6 OTHER CONSIDERATIONS REQUIRED BY CEQA

This chapter addresses the following other considerations required by CEQA based on the impact analysis in Chapter 4: growth inducement, maximum theoretical buildout, significant irreversible impacts, and significant and unavoidable impacts.

6.1 GROWTH INDUCEMENT

6.1.1 Background

A project is defined as growth inducing when it: directly or indirectly fosters economic growth, population growth, or additional housing; removes obstacles to growth; or encourages or facilitates other activities that would significantly affect the environment (CEQA Guidelines Section 15126.2). Growth inducement would be caused by the provision or extension of utilities and public services. For example, the development of water, wastewater, fire, or other services in previously underserved areas; the extension of transportation routes into undeveloped areas; and the establishment of major new employment opportunities would all induce growth. The proposed Plan is considered growth-inducing for the reasons presented below. In addition, Section 4.14, Population and Housing, under Impact POP-1, further analyzes whether implementation of the proposed Plan would induce substantial unplanned population growth to areas of the region either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., by extending roads and other infrastructure).

6.1.2 Economic Growth, Population Growth, Additional Housing

As shown in Table 2-1, in Section 2.0, "Project Description," of this Draft EIR, from 2022 to 2035, the region is forecasted have an increase of 117,056 people (4%), 137,242 housing units (11%), and 67,297 jobs (4%). From 2036 to 2050, the region is forecasted to decrease by 4,112 people (-0.1%), increase by 65,577 housing units (4.8%), and increase by 103,460 jobs (6.2%). The proposed Plan's objectives include focusing population and employment growth in existing urbanized areas to protect sensitive habitat and natural resource areas, and providing transportation investments that support compact land development patterns. The proposed Plan focuses this population, housing units, and employment growth near existing and planned transportation infrastructure and in areas with existing utilities and municipal or public services. This growth pattern would preserve natural resources, open space, and agricultural lands.

Development to accommodate regional growth and land use change would be constructed throughout the region. However, the proposed Plan forecasts a general intensification of existing land uses in urban communities and along key transportation corridors. Most of these areas have established roadways and utilities, as well as water and sewer services. The placement of additional housing units in established areas would require upgrading and resizing of existing infrastructure, including water facilities. The upgrading of these facilities would further remove obstacles to the construction of additional housing within and adjacent to these areas. Chapter 2, Project Description, and Section 4.14, Population and Housing, further describe forecasted population, housing units, and job growth within the region.

The planned transportation network improvements of the proposed Plan are intended to expand upon the current transportation network by providing transportation investments that support compact land development patterns and decrease sprawl while reducing greenhouse gas (GHG) emissions and other environmental impacts. These transportation network improvements would remove obstacles to growth in some areas of the region, which would support additional housing, population, and economic growth. Section 4.14, Population and Housing, discusses forecasted regional population and employment growth associated with the proposed Plan.

6.2 MAXIMUM THEORETICAL BUILDOUT SCENARIO

6.2.1 Background

The theoretical buildout scenario assumes maximum development allowed under the proposed Plan, pursuant to the maximum density and/or intensity specified in the adopted land use elements of local general plans (100 percent of allowable residential units and 100 percent of allowable non-residential square footage). Due to regulatory constraints, physical constraints, and foreseeable market conditions, realization of this scenario is not reasonably foreseeable and is highly unlikely; however, this EIR includes an analysis of this scenario for informational purposes because the jurisdictional land use plans associated with the proposed Plan land use forecast do provide the theoretical capacity for residential units and nonresidential building square footage up to this maximum. Table 6-1 compares 2050 housing units and jobs under the 2050 forecast of the proposed Plan with the maximum theoretical buildout scenario.

Table 6-1 Existing and Forecasted Job Growth by Jurisdiction

2050 Forecast	Proposed Plan	Maximum Theoretical Buildout	Percent increase relative to the Proposed Plan
Housing Units	1,438,461	1,690,069	17.5%
Jobs	2,373,052	2,738,653	15.4%

Source: SANDAG 2025. Maximum Theoretical Buildout Scenario.

