa Chica Basin State Marine Conservation Area Site M1 is located approximately four miles north of Downtown Huntington Beach and directly east of Pacific Coast Highway. Attended measurements were conducted at this site on Friday September 29, 2023, for the scheduled duration of the Airshow. Roadway noise was the predominant community noise source observed at this site. During the Airshow, four of the ten aircraft performers captured exceeded the City's L_{max} exterior noise standard of 80 dB at least one time. The loudest L_{max} aircraft event was associated with the Thunderbirds Diamond Practice at 100.1 dB. The quietest L_{max} aircraft event was attributed to the Army Helicopters at 70.8 dB.

2. Site M2 – Pacific City Park

Pacific City Park Site M2 is located approximately in Downtown Huntington Beach behind the Pacific City Shopping Center on Pacific View Avenue. Attended measurements were conducted at this site on Saturday September 30, 2023, for the scheduled duration of the Airshow. Roadway noise was the predominant community noise source observed at this site. During the Airshow, twelve of the eighteen aircraft performers captured exceeded the City's L_{max} exterior noise standard of 80 dB at least one time. The loudest L_{max} aircraft event was associated to the USAF Heritage flight at 112.5 dB. The quietest L_{max} aircraft event was attributed to the OC Water Drop at 63.6 dB.

3. Site M3 – Hyatt Regency Hotel

Hyatt Regency Hotel Site M3 was located on the corner of Pacific View Avenue and Beach Boulevard. Attended measurements were conducted at this site on Saturday September 30, 2023, for the scheduled duration of the Airshow. Roadway noise was the predominant community noise source observed at this site. During the airshow, fourteen of the seventeen aircraft performers captured exceeded the City's L_{max} exterior noise standard of 80 dB at least one time. The loudest L_{max} aircraft events were associated with the USAF F22 and the USN Growler at 111.0 dB. The quietest L_{max} aircraft event was attributed to the OC Water Drop, had an L_{max} of 74.3 dB.

4. Site M4 – Pecan Avenue and 8th Street

Residential Site M4 was located on the corner of Pecan Avenue and 8th Street. Attended measurements were conducted at this site on Saturday September 30, 2023, for the scheduled duration of the Airshow. Ambient community noise included roadway, pedestrian, and construction events at this site. During the airshow, ten of the fourteen aircraft performers captured exceeded the City's L_{max} exterior noise standard of 80 dB at least one time. The loudest L_{max} aircraft event was associated with the USAF Heritage at 119.3 dB. The quietest L_{max} aircraft event was attributed to the Subsonex at 73.1 dB.

5. Site M5 – Huntington Beach City Hall

City Hall Site M5 was located in the open area along Park Street on the premise of the municipal buildings. Attended measurements were conducted at this site on Friday September 29, 2023, for the scheduled duration of the Airshow. Occasional police sirens were the predominant community noise source observed at this site. During the airshow, seven of the sixteen aircraft performers captured exceeded the City's L_{max} exterior noise standard of 80 dB at least one time. The loudest L_{max} aircraft event was attributed to the USN F35C at 112.8 dB. The quietest L_{max} aircraft event was attributed to the USAF KC135 at 61.6 dB.

6. Site M6 – Peterson Elementary School

Site M6 was located on the corner of Farnsworth Lane and Kingfisher Drive, directly south of Peterson Elementary School. Attended measurements were conducted at this site on Friday September 29, 2023, for the scheduled duration of the Airshow. Ambient community noise included roadway, pedestrian, and construction events at this site. During the airshow, twelve of the eighteen aircraft performers captured exceeded the City's L_{max} exterior noise standard of 80 dB at least one time. The loudest L_{max} aircraft event was associated with the Thunderbirds at 125.1 dB. The quietest L_{max} aircraft event was attributed to the Army Helicopters at 66.5 dB.

Existing Roadway Noise Levels

Existing roadway CNEL noise levels were calculated for ten roadway segments located in the vicinity of the Project Site. The roadway segments selected for analysis are considered to be those that are expected to be most directly impacted by Project-related traffic, which, for the purpose of this analysis, includes the roadways that are located near and immediately adjacent to the Project Site. These roadways, when compared to roadways located farther away from the Project Site, would experience the greatest percentage increase in traffic generated by the Project (as distances are increased from the Project Site, traffic is spread out over a greater geographic area and its effects are reduced).

Existing roadway CNEL noise levels were calculated using the Federal Highway Administration's (FHWA's) Highway Traffic Noise Model (FHWA-TNM) and traffic volumes at the study intersections reported in the Project's Transportation Study prepared by Fehr & Peers (2023) The model calculates the average noise level at specific locations based on traffic volumes, average speeds, and site environmental conditions.

The noise levels along these roadway segments are presented in **Table 3.4-5**. As shown, the ambient noise environment of the Project vicinity can be characterized by 24-hour CNEL levels attributable to existing traffic on local roadways. The calculated CNEL (at a distance of 30 feet from the outermost travel lane) from actual existing traffic volumes on the analyzed roadway segments ranged from 64.2 dBA along Main Street between Orange Avenue & Adams Avenue to 76.7 dBA along Goldenwest Street between Yorktown Avenue & Ellis Avenue.

3.4.3.2 Vibration

Vibration Sensitive Receptor Locations

The FTA Transit Noise and Vibration Impact Assessment provides vibration structure damage criteria for (1) reinforced-concrete, steel, or timber (no plaster); (2) engineered concrete and masonry (no plaster); (3) non-engineered timber and masonry buildings; and (4) buildings extremely susceptible to vibration damage (FTA 2018).

The FTA's document also provides vibration human annoyance criteria which apply to land uses where people normally sleep. The closest sensitive receptor where people normally sleep in the Project vicinity include residential uses located to the northeast of the Project Site on the northeast side of Pacific Coast Highway and on the northeast side of Pacific View Avenue (to the northeast of Pacific Coast Highway).

Existing Groundborne Vibration Levels

Aside from periodic construction work occurring throughout the City, field observations noted that other sources of groundborne vibration in the Project Site vicinity are limited to heavy-duty vehicular travel (rubber-tired trucks or buses, etc.) on local roadways. Rubber-tired vehicles traveling at a distance of 50 feet typically generates groundborne vibration velocity levels of approximately 0.006 inches per second PPV (approximately 63 VdB) (FTA 2018, Figure 6-4). Groundborne noise levels would generally be 25 to 40 dB lower than the velocity level depending on the frequency level of the source (Caltrans 2013, p. 38).

TABLE 3.4-5
EXISTING VEHICULAR TRAFFIC NOISE LEVELS

		CNEL (dBA) at Referenced Distances from Roadway[a]
Roadway Segment	**Adjacent Noise Sensitive Land Uses**	**Existing**
SR-1 between Seapoint Street & Beach Boulevard	Residential/Commercial	71.1
SR-1 north of Seapoint Street	Open Space	71.4
Adams Avenue between Main Street & Santa Ana River	Residential/Commercial	72.8
Hamilton Avenue between Newland Street & Santa Ana River	Residential/Commercial/Educational	74.8
Beach Boulevard between SR-1 & Indianapolis Avenue	Residential/Commercial	74.3
Beach Boulevard between Indianapolis Avenue & Yorktown Avenue	Residential/Commercial	75.1
Beach Boulevard between Yorktown Avenue & Ellis Avenue	Commercial	75.3
Beach Boulevard north of Ellis Avenue	Residential/Commercial	76.1
SR-1 between Beach Boulevard & Brookhurst Street	Residential/Open Space/Industrial	73.3
SR-1 between East City Limit & Brookhurst Street	Open Space/Industrial	73.0
Newland Street between SR-1 & Indianapolis Avenue	Residential/Industrial	70.4
Newland Street between Indianapolis Avenue & Yorktown Avenue	Residential	72.0
Newland Street between Yorktown Avenue & Ellis Avenue	Residential	72.6
Magnolia Street between SR-1 & Atlanta Avenue	Open Space/ Residential/Educational	70.6
Magnolia Street between Atlanta Avenue & Adams Avenue	Residential/Commercial	75.6
Magnolia Street between Adams Avenue & Ellis Avenue	Residential/Commercial	74.0
Brookhurst Street between SR-1 & Hamilton Avenue	Open Space/Residential/Industrial/Commercial	73.0
Bushard Street between Brookhurst Avenue & Indianapolis Avenue	Residential/Commercial	69.3
Bushard Street between Indianapolis Avenue & Ellis Avenue	Residential/Commercial	71.7
Brookhurst Street between Atlanta Avenue & Adams Avenue	Residential/Commercial	74.3
Brookhurst Street between Adams Avenue & Ellis Avenue	Residential/Commercial	75.3
Main Street between Orange Avenue & Adams Avenue	Residential/Commercial/Open Space	64.2

Roadway Segment	Adjacent Noise Sensitive Land Uses	CNEL (dBA) at Referenced Distances from Roadway[a]
		Existing
Main Street between Adams Avenue & Ellis Avenue	Residential/Commercial/Educational	68.5
Goldenwest Street between SR-1 & Yorktown Avenue	Residential/Industrial/Educational	72.3
Goldenwest Street between Yorktown Avenue & Ellis Avenue	Residential/Commercial	76.7
Goldenwest Street north of Ellis Avenue	Residential/Open Space	76.1

NOTES: Differences may not add up due to rounding.

a. Traffic noise is estimated at a distance of 30 feet from roadway.
b. Differences may not add up due to rounding.

SOURCE: **Appendix F**, of this Draft EIR; Fehr & Peers 2023

3.4.4 Thresholds of Significance

3.4.4.1 On-Site and Off-Site Noise

The following significance threshold contained in CEQA Guidelines Appendix G was determined in the Initial Study to require detailed analysis in this Draft EIR. Therefore, this analysis evaluates whether operation of the Project would have a significant impact related to noise if it would:

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies (Impact 3.4-1).
- Generation of excessive groundborne vibration or groundborne noise levels (Impact 3.4-2).

Operation

As indicated in Table 3.4-3, the City has set noise standards for exterior land uses. The exterior noise standards during the daytime range from 55 to 85 dBA, and during the nighttime, they range from 50 to 70 dBA. The following criteria are applied to the Project's operational noise. The Project would have a significant impact from operations if:

- For Project-related traffic noise, the Project causes the ambient noise levels measured in the vicinity of the Project area to increase by 3 dBA CNEL to or within the "normally unacceptable" or "clearly unacceptable" categories; or the Project causes the ambient noise levels measured in the vicinity of the Project area to increase by 5 dBA CNEL or more within the "normally acceptable" or "conditionally acceptable" categories.
- For Project-related operational on-site (i.e., non-roadway) noise sources such as amplified speakers increase the ambient noise level (L_{eq}) at noise sensitive uses by 5 dBA L_{eq}.

In summary, for operational noise, the criterion for off-site operational noise is an increase in the ambient noise level of 3 dBA or 5 dBA CNEL, depending on the existing noise conditions at the

affected noise-sensitive land use category. On-site operational noise is an increase in the ambient noise level of 5 dBA L_{eq} at an adjacent property line.[1]

3.4.4.2 Groundborne Vibration and Groundborne Noise

The City of Huntington Beach has adopted the following groundborne vibration levels for human perception, it is unlawful for any person to create, maintain or cause any operational ground vibration on any property which exceeds 72 VdB at nearby vibration-sensitive land uses. The vibration limit at vibration-sensitive uses with high sensitivity such as operations conducting medical research and imaging shall be 65 VdB (Huntington Beach Municipal Code 8.40.113).

3.4.5 Methodology

3.4.5.1 Aircraft Noise

Measurements were conducted with Larson Davis Model 831 Sound Level Meter (SLM) at the six sites over a two-day period on September 29 and 30, 2023. All instrumentation conforms to ANSI (American National Standard Institute) Standard S1.4 for Type 1 precision, the highest level of precision, with current calibrations traceable to the U.S. National Institute of Standards and Technology (NIST). Type 1 precision instrumentation requires constant calibration to meet ANSI standards; calibrations were carried out in the field before and after the measurement period using NIST-certified calibration devices.

3.4.5.2 Off-Site Roadway Noise

Roadway CNEL noise levels were calculated using the methodology based on the FHWA's Highway Traffic Noise Model (TNM) and traffic volumes at the study intersections reported in the Project's Transportation Study prepared by Fehr & Peers (2023). The modeling analysis calculates the average noise level at specific locations based on traffic volumes, average speeds, and site existing conditions, which consists of trips from only the airshow event without the proposed music festival. Fehr & Peers analyzed that operation of the proposed music festival with the airshow event would increase vehicle miles traveled (VMT) by 185,000 (or 20,000 vehicle trips) as compared to the existing conditions. It would be speculative to apply the roadway volume increases to any one segment; therefore, the traffic noise increase was conservatively applied to all roadway segments analyzed under the existing conditions. To model the existing plus project scenario an 11 percent increase, representing the change in VMT between the existing conditions and the airshow with music festival scenario, was applied to the peak hour volumes for all roadway segments. This method allows for the definition of roadway configurations, barrier information (if any), and receiver locations.

3.4.5.3 Stationary Point-Source Noise

Stationary point-source noise levels were evaluated by identifying the noise levels generated by outdoor stationary noise sources such as the use of the amplified sound system at the outdoor

[1] Since the noise levels are measured at exterior locations at property lines, the noise levels inside buildings would be less than the values used for determining impacts. With windows closed, the minimum exterior-to-interior noise attenuation for typical structures in California is approximately 25 to 30 dBA or potentially more with improved noise abatement materials or techniques. See Gordon et al. 1971.

music festival and speech from music festival attendees, calculating the hourly L_{eq} noise level from each noise source at sensitive receiver property lines, and comparing such noise levels to existing ambient noise levels. More specifically, the following steps were undertaken to calculate outdoor stationary point-source noise impacts:

1. Existing noise levels at surrounding sensitive receptor locations were estimated based on field measurement data (see Table 3.4-4);
2. Typical noise levels generated by stationary point-source noise, such as the amplified sound system, were obtained from measured noise levels for similar equipment/activities, noise levels published in environmental noise assessment documents for land use development projects or scientific journals, or noise levels from equipment manufacturer specifications or other noise references;
3. Distances between stationary point-source noise generators and surrounding sensitive receptor locations were measured using aerial imagery and site plans;
4. Stationary point-source noise levels were then calculated for each sensitive receptor location based on the standard point source noise-distance attenuation factor of 6 dBA for each doubling of distance; and
5. Noise level increases, if any, were compared to the stationary point-source noise significance thresholds identified above in Section 3.4.4.

Music festival attendee noise was calculated based on noise from people talking within the assumed music festival area. The assumed area is shown as Concert Area #1 (Area A) or alternatively the southernmost portion of the Show Center Area within Concert Area #2/ Additional Seating/Activations Area (Area E) in **Figure 2-4** of Chapter 2, *Project Description*. Concert Area A was chosen because it represents a worst-case scenario that is in closer proximity to sensitive receptors as opposed to Concert Area E. Noise from female adults and male adults talking in raised voices is approximately 63 dBA and 65 dBA, respectively, at a distance of 3 feet (Olsen 1998). As a conservative analysis, it is assumed that each outdoor space would be at full capacity and that half of the visitors would be male and half female. Of the attendees, half would be talking simultaneously (assuming approximately half of the occupants talking and the other half listening). The music festival is assumed to have an attendance of up to 40,000 people.

3.4.5.4 Groundborne Vibration and Noise

Groundborne vibration and noise impacts were evaluated for human annoyance impacts by identifying the Project's potential vibration sources, estimating the distance between the Project's vibration sources and the nearest vibration sensitive receptor location, and making a significance determination based on the significance thresholds described above in Section 3.4.4.

3.4.6 Impact Analysis

The City determined in the Initial Study that the following environmental issue areas would result in no impacts or less-than-significant impacts and, therefore, are scoped out of this EIR. Refer to **Appendix B,** of this Draft EIR for a copy of the Initial Study and additional information regarding the following issue areas:

Would the Project:

- Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies (determined to be less than significant in the IS/NOP for construction).
- Generation of excessive groundborne vibration or groundborne noise levels (determined to be less than significant in the IS/NOP for construction).
- For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels (determined to be less than significant in the IS/NOP for construction and operations).

As detailed in the Initial Study, impacts related to generating a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards, generating excessive groundborne vibration or groundborne noise levels for project construction, and exposure of people residing or working in the project area to excessive noise levels within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport were determined to be less than significant in the IS/NOP and, therefore, are not addressed in this Draft EIR.

An approximately 4,500-foot-long by 40-foot-wide temporary runway is planned to be located along the southern edge of the Project Show Center Area with an associated 40-foot by 40-foot temporary aircraft landing pad. These temporary structures would be placed in the Project Show Center Area and would not be newly constructed structures; thus, their placement would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of applicable standards.

3.4.6.1 Exceedance of Established Noise Standards

Impact 3.4-1: The Project would result in a significant impact if it would generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Aircraft Noise

The noise levels from aircraft flyovers during the 2023 Airshow exceeded the maximum noise level criteria outlined in Table 3.4-3. L_{max} exceedances ranged from 1.3 dB to 50.1 dB over the various aircraft performances. Noise levels from aircraft flyovers for the duration of the Airshow would generate a substantial temporary increase in ambient noise levels and thus result in a significant impact.

