
4. ENVIRONMENTAL IMPACT ANALYSIS

This chapter presents an assessment of the environmental impacts of the proposed project, as described in Chapter 2, *Project Description*. This chapter describes the physical environment at and within the vicinity of LAX that may be affected by the proposed project; the impacts to that physical environment; and the measures proposed to mitigate those impacts, as required.

As identified in the Notice of Preparation (NOP) published on August 11, 2016 for this EIR, LAWA initially determined, based on a preliminary review of the proposed project, that four environmental resource areas would potentially be affected by construction of the project and would require additional review. The following environmental resource areas were identified in the NOP and are addressed in this chapter:

- ◆ Air Quality (including Human Health Risk)
- ◆ Greenhouse Gas (GHG) Emissions
- ◆ Cultural Resources (archaeological resources, paleontological resources, Tribal Cultural Resources, and human remains)
- ◆ Construction Surface Transportation

In addition, Appendix F of the State CEQA Guidelines requires an EIR to consider the potentially significant energy impacts of the proposed project. Therefore, Section 6.5 in Chapter 6, *Other Environmental Considerations*, addresses the infrastructure capacity and demand associated with the energy consumption associated with the construction and operation of the proposed project.

Organization

Each of the environmental disciplines addressed in this chapter is discussed in a separate section using a common organization. Sections are numbered 4.1 through 4.4. 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 this 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 Initial Study that was published with the NOP for the proposed project on August 11, 2016 (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 environmental resource 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 specific environmental resource areas that were determined to be no impact or less than significant through the analysis in the Initial Study, and therefore not proposed for further analysis in the EIR, include: Aesthetics, Agriculture and Forestry Resources, operational Air Quality and odors, Biological Resources, Cultural Resources (historic resources), Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, operational Transportation/Traffic, and Utilities and Service Systems.

- ◆ 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. This subsection also identifies the environmental baseline used to determine the significance of potential impacts. A discussion of the environmental baseline is provided below under *Analytical Framework*.

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- ◆ The **Existing Conditions** discusses the baseline 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 criteria used to determine whether a significant environmental impact would occur as a result of the project. This subsection identifies the origins of the thresholds of significance used in the analysis. In general, and unless otherwise noted, the thresholds of significance used in the analysis of the proposed project impacts reflect guidance provided in Appendix G of the State CEQA Guidelines¹⁹ and/or criteria or guidance included in the L.A. CEQA Thresholds Guide.²⁰
- ◆ The **Impacts Analysis** subsection presents the analysis of impacts for the construction (the build-out horizon year 2023) of the proposed project. Impacts were compared to the thresholds of significance to determine whether they would be, under CEQA, significant or less than significant. For purposes of determining significance, impacts were compared to the environmental baseline conditions, as further described in the Analytical Framework below. The impact analysis includes a determination of the level of significance of impacts under each threshold before mitigation.
- ◆ **Cumulative Impacts** are 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.
- ◆ **Mitigation Measures** are specified procedures, plans, policies, or activities proposed for adoption by the lead agency to reduce or avoid the significant impacts identified in the analysis of environmental impacts. This subsection identifies applicable Standard Control Measures that LAWA would apply as mitigation measures and any proposed project-specific mitigation measures to address significant impacts that would occur with implementation of the proposed project. In accordance with the requirements of CEQA, a mitigation monitoring and reporting program (MMRP) would be adopted as part of the proposed project approvals, to ensure that implementation of mitigation measures, including applicable Standard Control Measures, is properly monitored and documented. Further discussion of LAWA Standard Control Measures is provided in the Analytical Framework below.
- ◆ **Level of Significance After Mitigation** is a CEQA determination of the significance of a particular impact after implementation of the proposed mitigation measures. This subsection identifies any significant impacts that cannot be mitigated to a level that is less than significant. These "significant unavoidable impacts" are also listed in Chapter 6, *Other Environmental Considerations*, of this EIR.
- ◆ **Other Measures** include LAWA Standard Control Measures that would be applied to reduce impacts even though the project impact would be less than significant. This heading/subsection is only included in cases where there is a Standard Control Measure(s) applicable to the environmental topic and the impact would be less than significant. Further discussion of LAWA Standard Control Measures is provided in the *Analytical Framework* below.

¹⁹ State of California, Guidelines for California Environmental Quality Act (State CEQA Guidelines), California Code of Regulations, Title 14, Chapter 3, Sections 15000-15387.

²⁰ City of Los Angeles, L.A. CEQA Thresholds Guide, Your Resource for Preparing CEQA Analyses in Los Angeles, 2006, Available: <http://www.environmentla.org/programs/Thresholds/Complete%20Threshold%20Guide%202006.pdf>, Accessed January 19, 2017.