The maximum theoretical buildout scenario would represent a change in the level of residential and nonresidential development in the region. By 2050, it would result in approximately 251,608 additional housing units (approximately 17.5 percent more than the proposed Plan forecast) and approximately 365,601 additional jobs (approximately 15.4 percent more than the proposed Plan forecast) relative to forecasted growth under the proposed Plan. There would be no changes to the planned transportation network improvements and programs of the proposed Plan under this scenario.

The capacity of the maximum theoretical buildout scenario for housing units was estimated by either analyzing maximum plan density based on local adopted general plans (as of 2022) and any additional unit capacity from accessory dwelling units, or from Regional Housing Needs Allocation. The proposed Plan's Sustainable Communities Strategy (SCS) land use pattern is in alignment with each jurisdiction's adopted general plan. Given the generalized, highly theoretical nature of this buildout analysis, the analysis does not account for additional regulations, site specific conditions, or other factors that would hinder attainment of maximum allowable density or intensity on any given parcel. For example, parking requirements, slope and other land suitability characteristics, and implementation of environmental regulations would make attainment of maximum densities and/or intensities infeasible, and site-specific easements would restrict development of certain properties to levels below what is permitted by adopted plans. Another variable is that decision makers in each jurisdiction have the authority to approve, deny, or modify discretionary land use projects based on numerous site-specific factors.

The maximum theoretical buildout scenario assumes that development of lands with specified developmental constraints would be excluded, included but not limited to steep slopes (i.e., greater than 25 percent), Federal Emergency Management Agency (FEMA) 100-year floodplains and floodways, and conserved and preserved lands.

6.2.2 Aesthetics and Visual Resources

Under the maximum theoretical buildout scenario, neighborhoods that are below maximum buildout would be subject to redevelopment to achieve buildout, and areas that are not forecasted for development under the proposed Plan would be developed to the maximum density or intensity. As such, the character and the aesthetic quality of many areas would be altered. New development and infrastructure would be established within and adjacent to scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings. Scenic vistas, as well as scenic resources within a State-designated scenic highway, would be altered, if not blocked

completely in some areas, based on the construction of new buildings resulting from forecasted regional growth and land use change. Impacts would be greater with implementation of the maximum theoretical buildout scenario than with the proposed Plan. The greater amount of development under the theoretical buildout scenario would also substantially degrade the character of areas of the region, including adding a visual element of urban character to an existing rural or open space area. In addition, new development would create new light sources at night that would adversely affect dark skies in some locations. As with the proposed Plan, impacts on aesthetic resources would be reduced with the mitigation measures identified in Section 4.1, Aesthetics and Visual Resources, but would remain significant and unavoidable.

6.2.3 Agriculture and Forestry Resources

Impacts on agricultural lands, including areas with existing agricultural uses or lands with Williamson Act contracts, would be greater under the maximum theoretical buildout scenario. Lands with existing low-density residential uses that encourage or sustain agricultural operations would be developed to achieve maximum buildout and would no longer support agricultural operations. Additionally, a greater number of lands used for agricultural operations would be impacted by encroaching residential or commercial development. Areas adjacent to lands zoned for agricultural uses would be developed to achieve maximum density in such a way as to cause land use conflicts, as the nonagricultural uses would be in proximity to odors, runoff, and other effects. Impacts on agricultural lands would be greater than with implementation of the proposed Plan and greater than existing conditions.

Under the maximum theoretical buildout scenario, lands with existing low-density residential uses that include forest lands would be developed to achieve maximum buildout, and the theoretical buildout scenario would decrease acreage of forest lands in the region. As with the proposed Plan, impacts on agriculture and forestry resources would be reduced with the mitigation measures identified in Section 4.2, Agriculture and Forestry Resources, but would remain significant and unavoidable.

6.2.4 Air Quality

Under maximum theoretical buildout conditions, regional growth and land use change would result in some increases in air pollutant emissions, but as with the proposed Plan, conflicts with applicable Air Quality Attainment Plans are unlikely.