However, the City's Municipal Code includes provisions for approval of a Noise Deviation Permit. While the approval of a Noise Deviation Permit would not eliminate the significant impact related to aircraft noise, it would allow the deviation to occur, thereby removing the

conflict that would otherwise exist between the Noise Ordinance thresholds and requirements and the noise generated by the Project.

Municipal Code Section 8.40.130 states that the applicant must provide information in the Noise Deviation Permit application regarding actions taken to comply with the Noise Ordinance, reasons why compliance cannot be achieved, and a proposed method of achieving compliance, if such method exists. The applicant must also demonstrate the need to deviate from the noise level and whether the deviation produces a greater benefit to the community that outweighs the temporary increase in noise level.

Due to the nature of the Project, compliance with the Noise Ordinance thresholds is not possible while maintaining the activities the Airshow has included since 2016. The Project provides Huntington Beach residents and visitors with an opportunity to enjoy a family event that is geared towards all ages. Activities, food, and area retail establishment products are available at the Airshow, enhanced by live entertainment. Traffic and crowd noise are natural consequences of this type of event and there is no way to achieve strict Noise Ordinance compliance while maintaining the established activities. The benefits to the community and visitors are evident from the success of the annual Airshow, which provides an opportunity for local merchants to offer their services and wares to a larger audience. Therefore, the deviation produces a greater benefit to the community that outweighs the temporary exceedance from the once-a-year Airshow.

Additionally, new Airshow activities discussed in the Chapter 2.0, *Project Description*, such as air racing, nighttime flyovers, and helicopter landing within Main Hospitality Area, may result in similar noise levels as was measured during the 2023 Airshow. However, while noise impacts would remain significant, the Noise Deviation Permit would allow the exceedance to occur.

On-Site Noise

As discussed in the Chapter 2.0, *Project Description*, which is included as **Appendix B,** of this Draft EIR, during the Airshow events, the competitions and art installations would be located within the Project Site and generally located away from noise-sensitive uses east of Pacific Coast Highway. The temporary event structures would be similar in scale and location to previous Airshows since 2016 (except in 2020, when there was no Airshow) and generally located away from noise-sensitive uses east of Pacific Coast Highway. The temporary Airshow pyrotechnic display would occur over water, similar to the City's existing annual Fourth of July Fireworks Over the Ocean and would not result in permanent effects on the environment. The competitions, art installations, event structures, and pyrotechnic display would not generate a substantial increase in ambient noise in excess of established standards and existing conditions. Therefore, no further analysis of these issues are required in this Draft EIR.

The multi-day music festival would be located generally within the northernmost portion of the Show Center Area within Concert Area A or alternatively the southernmost portion of the Show Center Area within Concert Area E. The multi-day music festival would occur following the conclusion of the Airshow up to 11:00 p.m. over 3 days over the weekend directed towards the ocean. In addition, the music festival would require sound checks during the day/evening prior to

the music festival. The music festival would include the use of amplified speakers, which would be directed toward the ocean and away from noise sensitive uses located on Pacific Coast Highway. Nonetheless, the multi-day music festival with the use of amplified speakers may result in a temporary net increase in noise as compared to past Airshows.

Table 3.4-6 presents the estimated noise levels at off-site sensitive receptors, resulting from the Airshow music festival. As presented in Table 3.4-6, the estimated noise levels from the music festival would reach a maximum noise level of 71.5dBA (L_{eq}) at the Huntington Pacific Beach House Condo complex at 701 Pacific Coast Highway. This assumes that 10 speakers are placed at equal distances of 95 feet from the receptor starting at 95 feet and going eastward toward the pier at 950 feet. Furthermore, this noise analysis conservatively assumes that 40,000 event goers will be spread across Concert Area A of the Music Festival. Noise measurement receptor location M2 represents the closest noise monitoring that occurred nearby to both the sensitive receptor as well as to the music festival Concert Area A zone. Noise measurement M2 shows that the surrounding ambient environment is approximately 55.0 dBA L_{eq}. The Project, in addition to ambient noise levels, would be above the significance threshold of 5 dBA (L_{eq}). As such, the Project's music festival would result in the generation of a substantial temporary increase in ambient noise levels in the vicinity of the Project to be in excess of standards established by the City and impacts from the music festival would be potentially significant. Therefore, **Mitigation Measure NOI-1** would be required to reduce noise levels, as shown in Table 3.4-8, below. As shown therein, noise levels would still exceed the significance thresholds. Since it would not be feasible to locate speakers further away from the sensitive receptors (towards the ocean) because this would impede beyond the mean high tide line, and the City does not have any jurisdiction beyond the mean high tide line, this impact is determined to be significant and unavoidable. While the Project would submit a Noise Deviation Permit application pursuant to Municipal Code requirements, which would allow the exceedance to occur, the proposed music festival would be a new source of noise in excess of standards. Furthermore, as the proposed music festival would be a new addition to the Airshow and prior Noise Deviation Permit applications have not included a music festival, this impact is determined to be significant and unavoidable. No additional feasible mitigation measures are available.

TABLE 3.4-6
MUSIC FESTIVAL NOISE LEVELS

Receptor Location	Existing Ambient Noise Levels, dBA (L_{eq})	Speaker Noise Only dBA (L_{eq})[a,b]	Crowd Noise Only, dBA (L_{eq})[c]	Combined Speaker + Crowd Sound, dBA (L_{eq})[a.b.c]	Ambient + Project Noise Levels, dBA (L_{eq})	Significance Threshold	Exceedance over Significance Threshold	Significant Impact?
M2	55.0	71.5	64.6	72.3	72.4	60.0	12.4	Yes

NOTES:

a. World Health Organization recommends a limit of 100 dB for outdoor concerts and festivals. A reference noise level of 100 dBA at 5 feet was used. Available: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5187664/
b. A 5 dBA attenuation factor was applied to account for speaker directivity facing away from receptors.
c. The analysis assumes operation of 10 speakers at once at varying distances from the sensitive receptor and assumes 40,000 participants evenly spread across Concert Area A, which is designated as a zone for the music festival.

SOURCE: **Appendix F,** of this Draft EIR.

Off-Site Project Traffic

Existing roadway noise levels were calculated along various roadway segments near to the Project Site. Roadway noise attributable to the Airshow was calculated using the traffic noise model previously described and was compared to baseline noise levels that would occur under the "No Project" condition. Project impacts are shown in **Table 3.4-7**, with supporting calculation files provided in **Appendix F,** of this Draft EIR.

As indicated, the maximum increase in Project-related traffic noise levels over existing traffic noise levels would be less than 1 dBA CNEL along all roadway segments. This increase in noise level would be well below the "clearly noticeable" threshold increase of 5 dBA CNEL in an area characterized by normally acceptable noise levels that would remain below 55 dBA CNEL or "conditionally acceptable" threshold of noise levels that would remain below 70 dBA CNEL. Therefore, Project-related noise increases would be less than the applicable threshold and would be less than significant.

Mitigation Measures

Significance before Mitigation: Potentially Significant.

Mitigation:

Mitigation Measure NOI-1: The applicant shall implement the following measures for the duration of the event:

- The nearest speaker shall be placed at least 475 feet away from any nearby sensitive receptor and any subsequent speakers shall be separated from other speakers by 25 feet parallel to Pacific Coast Highway. Speakers shall also be positioned in a manner that would not point directly towards any nearby sensitive receptor and, instead, face the beach/ocean.
- A temporary noise barrier of at least 10 feet in height and constructed of plywood or using a sound blanket shall be installed on public property nearest to the sensitive receptors to the west of the proposed music festival area (Huntington Pacific Beach House Condo complex at 701 Pacific Coast Highway). The temporary noise barriers shall block the line-of-sight between the music festival attendees and similarly elevated ground-level noise-sensitive receptors.

Resulting Level of Significance:

As shown in **Table 3.4-8**, with implementation of **Mitigation Measure NOI-1** with the nearest speaker to the sensitive receptors located approximately 475 feet to the southwest of the receptors and any subsequent speaker being separated from other speakers by 25 feet parallel to Pacific Coast Highway, noise from speakers alone would reach up to 63.8 dBA L_{eq}. It is important to note that it would not be feasible to locate speakers further away from the sensitive receptors (towards the ocean) because this would impede beyond the mean high tide line and the City does not have any jurisdiction beyond the mean high tide line. The estimated 63.8 dBA L_{eq} accounts for a 5 dB reduction for speakers facing away from sensitive receptors, which is a low-end noise reduction level for a wall that blocks the line-of-sight. The speakers are assumed to be elevated from the

ground-level onto a sound stage or pole and elevated 10 feet from the ground-level. By incorporating a 10-foot wall with a minimum 5 dB noise reduction, noise levels from the crowd would be attenuated to 59.6 dBA L_{eq}. Therefore, the combined noise level from the speakers and crowd noise at ground level and the 2nd floor receptors under the scenario where speakers may be elevated above ground level, would attenuate to 65.2 dBA L_{eq}. Regardless, if the speakers were not elevated above ground-level, impacts from the speakers would not benefit from a sound barrier as the 2nd floor receptors (or receptors elevated above the wall) would have a direct line of sight to the speakers. These findings are shown in Table 3.4-8. Therefore, with the proposed mitigation measure, noise levels would remain above the 5 dB increase over ambient threshold as set forth by the City. Thus, operational impacts would be significant and unavoidable. No additional feasible mitigation measures are available.

3.4.6.2 Exposure to Vibration Levels

Impact 3.4-2: The Project will result in a significant impact if it generates excessive groundborne vibration or groundborne noise levels.

Operation of the music festival would include typical commercial-grade mechanical and electrical equipment, such as amplified sound systems, which would produce groundborne vibration. Data regarding specific groundborne vibration levels from speakers that would be used at the proposed music festival is not available. For the purposes of this analysis, assuming a relatively-high groundborne vibration level equivalent to a sonic pile driver operating under typical conditions of 93 VdB at 25 feet, at a distance of 95 feet, the vibration level would be approximately 81.4 VdB, which would exceed the significance threshold of 72 VdB at vibration-sensitive land uses. In the absence of specific data, the analytical assumption of using a groundborne vibration level equivalent to a sonic pile driver is anticipated to provide a reasonably conservative approach as sonic pile drivers represent equipment with the highest non-impact vibration level according to the FTA (2018) *Transit Noise and Vibration Impact Assessment Manual*. Therefore, it is determined that groundborne vibration and groundborne noise impacts from the music festival would be potentially significant.

Ground consisting of beach sand would have a dampening effect on groundborne vibration. Thus, increasing the separation distance between the speakers and vibration-sensitive land uses would reduce the vibration levels. **Mitigation Measure NOI-1**, which maximizes the separation distance between the speakers and vibration-sensitive land uses, would be required to reduce the groundborne vibration and groundborne noise levels. At a distance of 475 feet, as specified in **Mitigation Measure NOI-1**, the vibration level would be reduced to approximately 67.4 VdB, given the above assumptions, which suggests impacts could be reduced to less than significant. Nonetheless, since data regarding specific groundborne vibration levels from speakers that would be used at the proposed music festival is not available, and since it would not be feasible to locate speakers further away from the sensitive receptors (towards the ocean) because this would impede beyond the mean high tide line and the City does not have any jurisdiction beyond the mean high tide line, this impact is conservatively determined to be significant and unavoidable. No additional feasible mitigation measures are available.

TABLE 3.4-7
OFFSITE TRAFFIC NOISE IMPACTS – EXISTING PLUS PROJECT CONDITIONS

		CNEL (dBA) at Referenced Distances from Roadway[a]		
Roadway Segment	**Adjacent Noise Sensitive Land Uses**	**Existing**	**Existing + Project**	**Difference[b]**
SR-1 between Seapoint Street & Beach Boulevard	Residential/Commercial	71.1	71.6	0.5
SR-1 north of Seapoint Street	Open Space	71.4	71.9	0.5
Adams Avenue between Main Street & Santa Ana River	Residential/Commercial	72.8	73.2	0.5
Hamilton Avenue between Newland Street & Santa Ana River	Residential/Commercial/Educational	74.8	75.2	0.5
Beach Boulevard between SR-1 & Indianapolis Avenue	Residential/Commercial	74.3	74.7	0.5
Beach Boulevard between Indianapolis Avenue & Yorktown Avenue	Residential/Commercial	75.1	75.5	0.5
Beach Boulevard between Yorktown Avenue & Ellis Avenue	Commercial	75.3	75.7	0.5
Beach Boulevard north of Ellis Avenue	Residential/Commercial	76.1	76.5	0.5
SR-1 between Beach Boulevard & Brookhurst Street	Residential/Open Space/Industrial	73.3	73.8	0.5
SR-1 between East City Limit & Brookhurst Street	Open Space/Industrial	73.0	73.5	0.5
Newland Street between SR-1 & Indianapolis Avenue	Residential/Industrial	70.4	70.8	0.5
Newland Street between Indianapolis Avenue & Yorktown Avenue	Residential	72.0	72.5	0.5
Newland Street between Yorktown Avenue & Ellis Avenue	Residential	72.6	73.0	0.5
Magnolia Street between SR-1 & Atlanta Avenue	Open Space/ Residential/Educational	70.6	71.0	0.5
Magnolia Street between Atlanta Avenue & Adams Avenue	Residential/Commercial	75.6	76.1	0.5
Magnolia Street between Adams Avenue & Ellis Avenue	Residential/Commercial	74.0	74.4	0.5
Brookhurst Street between SR-1 & Hamilton Avenue	Open Space/Residential/Industrial/Commercial	73.0	73.5	0.5
Bushard Street between Brookhurst Avenue & Indianapolis Avenue	Residential/Commercial	69.3	69.7	0.5
Bushard Street between Indianapolis Avenue & Ellis Avenue	Residential/Commercial	71.7	72.2	0.5
Brookhurst Street between Atlanta Avenue & Adams Avenue	Residential/Commercial	74.3	74.8	0.5
Brookhurst Street between Adams Avenue & Ellis Avenue	Residential/Commercial	75.3	75.8	0.5
Main Street between Orange Avenue & Adams Avenue	Residential/Commercial/Open Space	64.2	64.6	0.5

Roadway Segment	Adjacent Noise Sensitive Land Uses	CNEL (dBA) at Referenced Distances from Roadway[a]		
		Existing	Existing + Project	Difference[b]
Main Street between Adams Avenue & Ellis Avenue	Residential/Commercial/Educational	68.5	68.9	0.5
Goldenwest Street between SR-1 & Yorktown Avenue	Residential/Industrial/Educational	72.3	72.8	0.5
Goldenwest Street between Yorktown Avenue & Ellis Avenue	Residential/Commercial	76.7	77.2	0.5
Goldenwest Street north of Ellis Avenue	Residential/Open Space	76.1	76.6	0.5

NOTES: Differences may not add up due to rounding.

a. Traffic noise is estimated at a distance of 30 feet from roadway.
b. Differences may not add up due to rounding.

SOURCE: **Appendix F**, of this Draft EIR; Fehr & Peers 2023

TABLE 3.4-8
MITIGATED MUSIC FESTIVAL NOISE LEVELS

Receptor Location	Existing Ambient Noise Levels, dBA (L_{eq})	Speaker Noise Only dBA (L_{eq})[a,b]	Crowd Noise Only, dBA (L_{eq})[c]	Combined Speaker + Crowd Sound, dBA (L_{eq})[a,b,c]	Ambient + Project Noise Levels, dBA (L_{eq})	Significance Threshold	Exceedance over Significance Threshold	Significant Impact?
Speakers Hoisted Above (e.g., Stage, Scaffolding, Poles)								
1st Floor	55.0	63.8	59.6	65.2	65.6	60.0	5.6	Yes
2nd Floor	55.0	63.8	59.6	65.2	65.6	60.0	5.6	Yes
Speakers Placed at Ground Level								
1st Floor	55.0	58.8	59.6	62.2	63.0	60.0	3.0	Yes
2nd Floor	55.0	63.8	59.6	65.2	65.6	60.0	5.6	Yes

NOTES:

a. World Health Organization recommends a limit of 100 dB for outdoor concerts and festivals. A reference noise level of 100 dBA at 5 feet was used: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5187664/.
b. A 5 dBA attenuation factor was applied to account for speaker directivity facing away from receptors. Additionally, when placed on ground level an additional 5 dBA reduction was applied to the 1st floor receptors to factor in the sound wall barrier.
c. The analysis assumes operation of 10 speakers at once at varying distances from the sensitive receptor and assumes 40,000 participants evenly spread across Concert Area A, which is designated as a zone for the music festival.

SOURCE: **Appendix F**, of this Draft EIR

Mitigation Measures

Significance before Mitigation: Potentially Significant.

Mitigation: Implement Mitigation Measure NOI-1, described above in Impact 3.4-1.

Resulting Level of Significance:

Potential measures to reduce vibration impacts include the installation of a wave barrier, which is typically a trench or a thin wall made of sheet piles installed in the ground (essentially a subterranean sound barrier to reduce noise). However, wave barriers must

be very deep and long to be effective and are not considered feasible for temporary applications, such as the proposed project (Caltrans 2020). Per the Caltrans Transportation and Construction Vibration Guidance Manual, the wave barrier would need to be at least two-thirds of the seismic wavelength and the length of the barrier must be at least one wavelength (typical wavelength can be up to 500 feet). In addition, constructing a wave barrier to reduce temporary vibration impacts would, in and of itself, generate groundborne vibration from the excavation equipment. Further, it would not be feasible to locate speakers further away from the sensitive receptors (towards the ocean) because this would impede beyond the mean high tide line and the City does not have any jurisdiction beyond the mean high tide line. Project-specific impacts regarding groundborne vibration or groundborne noise levels would be significant and unavoidable and there are no additional feasible mitigation measures available.

