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## 4. ENVIRONMENTAL IMPACT ANALYSIS

### Introduction

This chapter presents an assessment of the environmental impacts of the LAX Airfield and Terminal Modernization Project described in Chapter 2, *Description of the Proposed Project*. This chapter describes the physical environment at and within the vicinity of LAX that may be affected by the improvements under the proposed Project, the impacts to that physical environment, and the measures proposed to mitigate those impacts when significant, as required.

The following topics are addressed in this chapter:

- Air Quality and Human Health Risk
- Cultural Resources (Historical Resources)
- Energy
- Greenhouse Gas Emissions
- Hazardous Materials
- Land Use and Planning
- Noise
  - Aircraft Noise
  - Roadway Traffic Noise
  - Construction Traffic and Equipment Noise and Vibration
- Transportation
- Utilities
  - Water Supply
  - Wastewater Generation

### Organization

Each of the nine main environmental disciplines addressed in this chapter is discussed in a separate section using a common organization. Sections are numbered 4.1 through 4.9. Several sections are divided into subsections to simplify and clarify the discussion.

Within each environmental topic section, discussion of the following is provided:

- The **Introduction** briefly describes the issues addressed in the analysis and identifies related topics. The Introduction also identifies any specific issue area of the topic that is not being addressed as part of the proposed Project EIR and provides a discussion explaining the reasons why. In many cases, a number of specific issue areas were evaluated, and impacts determined to be less than significant, as documented in the LAX Airfield and Terminal Modernization Project Notice of Preparation (NOP)/Initial Study (April 2019), which is included as **Appendix A** of this EIR. In accordance with Sections 15063(c)(3)(A) and 15128 of the State CEQA Guidelines, further analysis of specific issue areas where impacts were determined to be less than significant in the Initial Study is not required and is not provided in this EIR.

- The **Methodology** describes how the issue was approached, including explanations of any assumptions, equations, or calculations; identification of information sources used for the analysis; and delineation of the study area considered for each environmental discipline.
- The **Existing Conditions** section discusses existing conditions for the environmental discipline in the study area, including relevant activities, facilities, and regulations. The environmental baseline is described below under Analytical Framework.
- The **Thresholds of Significance** are quantitative or qualitative measures used to determine whether a significant environmental impact would occur as a result of the proposed Project. This section identifies the source or guidance of the thresholds of significance used in the analysis. In general, and unless otherwise noted, the thresholds of significance used in the analysis of proposed Project impacts reflect guidance provided in Appendix G of the State CEQA Guidelines.<sup>1</sup>
- The **Project Impacts** section presents the analysis of impacts at a project-level for both construction and operation of the proposed Project. Impacts are compared to the thresholds of significance to determine whether they would be significant or less than significant under CEQA. For purposes of determining significance, impacts are compared to the environmental baseline conditions, as further described in the *Analytical Framework* below. Within this section are impact determinations and suggested **mitigation measures** that would feasibly mitigate each significant impact. Mitigation measures are specified actions proposed for adoption by the lead agency (LAWA) to reduce or avoid the significant impacts identified in the analysis of environmental impacts. If the recommended measures should be carried out by another agency, then the other agency is identified. If impacts are considered significant prior to mitigation, mitigation measures have been suggested that would reduce significant impacts. Following identified mitigation measures, there is a statement whether the mitigation would reduce the impact to a less than significant level, or whether the impact would remain significant and unavoidable.
- The **Cumulative Impacts** section discusses the impacts of the proposed Project in conjunction with past, present, and reasonably foreseeable probable future projects. The environmental impacts of the proposed Project may be individually minor, but collectively significant when considered in conjunction with other projects.
- The **Summary of Impact Determinations** provides a table which summarizes the conclusion of the Project Impacts section, including the impact determinations of the proposed Project before mitigation, mitigation measures proposed to reduce or avoid significant impacts, and the level of significance after implementation of the proposed mitigation measures.

## Analytical Framework

### Environmental Baseline

Section 15125(a) of the State CEQA Guidelines requires that an EIR describe the physical environmental conditions in the vicinity of a proposed project and states that "[t]his environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant.... The purpose of this requirement is to give the public and decision makers the most accurate and understandable picture practically possible of the project's likely near-term and long-term impacts."

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<sup>1</sup> State of California, *Guidelines for California Environmental Quality Act (State CEQA Guidelines)*, California Code of Regulations, Title 14, Chapter 3, Sections 15000-15387.

## Existing Conditions (2018/2019) Baseline

Section 15125(a)(1) of the State CEQA Guidelines identifies different ways in which a lead agency may define “existing conditions” for purposes of identifying the appropriate baseline against which to measure a proposed project’s impacts and states that “[g]enerally, the lead agency should describe physical environmental conditions as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective.”