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Analytical Framework

Environmental Baseline

Section 15125 of the State CEQA Guidelines requires that an EIR describe the physical environmental conditions in the vicinity of a proposed project "as they exist at the time the notice of preparation is published..." and further 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 NOP for this EIR was published on August 11, 2016. In accordance with the provisions of CEQA, 2016 is the baseline year for characterizing existing conditions in the environmental analysis. Where existing conditions data specific to 2016 were not available or where 2016, by itself, was not an appropriate representation of baseline conditions, this EIR identifies this fact, explains what data was used to determine existing conditions, and provides evidence of why this information is representative of baseline conditions.

Description of Cumulative Impacts

As defined in the State CEQA Guidelines Section 15355, cumulative impacts are the impacts of the proposed project in conjunction with past, present, and reasonably foreseeable probable future projects. The environmental impacts of the project may be individually minor, but collectively significant when considered in conjunction with other projects.

In accordance with the State CEQA Guidelines Section 15130, the proposed project must be evaluated for cumulative impacts for each environmental discipline to determine if they would be significant. This EIR provides an analysis of cumulative impacts associated with construction of the proposed project in conjunction with other construction projects both at/adjacent to LAX.

In accordance with State CEQA Guidelines Section 15130(b), there are generally two options for delineating cumulative development for evaluating cumulative impacts:

- a. List past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or
- b. Summarize projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program.

For analyzing the proposed project's cumulative air quality and cultural resources impacts, a list approach was used. For analyzing cumulative GHG impacts, neither approach was used, since GHG impacts are inherently cumulative. For analyzing the proposed project's cumulative construction traffic impacts, a modified list approach was used. For analyzing the proposed cumulative energy impacts, both a list and a plan approach were used.

As further described in Chapter 2, *Project Description*, construction of the proposed project is expected to occur for approximately 76 months (six years and four months), beginning fourth quarter 2017 and ending in late 2023. Accordingly, the cumulative impacts analysis for each environmental issue analyzed in this EIR, with the exception of the cumulative impacts analysis for GHG emissions, evaluates the effects of other proposed development projects that may be constructed at some point during the same 76-month time period (i.e., 2017 through 2023). This includes past, present, and reasonably foreseeable probable future projects at and adjacent to LAX that could, in conjunction with the proposed project, result in cumulative impacts to the environment. Past, present, and reasonably foreseeable probable future projects at/adjacent to LAX are described in Chapter 3, *Overview of Project Setting*, and are listed in Table 3-1 and identified in Figure 3-1. In addition, the probable development projects in the City of Los Angeles and neighboring communities within the general vicinity of the proposed project listed in Table 3-2 were

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considered qualitatively in the cumulative impact analysis for each resource, other than GHG emissions, which are cumulative in nature (see below), and were accounted for quantitatively in the cumulative impact analysis for construction surface transportation through the use of a regional traffic growth factor that includes such other development (refer to Section 4.4.2.4 for details).

For the GHG analysis, as further described in Section 4.2, *Greenhouse Gas Emissions*, climate change impacts are cumulative in nature, and therefore no typical single project would result in emissions of such a magnitude that it would be significant on a project basis. Thus, the analysis of significance of potential impacts from GHG emissions related to a single project is already representative of the long-term impacts on a cumulative basis. Therefore, projects that exceed the project-specific significance thresholds would cause cumulatively considerable impacts with respect to GHG emissions.

As further described in Section 4.4, *Construction Surface Transportation*, of this EIR, the construction traffic analysis assumed that peak cumulative traffic conditions associated with other LAX development projects listed in Table 3-1 would occur in November 2019. In addition, baseline traffic volumes were multiplied by a growth factor of two percent per year to account for local background traffic growth through 2019. This annual growth rate assumption is conservative based on recent trends, and consistent with previous direction first provided by the City of Los Angeles Department of Transportation (LADOT) for use in the South Airfield Improvement Project (SAIP) EIR²¹ construction traffic analysis and subsequently used for construction traffic studies prepared for the Crossfield Taxiway Project (CFTP) EIR,²² Bradley West Project EIR,²³ Central Utility Plant Replacement Project (CUP-RP) EIR,²⁴ Runway 7L/25R Runway Safety Area (RSA) and Associated Improvements Project EIR,²⁵ West Aircraft Maintenance Area (WAMA) Project EIR,²⁶ Midfield Satellite Concourse (MSC) EIR,²⁷ and the Runway 6L-24R and Runway 6R-24L Runway Safety Area (RSA North) EIR.²⁸