3.5 Transportation

This section describes and evaluates potential transportation impacts that could result from implementation of the Project.

As discussed in the Initial Study, **Appendix B**, of this Draft EIR, potential impacts related to a conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities, and substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) were found to have no impact and are not addressed further in this Draft EIR.

Comments received in response to the Notice of Preparation (NOP) for the Draft EIR can be found in **Appendix A**, of this Draft EIR. The transportation-related comments in response to the NOP included comments regarding Project vehicle miles traveled (VMT) and encouraging increased transit use to reduce congestion/VMT.

3.5.1 Environmental Setting

3.5.1.1 Existing Transportation System

Regional travel routes through and adjacent to the City of Huntington Beach are provided by Interstate 405 (I-405) generally along the northern boundary of the City, State Route 1 (SR-1) generally aligned northwest/southeast along the coastline, and State Route 55 (SR-55) which is generally north/south.

The event area for the Pacific Airshow (Airshow) is accessible by the grid-like roadway network within the City of Huntington Beach (City). Per the City's Circulation Element of the General Plan (2017), the primary local corridors connecting to the Airshow are as follows:

- Pacific Coast Highway (SR-1): SR-1 is a State-owned facility along the California Coast. Within the City of Huntington Beach, SR-1 provides regional and local access. SR-1 is generally a 6-lane divided roadway with a raised center median and on-street parking. Pedestrian access is provided by a sidewalk on the inland side between Goldenwest Street and Beach Boulevard and on both (inland and coastal) sides southeast of 11th Street. Segments of bike lane south of 7th Street provides access for bicyclists on both sides of SR-1, and a multiuse trail between Warner Ave and the Santa Ana River between SR-1 and the coast facilitates beach access for bicyclists and pedestrians.
- Beach Boulevard (SR-39): SR-39 is a State-owned facility classified as a Smart Street Arterial[1] that is a 6 to 8 lane roadway generally with sidewalks on both sides and some on-street parking near SR-1. SR-39 terminates at its intersection with SR-1 where it provides access to the Huntington City Beach and State Beach public parking lots.
- Newland Street: Newland Street is classified as a Secondary Arterial and is generally 4-lane undivided with a sidewalk and class II bike lane throughout, with a gap in sidewalk connectivity on the west side between Hamilton Avenue and Biscayne Drive. Near

[1] Designated by the County of Orange Master Plan or Arterial Highways (MPAH).

Huntington State Beach, the generally north/south alignment of Newland Street terminates at the intersection with SR-1 and provides access to the Huntington Beach public parking lot.

- Magnolia Street: Magnolia Street is classified as a Primary Arterial and is generally 4-lane divided with a sidewalk and class II bike lane throughout. Near Huntington State Beach, Magnolia Street terminates at the intersection with SR-1 and provides access to the Huntington State Beach public parking lot.
- Brookhurst Street: Brookhurst Street is classified as a Major Arterial and is generally 6-lane divided with a sidewalk throughout and a class II bike lane between Bushard Street and SR-1. Brookhurst Street terminates at the intersection with SR-1, providing access to the Huntington State Beach public parking lot. Along the eastern City Limits, Brookhurst Street connects with east-west roadways across the Santa Ana River such as Hamilton Avenue and Adams Avenue.
- Hamilton Avenue: Hamilton Avenue is classified as a Primary Arterial and is generally 4-lane divided with on-street parking, a sidewalk, and segments of class II bike lanes throughout. Hamilton Avenue traverses the Santa Ana River north of SR-1, connecting the City of Huntington Beach with the cities of Costa Mesa and Newport Beach.
- Adams Avenue: Adams Avenue is classified as a Major Arterial and is generally 6-lane divided with a sidewalk throughout and a class II bike lane between Magnolia Street and Lake Street. Adams Avenue serves as a major throughfare connecting the City of Huntington Beach with areas to the east including Costa Mesa and SR-55.

During the 2023 Airshow, temporary road closures were implemented near Huntington City Beach for travel in the southbound direction along 1st Street between the 200-300 block; Main Street between Olive Avenue and SR-1; and the curb-adjacent lane southbound along SR-1 approaching its intersection with SR-39. Temporary road closures during the Airshow days served to provide staging areas for emergency response personnel, equipment for the Airshow, public displays and street activation (Main Street), and to facilitate safe and efficient movement of vehicles exiting the Huntington Beach public parking lots. *The future Airshows propose no substantial or permanent changes to the existing circulation elements, or temporary road closures, that would affect transit vehicles, autos, bicycles, or pedestrians beyond what has occurred for previous Airshows.*

Designated viewing areas with ticketed access are reserved along the Pier and along Huntington City Beach between the Pier and Beach Boulevard. However, since flight performance takes place at altitude and is observable from a greater distance, participants without purchased tickets may view the Airshow performances outside of the Airshow venue. For simplicity, “visitor” refers to any person who is visiting the City of Huntington Beach as a result of the Airshow, with or without a purchased ticket.

Visitors arriving by car are permitted to park within the Huntington Beach public parking area, where the Airshow organizer coordinates with the City of Huntington Beach to reserve parking spaces dedicated to Airshow attendees. Access to the public parking lots adjacent to the Airshow venue are located along SR-1 at the intersection of 6th Street, 1st Street, Huntington Street, Beach Boulevard, and a right-in-right-out driveway mid-block between Main Street and 1st Street. Additional public parking southeast of the Airshow can be accessed at Newland Street, Magnolia Street, and Brookhurst Street. On-street parking in the general vicinity is allowed except where

temporary restrictions are implemented along SR-1, along with other streets with temporary closures as described above. In addition to on-street options, public parking is available at a number of structures in the downtown area.

On the days of the 2023 Airshow, a high volume of pedestrian and bicyclist activity was observed by Fehr & Peers near the beach. Thousands were observed to walk or bike using the boardwalk and multiuse trails along SR-1. Visitors arriving by car who find a shortage of parking spaces within the public lots or structures are likely to utilize available on-street parking nearby, potentially traveling by foot or bicycle. Residents within walking or bicycling distance of Huntington Beach and visitors with the intent to walk or bicycle as an activity are also likely contributors to non-automobile travel in the area.

Traffic Count Data (2023) Evaluation

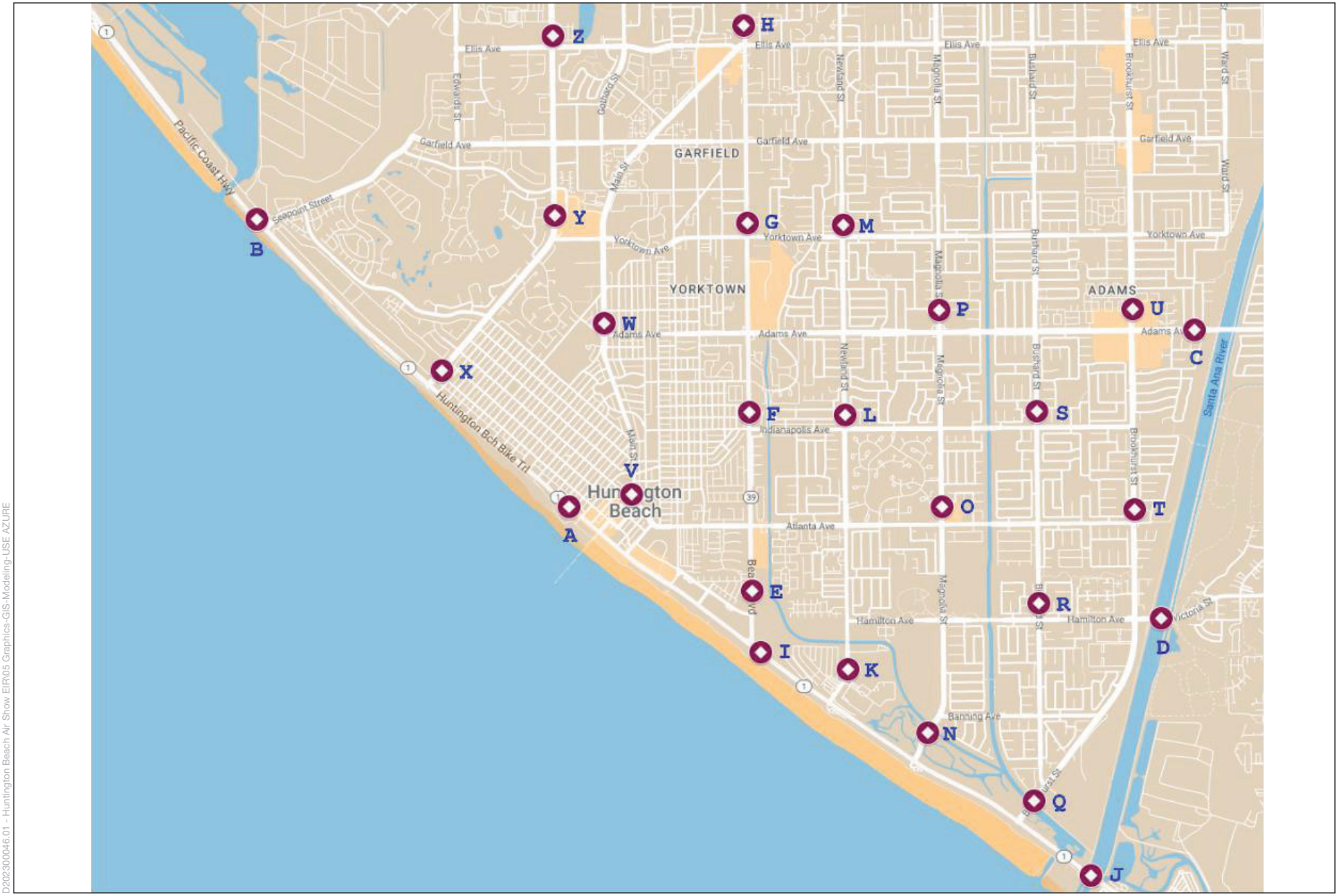
During the 2023 Airshow, traffic volume counts were conducted at 15-minute intervals over a 10-day period (9/22 to 10/1) to span the Airshow and Non-Airshow weekends. Bi-directional traffic volumes were collected and analyzed at 26 locations throughout the City of Huntington Beach as shown in **Figure 3.5-1** and along corridors listed in **Table 3.5-1**.

The traffic count data was organized into analysis periods of 24-hours; 5-hours during the AM and PM; and 2-hour peaks within the AM and PM periods. For the 5-hour and 2-hour peak periods, the peak direction of travel[2] (directional) and the total of both directions of travel (total) were analyzed. **Table 3.5-2** summarizes the time periods and directionality for which the traffic count data was analyzed.

For each analysis period, traffic volumes during the 2023 Airshow days (9/29 - 10/1) were compared to the same days of the week without the Airshow (9/22 – 9/24). The traffic volume data collected prior to and during the 2023 Airshow indicates the magnitude of change in motor vehicle activity as a consequence of the Airshow. The intent of this data is to provide perspective on the change in travel patterns and levels of activity between the 2023 Airshow and the Non-Airshow conditions for informational purposes only. Following the presentation of this informational data, a VMT analysis is provided to support the Draft EIR, which has been prepared to satisfy the procedural and substantive requirements of the California Environmental Quality Act (CEQA).

Table 3.5-3 presents the comparison of total daily (24-hour) traffic for each Friday, Saturday, and Sunday during both 2023 Airshow days and 2023 Non-Airshow days. Although the 2023 Airshow officially began on Friday, September 29, 2023, changes in background (Non-Airshow) travel patterns may also contribute to the difference in the observed traffic volume. An increase in overall traffic volumes was observed during the 2023 Airshow days, however, the direct effects of the 2023 Airshow cannot be isolated as traffic volume counts do not distinguish trip purpose.

[2] Peak Direction is defined as inbound (towards Huntington State Beach) during the AM and outbound (away from Huntington State Beach) in the PM.



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SOURCE: Fehr and Peers, 2024

Pacific Airshow Huntington Beach

Figure 3.5-1
Map of Daily Vehicle Count Locations

ESA

TABLE 3.5-1
LIST OF VEHICLE COUNT LOCATIONS

Location ID	Roadway	From	To
A	SR-1	8th Street	7th Street
B	SR-1	West City Limit	Seapoint Street
C	Adams Avenue	Ranger Lane	Santa Ana River
D	Hamilton Avenue	Brookhurst Street	Santa Ana River
E	SR-39 Boulevard	Sunrise Drive	Pacific View Avenue
F	SR-39 Boulevard	Knoxville Avenue	Joliet Avenue
G	SR-39 Boulevard	Williams Drive	Yorktown Avenue
H	SR-39 Boulevard	Taylor Drive	Ellis Avenue
I	SR-1	SR-39	Newland Street
J	SR-1	East City Limit	Brookhurst Street
K	Newland Street	Edison Drive	Biscayne Drive
L	Newland Street	Vail Drive	Indianapolis Avenue
M	Newland Street	Bridgepoint Drive	Yorktown Avenue
N	Magnolia Street	Banning Avenue	SR-1
O	Magnolia Street	Oceanwood Drive	Atlanta Avenue
P	Magnolia Street	Clipper Drive	Adams Avenue
Q	Brookhurst Street	Bushard Street	SR-1
R	Bushard Street	Waterfront Drive	Hamilton Avenue
S	Bushard Street	Bay Meadow Drive	Indianapolis Avenue
T	Brookhurst Street	Endever Drive	Atlanta Avenue
U	Brookhurst Street	Constitution Drive	Adams Avenue
V	Main Street	Pecan Avenue	Orange Avenue
W	Main Street	Springfield Avenue	Adams Avenue
X	Goldenwest Street	Olive Avenue	SR-1
Y	Goldenwest Street	Summit Drive	Yorktown Avenue
Z	Goldenwest Street	Taylor Drive	Ellis Avenue

SOURCE: Fehr and Peers, 2024

TABLE 3.5-2
2023 TRAFFIC COUNT DATA ANALYSIS PERIODS

Time Period	Directional	Total
24-Hour Daily		x
5-Hour AM (7 AM-noon)	x	x
5-Hour PM (1 PM-6 PM)	x	x
2-Hour Peak AM (varies) [a]	x	x
2-Hour Peak PM (varies) [a]	x	x

NOTES:
a The peak 2-hour period was identified separately for each of the 26 locations, so time varies by location.
SOURCE: Fehr and Peers, 2024

TABLE 3.5-3
24-HOUR DAILY COMPARISON (2023)

	Non-Airshow	Airshow	% Change
Weekday*	571,290	N/A	N/A
Friday	602,804	641,689	6.5%
Saturday	571,206	601,669	5.3%
Sunday	447,588	538,619	12.8%

NOTES:
* Weekday = Average of Monday through Thursday 24-hour volumes
SOURCE: Fehr and Peers, 2024

The percentage change in volume of inbound traffic was consistently higher during the Airshow weekend when compared to the Non-Airshow weekend (**Table 3.5-4**), but more notably so on Saturday and Sunday. When including both directions of travel, the increase of traffic during the 2023 Airshow was less noticeable, indicating a decrease of outbound traffic during the AM. With or without the Airshow, traffic volumes during the weekend AM periods were generally lower than that of the same period on Friday.

TABLE 3.5-4
5-HOUR AM COMPARISON (2023)

	Non-Airshow	Airshow	% Change
Inbound			
Friday	90,194	97,699	8.3%
Saturday	77,263	96,825	25.3%
Sunday	63,121	80,951	28.2%
Total (Inbound and Outbound)			
Friday	185,666	194,991	5.0%
Saturday	170,655	188,345	10.4%
Sunday	147,933	162,695	10.0%

SOURCE: Fehr and Peers, 2024

The percentage increase of outbound traffic during the PM was similar to the percentage increase of inbound traffic observed in the AM (**Table 3.5-5**). When accounting for both directions of travel, the total PM traffic volumes were found to decrease during the Airshow on both Friday and Saturday, with a marked decrease of inbound traffic during the PM.

TABLE 3.5-5
5-HOUR PM COMPARISON (2023)

	Non-Airshow	Airshow	% Change
Inbound			
Friday	117,770	131,104	11.3%
Saturday	101,114	120,246	18.9%
Sunday	90,296	117,157	29.7%
Total (Inbound and Outbound)			
Friday	279,449	273,548	-2.1%
Saturday	270,230	254,186	-5.9%
Sunday	233,277	263,734	13.1%

SOURCE: Fehr and Peers, 2024

Table 3.5-6 presents the comparison of the highest traffic volumes in a 2-hour peak period during the AM, with and without the 2023 Airshow. The changes in AM peak period traffic volumes were more pronounced during the weekend as compared to Friday, with higher than weekday peak period volumes on Saturday.

