4.0 ENVIRONMENTAL IMPACT ANALYSIS APPROACH

This chapter discusses the environmental impacts of implementing the proposed Plan and identifies mitigation measures to reduce impacts found to be significant. This introductory section (4.0) describes the resource areas analyzed, and the impact analysis methodology employed.

RESOURCE AREAS ANALYZED

Consistent with the CEQA Guidelines and public scoping input discussed in Chapter 1.0, the resource areas analyzed in this EIR because they may have significant impacts are as follows:

- Aesthetics and Visual Resources
- Agricultural and Forestry Resources
- Air Quality
- Biological Resources
- Cultural and Paleontological Resources
- Energy
- Geology, Soils, and Mineral Resources
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use
- Noise and Vibration
- Population and Housing
- Public Services and Utilities
- Transportation
- Water Supply

ANALYSIS METHODOLOGY

As discussed in Chapter 1.0, this is a Program EIR, which may be prepared for a series of related actions that can be characterized as one project (CEQA Guidelines Section 15168). The degree of specificity in an EIR corresponds to the degree of specificity of the underlying activity being evaluated (CEQA Guidelines Section 15146). This EIR analyzes impacts of the proposed Plan at the same level of detail as the proposed Plan. The EIR provides a foundation for second-tier CEQA documents for subsequent projects, but does not analyze the project-specific impacts of individual projects. Project-specific and site-specific details of subsequent transportation and land use projects will vary widely. When a first-tier Program EIR is prepared, "leaving project-specific details to subsequent EIRs when specific projects are considered" is a proper approach to CEQA tiering (*In re Bay Delta* [2008] 43 Cal. 4th 1143, 1174).

The planning horizon of the proposed Plan is 2050. The programmatic and long-term nature of the proposed Plan necessitates a general and at times qualitative approach to the evaluation of impacts. The EIR analyzes impacts for the two main physical components of the proposed Plan: regional growth and land use change, and transportation network improvements and programs. It also analyzes the combined impacts of these components.

In general, physical conditions as they existed in 2012 are used as the baseline for the impact analysis of this EIR, corresponding with the release of the NOP on December 14, 2012. For a few significance criteria, more recent data are used when available to better represent existing conditions. For a few other significance criteria, when 2012 information was not available, older information was used as the baseline, with an explanation of why the information is representative of 2012 conditions.

The impact analysis involves comparison of anticipated future physical conditions under implementation of the proposed Plan to the baseline conditions for each resource area. The analysis includes not only future conditions in the 2050 long-term horizon year of the proposed Plan, but also the interim years of 2020 and 2035, the years for which SB 375 establishes greenhouse gas emission reduction targets. A supplemental summary analysis of future years 2025 and 2030 are also provided in Section 4.17.

Each resource area section includes the following:

Existing Conditions, consistent with CEQA Guidelines Section 15125(a), are described in the EIR and serve as the baseline physical conditions for the analysis of impacts. As noted above, unless otherwise noted, the "Existing Conditions" sections of the EIR describe conditions existing in 2012.

Regulatory Setting provides a summary of the federal, state, and local laws, regulations, plans, or policies that are relevant to each resource area and its significance criteria.

Significance Criteria are identifiable quantitative, qualitative, or performance levels used for each resource area to determine whether environmental impacts are significant. Unless otherwise noted, the significance criteria specifically developed for this EIR are based on the checklist question in Appendix G of the CEQA Guidelines. In some cases the EIR has combined checklist questions, edited their wording, or changed their location in the document in an effort to develop criteria that reflect the programmatic level of the impact analysis and the unique nature of the proposed Plan or local conditions.

Analysis Methodology describes the methods used to evaluate the impact for each significance criterion, and explains how a significant impact is defined for each significance criterion. For some resource areas, technical appendices have been prepared which present more detail on methodology, assumptions, data sheets, and/or results.

Climate Change effects may exacerbate the proposed Plan's impacts for most resource areas. The analysis methodology for affected resource areas describes climate change effects. Climate change impacts considered include, but are not limited to:

- Higher annual average temperature
- More days of extreme high temperatures
- Longer and more humid heat waves
- More intense and frequent drought
- Increased evaporation from soil, surface waters
- More frequent, severe wildfires
- Sea level rise
- Less frequent, more intense rainstorms, more frequent watershed flood events
- More frequent and severe coastal flooding
- Spreading of pests and vector-borne diseases

Impact Analysis presents scientific or factual data for the cause and effect relationship between the proposed Plan and the forecasted changes in baseline physical environmental conditions. The magnitude, duration, extent, frequency, range, or other parameters of an impact are ascertained to determine whether impacts are significant; all direct effects and reasonably foreseeable indirect effects are considered, with due consideration to both short-term and long-term impacts. Impacts are analyzed for 2020, 2035, and 2050 for the reasons described above.