Compared to the proposed Plan, maximum theoretical buildout would result in increased particulate emissions, both construction and operational. Therefore, maximum theoretical buildout would have greater potential to violate or contribute substantially to a violation of an air quality standard. In particular, emissions of respirable particulate matter (PM10,associated with maximum theoretical buildout scenario have greater potential to result in violations of California Ambient Air Quality Standards for this pollutant, or to contribute substantially to existing violations. The proposed Plan results in cumulatively considerable increases in emissions of the nonattainment pollutant PM10, a significant impact. Maximum theoretical buildout would increase the magnitude of this impact.

The proposed Plan's PM2.5 and toxic air contaminant (TAC) emissions would expose sensitive receptors to substantial pollutant concentrations, a significant impact. Emissions of PM2.5 and TACs under the maximum theoretical buildout scenario would increase due to increases in vehicle miles traveled (VMT). Compared to the proposed Plan, there would be increased exposure of sensitive receptors to substantial pollutant concentrations. As with the proposed Plan, significant air quality impacts would be reduced with the mitigation measures identified in Section 4.3, Air Quality, but would remain significant and unavoidable.

6.2.5 Biological Resources

Impacts on biological resources would be greater under the maximum theoretical buildout scenario when compared to the proposed Plan. Under this scenario, areas that are vacant and not preserved or protected, or areas of low density would be developed to allow higher density and higher intensity uses. The conversion of

undeveloped lands to developed lands would result in impacts on biological resources, affecting sensitive natural communities and potential regulated waters; special status plant and wildlife species, and regional wildlife corridors and movement. Mitigation measures to reduce these impacts are described in Section 4.4, Biological Resources, for the proposed Plan. However, those impacts would remain significant and unavoidable. The same mitigation measures would apply for the theoretical buildout scenario. The maximum theoretical buildout scenario would consist of more development than the proposed Plan, and although impacts on biological resources would be reduced with the mitigation identified in Section 4.4, they would remain significant and unavoidable.

The maximum theoretical buildout scenario would not conflict with approved local, regional, State, and federal regulations, policies, ordinances, and finalized Habitat Conservation Plans/Natural Community Conservation Plans (HCP/NCCPs). The maximum theoretical buildout scenario would result in less-than-significant impacts related to encroachment into hardline preserve areas identified by adopted HCP/NCCPs because, as with the proposed Plan, development projects would require biologically equivalent or superior compensation of habitat or project redesign when there is encroachment into hardline preserve areas. Therefore, that impact would be less than significant.

6.2.6 Cultural Resources

Regional growth and land use changes forecasted under the maximum theoretical buildout scenario would result in ground disturbance that would occur during redevelopment and development of most of the region, including areas that are not planned for development under the proposed Plan. The area of ground disturbance would be greater than that anticipated under the proposed Plan, as areas not planned for regional growth and land use changes under the proposed Plan would be developed to their maximum densities. Development under the proposed Plan is more concentrated than it would be under maximum theoretical buildout. The likelihood of encountering historical resources or unique archeological resources is greatest on sites that have been minimally excavated in the past (e.g., undeveloped parcels, vacant lots, and lots containing surface parking, etc.). Previously excavated areas are generally considered to have a low potential for historic resources or unique archaeological resources, as the soil containing such resources has been removed. However, projects under the maximum theoretical buildout scenario likely would involve underground parking areas, underground tanks, new pipelines, or replacement of pipelines, all at a lower depth than the previous development in previously graded areas, and in areas that were not previously developed. As such, additional significant ground disturbances are anticipated, and it is possible that more unique archeological resources would be disturbed.

Therefore, compared to the proposed Plan, a greater number of historical resources or unique archeological resources would experience substantial adverse changes; this impact would continue to be significant. As with the proposed Plan, under maximum theoretical buildout, impacts related to disturbance of human remains would continue to be less than significant due to compliance with existing laws and regulations. Section 4.5, Cultural Resources identifies mitigation measures that would reduce impacts on historical resources or unique archaeological resources. However, as with the proposed Plan, under maximum theoretical buildout these impacts would remain significant and unavoidable.