TABLE 3.5-6
2-HOUR AM COMPARISON (2023)

	Non-Airshow	Airshow	% Change
Inbound			
Friday	42,323	44,790	5.8%
Saturday	38,126	49,935	31.0%
Sunday	33,430	44,302	32.5%
Total (Inbound and Outbound)			
Friday	77,800	82,941	6.6%
Saturday	76,998	91,464	18.8%
Sunday	67,325	80,832	20.1%

SOURCE: Fehr and Peers, 2024

Table 3.5-7 presents the comparison of the highest volumes in a 2-hour peak period during the PM, with and without the 2023 Airshow. Even though the PM peak period traffic volumes on Sunday of the 2023 Airshow were substantially higher than a Non-Airshow Sunday, weekend volumes during the 2023 Airshow were similar to that of a Non-Airshow Friday.

TABLE 3.5-7
2-HOUR PM COMPARISON (2023)

	Non-Airshow	Airshow	% Change
Inbound			
Friday	52,615	60,686	15.3%
Saturday	42,524	53,876	26.7%
Sunday	38,087	55,741	46.4%
Total (Inbound and Outbound)			
Friday	101,027	108,674	7.6%
Saturday	88,062	100,979	14.7%
Sunday	77,898	99,019	27.1%

SOURCE: Fehr and Peers, 2024

In summary, as shown by Tables 3.5-3 through 3.5-7, during the 2023 Airshow, there was a clear increase in inbound traffic volumes in the morning and outbound traffic volumes in the evening relative to a comparable Non-Airshow day. The magnitude of change was most noticeable in a concentrated 2-hour period, with a peak direction (AM inbound, PM outbound) of up to 15% on Friday and approximately 30% to 40% on Saturday/Sunday. When considering both directions of travel (inbound and outbound), the 2-hour peak was less pronounced, with increases of less than 10% on Friday and under 30% on the weekend. The effect of the Airshow, when measured as a percent change, was slightly less when looking at the 5-hour windows compared to the 2-hour peak periods, and the change over a 24-hour period was approximately 5% to 10%.

3.5.1.2 Existing Vehicle Miles Traveled Data

Vehicle-Miles-Traveled for Airshow (2022 data)

The most recently available VMT data is from 2022. The trip characteristics, such as number of trips taken and average trip distance, were collected in the form of anonymized location-based data to calculate the change in daily total VMT within the City of Huntington Beach during the 2022 Airshow. This data is sourced from cell phones and GPS units on individual vehicles. All trips beginning or ending within the City Boundary[3] were first identified for both Airshow and Non-Airshow conditions (2022). Secondly, the average length of these trips was identified. The number of trips and their average length were then multiplied to calculate the total VMT. Calculated VMT for Friday and Saturday[4] of the 2022 Airshow (9/30 & 10/1) were compared to Friday and Saturday prior to (without) the Airshow (9/23 & 9/24) to evaluate the change in daily VMT to and from the City. **Table 3.5-8** presents the percent change in daily VMT for the City of Huntington Beach on Friday and Saturday, both with and without the 2022 Airshow.

3 Including all internal trips, which begin and end within the City boundary.

4 All 2022 Airshow events scheduled on Sunday, 10/2, were canceled due to an oil spill off the Orange County Coast.

TABLE 3.5-8
CHANGE IN VMT DUE TO AIRSHOW (2022)

Day	Non-Airshow (9/23-9/29)	Airshow (9/30-10/1)	Change in VMT	% Change
Mon-Thurs	8,065,000	-	-	-
Friday	8,144,000	8,988,000	844,000	+10%
Saturday	8,152,000	9,815,000	1,663,000	+20%

SOURCE: Fehr and Peers, 2024

As shown in Table 3.5-8, the daily total VMT was 10% higher during the 2022 Airshow on Friday and 20% higher during the Airshow on Saturday, when compared to the weekend prior. This is the net effect on VMT during those days, but it does not mean that all of the trips (and therefore VMT) were related to the Airshow. The daily total VMT observed includes the change in background (Non-Airshow) VMT. For example, residents of Huntington Beach may choose to stay home or take a more circuitous route to avoid traffic near the Airshow. Similarly, local travel patterns can also be affected by factors unrelated to traffic conditions, such as weather. In the case of the 2022 data, the weather was clear for both the weekend prior and the weekend of the event.

Local Context of Vehicle-Miles-Traveled

In addition to the 2022 Airshow data, comparable data was assembled for other key activities and seasons in Huntington Beach to understand the fluctuations in Daily VMT (**Table 3.5-9**: Daily VMT). On a per-day basis, the Airshow generated VMT that is comparable, but slightly higher, than both the AVP volleyball tournament (6% higher) and US Open of Surfing (12% higher). Activity during the days of the Airshow was comparable to weekdays preceding the Thanksgiving holiday.

Another way to compare the Airshow to other special events is to measure the VMT for the duration of the event. Namely, what is the total VMT generated over the sum of all days, which is presented in **Table 3.5-10**.

The total VMT observed within the City Boundary of Huntington Beach during the 2022 Airshow was 28,617,000 over the course of 3 days, which is within the range of VMT from other special events (some higher, some lower). For future events, a music festival may also be hosted with the Airshow as a separately ticketed activity. Based on information provided by the Airshow organizers, a small percentage (5%) of concert attendance during past events (2021) came directly from the Airshow. In estimating the future Airshow VMT, the same amount of shared attendance (5%) was assumed, while the remainder (95%) of future music festival attendance (up to 40,000 per night) was assumed to travel similar distances and in similar sized groups as Airshow attendees.

TABLE 3.5-9
DAILY VMT (2022 DATA)

Event	Average Trip Length (Miles)	VMT/Day	Event
Mon-Thurs Non-Summer (Baseline)	6.75	8,065	100%
Mon-Thurs in Summer[a]	7.58	7,995	-1%
Friday in Summer	7.42	8,801	+9%
Saturday in Summer	9.33	9,132	+13%
July 4th Weekend[b]	8.40	7,906	-2%
US Open of Surfing Weekend[b]	9.13	8,866	+10%
International Surfing Association (ISA) Surfing and Para surfing Weekend2	8.15	8,178	+1%
Association of Volleyball Professionals (AVP) Open Tournament Weekend	8.05	9,324	+16%
Weekdays prior to Thanksgiving (Mon-Wed)	7.20	9,739	+21%
Thanksgiving Weekend	8.60	9,021	+12%
Airshow Weekend	9.15	9,815	+22%

NOTES:

a Summer data include an average of 2 consecutive weeks without special events in the month of July.
b Weekend data for the fourth of July weekend only includes Saturday only for an "apples-to-apples" comparison to the Airshow, which didn't have a Sunday event in 2022 due to oil spill. Events spanning 2 weekends, including the US Open of Surf and ISA Surf, compare the average of both Saturdays.

SOURCE: Streetlight data for trips beginning and/or ending in Huntington Beach

Fehr and Peers, 2024

TABLE 3.5-10
CITYWIDE VMT DURING EVENTS

Special Event	Event Duration (Days)	Total VMT (thousands)	Comparison to Existing Airshow	Comparison to Future Airshow
Existing Airshow[a]	3	28,617	100%	
Future Airshow[b]	5 (with 3 nights concert)	47,148		100%
US Open of Surfing	9	76,886	+169%	+63%
ISA Surf	8	72,144	+152%	+53%
Thanksgiving Week (Monday-Friday)	5	44,609	+56%	-5%
AVP Tournament	2	17,366	-39%	-63%

NOTES:

a As the 2022 Airshow event was cancelled on Sunday, Fehr & Peers created an estimate of what the 2022 VMT would have been for that day based on data collected during the 2023 Airshow. Traffic volumes in 2023 on Sunday were approximately 90% of that on Saturday. Factoring in the trip distances measured in 2022, the VMT on Sunday during the 2022 Airshow is estimated to be 100% of the VMT on Saturday.
b Future Airshow (2024-2034) proposed for five days from Wednesday through Sunday, with a nighttime music festival for up to three days from Friday through Sunday.

SOURCE: Fehr and Peers, 2024

3.5.2 Regulatory Framework

3.5.2.1 Federal

There are no federal regulations, plans, or policies applicable to transportation relevant to the Project.

3.5.2.2 State

Governor's Office of Planning and Research (OPR) Senate Bill 743

The Governor's Office of Planning and Research (OPR) published the Technical Advisory on Evaluating Transportation Impacts in CEQA in 2018. SB 743 (Steinberg, 2013) updated the way transportation impacts are measured in California for new development projects. It required changes to the guidelines implementing CEQA regarding the analysis of transportation impacts in that the criteria for determining the significance of impacts must promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.

To that end, the California Natural Resources Agency has implemented changes to the CEQA Guidelines that identify VMT as the most appropriate metric to evaluate a project's transportation impacts. Automobile delay, as measured by "level of service" and other similar metrics, generally will no longer constitute a significant environmental effect under CEQA.

3.5.2.3 Regional

There are no regional regulations, plans, or policies applicable to transportation relevant to the Project.

3.5.2.4 Local

There are no local regulations, plans, or policies applicable to transportation relevant to the Project.

3.5.3 Thresholds of Significance

According to Appendix G of the State CEQA Guidelines, impacts to transportation would be considered significant if the Project would:

- Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities (determined to be no impact in the IS/NOP);
- Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) (Impact 3.5-1);
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (determined to be no impact in the IS/NOP);
- Result in inadequate emergency access (Impact 3.5-2).

3.5.4 Methodology

3.5.4.1 VMT

Since July 1, 2020, Level of Service (LOS), which is a measurement of the degree of congestion, is no longer allowable in determining a project's effects on transportation under CEQA, and, instead, VMT was adopted as the appropriate metric to evaluate transportation impacts. The City of Huntington Beach follows the recommendations provided by the Office of Planning and Research (OPR) in determining the significance of a project's potential impacts on a project-by-project basis using a VMT methodology. However, those guidelines are only applicable to a long-term change in land use or infrastructure. Neither CEQA Guidelines (Section 15064.3) nor OPR's recommendations[5] identify whether or how VMT should be quantified or evaluated for a seasonal or temporary event. In the absence of any guidance, and given the City has many temporary events of a similar magnitude throughout the year, the City has de-facto accepted that a temporary increase in VMT is less-than-significant.

3.5.5 Impact Analysis

3.5.5.1 VMT Findings

Impact 3.5-1: The project would have a less than significant impact as it relates to VMT.

Future Airshows (Project) are proposed to be held annually in the City within an area similar to past Airshows. In addition to activities scheduled during past Airshows, a variety of new activities may be introduced as a part of the Project, including those listed in Section 2, *Project Description*, of this Draft EIR. Although aspects of localized traffic operation and parking management may have minor differences year-to-year, no major changes in regional travel patterns are anticipated.

Due to its unique setting and location, the City of Huntington Beach experiences seasonal fluctuations in activity (and therefore VMT), with a marked increase around the Thanksgiving Holiday and during the summer season. Additionally, the City hosts a variety of special events, as shown in Tables 3.5-9 and 3.5-10, such as the U.S. Open of Surfing, ISA World Surfing and Para Surfing Games, AVP Open Tournament, Independence Day Celebrations and Parade, and others. The 2022 Airshow temporarily increased VMT by 22% during the event days when compared to that on a Non-Summer weekday. The magnitude of VMT related to the Airshow is within the range of other special events (for example, the US Open of Surfing results in almost double) and the seasonal fluctuations. Accounting for the expanded programming of Future Airshows, total VMT related to the Project is expected to remain in range of other special events and seasonal fluctuations. In the absence of any OPR guidance, it is reasonable to conclude that if there is a VMT increase, then the Project will create an impact, but given the City has many short-term events of similar magnitude throughout the year, the City has de-facto accepted that a temporary increase in VMT is less-than-significant.

[5] OPR's Technical Advisory on Evaluating Transportation Impacts in CEQA, December 2018.

The Airshow results in more VMT than the comparable days on the prior weekend. However, it would result in less-than-significant impact to VMT due to its temporary nature, as it occurs only a few days of the year, and the magnitude falls within the range of fluctuations due to seasonal effects and special events over the course of the year.

Mitigation Measures

Significance before Mitigation: Less than Significant Impact

Mitigation: None required.

Resulting Level of Significance: Less than Significant.

3.5.5.2 Emergency Access

Impact 3.5-2: The project would have a significant and unavoidable impact as a result inadequate emergency access.

The Project would not alter the transportation network to permanently block or reduce access to Huntington Beach or to any major roadways throughout the City, resulting in inadequate emergency access. Further, only a portion of the Pier would be reserved for seated ticketholders and pier ingress and egress would still be provided for both the public and emergency vehicles and personnel. Located throughout the venue are emergency vehicle staging areas and access lanes, first aid stations, and lost and found stations. Access lanes throughout the Project Site would be restricted for emergency vehicles and personnel throughout the Airshow. In addition to foot and motor patrols provided by the City of Huntington Beach Police Department (HBPD) during the event days, private security would also be provided by the Applicant. The private security company would coordinate crowd control, internal security, venue safety, and emergency evacuation in coordination with the HBPD. In addition, HBPD motor officers and parking control officers would be deployed to maintain traffic flow along Pacific Coast Highway and to enforce parking restrictions in the vicinity. Fire and medical services would be provided by the Huntington Beach Fire Department (HBFD). Therefore, adequate emergency access would be provided to the Airshow during.

Mitigation Measures

Significance before Mitigation: Potentially Significant.

Mitigation: None required.

Resulting Level of Significance: Less than Significant.

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3.6 Tribal Cultural Resources

This section evaluates potential impacts on tribal cultural resources. The analysis is based on a Sacred Lands File (SLF) search conducted by the California Native American Heritage Commission (NAHC) and consultations between the City and Native American tribes pursuant to Assembly Bill (AB) 52. Native American consultation documentation related to AB 52 consultations is provided in **Appendix G,** of this Draft EIR.

3.6.1 Environmental Setting

3.6.1.1 Existing Conditions

Project Site

The Project is located in the City of Huntington Beach, which is in coastal Orange County in Southern California. The Show Center Area is the location where primary on-the-ground events and activities of the Airshow take place. The Airshow Performance Area, the primary area for civilian and military aircraft flybys and aerial acrobatics, is located adjacent to the Show Center Area over the Pacific Ocean with an east-west length of approximately 3,000 feet from the shoreline and a north–south length of approximately 12,000 feet. The Show Center Area and Airshow Performance Area collectively comprise of the Project Site. The Show Center Area consists of the beach, the Huntington Beach Pier landward of the State Lands Commission mean high tide line, parking lots, commercial/restaurant uses, bicycle and walking trails along Pacific Coast Highway. Land uses surrounding the Show Center Area comprise of commercial/restaurant uses, hotel uses, parking lots, bicycle and walking trails, Pacific Coast Highway, and the beach.

3.6.1.2 Ethnographic Setting

The Project Site is situated within territory occupied by the Juaneño and Gabrielino. Ethnographic information on these two groups is provided below.

Juaneño

The Juaneño spoke a language belonging to the Cupan group of the Tackic subfamily of the Uto-Aztecan language family. The Juaneño people were so called because of their association with Mission San Juan Capistrano, although some contemporary Juaneño identify themselves by the indigenous term *Acjachemen*. The Juaneño were linguistically and culturally related to the neighboring Luiseño (with whom they are often grouped; see Bean and Shipek 1978), Cahuilla, and Cupeño. Juaneño territory extended from just above Aliso Creek in the north to San Onofre Canyon in the south and inland from the Pacific Ocean to Santiago Peak and the ridges above Lake Elsinore (Bean and Shipek 1978).

The Juaneño lived in sedentary autonomous villages located in diverse ecological zones. Each settlement claimed specific fishing and collecting regions. Typically, villages were located in valley bottoms, along coastal strands and streams, and near mountain foothills. Villages were usually sheltered in coves or canyons, on the side of slopes near water and in good defensive spots. Trails, hunting sites, temporary hunting camps, quarry sites and ceremonial and gaming locations were communally owned, while houses, gardens, tools, ritual equipment, and

ornamentation were owned by individuals or families (Bean and Shipek 1978). Most groups had fishing and gathering sites along the coast that they visited annually from January to March when inland supplies were scarce. October to November was acorn-gathering time, when most of the village would settle in the mountain oak groves. Houses were conical in form, partially subterranean, covered with thatch, reeds, brush, or bark. Sweathouses were round and earth covered. Each village was enclosed with a circular fence and had a communal ceremonial structure at the center.

Beginning with the Mission Period, Native Americans suffered severe depopulation and their traditional culture was radically altered. Nonetheless, Juaneño descendants still reside in the greater Los Angeles and Orange County areas and maintain an active interest in their heritage resources. The Juaneño Band of Mission Indians, *Acjachemen* Nation, is recognized by the State of California as a Native American tribe.

Gabrielino

The Project Site is also located in a region traditionally occupied by the Takic-speaking Gabrielino Indians. The term "Gabrielino" is a general term that refers to those Native Americans who were administered by the Spanish at the Mission San Gabriel Arcángel. Prior to European colonization, the Gabrielino occupied a diverse area that included: the watersheds of the Los Angeles, San Gabriel, and Santa Ana rivers; the Los Angeles basin; and the islands of San Clemente, San Nicolas, and Santa Catalina (Kroeber 1925). Their neighbors included the Chumash and Tataviam to the north, the Juañeno to the south, and the Serrano and Cahuilla to the east. The Gabrielino are reported to have been second only to the Chumash in terms of population size and regional influence (Bean and Smith 1978). The Gabrielino language was part of the Takic branch of the Uto-Aztecan language family.