The EIR provides quantitative analysis of the environmental impacts of the proposed Plan where possible or meaningful. For example, quantitative analysis is provided in the following resource area sections: agricultural and forestry resources, air quality, biological resources, energy, greenhouse gas emissions, transportation, and water supply. However, not all of the proposed Plan's impacts can meaningfully be analyzed quantitatively through the year 2050.

Where quantitative analysis of an impact is not possible or meaningful, qualitative analysis is provided. The EIR provides sufficient information about the proposed Plan's environmental impacts "in light of what is reasonably feasible." (CEQA Guidelines Section 15151.)

A cumulative impact analysis is provided in Chapter 5.0. This section analyzes whether a significant cumulative impact is created when impacts of the proposed Plan are added to the impacts of one or more related projects, and whether the proposed Plan's contribution to this impact is cumulatively considerable (CEQA Guidelines Section 15130). Cumulative impacts are analyzed for the same resource areas analyzed in Chapter 4.0.

Mitigation Measures are feasible actions intended to avoid or substantially lessen significant impacts identified as significant in the Impact Analysis. Mitigation Measures are provided only for those criteria where significant impacts have been identified.

The EIR include three broad types of mitigation measures: 1) plan- and policy-level mitigation measures assigned to SANDAG; 2) mitigation measures for transportation network improvements and programs, assigned to SANDAG and other transportation project sponsors; and 3) mitigation measures for development projects implementing regional growth and land use changes, which local jurisdictions implement.

The SANDAG Board of Directors has discretion to adopt or reject plan and policy level mitigation measures recommended in the EIR (as well as the other two types). This decision will be reflected in findings made by the Board at the time of Project approval. Plan or policy level mitigation measures that are accepted will be made formal parts of the proposed Plan and monitored to help ensure their implementation.

While the EIR provides as much detail as needed in the mitigation measures to evaluate their ability to avoid or substantially lessen impacts, some flexibility must be maintained to present mitigation approaches for impacts occurring under different circumstances. Many of the mitigation measures include lists of mitigation actions that can be implemented in connection with individual future transportation and development projects proposed in the Plan, or which will be undertaken under the land use authority of local governments. These individual future projects will occur over a wide and diverse geographic scope over the 35 year time span addressed in the Plan. Some will require approvals from multiple public agencies, each with different legal, regulatory or other authority relevant to the Project. Since the nature of individual future projects, resources and legal authority of the approving agency or agencies, physical circumstances of the project, and local policy considerations for all future projects implementing the Plan will vary widely, the mitigation actions included in lists, while generally feasible for many projects, may or may not be feasible for specific projects. In each case, the lead agency (and any responsible agencies) for an individual project will have to determine which mitigation actions are specifically applicable to the project, and the degree to which the recommended mitigation actions can feasibly be implemented based on project-specific circumstances.

Laws and regulations that are applied routinely to similar projects are generally taken into account in the impact analysis and not repeated as mitigation. However, some mitigation measures do describe specific impact-reducing actions that would be taken to achieve compliance with laws and regulations. In addition, many policies and programs already included in the proposed Plan will have the effect of reducing environmental effects that might otherwise occur from transportation network improvements and regional growth/land use change. The effects of these intrinsic elements of the Plan are accounted for in the impact analysis. These intrinsic measures may be identified for informational purposes in the text, but are not considered as "mitigation measures" for purposes of the EIR.

SANDAG is responsible for implementing those mitigation measures within its responsibility, jurisdiction, and statutory authority. Mitigation can also include measures that are within the responsibility and jurisdiction of another public agency (CEQA Guidelines Section 15091 [a][2]). In many instances, mitigation measures included in this EIR that would avoid or substantially lessen significant impacts of the proposed Plan fall under the responsibility and jurisdiction of other implementation agencies, such as cities, the County, Caltrans, public transit agencies, or other special districts. Since other project agencies would be responsible for certain mitigation measures identified in this EIR, SANDAG in its CEQA findings may find that those measures, if feasible, can and should be adopted by those other agencies (CEQA Guidelines Section 15091(a)(2)). Details regarding responsibilities for mitigation measure implementation will be provided in a separate mitigation monitoring and reporting program (MMRP) that the SANDAG Board of Directors will consider for approval in conjunction with approval of the proposed Plan.

Significance after Mitigation describes the effect of the mitigation measure(s) on the significant impacts, and determines whether the mitigation measure(s) will reduce the impact to less than significant, or whether the impact will remain significant. Impacts that remain significant after feasible mitigation measures are applied are identified as "significant and unavoidable impacts." For some impacts, infeasible mitigation measures are also discussed, with explanations of why they are infeasible; this discussion is provided for informational purposes only, and is not required by CEQA.