6.2.7 Energy

Under maximum theoretical buildout conditions, regional growth and land use change would increase overall energy consumption compared to the proposed Plan. Increased housing would result in additional construction-related energy consumption from the use of fuel for off-road equipment, worker commutes, and electricity consumption. Operational electricity consumption and natural gas use would also increase under maximum theoretical buildout conditions. However, Impact EN-1 is based on the per capita energy consumption, which would determine whether the energy use under maximum theoretical buildout conditions is more efficient than under the existing land uses and transportation network. As discussed in Section 4.6, Energy, the per capita energy consumption rates for the proposed Plan decrease by 12.6% from 2022 to 2035, 11.8 % from 2022 to 2050, and 0.8% from 2036 to 2050, respectively. Therefore, even with the somewhat increased energy consumption under

maximum theoretical buildout conditions, population levels would be higher, and the per capita rates would continue to be lower than existing conditions. This impact would be less than significant.

Federal, State, and regional agencies will continue to implement programs that improve energy efficiency, decrease reliance on fossil fuels, and increase reliance on renewable energy sources. SANDAG efforts will continue to support State goals through 2050. SANDAG and San Diego Gas & Electric (SDG&E) will continue to make efforts at the regional and local levels to increase the amount of renewable energy to meet energy demands. As with the proposed Plan, the maximum theoretical buildout conditions would not result in an increased reliance on fossil fuels and decreased reliance on renewable energy sources, and there would be no conflict with a State or regional plan related to the increased use of renewable energy or energy efficiency. The impact would be less than significant.

6.2.8 Geology, Soils, and Paleontological Resources

Regional growth and land use changes in the buildout forecasted in the maximum theoretical scenario would result in additional structures exposed to seismic hazards such as ground shaking, fault rupture, liquefaction, and earthquake-induced landslides; however, new buildings and utilities would be constructed according to existing State and local regulations to minimize geologic hazards. As with the proposed Plan, adherence to the laws, regulations, and programs included in Section 4.7.2 and project-specific investigations following State and local standards and practices would minimize risks to people or property as a result of the maximum theoretical buildout scenario. Therefore, impacts associated with geologic and seismic risks would be less than significant for the maximum theoretical buildout scenario, such as with the proposed Plan. Further, incorporated cities and county government within the region have safety elements as part of their general plans, which contain requirements concerning the risks associated with expansive soils, landslides, subsidence, liquefaction, and other seismic and geologic hazards, as summarized in Table 4.7-3 in Section 4.7, 'Geology, Soils, and Paleontological Resources'. Impacts related to unstable soils, including expansive, collapsible, or unstable soils; landslides; and erosion or loss of topsoil would be greater under the maximum theoretical buildout scenario, as a result of the construction associated with development to accommodate regional growth and land use changes located in erosion-prone areas . Impacts would be greater than those under the proposed Plan, as a greater number of development projects would be constructed. As described in Section 4.7, Geology, Soils, and Paleontological Resources, adherence to the California Building Code (CBC), coastal zone regulations, construction general permit requirements, and local grading and erosion control ordinances would reduce the potential for substantial soil erosion or loss of topsoil, and impacts would continue to be less than significant.

The maximum theoretical buildout scenario would result in more construction than under the proposed Plan, particularly development in areas within geologic formations of moderate to high paleontological resource potential and areas containing unique geologic resources, and disturbance would occur at a lower depth than the previous development in previously graded areas, which would increase potential impacts on paleontological resources and unique geological features. Compared to the proposed Plan, this increased development under maximum theoretical buildout would cause a greater number of unique paleontological resources and unique geological features to be destroyed; this impact would continue to be significant and unavoidable.

6.2.9 Greenhouse Gas Emissions

Compared to existing conditions, the proposed Plan's GHG emissions would decrease for all horizon years (2035 and 2050). Under maximum theoretical buildout conditions, regional growth and land use change would result in some increases in GHG emissions, but there would still be net decreases compared to existing conditions.