The Gabrielino Indians were hunter-gatherers and lived in permanent communities located near the presence of a stable food supply. Subsistence consisted of hunting, fishing, and gathering. Small terrestrial game was hunted with deadfalls, rabbit drives, and by burning undergrowth, while larger game such as deer were hunted using bows and arrows. Fish were taken by hook and line, nets, traps, spears, and poison (Bean and Smith 1978). The primary plant resources were the acorn, gathered in the fall and processed in mortars and pestles, and various seeds that were harvested in late spring and summer and ground with manos and metates. The seeds included chia and other sages, various grasses, and islay or holly-leafed cherry. Community populations generally ranged from 50 to 100 inhabitants, although larger settlements may have existed. The Gabrielino are estimated to have had a population numbering around 5,000 in the pre-contact period (Kroeber 1925).

The Late Prehistoric Period, spanning from approximately 1,500 years BP to the mission era, is the period associated with the florescence of the Gabrielino (Wallace 1955). Coming ashore near Malibu Lagoon or Mugu Lagoon in October of 1542, Juan Rodriguez Cabrillo was the first European to make contact with the Gabrielino Indians. The Gabrielino are reported to have been second only to their Chumash neighbors in terms of population size, regional influence, and degree of sedentism (Bean and Smith 1978). Coming ashore on Santa Catalina Island in October 1542, Juan Rodriguez Cabrillo was the first European explorer to make contact with the

Gabrielino; and, later the 1769 expedition of Gaspar de Portolá also passed through Gabrielino territory (Bean and Smith 1978:540). Similar to the Juaneño, Gabrielino descendants also still reside in the greater Los Angeles and Orange County areas and maintain an active interest in their heritage resources.

3.6.1.3 Sacred Lands File Search

The NAHC maintains a confidential SLF, which contains sites of traditional, cultural, or religious value to the Native American community. On February 6, 2024, the NAHC was contacted by the City to request a search of the SLF. The NAHC responded on February 27, 2024, indicating the SLF search resulted in positive findings and the Juaneño Band of Mission Indians Acjachemen Nation – Belardes should be contacted for more information.

3.6.1.4 Assembly Bill 52 Tribal Consultation

The City submitted notification and request to consult letters to twenty-two individuals and organizations on March 11, 2024, pursuant to AB 52. In particular, AB 52 letters were sent via certified mail to the following California Native American tribes and individuals:

- Ralph Goff, Chairperson, Campo Band of Diegueno Mission Indians
- Robert Pinto, Chairperson, Ewiiaapaayp Band of Kumeyaay Indians
- Michael Garcia, Vice Chairperson, Ewiiaapaayp Band of Kumeyaay Indians
- Christina Swindall Martinez, Secretary, Gabrieleno Band of Mission Indians - Kizh Nation
- Andrew Salas, Chairperson, Gabrieleno Band of Mission Indians - Kizh Nation
- Anthony Morales, Chairperson, Gabrieleno/Tongva San Gabriel Band of Mission Indians
- Sandonne Goad, Chairperson, Gabrielino /Tongva Nation
- Robert Dorame, Chairperson, Gabrielino Tongva Indians of California Tribal Council
- Christina Conley, Cultural Resource Administrator, Gabrielino Tongva Indians of California Tribal Council
- Charles Alvarez, Chairperson, Gabrielino-Tongva Tribe
- Sam Dunlap, Cultural Resource Director, Gabrielino-Tongva Tribe
- Joyce Perry, Cultural Resource Director, Juaneno Band of Mission Indians Acjachemen Nation - Belardes
- Heidi Lucero, Chairperson, THPO, Juaneno Band of Mission Indians Acjachemen Nation 84A
- Gwendolyn Parada, Chairperson, La Posta Band of Diegueno Mission Indians
- Angela Elliott Santos, Chairperson, Manzanita Band of Kumeyaay Nation
- Michael Linton, Chairperson, Mesa Grande Band of Diegueno Mission Indians
- Shasta Gaughen, Tribal Historic Preservation Officer, Pala Band of Mission Indians
- Alexis Wallick, Assistant THPO, Pala Band of Mission Indians

- Christopher Nejo, Legal Analyst/Researcher, Pala Band of Mission Indians
- Lovina Redner, Tribal Chair, Santa Rosa Band of Cahuilla Indians
- Joseph Ontiveros, Tribal Historic Preservation Officer, Soboba Band of Luiseno Indians
- Jessica Valdez, Cultural Resource Specialist, Soboba Band of Luiseno Indians

The City received an email response on March 12, 2024, from the Gabrielino Tongva Indians of California stating they have no concerns for the Project with regard to tribal cultural resources. The City has not received any other responses from the Native American community.

The AB 52 Native American notification letters and the Gabrielino Tongva Indians of California email response transmittal are provided in **Appendix G,** of this Draft EIR.

3.6.2 Regulatory Framework

The following describes the primary State regulatory requirement (AB52) regarding tribal cultural resources.

3.6.2.1 Federal

There are no federal regulations, plans, or policies applicable to tribal cultural resources relevant to the Project.

3.6.2.2 State

Assembly Bill 52

AB 52 was approved on September 25, 2014. The act amended California Public Resources Code (PRC) Section 5097.94, and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3. The primary intent of AB 52 is to involve California Native American Tribes early in the environmental review process and to establish a category of resources related to Native Americans, known as tribal cultural resources, that require consideration under CEQA. PRC Section 21074(a)(1) and (2) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe" that are either included or determined to be eligible for inclusion in the California Register or included in a local register of historical resources, or a resource that is determined to be a tribal cultural resource by a lead agency, in its discretion and supported by substantial evidence. A tribal cultural resource is further defined by PRC Section 20174(b) as a cultural landscape that meets the criteria of subdivision (a) to the extent that the landscape is geographically defined in terms of the size and scope of the landscape. PRC Section 20174(c) provides that a historical resource described in Section 21084.1, a unique archaeological resource as defined in Section 21083.2(g), or a "nonunique archaeological resource" as defined in Section 21083.2(h) may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

PRC Section 21080.3.1 requires that, within 14 days of a lead agency determining that an application for a project is complete, or a decision by a public agency to undertake a project, the lead agency provide formal notification to the designated contact, or a tribal representative, of

California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the project (as defined in PRC Section 21073) and who have requested in writing to be informed by the lead agency of projects within their geographic area of concern. Tribes interested in consultation must respond in writing within 30 days from receipt of the lead agency's formal notification and the lead agency must begin consultation within 30 days of receiving the tribe's request for consultation.

PRC Section 21080.3.2(a) identifies the following as potential consultation discussion topics: the type of environmental review necessary; the significance of tribal cultural resources; the significance of the project's impacts on the tribal cultural resources; project alternatives or appropriate measures for preservation; and mitigation measures. Consultation is considered concluded when either (1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource, or (2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached.

In addition to other CEQA provisions, the lead agency may certify an EIR or adopt a mitigated negative declaration for a project with a significant impact on an identified tribal cultural resource, only if a California Native American tribe has requested consultation pursuant to PRC Section 21080.3.1 and has failed to provide comments to the lead agency, or requested a consultation but failed to engage in the consultation process, or the consultation process occurred and was concluded as described above, or if the California Native American tribe did not request consultation within 30 days.

PRC Section 21082.3(c)(1) states that any information, including, but not limited to, the location, description, and use of the tribal cultural resources, that is submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public without the prior consent of the tribe that provided the information. If the lead agency publishes any information submitted by a California Native American tribe during the consultation or environmental review process, that information shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public.

Confidentiality does not apply to data or information that are, or become, publicly available, are already in lawful possession of the applicant before the provision of the information by the California Native American tribe, are independently developed by the applicant or the applicant's agents, or are lawfully obtained by the applicant from a third party that is not the lead agency, a California Native American tribe, or another public agency.

3.6.2.3 Regional

There are no regional regulations, plans, or policies applicable to tribal cultural resources relevant to the Project.

3.6.2.4 Local

There are no local regulations, plans, or policies applicable to tribal cultural resources relevant to the Project.

3.6.3 Thresholds of Significance

The significance thresholds below are derived from the Environmental Checklist questions in Appendix G of the CEQA Guidelines. Accordingly, a significant impact to tribal cultural resources would occur if:

- The Project would cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
  i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or
  ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe (Impact 3.6-1).

3.6.4 Methodology

The analysis is based on a SLF search conducted by the NAHC and consultations between the City and Native American tribes pursuant to AB 52. Specifically, the City submitted notification and request to consult letters to Native American individuals and organizations and conducted follow-up Native American consultation.

3.6.5 Impact Analysis

3.6.5.1 Tribal Cultural Resources

Impact 3.6-1-1: The Project would not result in a significant tribal cultural resources impact because it would not cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k); or

ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

The City submitted notification and request to consult letters to twenty-two individuals and organizations on March 11, 2024, pursuant to AB 52. On March 12, 2024 the City received an email from Christina Conley, Cultural Resource Administrator Under Tribal Chair, Gabrielino Tongva Indians of California, in response to their AB 52 notification and request to consult letter. In the email, Christina Conley stated the Tribe had "no concerns" for the Project. The City has not received any other responses from the Native American community, including the Juañeno Band of Mission Indians Acjachemen Nation – Belardes, who was identified by the NAHC as potentially having additional information related to the positive result of the SLF search conducted for the Project.

As a result of the City's AB 52 consultation efforts, no known tribal cultural resources have been identified within the Project Site or vicinity. Therefore, the Project would not cause an impact to tribal cultural resources.

Mitigation Measures

Significance before Mitigation: Potentially Significant.

Mitigation: None required.

Resulting Level of Significance: No Impact.

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3.7 Cumulative Analysis

The California Environmental Quality Act (CEQA) requires that a Draft EIR assess the cumulative impacts of a project with respect to past, present, and reasonably foreseeable future projects. CEQA Guidelines Section 15355, Cumulative Impacts, specifically provides the following definition of cumulative impacts:

> *"Cumulative impacts" refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.*
>
> *(a) The individual effects may be changes resulting from a single project or a number of separate projects.*
>
> *(b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.*

CEQA Guidelines Section 15130(a), Discussion of Cumulative Impacts, further addresses the analysis of cumulative impacts:

> *"(1) As defined in Section 15355, a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. An EIR should not discuss impacts which do not result in part from the project evaluated in the EIR;*
>
> *(2) If the combined cumulative impact associated with the project's incremental effect and the effects of other projects is not significant, the EIR should briefly indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR. A lead agency shall identify facts and analysis supporting the lead agency's conclusion that the cumulative impact is less than significant.*
>
> *(3) An EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. The lead agency shall identify facts and analysis supporting its conclusion that the contribution will be rendered less than cumulatively considerable."*

In summary, if the combined cumulative impact associated with the project's incremental effect and the effects of other projects is significant, the EIR must determine whether the project's incremental contribution is cumulatively considerable. If the project's incremental contribution is not cumulatively considerable, the cumulative impact is considered "not significant" pursuant to CEQA Guidelines 15130(a)(3).

Pursuant to CEQA Guidelines Section 15130(b), the discussion of cumulative impacts shall be guided by the standards of practicality and reasonableness, and should include the following elements:

> *1. Either:*
>
> *A. A list of past, present and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the Agency, or*
>
> *B. A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projects may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency.*
>
> *2. When utilizing a list, as suggested in paragraph (1) of subdivision (b), factors to consider when determining whether to include a related project should include the nature of each environmental resource being examined, the location of the project and its type. Location may be important, for example, when water quality impacts are at issue since projects outside the watershed would probably not contribute to a cumulative effect. Project type may be important, for example, when the impact is specialized, such as a particular air pollutant or mode of traffic.*
>
> *3. Lead agencies should define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used.*
>
> *4. A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available; and*
>
> *5. A reasonable analysis of the cumulative impacts of the relevant projects, including examination of reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.*

Because the Airshow does not propose construction of new permanent development, and further, because it is a temporary event, the nature of this Project does not allow for the same manner of cumulative assessment as projects that lead to a permanent change or construction-related impacts that could combine with other projects spatially and/or temporarily, such as land use or transportation projects. Therefore, consistent with CEQA Guidelines Section 15130(a)(2), the following discussion provides facts and analyses supporting the Lead Agency's conclusion that the combined cumulative impacts associated with the Airshow project's incremental effect and the effects of other projects is not significant and is not discussed in detail in this Draft EIR. As part of the facts and analyses supporting the use of CEQA Guidelines Section 15130(a)(2), the City of Huntington Beach prepared a list of past, present, and reasonably future projects that were

considered when making the conclusion that the Project, when considered with other cumulative projects, would not result in a cumulatively considerable contribution to a significant cumulative impact. The list of cumulative projects that were considered is provided in **Table, 3.7-1**, *Related Projects List.* Also, because there is no new permanent development, the Project would not result in an increase in growth projections.

TABLE 3.7-1
RELATED PROJECT LIST

No.	Project Name/Location	Description	Status
1.	Huntington's on the Pier (21 Main Street and 22 Main Street on the Pier)	Conversion of a former fishing supply building into a new restaurant and bar, with interior modifications and an addition of 530 sf to the existing 820 square-foot building, and conversion of a 409 square-foot existing public restroom into a public restroom building with employee changing room/restroom/locker area and restaurant storage areas.	Under review with construction anticipated to begin in 2025.
2.	414 Main Mixed Use	A four-story mixed use project consisting of 5,000 sf of retail space, 20 residential condominium units, with 46 on-site parking spaces mostly provided in a subterranean parking garage.	Under construction with occupancy late 2024.
3.	410 Main Mixed Use	Construct an approximately 42,000 square-foot mixed use building with 28 condominium residential units, 8,000 sf of ground floor retail space, and a subterranean parking garage.	Under review.
4.	Magnolia Tank Farm (21845 Magnolia Street)	Construct a 211,000 square-foot lodge with 175 guest rooms and guesthouse with 40 rooms, 19,000 sf of retail, 250 for sale dwelling units (at 15 dwelling units per acre), 2.8 acres of coastal conservation area to provide a buffer for the adjacent wetlands, and 2.8 acres of park.	Under review.
5.	AMG Residential (19431 and 19471 Beach Blvd)	Construct three residential buildings, each containing 7 stories of residential units, totaling in 222 units and 141,440 sf.	Under review.
6.	Seacliff at Huntington Beach Inspired Senior Living Facility (2120 Main Street)	Construct a 3-story, approximately 281,000 square-foot State-licensed assisted living and memory care facility with 226 guest rooms and a subterranean parking garage on an approximately 6.57-acre portion of the approximately 11.29-acre site.	Under construction through late 2025.
7.	ASCON Site (Southwest corner of Magnolia Street at Hamilton Avenue)	On-going remedial clean-up activities; no surface development expected to occur and the site will ultimately become permanent open space.	Approved and Ongoing
8.	Pacific Coast Highway (PCH) Caltrans Improvement Project	Construction of a continuous 10-mile long bicycle lane improvement project in both directions and associated safety features. Caltrans agreed, in conversation with the City, to identify the City's special events (i.e., including, but not limited to, the Pacific Airshow, U.S. Surf Open, AVP Volleyball, etc.) as "non-construction dates" for the PCH Caltrans Improvement Project. In addition, Caltrans will shut down construction activities between Memorial Day and Labor Day to avoid the busy, summer, beach season. Construction activities will likely begin in 2025 and last through 2026 given the various "non-construction dates."	Approved. Construction not yet started.

NOTES:
sf = square feet

SOURCE: City of Huntington Beach, 2024

For Project-related impacts that result in no impact, the Project cannot combine to create an incremental, cumulatively considerable contribution to a significant cumulative impact. Therefore, consistent with CEQA Guidelines Section 15130(a)(1), "[A]n EIR should not discuss impacts which do not result in part from the project evaluated in the EIR." Accordingly, this cumulative impact analysis does not address impact statements that are determined to result in no impact in either the IS/NOP or the EIR.

If the combined cumulative impact associated with the project's incremental effect and the effects of other projects is not significant, the EIR should briefly indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR, as allowed by CEQA Guidelines Section 15130(a)(2).

For air quality, the approach to the cumulative analysis, as recommended by the South Coast Air Quality Management District (SCAQMD), is different than the approach identified in CEQA Guidelines Section 15130(b). The SCAQMD recommends the cumulative impact analysis focuses on consistency with the current Air Quality Management Plan (AQMP) or assumption that project-specific impacts that exceed project-specific significance thresholds are considered cumulatively considerable. For this analysis, both cumulative impact approaches are provided.

Table 3.7-2, *Airshow Project-Related and Cumulative Impact Conclusions*, provides a summary of the Project-related impact conclusions and cumulative impact conclusions for each threshold evaluated in this Draft EIR, including explanatory notes. Table 3.7-2 only identifies those thresholds carried forward for analysis in the Draft EIR, no matter the conclusion in this Draft EIR. As with this Draft EIR, the Initial Study/Notice of Preparation identifies thresholds that would result in no impact and, therefore, were not carried forward for analysis in the Draft EIR and, similarly, result in no cumulative impact.

3.7.1.1 Air Quality

The geographic area for evaluating the Project's cumulative impacts for air quality is the South Coast Air Basin, which is a distinct geographic subarea within the SCAQMD's jurisdiction and includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the Coachella Valley area in Riverside County. The SCAQMD recommends using two methodologies to assess the cumulative impact of air quality emissions: (1) that a project's consistency with the current AQMP be used to determine its potential cumulative impacts or (2) that project-specific air quality impacts be used to determine the project's potential cumulative impacts to regional air quality.[1]

[1] SCAQMD, *Potential Control Strategies to Address Cumulative Impacts from Air Pollution White Paper*, Appendix D, 1993, page D-3 ("As Lead Agency, the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR … Projects that exceed the Project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.").