The NOP for this EIR was published on April 4, 2019. In accordance with the provisions of CEQA, LAWA has selected 2019 as the baseline year for characterizing existing physical conditions in the environmental analysis. Where existing physical conditions data specific to 2019 were not available or where 2019, by itself, was not an appropriate representation of baseline physical conditions, this EIR identifies this fact, explains the data that were used to determine existing physical conditions, and provides evidence of why this information is representative of baseline physical conditions.

For the analysis of certain operational impacts, a full year’s worth of operational data for LAX was considered necessary and appropriate to characterize existing baseline conditions, since the operational characteristics of LAX, especially in terms of aircraft operations, vary throughout the year based on seasonal travel and holiday travel. Those changes in operations result in temporal differences in existing aircraft noise and existing aircraft-related air pollutant emissions, such that an appropriate existing conditions baseline for evaluating operational impacts takes into account an entire year’s worth of operational data. As such, LAX operational data for all of 2018, the calendar year prior to the release of the NOP, were used to define existing baseline conditions for the evaluation of potential impacts related to aircraft noise and aircraft-related air pollutant and greenhouse gas (GHG) emissions.

## Projected Future Conditions Baselines

Section 15125(a)(2) of the State CEQA Guidelines also provides that a lead agency “may use projected future conditions (beyond the date of project operations) baseline as the sole baseline for analysis ... if it demonstrates with substantial evidence that use of existing conditions would be either misleading or without informative value to decision-makers and the public. Use of projected future conditions as the only baseline must be supported by reliable projections based on substantial evidence in the record.”

In certain instances, LAWA has determined that use of the existing conditions (2018/2019) baseline would be either misleading or without informative value to decision-makers and the public. In these instances, LAWA has used projected future conditions as the baseline for analysis.

In evaluating potential aircraft noise, air quality, and GHG impacts associated with the temporary closure of runways necessary to construct proposed improvements in the north airfield of LAX (described in Section 2.6.4), the analysis uses aircraft operations projected to occur in 2023 and 2024 - the years when each runway closure is anticipated to occur – as the sole baseline. This is because during the 4.5 months in each of the two years with a runway closure, aircraft operations at LAX would be redistributed among the remaining three runways. By assuming 2023 and 2024 for baseline conditions, instead of 2018, the impacts analysis accounts for the five to six interim years of growth in aircraft operations projected to occur at LAX, which would otherwise not be accounted for if 2018 was assumed as the baseline year. In these instances, using 2018 as the baseline would be misleading and without informative value since it would not accurately capture the temporary impacts that would occur due to runway closure. This approach is appropriate because LAX is a dynamic facility, and conditions are generally not static over time. In particular, the level of aircraft operations that exist in 2023 and 2024 will differ from those conditions that existed in 2019. It is, therefore, appropriate to adjust the baseline to reflect these anticipated conditions as of 2023 and 2024. This approach is conservative because the

number of aircraft operations is expected to increase between 2019 and 2023/2024. As a result, the use of a 2023/2024 baseline involves more aircraft operations, and therefore greater impacts, than would occur if a 2019 baseline were used for this purpose.

The Draft EIR also uses a projected future conditions baseline in the analysis of transportation impacts. Specifically, as discussed in Section 2.3.2 in Chapter 2, *Description of the Proposed Project*, one of the objectives of the proposed Project is to complete construction of the proposed Project prior to the 2028 Olympic and Paralympic Games scheduled to be held in Los Angeles. By year 2028, substantial evidence in the record demonstrates that Phase 1 of the LAX Landside Access Modernization Program, including the Automated People Mover (APM), Intermodal Transportation Facility (ITF) East, ITF West, Consolidated Rental Car Facility (CONRAC), Phase 1 roadways, and a connection to the Airport Metro Connector 96<sup>th</sup> Street Transit Station, will be completed. Phase 1 of the LAX Landside Access Modernization Program is approved, funded, under construction, and scheduled for completion well before 2028. For this reason, it would be misleading and without informative value to analyze the Project's impacts at buildout in 2028 without accounting for the APM, ITF East, ITF West, CONRAC, and other LAX Landside Access Modernization Program Phase 1 improvements. These improvements will substantially change the surface transportation characteristics around the airport, including as related to vehicle miles traveled (VMT). Therefore, projected future conditions in year 2028 are used as the sole baseline for the transportation impact analysis since use of existing conditions (2018/2019) as the baseline would be misleading and without informative value to decision-makers and the public. Please see Section 4.8, *Transportation*, for additional discussion of the use of a projected future conditions baseline as the basis for the evaluation of VMT.

## Evaluation of Cumulative Impacts

As defined in Section 15355 of the State CEQA Guidelines, cumulative impacts are the incremental impacts of a proposed project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts may be individually minor, but collectively significant.