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- ²¹ City of Los Angeles, Los Angeles World Airports, Final Environmental Impact Report for Los Angeles International Airport (LAX) South Airfield Improvement Project, (SCH 2004081039), October 2005. Available: <http://www.lawa.org/ourLAX/Pastprojects.aspx?id=8820>, Accessed January 19, 2017.
- ²² City of Los Angeles, Los Angeles World Airports, Final Environmental Impact Report for Los Angeles International Airport (LAX) Crossfield Taxiway Project, (SCH 2008041058), January 2009. Available: <http://www.lawa.org/ourLAX/Pastprojects.aspx?id=8829>, Accessed January 19, 2017.
- ²³ City of Los Angeles, Los Angeles World Airports, Final Environmental Impact Report for Los Angeles International Airport (LAX) Bradley West Project, (SCH 2008121080), September 2009. Available: <http://www.lawa.org/ourLAX/Pastprojects.aspx?id=10040>, Accessed January 19, 2017.
- ²⁴ City of Los Angeles, Los Angeles World Airports, Final Environmental Impact Report for Los Angeles International Airport (LAX) Central Utility Plant Project, (SCH 2009041043), October 2009. Available: <http://www.lawa.org/ourLAX/Pastprojects.aspx?id=2348>, Accessed January 19, 2017.
- ²⁵ City of Los Angeles, Los Angeles World Airports, Final Environmental Impact Report for Los Angeles International Airport (LAX) Runway 7L/25R Runway Safety Area (RSA) and Associated Improvements Project, (SCH 2012101019), January 2014. Available: <http://www.lawa.org/ourLAX/RSA-South.aspx>, Accessed January 19, 2017.
- ²⁶ City of Los Angeles, Los Angeles World Airports, Final Environmental Impact Report for Los Angeles International Airport (LAX) West Aircraft Maintenance Area (WAMA) Project, (SCH 2012091037), February 2014. Available: <http://www.lawa.org/ourLAX/wama.aspx>, Accessed January 19, 2017.
- ²⁷ City of Los Angeles, Los Angeles World Airports, Final Environmental Impact Report for Los Angeles International Airport (LAX) Midfield Satellite Concourse (MSC), (SCH 2013021020), June 2014. Available: <http://www.lawa.org/MSCNorth/Index.aspx>, Accessed January 19, 2017.
- ²⁸ City of Los Angeles, Los Angeles World Airports, Final Environmental Impact Report for Los Angeles International Airport (LAX) Runway 6L-24R and Runway 6R-24L Runway Safety Area (RSA) and Associated Improvement Projects, (SCH 2014051040), June 2014. Available: <http://www.lawa.org/ourLAX/Currentprojects.aspx?id=7984>, Accessed January 19, 2017.

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LAWA Standard Control Measures

Standard Control Measures are measures that implement existing regulations and/or LAWA plans and policies that would reduce or avoid potential environmental impacts. For example, LAWA has formulated a wide range of actions designed to reduce temporary, construction-related air pollutant emissions from its ongoing construction. Another example of a LAWA Standard Control Measure is conformance by contractors with LAWA's existing Archaeological Treatment Plan²⁹ to reduce or avoid potential impacts to previously undiscovered archaeological resources that may be encountered during construction activities. LAWA's Archaeological Treatment Plan establishes requirements for monitoring during grading and/or excavation in native and undisturbed soils by a qualified archaeologist and protocols for the identification, evaluation, and recovery of archaeological resources, if discovered.

Standard Control Measures are proposed, as warranted, in this EIR as "mitigation measures" to reduce significant impacts. In addition, project-specific mitigation measures have been proposed to supplement applicable Standard Control Measures to reduce significant impacts to the extent feasible. In accordance with the requirements of CEQA, this EIR describes and, where relevant, quantifies, impacts both with and without mitigation, including Standard Control Measures. As such, the analysis under the heading "Impact Analysis" in each section of this chapter identifies the impacts of the proposed project before the application of Standard Control Measures and project-specific mitigation measures. A description and, where appropriate, quantification, of the impacts of the proposed project after application of Standard Control Measures and project-specific mitigation measures is then provided under the "Level of Significance After Mitigation" heading in each section.

As described above, LAWA has also identified Standard Control Measures that would be applied to the proposed project even though the project impact would be less than significant. In such cases, the Standard Control Measure(s) are identified under the heading "Other Measures" at the end of the section, rather than under the heading of "Mitigation Measures." This "Other Measures" heading/subsection is only included in cases where there is a Standard Control Measure applicable to the environmental topic and the impact has already been determined to be less than significant (i.e., the impact determination of "less than significant" is prior to, and not dependent upon, application of the "Other Measures").

²⁹ City of Los Angeles, Los Angeles World Airports, Final LAX Master Plan Mitigation Monitoring & Reporting Program: Archaeological Treatment Plan, prepared by Brian F. Smith and Associates. June 2005.

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