TABLE 3.7-2
AIRSHOW PROJECT-RELATED AND CUMULATIVE IMPACT CONCLUSIONS

Impact Statement	Project-Related Impact Conclusion	Cumulative Impact Conclusion	Notes
Air Quality			
Consistency with the Current Air Quality Management Plan.	Not Applicable.	Project's incremental contribution is not cumulatively considerable.`	SCAQMD allows a lead agency to determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project is consistent with the current AQMP (this is not a CEQA Appendix G Threshold for a Project-related impact; Impact 3.1-1 addresses the CEQA Appendix Threshold).
Impact 3.1-1: The Project would result in significant impact if it would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.	Significant and Unavoidable.	Cumulatively considerable contribution to a significant cumulative impact.	SCAQMD recommends that construction or operational Project emissions are considered cumulatively considerable if Project-specific emissions exceed an applicable SCAQMD recommended significance threshold.
Biological Resources			
Impact 3.2-1: The project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	Less than Significant.	Project's incremental contribution is not cumulatively considerable to a significant cumulative impact.	
Impact 3.2-2: The project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	Less than Significant.	Project's incremental contribution is not cumulatively considerable to a significant cumulative impact.	
Hazards and Hazardous Materials			
Impact 3.3-1: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, the project would not result in a safety hazard or excessive noise for people residing or working in the project area.	Less than Significant with Mitigation.	Project's incremental contribution is not cumulatively considerable to a significant cumulative impact.	
Impact 3.3-2: The project could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	Significant and Unavoidable.	Project's incremental contribution is not cumulatively considerable to a significant cumulative impact..	

TABLE 3.7-2
AIRSHOW PROJECT-RELATED AND CUMULATIVE IMPACT CONCLUSIONS

Impact Statement	Project-Related Impact Conclusion	Cumulative Impact Conclusion	Notes
Noise			
Impact 3.4-1 (On-Site Operational Noise): The Project would result in a significant impact from the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Significant and Unavoidable with Mitigation.	Cumulatively considerable contribution to a significant cumulative impact.	
Impact 3.4-1 (Off-Site Traffic Noise): The Project would result in a significant impact from the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Less than Significant.	Project's incremental contribution is not cumulatively considerable to a significant cumulative impact.	
Impact 3.4-2: The Project would not generate excessive groundborne vibration or groundborne noise levels.	Significant and Unavoidable with Mitigation.	Cumulatively considerable contribution to a significant cumulative impact.	
Transportation			
Impact 3.5-1: The project would not conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b) (as it relates to VMT)	Less than Significant.	Project's incremental contribution is not cumulatively considerable.	
Impact 3.5-2: The project would not result in inadequate emergency access.	Less than Significant.	Project's incremental contribution is not cumulatively considerable.	

As discussed in Section 3.1, *Air Quality*, of the Draft EIR, and under Section III.c in the Initial Study, the Project would result in no impact related to the exceedance of significance thresholds for construction emissions. Therefore, no cumulative impacts would occur.

Consistency with Air Quality Management Plan

The SCAQMD recommends assessing a project's cumulative impacts based on whether the project is consistent with the current AQMP. CEQA Guidelines Section 15064(h)(3) provides guidance in determining the significance of cumulative impacts. Specifically, CEQA Guidelines Section 15064(h)(3) states in part that:

> *"A lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program which provides specific requirements that will avoid or substantially lessen the cumulative problem (e.g., water quality control plan, air quality plan, integrated*

> *waste management plan) within the geographic area in which the project is located. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency …"*

For purposes of the cumulative air quality analysis, the Project's cumulative air quality impacts are determined not to be significant based on its consistency with the SCAQMD's adopted 2022 AQMP, as further discussed in Section 3.1, *Air Quality*, and in the Initial Study (**Appendix B**, of this Draft EIR). As discussed in Section 3.1, *Air Quality*, and in the Initial Study, the Project's effects on population, housing and employment growth would not conflict with the 2020–2045 Regional Transportation Plan/ Sustainable Communities Strategy (RTP/SCS) growth projections, upon which the 2022 AQMP is based. Related projects would also be required to assess consistency with the adopted AQMP transportation control strategies, as well as with population, housing, and employment growth projections in the corresponding RTP/SCS and provide mitigation measures if significant impacts are identified. As discussed in Section III.a in the Initial Study, the Project would not increase the frequency or severity of an existing violation or cause or contribute to new violations for ozone. Therefore, the Project would not conflict with or obstruct implementation of the applicable AQMP. Accordingly, the Project does not provide a cumulatively considerable contribution to a significant air quality impact related to consistency with the AQMP.

Project-Specific Impacts

The SCAQMD CEQA Air Quality Handbook states that the "Handbook is intended to provide local governments, project proponents, and consultants who prepare environmental documents with guidance for analyzing and mitigating air quality impacts of projects." The SCAQMD CEQA Air Quality Handbook also states that "[f]rom an air quality perspective, the impact of a project is determined by examining the types and levels of emissions generated by the project and its impact on factors that affect air quality. As such, projects should be evaluated in terms of air pollution thresholds established by the District." SCAQMD has provided guidance on addressing the cumulative impacts for air quality. as discussed below:

> *"As Lead Agency, the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR … Projects that exceed the Project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."*

The SCAQMD recommends evaluating cumulative impacts for individual projects based on whether the project exceeds the SCAQMD's recommended daily thresholds for project-specific impacts for those pollutants for which the Air Basin is in non-attainment. Thus, the cumulative analysis of air quality impacts follows SCAQMD's guidance such that construction or operational Project emissions would be considered cumulatively considerable if Project-specific emissions exceed an applicable SCAQMD recommended significance threshold.

The City relies on thresholds established by the SCAQMD to assess the Project's cumulative air quality impacts. Regional emissions from a project have the potential to affect the Air Basin as a whole, and, unlike other environmental issues areas, such as biological resources or noise, it is not possible to establish a geographical radius from a specific project site where potential cumulative impacts from regional emissions would be limited. Meteorological factors, such as wind, can disperse pollutants, often times tens of miles downwind from a project site. Therefore, the potential for the Project to result in cumulative impacts from regional emissions (i.e., the Air Basin as a whole) is consistent with accepted and established SCAQMD cumulative impact methodologies.

For Project operations, as discussed in Section 3.1, *Air Quality*, in Impact 3.1-1, the Project would result in an exceedance of significance thresholds for operations due to the additional daily vehicle miles traveled (VMT) resulting from the expanded music festival that would occur during the Project's future Airshows compared to prior Airshows without the music festival. Therefore, cumulative impacts related to operational emissions would be significant. There are no feasible mitigation measures that would reduce operational VOC, NO_X, and CO emissions for vehicular sources to below the significance thresholds. Vehicles would be utilized by Project attendees and employees to future Project Airshow events and the Project has no ability to regulate the personal choices made by future Project attendees and employees who may purchase and use any vehicles legally sold to travel to and from the site. In addition, as stated in Section 3.5, *Transportation*, there are no additional feasible mitigation measures to further reduce Project VMT. Thus, there are no additional feasible mitigation measures that would reduce operational VOC, NO_X, and CO emissions, and the Project would provide a cumulatively considerable contribution to a significant cumulative impact. As with Project-related impacts, cumulative impacts would be significant and unavoidable.

3.7.1.2 Biological Resources

The geographic area for evaluating the Project's cumulative impacts for biological resources is the Show Center Area and the Bolsa Chica Ecological Reserve (BCER). The Project analysis concludes that there would be a potential for impacts to special-status species and wildlife movement corridors. Although no suitable habitat for special-status species occurs within the Show Center Area, and no impacts to special-status species within the Show Center Area would occur, there is a low potential for special-status species within the BCER to be impacted. However, the Project proposes daily directional briefings for aircraft controllers and operators to recommend flight paths that avoid flying over the BCER, as well as other plover and tern protected areas in the area, and annual preactivity surveys and biological monitoring prior to and during the annual Airshow to assess biological resource conditions. As such, Project-related impacts to biological resources may occur within the BSA, but would be considered less than significant. Additionally, the low potential for fuel dumping would be a less than significant impact to wildlife movement corridors. The projects currently identified in Table 3.7-1 occur within existing developed land cover type and do not currently support habitat suitable for special-status species, nor occur within open space available for wildlife movement. Therefore, the Project would not provide a cumulatively considerable contribution to significant biological resources impacts related to sensitive species or wildlife movement.

3.7.1.3 Hazards and Hazardous Materials

The geographic area for evaluating the Project's cumulative impacts for wildlife hazards is the Show Center Area. The Wildlife Hazard Analysis is provided in Section 3.3, *Hazards and Hazardous Materials*, of this Draft EIR, in compliance with the guidelines for a Wildlife Hazard Site Visit (WHSV) as described for in the Protocol for the Conduct and Review of Wildlife Hazard Site Visits, Wildlife Hazard Assessments, and Wildlife Hazard Management Plans (Federal Aviation Administration, Advisory Circular 150/5200-38, August 2018). A wildlife hazard is the potential for an aircraft to have a collision with wildlife (i.e., birds), resulting in a safety hazard for operation of the aircraft; in contrast, Section 3.2, *Biological Resources*, evaluates the impacts of operation of the aircraft on wildlife.

For the cumulative impact analysis associated with FAA-regulated wildlife hazards, the Project would only combine with past, present, or reasonably foreseeable future projects that could result in attracting more wildlife (e.g., a project that would improve or increase wildlife habitat within the Project footprint), thus potentially increasing the safety hazard associated with an aircraft-wildlife collision. Table 3.7-1, Cumulative Project List, does not include any project that could result in increased numbers of hazardous wildlife; instead, the projects include residential, mixed-use, and restaurant uses; remediation activities; and the provision of bike lanes on the Pacific Coast Highway. Similarly, the Project (i.e., the Airshow, Music Festival, and associated activities) would not attract more wildlife as compared to existing conditions.

Other components of cumulative projects that could potentially attract birds, even if the Project does not include habitat creation or restoration, would be exposed trash receptacles, landscaping, or engineered water features such as ponds. However, all trash receptacles maintained by the City or its designated refuse collector contain lids, and Section 8.21.010, of the City's Municipal Code, further requires that residential or commercial trash containers "shall not exceed the lowest top edge thereof and still allow the lid thereof to be completely closed." Sizable, permanent water features of the type that would attract larger, more hazardous birds such as herons or egrets are not currently planned. Smaller birds (such as songbirds) may forage, roost, or nest in ornamental shrubs or trees associated with residential and mixed-use development, but would pose far less risk to aircraft than larger raptors and wading birds, which would not be attracted to the cumulative project types. Cumulatively, the overall change in wildlife occurrences compared to existing conditions would be negligible.

For these reasons, while the Project would create an increased wildlife hazard due to the introduction of additional aircraft in the area, over a temporary period of time, there is no significant cumulative impact to which the Project's incremental contribution could be cumulatively considerable.

The geographic area for evaluating the Project's cumulative impacts for evacuation is the Show Center Area and the primary local corridors connecting to the Airshow which include Pacific Coast Highway (SR-1), Beach Boulevard (SR-39), Newland Street, Magnolia Street, Brookhurst Street, Hamilton Avenue, and Adams Avenue. Regarding evacuation from a hazard, there is also no evidence of any cumulative activities that would occur simultaneously. During the Airshow, no other City sponsored activity would occur, as permission would be given to only one such

specifical/specific event such as the Airshow at any time. As such, there is no significant cumulative impact to which the Project's incremental contribution could be cumulatively considerable.

3.7.1.4 Noise

As noise is a localized phenomenon and decreases in magnitude as distance from the source increases, the geographic area for evaluating the Project's cumulative impacts for noise includes related projects and ambient growth within 500 feet of the Project. Related projects having a direct line-of-sight to the Project Site could combine with the Project's on-site noise sources to result in cumulatively considerable noise impacts. In addition, the geographic area for off-site cumulative traffic noise includes roadway segments analyzed in Section 3.4, *Noise*, of the Draft EIR. The cumulative impact analysis considers the Project in combination with ambient growth and other development projects (Related Projects) within the vicinity. Based on the information provided by the City on related projects, the Huntington's on the Pier (21 Main Street and 22 Main Street on the Pier) related project would be located within approximately 500 feet of the Project Site. Other related projects identified by the City would be located more than 1,500 feet from the Project Site.

Cumulative Noise

As discussed in Section 3.4, *Noise*, of the Draft EIR, and under Section XIII.a in the Initial Study, the Project would not result in an exceedance of significance thresholds for construction noise. Therefore, the Project does not result in a cumulatively considerable incremental impact, and cumulative impacts related to an exceedance of significance thresholds for construction noise are less than significant.

On-site operational noise associated with the musical festival portion of the Project will be directed toward the water and away from sensitive receptors. However, even with Mitigation Measure NOISE-1, which requires maximizing the distance between the music festival speakers and noise sensitive receptors along Pacific Coast Highway and the use of a temporary noise barrier on the west/northwest side of the music festival area, noise associated with crowds and speakers for the music festival could result in a significant and unavoidable impact. The Huntington's on the Pier (21 Main Street and 22 Main Street on the Pier) related project would generate localized operational noise from the proposed restaurant/bar activities and restaurant guests conversing. However, the operational noise from the Huntington's on the Pier would be anticipated to be substantially below (10 dBA below or more) the noise from the music festival area, crowds and speakers such that it would not add to an audible increase in cumulative noise. Due to the logarithmic nature of the decibel scale, a noise level that is 10 dB below another noise source does not audibly contribute to an increase in the total decibel noise level. Nonetheless, the Project would provide a cumulatively considerable contribution to a significant cumulative impact. As with Project-related impacts, cumulative impacts would be significant and unavoidable.

As shown in Table 3.4-7, *Off-Site Traffic Noise Impacts – Existing Plus Project Conditions*, new vehicle trips associated with the Project are expected to result in a nominal increase in ambient

noise levels along affected road segments (up to 0.5 dBA CNEL). These increases would nominally add to ambient noise levels as the area. However, as discussed in subsection 3.4.1.1 of Section 3.4, *Noise*, of the Draft EIR, except in carefully controlled laboratory experiments, a change of 1 dBA in ambient noise levels cannot be perceived and a 3 dBA change in ambient noise levels is considered to be a barely perceivable difference. A doubling of sound energy (i.e., a doubling of roadway traffic volumes) is required to generate a 3 dBA increase in noise. The related projects identified by the City as indicated in Table 3.7-1 are located at various locations in the City with Related Project No. 1 located on the Pier within approximately 500 feet of the Project Site and the other related projects located at much greater distances to the north, south, and east of the Project Site. The distribution of the related projects at various locations in the City would result in traffic volumes from these related projects being distributed along different roadways and not concentrated along any single roadway. Furthermore, the Related Project consist of nominally sized residential developments, mixed-use residential and commercial uses, a restaurant and bar, assisted living facility, remedial clean-up activity, and a highway bicycle lane project, all of which are not abnormally high-volume traffic generators. Therefore, based on the distribution and the types of the Related Projects and the corresponding distribution of Related Project traffic, the Project's increase of 0.5 dBA CNEL along affected road segments combined with the increase in noise from traffic from related projects would not provide a cumulatively considerable contribution to a significant off-site noise impact.

Groundborne Vibration

As discussed in Section 3.4, *Noise*, of the Draft EIR, and under Section XIII.c in the Initial Study, the Project would not result in an exceedance of significance thresholds for construction-related groundborne vibration and groundborne noise.

Therefore, the Project does not result in a cumulatively considerable incremental impact, and cumulative impacts related to an exceedance of significance thresholds for construction groundborne vibration and groundborne noise are less than significant.

As discussed in Section 3.4, *Noise*, groundborne vibration and groundborne noise impacts from the music festival would be potentially significant for human annoyance impacts at sensitive receptor locations. Even with implementation of Mitigation Measure NOISE-1, it would not be feasible to locate speakers further away from the sensitive receptors (towards the ocean) because this would impede beyond the mid-tide line and the City does not have any jurisdiction beyond the mid-tide line. Thus, Project-specific impacts regarding groundborne vibration or groundborne noise levels would be significant and unavoidable.

While the rapid attenuation characteristics of groundborne vibration and distance from each of the related projects to the Project Site does not necessarily indicate there is a potential for related projects to contribute to cumulative operational impacts with respect to groundborne vibration, because the Project would result in a significant and unavoidable on-site operational groundborne vibration and/or groundborne noise impacts, cumulative operational groundborne vibration or groundborne noise impacts are also conservatively considered to be significant and unavoidable.

3.7.1.5 Transportation

The geographic area for evaluating the Project's cumulative impacts for transportation include the Show Center Area and the primary local corridors connecting to the Airshow which include Pacific Coast Highway (SR-1), Beach Boulevard (SR-39), Newland Street, Magnolia Street, Brookhurst Street, Hamilton Avenue, and Adams Avenue. The only cumulative project identified in Table 3.7-1, *Related Projects List*, that could combine with the Airshow Project is the Caltrans Bike Improvement Project; however, Caltrans agreed, in conversation with the City, to identify the City's special events (i.e., including, but not limited to, the Pacific Airshow, U.S. Surf Open, AVP Volleyball, etc.) as "non-construction dates" for the PCH Caltrans Improvement Project. In addition, Caltrans will shut down construction activities between Memorial Day and Labor Day to avoid the busy, summer, beach season. Construction activities will likely begin in 2025 and last through 2026 given the various "non-construction dates." Therefore, the Project would not combine with this cumulative project, and no cumulative impact would occur.