In accordance with Section 15130 of the State CEQA Guidelines, this EIR discusses cumulative impacts of the proposed Project when the Project's incremental effect is cumulatively considerable. As defined by Section 15065 of the State CEQA Guidelines, "cumulatively considerable means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects."

In order to evaluate the potential for significant cumulative impacts, the EIR determines the geographic area of potential cumulative impacts analysis for each environmental resource area, and identifies the relevant projects at/adjacent to LAX (listed in Table 3-1 in Section 3.4, *Development Setting*) that could, in conjunction with the proposed Project, result in cumulative impacts. Next, the impacts of the proposed Project are summarized, as are the impacts of each individual relevant cumulative project. The combined impacts of the proposed Project and the other relevant projects are then evaluated to determine if cumulative impacts of all the projects would be significant, based on the applicable threshold(s) of significance. If a significant cumulative impact is identified, a determination is made as to whether the contribution of the proposed Project to the cumulative impact would be cumulatively considerable. Where it is determined that the proposed Project would have a cumulatively considerable contribution to a significant cumulative impact, the analysis includes an evaluation of whether a mitigation measure(s) would render that contribution to a level that is less than cumulatively considerable.

## NEPA Analysis

Implementation of the proposed Project requires certain approvals from the Federal Aviation Administration (FAA), and such federal approvals are subject to environmental review under the National Environmental Policy Act (NEPA). In accordance with NEPA requirements, an Environmental Assessment (EA) is prepared, which evaluates the effects of a proposed Federal action (i.e., a proposed project) on the surrounding environment and assists in determining whether potential environmental impacts are significant. For the proposed Project, the FAA is the lead agency responsible for completing the NEPA review process, including the processing of an EA for the proposed Project. The EA currently being prepared and processed for the proposed Project is separate from this Draft EIR. It is important to note that there are key differences between CEQA and NEPA relative to the analytical framework for evaluating environmental impacts, including, but not limited to, the environmental baseline and the thresholds of significance.

As described earlier in this section, the State CEQA Guidelines indicate that the physical environmental conditions in the vicinity of a proposed project, as they exist at the time the NOP is published, will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. That constitutes the Existing Conditions Baseline, as described above. With the exception of the impacts related to transportation and temporary runway closures during construction, which are evaluated in terms of Projected Future Conditions Baselines, the evaluation of impacts throughout this chapter of the EIR is based on future environmental conditions at buildout of the proposed Project in 2028 as measured against the Existing Conditions Baseline. As such, many of the operations-related impacts, such as those related to air quality, GHG, and aircraft noise, that are ascribed to the proposed Project are based on the difference between existing airport activity levels and future (2028) airport activity levels, even though the projected increase in airport activity levels would occur even without the proposed Project.

Under NEPA requirements, by contrast, the baseline by which impacts of a proposed project are measured is the No Action Alternative, which, in essence, represents the future environmental conditions that would exist if the proposed Project were not implemented. With respect to evaluation of aircraft-related impacts in this EIR, the number of annual aircraft operations (i.e., takeoffs and landings) projected for 2028 is 800,000, as compared to 715,000 annual operations in 2018; hence, impacts related to aircraft noise and aircraft air pollutant emissions, including GHG emissions, are based on an increase of 85,000 annual operations. Based on NEPA requirements, it is anticipated that the evaluation of the aircraft-related impacts in the EA to be prepared for the proposed Project will be based on the same number of annual aircraft operations for the proposed Project in 2028 as for the No Action Alternative in 2028. In light of how the increment of change in environmental conditions addressed in the CEQA analysis of the proposed Project will be different from that in the NEPA analysis of the proposed Project, it is anticipated that the conclusions regarding significant impacts in that regard may be different between the EIR and the EA.

Regarding the thresholds of significance applied in evaluating the environmental impacts of the proposed Project, it is anticipated that there will be differences between the thresholds of significance in the EIR and the thresholds of significance in the EA. For example, the thresholds of significance used in the EIR for evaluating air quality impacts are based on thresholds set forth by the South Coast Air Quality Management District, a regional agency specific to Southern California, whereas the thresholds of significance to be used in the EA are anticipated to be based on nationwide standards as set forth through the federal Clean Air Act. Based on such differences in thresholds, it is anticipated that there may be differences between the EIR and the EA regarding the significance of air quality impacts.

There may be other reasons why the EIR and the EA may reach different conclusions concerning whether the proposed Project will cause significant environmental effects. For example, in preparing the EA, the FAA may rely on different data or use different methodologies to evaluate the proposed Project. The two differences described above are noted because they represent ways in which CEQA and NEPA require different approaches to evaluating a proposed project's environmental impacts.

In summary, the conclusions presented in this chapter of the EIR regarding significant impacts may be different from those of the EA for the proposed Project.