As previously mentioned, due to the Project's temporary nature, cumulative VMT effects cannot be assessed in the same manner as projects that lead to permanent changes, such as land use or transportation projects. While an absolute Project-related VMT metric (total net change) is recommended for retail and transportation projects, and an efficiency metric (VMT per capita) is recommended for residential and office projects, neither option provide an applicable framework for analysis of a temporary change. While the Airshow results in more VMT than the comparable days on the prior weekend, it would result in less-than-significant impact to VMT due to its temporary nature, as it occurs only a few days of the year, and the magnitude falls within the range of fluctuations due to seasonal effects and special events over the course of the year.

As discussed in Section 3.5, *Transportation*, the exact number of people who would alter their travel behavior during the Airshow is unknown. Without a definable population, the efficiency of travel during the airshow is also indeterminable. The analysis in the Transportation section (Section 3.5) found that the observable change in vehicle travel citywide is similar to what occurs during other temporary events or major holidays. Although the VMT for temporary, major events is quantified within the transportation section (refer to Table 3.5-9), it would not be practical to add all temporary events together because there are hundreds of "other" temporary events that take place each year within the City (both public and private) that cannot be quantified. Moreover, there is no precedent, guideline, or threshold for determining the impact of the aggregation of temporary events from a VMT perspective. As previously mentioned, due to the temporary nature of the project and the fact the VMT falls within the range of fluctuations due to seasonal effects and special events over the course of the year, the Project would not provide a considerable contribution to a significant cumulative impact related to VMT.

In addition, using the directional vehicle volume data collected in 2023, unrelated travel (outbound in the AM and inbound in the PM) during the Airshow was observed to decrease, which supports the conclusion that there would be no cumulative effect from other activities during the time of the Airshow.

CHAPTER 4
Alternatives

4.1 Introduction and Overview

CEQA requires that an EIR describe a range of reasonable alternatives to the Project, to the location of the Project, which could feasibly avoid or lessen any significant environmental impacts while substantially attaining the basic objectives of the Project. An EIR should also evaluate the comparative merits of the alternatives. This chapter describes potential alternatives to the Project that were considered, identifies alternatives that were eliminated from further consideration and reasons for dismissal, and analyzes available alternatives in comparison to the potential environmental impacts associated with the Project.

Key provisions of the CEQA Guidelines (Section 15126.6) pertaining to the alternatives analysis are summarized below:

- The discussion of alternatives shall describe a range of reasonable alternatives to the project, or to the location of the project, but need not consider every conceivable alternative. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives that are infeasible.
- The No Project Alternative shall be evaluated along with its impact. The No Project analysis shall discuss the existing conditions at the time of Notice of Preparation is published. Additionally, the analysis shall discuss what would be reasonably expected to occur in the foreseeable future if the Project were not approved, based on current plans and consistent with available infrastructure and community services.
- The range of alternatives required in an EIR is governed by a "rule of reason"; therefore, the EIR must evaluate only those alternatives necessary to permit a reasoned choice.
- For alternative locations, only locations that would avoid or substantially lessen any of the significant effects of the Project would need to be considered for inclusion in the EIR.
- An EIR need not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote and speculative.

The range of reasonable alternatives is selected and discussed in a manner to foster meaningful public participation and informed decision-making. Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans and regulatory limitations, jurisdictional boundaries, and whether the proponent could reasonably acquire, control, or otherwise have access to the alternative site.

Table 4-1 identifies potential impacts from the Project as well as the proposed alternatives.

TABLE 4-1
SUMMARY OF IMPACTS OF ALTERNATIVES IN RELATION TO THE PROJECT

Alternative	Air Quality	Biological Resources	Hazards and Hazardous Materials	Noise	Transportation	Tribal Cultural Resources
Project	Significant and Unavoidable	Less than Significant	Significant and Unavoidable	Significant and Unavoidable with Mitigation	Less than Significant	No Impact
Alternative 1: No Project	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
Alternative 2: 2023 Airshow Alternative	Significant and Unavoidable	Less than Significant	Significant and Unavoidable	Less than Significant with Mitigation	Less than Significant	No Impact
Alternative 3: Reduced Project Alternative	Significant and Unavoidable	Less than Significant	Significant and Unavoidable	Significant and Unavoidable with Mitigation	Less than Significant	No Impact

4.2 Project Objectives

To provide context for evaluating alternatives, CEQA requires that the Lead Agency enumerate the project objectives. Listed below are the main goals and objectives of the Project, as stated in Section 2.5, *Project Purpose and Objectives*:

- Continue to provide a family-oriented, safe, educational, fun, and entertaining Airshow experience with an emphasis on outdoor lifestyle and popular culture elements.
- Continue to provide a gathering place where locals and visitors can come together to enjoy civilian and military aircraft flybys and aerial acrobatics, illustrations, displays, food, and music.
- Prove an event that promotes careers and opportunities in the Defense Forces.
- Provide an event that promotes coastal access.
- Continue to promote awareness and use of the Huntington Beach Pier and beaches.
- Continue to promote awareness of the Downtown Huntington Beach hotels, restaurants, stores, and businesses.
- Continue to promote Huntington Beach and Southern California as a global tourism destination.
- Create a net positive direct economic impact on the City and surrounding communities as a result of spending by incremental visiting attendees, the event organizer, and event sponsors.
- Increase tax revenues (i.e., sales tax and transit occupancy tax) to the City.
- Continue to provide temporary and full-time jobs associated with the Airshow.
- Provide an event that reduces potential impacts to the surrounding sensitive habitat including the Bolsa Chica Ecological Reserve, the Huntington Beach Wetlands, the Magnolia Marsh, and special-status wildlife species such as the federally endangered California least tern and western snowy plover.

4.3 Alternatives Considered and Rejected

CEQA does not require that the alternatives be exhaustive, or require evaluation of alternatives that are not realistically feasible given the failure to meet project objectives or the availability of resources to support the alternatives. The following alternatives were rejected because implementation is considered remote and speculative or some of the goals and objectives would not be met.

4.3.1 Offsite Location

The Offsite Location Alternative would aim to be located further from sensitive biological resources. Sensitive habitat is located along the coastline including the Huntington Beach Wetlands, the Magnolia Marsh, and the Bolsa Chica Ecological Reserve (BCER). In order to be located away from the areas that contain more sensitive biological resources, the site would likely need to be at a more inland location, where there would be less space for attendees to congregate as well as fewer areas to view the Airshow compared to the proposed Project Site. In addition, the likelihood of finding a location that would be able to accommodate the number of activities planned (Airshow, music festival, wave pool surf competitions, skateboard/BMX event, etc.) for the Airshow would be low.

This Alternative was considered infeasible due to the fact that there are very few, if any, other locations within the City that are City-owned and would be able to provide the services and area for the Airshow to be conducted and viewed. The alternative site would need to be up to approximately 100 acres in size in order to accommodate the parking, viewing areas, and other activities. Per the CEQA guidelines, the Offsite Location Alternative was rejected as infeasible using the criteria for off-site alternatives, including site suitability, economic viability, jurisdictional boundaries, whether the project proponent owns the site, and whether the project proponent can control site access.

Some of the alternative sites considered that would be large enough to accommodate the activities include Edison High School and Central Park located in the City. Edison was rejected because this site would be closer to the Huntington Beach wetlands complex, and therefore, not necessarily further from sensitive biological resources. Central Park was also rejected due to the sensitive habitat and species that are present throughout the Park. Central Park has three freshwater lakes that are used by waterfowl and other birds. Portions of Central Park are also located closer to the BCER. Therefore, due to the proximity of sensitive habitat and sensitive species at the two locations most appropriate to be considered as alternative sites, these locations would not reduce impacts to biological resources.

4.3.2 Avoidance of Flying over Bolsa Chica

The Avoidance of Flying over Bolsa Chica Alternative would involve having the Pacific Airshow LLC instruct the air traffic controllers to avoid flying over the BCER . The purpose of this Alternative would be to reduce noise over the BCER and to avoid potential impacts to biological resources in the BCER. However, noise from commercial and private aircraft and helicopter flights over the BCER, including helicopters regularly landing at the helipad located within the

BCER, is an existing condition. In addition, the Project already has controls and measures in place to prevent incursion into the BCER including providing a daily formal briefing (each day of the Airshow) to all Airshow pilots on the location and nature of the BCER; requesting that pilots minimize or avoid overflight of the BCER to the greatest extent possible; requesting that when overflight of the BCER cannot be avoided that it be at 1,000 feet above ground level (AGL) or above; advising Southern California Terminal Radar Approach Control (TRACON) as well as Los Alamitos Army Airfield Tower on the location and nature of the BCER and request that they avoid directing Airshow pilots to overfly the area to the greatest extent possible; establishing routes in/out of Airshow airspace and supporting airfields to avoid overflight of the BCER to the greatest extent possible; coordinating with Southern California TRACON and Los Alamitos Army Airfield Tower regarding directing airshow aircraft transiting to/from supporting airfields to fly as directly as able into the Airshow's restricted airspace which, in most cases, will prevent overflight of the BCER; discussing and sharing any report of otherwise avoidable incursion will be at the daily briefing and discussing with air traffic control representatives in the ongoing effort to identify and implement solutions to avoid overflight; and instructing parachute demonstration teams to keep streamer drops in close to the site or to refrain from using them all together if conditions permit to prevent incursion into the BCER. Since these measures are already in place for the 2024 Airshow and all Airshow events moving forward, the potential noise and incursion into the BCER is already being minimized to the extent feasible. In addition, the Project includes a measure where a biological monitor is recommended to conduct monitoring at the Bolsa Chica Ecological Reserve and protected plover and tern nesting areas to confirm debris does not move into these areas and that low flyovers do not occur within these areas. Also, important to note is that the Airshow is scheduled for after breeding season. Therefore, since the BCER is already being avoided by the activities and measures listed above, this Alternative is not analyzed in further detail.

4.4 Alternatives Considered in Detail

4.4.1 Alternative 1: No Project/No Airshow Alternative

CEQA Guidelines Section 15126.6(e) requires analysis of a No Project Alternative that (1) discusses existing site conditions at the time the NOP is prepared or the Draft EIR is commenced and (2) analyzes what is reasonably expected to occur in the foreseeable future based on current plans if the Project were not approved.

Under this Alternative, the Airshow and the associated activities are not occurring in 2024 or for the foreseeable future. Since the No Project Alternative assumes the Airshow would not take place, no new environmental impacts would occur under this Alternative.

Air Quality

Existing air quality emissions are present in the Project area, caused by the existing businesses, residents, and visitors to the beach. With the No Project Alternative, there would not be any aircraft activities including aircraft staging, maintenance, preparation activities, aircraft flight familiarization and aircraft flight practice, and performance flyovers throughout the Airshow Performance Area. In addition, there would be no daily operational mobile source emissions from

future Airshows from vehicle and truck trips traveling to and from the Project Site. Under the Project, VOC, NOx, CO, PM10 and PM2.5 emissions would remain significant and unavoidable since there are no feasible mitigation measures that would reduce emissions to below the significance thresholds. Air quality impacts would be reduced under the No Project Alternative compared to the Project, since there would be no Airshow, music festival, and other events to be held for 3 days up to 5 days.

Biological Resources

With the No Project Alternative, there would be no impacts associated with potential air strikes, sound pollution, and potential for debris to fall into habitat areas from the Airshow activities. The No Project Alternative would avoid direct impacts to special-status migratory birds and raptors, since there would not be any Airshow flyover performances that would have the potential to cause air strikes. In addition, the noise associated with civilian and military aircraft that would have the potential to cause impacts under the Project would not occur, and there would not be any potential for an emergency fuel dump. The Project analysis found that potential impacts would be reduced with the existing controls and measures currently in place, including the recommendation of pre-activity surveys and biological monitoring to be conducted within the BCER each year as part of the Project. Biological resources impacts would be reduced under the No Project Alternative compared to the Project, since there would not be an Airshow and the associated Project activities.

Hazards and Hazardous Materials

Hazards impacts regarding potential air strikes would be reduced since no Airshow would occur;while Project impacts were determined to be significant and unavoidable with implementation of mitigation measures. Existing air strikes occur due to existing commercial and private aircraft and helicopter flights in the area. Impacts regarding emergency evacuations would be reduced since there would be no large events associated with the Air Show. Under the No Project Alternative, impacts regarding hazards and hazardous materials would be reduced to no impact in comparison to the Project.

Noise

The Huntington Beach area, and especially the Show Center Area, is a popular area where individuals and groups gather, as well as the location of other events throughout the year. The aircraft noise, roadway noise, sound amplification from the music festival, and noise from music festival attendees would not be an impact under the No Project Alternative. With the implementation of appropriate mitigation measures, noise impacts under the Project would continue to be significant and unavoidable due to the noise amplification devices and their proximity to sensitive receptors. Noise impacts would be reduced under the No Project Alternative compared to the Project, since no Airshow, music festival, and other associated events to be held for 3 days up to 5 days.

Transportation

Transportation impacts would be reduced under the No Project Alternative compared to the Project, due to fact that the activities planned with the Project would not occur under the No Project Alternative. The transportation impacts including increased vehicle miles traveled would be reduced since there would be no large events to be held for 3 days up to 5 days.

Tribal Cultural Resources

Under the No Project Alternative, tribal cultural resources impacts would be reduced compared to the Project since there would be no ground disturbance associated with the No Project Alternative. Therefore, the likelihood of encountering or impacting tribal cultural resources would be lower than the Project. No known tribal resources have been identified and no tribes have requested formal consultation, resulting in no impacts.

4.4.2 Alternative 2: 2023 Airshow Alternative

Under the 2023 Airshow Alternative, the annual event would take place over 3 days, and would not include a music festival, helicopter and aircraft runway/display, skateboard/BMX competition, pyrotechnic shows, sandcastle building competition, and beach camping, among other activities/features noted in *New Airshow Activities Anticipated for 2024 through 2034* in Section 1.6, *Historic and Future Airshow Activities and Events Schedule*. The Airshow would continue to be held annually Friday through Sunday during the fall season with aircraft flight familiarization and flight practice flyovers beginning as early as Monday of the week of the Airshow.

Air Quality

With the 2023 Airshow Alternative, fewer activities would occur, since the event would occur for 3 days rather than the Project's potential of up to 5 days. In addition, there would be fewer daily operational mobile source emissions from future Airshows from vehicle and truck trips traveling to and from the Project Site since the number of attendees would be reduced in this scenario. Under the Project, VOC, NOx, CO, PM10 and PM2.5 emissions would remain significant and unavoidable since there are no feasible mitigation measures that would reduce emissions to below the significance thresholds. Air quality impacts would be reduced under the 2023 Airshow Alternative compared to the Project, since the duration of the Airshow would be shorter; and the music festival, wave pool surf competitions, skateboard/BMX competition, and other additional events noted above would not occur. The operation of the Airshow, even without the additional events noted, would still produce emissions associated with staff and visitors traveling to the Project Site, staging activities, and emissions from the planes flying in the Airshow. However, although the magnitude of the impacts would be reduced, air quality impacts would remain significant and unavoidable.

Biological Resources

With the 2023 Airshow Alternative, similar impacts associated with potential air strikes, sound pollution, and potential for debris to fall into habitat areas would occur from the Airshow activities. Since there would still be Airshow flyover performances that would have the potential

to cause air strikes, with the Airshow continuing over a 3-day period, the impacts would be similar. In addition, the noise associated with civilian and military aircraft that would have the potential to cause impacts under the Project would also occur, and the small potential for an emergency fuel dump would still exist. The Project analysis found that potential impacts would be reduced with the existing controls and measures currently in place, including the recommendation of pre-activity surveys and biological monitoring to be conducted within the BCER each year as part of the Project. Biological resources impacts would be slightly reduced under the 2023 Airshow Alternative compared to the Project, since there would be fewer associated Project activities around the Airshow itself.

Hazards and Hazardous Materials

Hazards impacts regarding potential air strikes would be similar since the Airshow would still occur. Existing air strikes occur due to existing commercial and private aircraft and helicopter flights in the area. However, potential impacts due to traffic congestion during potential emergency evacuations would be reduced since reduced attendance would be anticipated from the reduced size and duration of Airshow events; and, similar to the Project, impacts would be significant and unavoidable even with implementation of mitigation measures. Under the 2023 Airshow Alternative, impacts regarding hazards and hazardous materials would be slightly reduced in comparison to the Project.

Noise

Under the 2023 Airshow Alternative, aircraft noise as well as roadway noise would still occur from the Airshow and attendees at the 3-day event. However, sound amplification from the music festival and noise from music festival attendees would not be an impact under the 2023 Airshow Alternative. With the implementation of appropriate mitigation measures, noise impacts under the Project would continue to be significant and unavoidable due to the noise amplification devices and their proximity to sensitive receptors. Noise impacts would be reduced under the 2023 Airshow Alternative compared to the Project, since no music festival, and other associated events would occur.

Transportation

Under the 2023 Airshow Alternative, fewer vehicle miles traveled would be generated due to the events occurring over the course of 3 days rather than 5 days, as well as fewer activities occurring. Since the events would be reduced in size and duration, the transportation impacts including increased vehicle miles traveled would be reduced. Transportation impacts would be similar but reduced under the 2023 Airshow Alternative compared to the Project.

Tribal Cultural Resources

Under the 2023 Airshow Alternative, tribal cultural resources impacts would be similar compared to the Project since there would be similar ground disturbance associated with the 2023 Airshow Alternative. Therefore, the likelihood of encountering or impacting tribal cultural resources would be similar to the Project. No known tribal resources have been identified and no tribes have requested formal consultation, so no impacts would occur.

4.4.3 Alternative 3: Reduced Project Alternative

The Reduced Project Alternative would include a reduced size of the Airshow with no military aircraft or equivalent noise-producing jets being included in the Airshow. Based on information received from the President of the International Council of Airshows, John Cudahy[1], airshows without military performers have less than half of the attendance of shows that include military aircraft. In fact, in 2013, when the United States Department of Defense cancelled its participation in civilian airshows, attendance decreases of 75 percent to 80 percent occurred. In addition, without military aircraft, the noise impacts from the flyovers would be reduced. Therefore, the Reduced Project Alternative is aimed to reduce noise impacts due to the type of aircraft being used. Additionally, evacuation impacts would be reduced due to both a decreased number of employees and a decreased number of attendees.

The Reduced Project Alternative would not meet the following Project objectives:

- Continue to provide a gathering place where locals and visitors can come together to enjoy civilian and military aircraft flybys and aerial acrobatics, illustrations, displays, food, and music.
- Prove an event that promotes careers and opportunities in the Defense Forces.

Since the Reduced Project Alternative would not include military flybys from military aircraft, the two above objectives would not be met in their entirety. In addition, since the Reduced Project Alternative would result in a decreased number of attendees, this alternative would also only partially meet the objectives of creating a net positive economic impact, increasing tax revenues, and continuing to provide jobs associated with the Airshow. With fewer attendees, it is anticipated that the positive economic impact, the potential tax revenues, tourism impact, quality level of show and the number of employees needed to staff the Airshow would all potentially be reduced.

Air Quality

With the Reduced Project Alternative, fewer flyover events would occur because the Airshow would not include military aircraft or similar noise-producing jets. In addition, there would be fewer daily operational mobile source emissions from future Airshows from vehicle and truck trips traveling to and from the Project Site since the number of attendees would be greatly reduced in this scenario. Under the Project, VOC, NOx, CO, PM10, and PM2.5 emissions would remain significant and unavoidable since there are no feasible mitigation measures that would reduce emissions to below the significance thresholds. Air quality impacts would be slightly reduced under the Reduced Project Alternative compared to the Project, since the number of flights and jets included in the Airshow would be reduced. However, although the magnitude of the impacts would be reduced, air quality impacts would remain significant and unavoidable.

[1] John B. Cudahy, President, International Council of Air Shows. Letter correspondence dated March 25, 2024.

Biological Resources

With the Reduced Project Alternative, similar impacts associated with potential air strikes, sound pollution, and potential for debris to fall into habitat areas would occur from the Airshow activities. Since there would still be Airshow flyover performances that would have the potential to cause air strikes, impacts would be similar even though military aircraft would not be included in the Airshow. However, the noise associated with military aircraft that would have the potential to cause impacts under the Project would not occur, but the small potential for an emergency fuel dump would still exist. The Project analysis found that potential impacts would be reduced through the existing controls and measures currently in place, including the recommendation of pre-activity surveys and biological monitoring to be conducted within the BCER each year as part of the Project. Biological resources impacts would be slightly reduced under the Reduced Project Alternative compared to the Project, since there would be fewer military aircraft included within the Airshow.

Hazards and Hazardous Materials

Hazards impacts regarding potential air strikes would be similar since the Airshow would still occur, although with no military aircraft or similar noise-producing jets. Existing air strikes occur due to existing commercial and private aircraft and helicopter flights in the area. However, potential impacts due to traffic congestion during potential emergency evacuations would be reduced since reduced attendance would be anticipated from the lack of military aircraft. Similar to the Project, impacts would be significant and unavoidable even with implementation of mitigation measures. Under the Reduced Project Alternative, impacts regarding hazards and hazardous materials would be reduced (but not to a less than significant level) in comparison to the Project.

Noise

Under the Reduced Project Alternative, aircraft noise as well as roadway noise would still occur from the Airshow and attendees. However, noise from military aircraft and similar noise-producing jets would not be an impact under the Reduced Project Alternative. With the implementation of appropriate mitigation measures, noise impacts under the Project would continue to be significant and unavoidable due to the noise amplification devices and their proximity to sensitive receptors. Noise impacts would be slightly reduced under the No Project Alternative compared to the Project, since no noise for military aircraft would be produced; however, noise from sound amplification devices would still exist and impacts would remain significant and unavoidable.

Transportation

Under the Reduced Project Alternative, fewer vehicle miles traveled would be generated due to the fact that fewer attendees and staff would be required since military aircraft would not be included in the Airshow. Since the Airshow would be expected to have reduced attendance, the transportation impacts including increased vehicle miles traveled would be reduced. Transportation impacts would be similar but reduced under the Reduced Project Alternative compared to the Project.

Tribal Cultural Resources

Under the Reduced Project Alternative, tribal cultural resources impacts would be similar compared to the Project since there would be similar ground disturbance associated with the Reduced Project Alternative. Therefore, the likelihood of encountering or impacting tribal cultural resources would be similar to the Project. No known tribal resources have been identified and no tribes have requested formal consultation, so no impacts would occur.

4.5 Environmentally Superior Alternative

Of the alternatives analyzed in the EIR, the No Project Alternative is considered the environmentally superior alternative as it would avoid or reduce most of the potential impacts associated with operation of the Project. However, it would not meet the objectives of the Project.

CEQA Guidelines require that, if the No Project Alternative is determined to be the environmentally superior alternative, an environmentally superior alternative must also be identified among the remaining alternatives. As such, the 2023 Airshow Alternative would result in the fewest environmental impacts as compared to the Project and is considered the Environmentally Superior Alternative. However, this alternative would not meet all of the Project Objectives. Furthermore, the 2023 Airshow Alternative would reduce the opportunity to gather since fewer events would be held over fewer days.

The 2023 Airshow Alternative would not meet the following Project objectives in their entirety:

- Continue to provide a family-oriented, safe, educational, fun, and entertaining Airshow experience with an emphasis on outdoor lifestyle and popular culture elements.
- Continue to provide a gathering place where locals and visitors can come together to enjoy civilian and military aircraft flybys and aerial acrobatics, illustrations, displays, food, and music.
- Create a net positive direct economic impact on the City and surrounding communities as a result of spending by incremental visiting attendees, the event organizer, and event sponsors.
- Increase in tax revenues (i.e., sales tax and transit occupancy tax) to the City.
- Continue to provide temporary and full-time jobs associated with the Airshow.

Since the 2023 Airshow Alternative would not include a music festival, helicopter and aircraft runway/display, skateboard/BMX competition, pyrotechnic shows, sandcastle building competition, and beach camping, among other activities/features, fewer family-oriented events would be offered. With fewer activities, it is anticipated that the positive economic impact, the potential tax revenues, and the number of employees needed to staff the Airshow would each potentially be reduced. In addition, without offering the events promoting the beach community, including beach camping and sandcastle building among others, there would be a reduced positive impact to the promotion of the Huntington Beach Pier and beaches.

In conclusion, the 2023 Airshow Alternative is the Environmentally Superior Alternative; however, it does not meet all the Project Objectives.

CHAPTER 5
Other CEQA Consequences

This chapter presents the evaluation of other types of environmental impacts required by CEQA that are not covered within the other chapters of this Draft EIR. The other CEQA considerations include irreversible environmental changes, growth-inducing impacts and significant and unavoidable adverse impacts.

5.1 Environmental Effects Not Found to be Significant

The Initial Study (**Appendix B**) for the Project completed in February 2024 determined that the Project would result in no impact or a less than significant impact to 14 of 21 environmental issue areas. The Initial Study for the Project discusses why the Project would have no impact or a less than significant impact for these issue areas, which are subsequently not discussed in detail in this Draft EIR. The issue areas determined to have no impact or a less than significant impact in the Initial Study analysis include the following:

- Aesthetics
- Agriculture and Forestry Resources
- Cultural Resources
- Energy
- Geology/Soils
- Greenhouse Gas Emissions
- Hydrology/Water Quality
- Land Use/Planning
- Mineral Resources
- Population/Housing
- Public Services
- Recreation
- Utilities/Service Systems
- Wildfire

After a more detailed evaluation of the environmental issues associated with the Project, including reviews of the comments received during the Scoping Period, the Draft EIR determined that impacts would be less than significant for the following environmental issue areas:

- Tribal Cultural Resources

The Draft EIR determined that with incorporation of mitigation measures for the following environmental issue areas, impacts would be less than significant.

- Biological Resources
- Hazards & Hazardous Materials

5.2 Irreversible Environmental Changes

According to CEQA Guidelines, "[u]ses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impact and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified." Therefore, the purpose of this analysis is to identify any significant irreversible environmental effects of project implementation that cannot be avoided.

The Airshow does not propose construction of new permanent development; instead, the Project consists of temporary event structures, all of which would be removed immediately following the conclusion of the Airshow. The temporary operation of the Project would lead to the consumption of limited, slowly renewable and nonrenewable resources, committing such resources to uses that future generations would be unable to reverse. The Project setup and temporary operations would require the commitment of limited resources that include fuel and operational materials/resources and the transportation of goods and people to and from the Project site.

The Project does not include construction. In terms of the Project's temporary operations, the following limited, slowly renewable or nonrenewable resources would be required: electricity, petroleum-based fuels, fossil fuels, and water.

The commitment of limited resources required for temporary operation of the Project would limit the availability of such resources for future generations or for other uses during the temporary life of the Project. However, continued use of such resources is consistent with the anticipated planned events that occur within the City and within the general vicinity. Furthermore, impacts to the energy supply would be less than significant given the existing levels of development in the City of Huntington Beach and County of Orange.

Future generations will continue to use the Project area for community and recreational purposes. The Project will not preclude use of the site for other purposes in the future to any degree greater than the No Project Alternative. Additionally, these same limited resources will be required for

the temporary operation of the Airshow in an available alternative location. In the long term, the level of resource commitment will be minimal since future Airshows are anticipated to be held annually for three (3) days to up to five (5) days.

5.3 Growth Inducing Impacts

Pursuant to Section 15162.2 of the CEQA Guidelines: an EIR must address whether a project will directly or indirectly foster growth as follows:

[An EIR shall] "discuss the ways in which the Proposed Project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of wastewater treatment plant, might, for example, allow for more construction in service areas). Increases in the population may further tax existing community service facilities so consideration must be given to this impact. Also, discuss the characteristics of some projects, which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."

As discussed below, this analysis evaluates whether the Project would directly or indirectly induce economic, population, or housing growth in the surrounding environment.

5.3.1 Direct Growth-inducing Impacts in the Surrounding Environment

Direct growth-inducing impacts occur when the development of a project induces population growth or the construction of additional developments in the same area of a proposed project and produces related growth-associated impacts. Growth inducing projects remove physical obstacles to population growth, such as the construction of a new road into an undeveloped area, a wastewater treatment plant expansion, and projects that allow new development in the service area. Construction of such infrastructure projects are considered in relation to the potential development and the potential environmental impacts.

Implementation of the Project would include future Airshows which are anticipated to be held annually for three (3) days to up to five (5) days over the next 10 years. Therefore, the Project does not include residential development or infrastructure development and does not directly induce population growth. The Project will not remove obstacles to regional growth and related development.

5.3.2 Indirect Growth-Inducing Impacts in the Surrounding Environment

Although the Project will generate limited temporary employment generated by future Airshows which are anticipated to be held annually for three (3) days to up to five (5) days over the next 10 years, these events will be limited in nature and will not cause an influx of permanent residents.

The Project does not contain components likely to indirectly induce employment or an employment-related increase in population.

5.4 Significant Unavoidable Environmental Impacts

5.4.1 Air Quality

The Project's future Airshows would result in an increase in vehicle trips and vehicle miles traveled when compared to prior Airshow events due to an increase in events at future Airshows. The Project has no ability to regulate the personal vehicle usage made by future Project attendees or require specific modes of transportation. Thus, there are no feasible mitigation measures that would reduce operational VOC, NO_X, and CO emissions and impacts related to regional VOC, NO_X, and CO operational emissions would remain significant and unavoidable.

5.4.2 Noise

With implementation of the proposed mitigation measures with the nearest speaker to the sensitive receptors located approximately 475 feet to the southwest of the receptors and any subsequent speaker being separated from other speakers by 25 feet parallel to Pacific Coast Highway; noise from speakers alone would reach up to 63.8 dBA L_{eq}. It is important to note that it would not be feasible to locate the speakers further away from the sensitive receptors along the coast because this would impede beyond the mid-tide line and the City does not have jurisdiction beyond the mean high tide line. The estimated 63.8 dBA L_{eq} accounts for a 5 dB reduction for speakers facing away from sensitive receptors. The speakers are assumed to be elevated from the ground-level onto a sound stage or pole and elevated 10 feet from the ground-level. By incorporating a 10-foot wall with a minimum 5 dB noise reduction, noise levels from the crowd would be attenuated to 59.6 dBA L_{eq}. Therefore, the combined noise level from the speakers and crowd noise at ground level and the 2nd floor receptors under the scenario where speakers may be elevated above ground level, would attenuate to 65.2 dBA L_{eq}. Regardless, if the speakers were not elevated above ground-level, impacts from the speakers would not benefit from a sound barrier as the 2nd floor receptors would have a direct line of sight to the speakers. Therefore, with the proposed mitigation measures, noise levels would remain above the 5 dB increase over ambient threshold as set forth by the City. Thus, impacts would be significant and unavoidable. No additional feasible mitigation measures are available.

5.4.3 Hazards and Hazardous Materials

As the Project is located within the Tsunami Inundation Zone identified by the City's Local Hazard Mitigation Plan, the increased population as a result of the Project, and all other population, including existing residents, employees, and visitors, would be subject to evacuation in case of an emergency event requiring the evacuation of the Tsunami Hazard Area. Due to the reduced evacuation speeds from the increase in population, the Project would increase the hazard risk. Given the difficulty in evacuating the concentration of people in the beach area and the increase in evacuation times for those in the City for other reasons, the Project would result in significant and unavoidable impacts to emergency access.

CHAPTER 6
Preparers, Persons, and Organizations Consulted

6.1 City of Huntington Beach

The following staff from the City of Huntington Beach (City) were involved in the preparation of this Draft Environmental Impact Report (EIR).

- Michael E. Gates, City Attorney
- Connor Hyland, Senior Deputy City Attorney
- Jennifer Villasenor, Director of Community Development
- Hayden Beckman, Senior Planner
- Bob Stachelski, Transportation Manager

6.2 EIR Preparers

The following staff were involved in the preparation of this Draft EIR.

6.2.1 Environmental Science Associates (ESA)

- Terri Avila, Planner VI (Project Director)
- Brian Allee, Planner IV, (Project Manager)
- Alan Sako, Director of Air Quality & Acoustics Analysts V (Air Quality, Noise)
- Justin Cook, Aviation Specialist V (Airports)
- Chris Nottoli, Air Quality & Acoustics Analyst III (Airports)
- Barbra Calantas, Practice Leader (Biological Resources)
- Amanda French, Biologist III (Biological Resources and Hazards and Hazardous Materials)
- Brenda McMillan, Biologist III (Biological Resources)
- Bailey Setzler, Biologist I (Biological Resources)
- Brandon Mukogawa, Biologist I (Biological Resources)
- Stephan Geissler, Senior GIS Analyst (GIS)
- Chance Scott, GIS Analyst (GIS)

- Denise Kaneshiro, Graphic Design (Graphics)
- Joel Miller, Senior Publications Specialist (Publications)

6.2.2 Technical Consultants

Fehr & Peers (F&P)

- Steven J. Brown, P.E., Senior Vice Present
- Baldwin Ngai, Senior Engineer/Planner

GeoEngineers

- Jason P. Stutes, PhD., Senior Marine Ecologist
- Lisa J. Bona, Associate

6.2.3 Persons Consulted

The following individuals were consulted during the preparation of this Draft EIR:

- John B. Cudahy, President, International Council of Air Shows (ICAS)
- Timothy Lerma, Aviation Safety Inspector, Federal Aviation Administration (FAA)

CHAPTER 7
References

Executive Summary

Cudahy, J.B. 2024. Personal Communication from J.B. Cudahy, President, International Council of Air Shows. March 25, 2024. Provided in Appendix H of this Draft EIR.

Chapter 1: Introduction

Not Applicable.

Chapter 2: Project Description

Not Applicable.

Chapter 3: Environmental Setting, Impacts, and Mitigation Measures

Section 3.0: Introduction to the Analysis

City of Huntington Beach. 2024.

Section 3.1: Air Quality

42 United States Code Section 7401 et seq.

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Section 3.7: Cumulative Analysis

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Chapter 4: Alternatives

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Chapter 5: Other CEQA Considerations

Not Applicable.

Chapter 6: Preparers, Persons, and Organizations Consulted

Not Applicable.