Development under the maximum theoretical buildout scenario would be expected to largely continue in a similar pattern as under the proposed Plan, which encourages compact development, supporting rather than impeding adopted Climate Cation Plans (CAPs), GHG reduction plans, and/or sustainability plans relevant to the proposed Plan.

Under maximum theoretical buildout, development would be expected to largely continue in a similar pattern as under the proposed Plan, which encourages compact development, although per capita GHG emissions from passenger vehicles would somewhat increase. This increase could create a conflict with Senate Bill (SB) 375's per capita GHG emission reduction targets set by the California Air Resources Board for the San Diego region. The proposed Plan would be inconsistent with the State's ability to achieve the 2030 and 2045 reference points of 15.6 and 3.9 million metric tons of carbon dioxide equivalent, respectively (based on the goals of SB 32 and Assembly Bill [AB] 1279). Though a reference point could not be determined for 2050, as no statewide reduction target has been codified for that year, the proposed Plan's emissions would be greater in 2050 than the reference point derived for the AB 1279 target. Because GHG emissions would be higher under maximum theoretical buildout, these inconsistencies, which are a significant impact, would be worse. As with the proposed Plan, this would be reduced with the mitigation identified in Section 4.8, Greenhouse Gas Emissions, but impacts would remain significant and unavoidable.

6.2.10 Hazards and Hazardous Materials

The increased construction that would occur under the maximum theoretical buildout scenario would lead to an increase in the risk of hazards to the public, schools, and/or the environment through the routine use, handling, transport, or disposal of hazardous materials. As with the proposed Plan, adherence to existing regulations discussed in Section 4.9.2 would result in less-than-significant impacts related to hazardous emissions or handling hazardous materials during preconstruction, demolition, and/or construction activities for the theoretical buildout scenario. Regional growth and land use changes under the maximum theoretical buildout scenario would, similar to the proposed Plan, also result in air traffic hazards for people residing or working within an airport land use plan or within 2 miles of a public airport or public use airport. However, existing regulations, Federal Aviation Administration (FAA) procedures, Airport Land Use Compatibility Plans (ALUCPs), and Air Installation Compatible Use Zone (AICUZ) studies ensure compatibility between uses and reduce the potential for aircraft accidents and would result in a less-than-significant impact.

Additionally, regional growth and land use changes would result in development of parcels that are not proposed under the proposed Plan, and redevelopment would occur at higher densities, which would cause obstruction for emergency response vehicles or result in activities that would cause physical interference in the implementation of emergency response and evacuation plans or interfere with adequate emergency access. Associated development projects under the theoretical buildout scenario would be required to comply with existing regulations to reduce such hazards, as described in Section 4.9, Hazards and Hazardous Materials. However, as with the proposed Plan, under maximum theoretical buildout these impacts would remain significant and unavoidable.

6.2.11 Hydrology and Water Quality

The maximum theoretical buildout scenario would result in development and redevelopment throughout the region, at a greater level than under the proposed Plan. New areas of impermeable surface would be created as vacant or undisturbed areas would be paved; there would be changes in absorption rates, drainage patterns, groundwater infiltration, or the rate of surface runoff; and water and groundwater quality would be diminished. Because new construction and development would be required to comply with federal, State, and local regulations governing water quality and pollution prevention, as described in Section 4.10, Hydrology and Water Quality, as with the proposed Plan, these hydrology and water quality impacts associated with maximum theoretical buildout would be less than significant.

Development projects associated with the proposed Plan would be evaluated for the potential for damage from flooding and other associated hazards. Existing planning and design standards and regulations, such as project-specific technical studies, existing and updated emergency evacuation plans, water tank safety requirements, and other similar and applicable safety design considerations, would serve to address and minimize these potential impacts. Although a greater number of projects would be constructed under the maximum theoretical buildout scenario, and therefore a greater number of projects would be at risk from flooding, seiche, tsunami, or mudflow,

existing standards and regulations would continue to apply. Therefore, these impacts associated with hydrology and water quality would also be considered less than significant under the maximum theoretical buildout scenario.

6.2.12 Land Use and Planning

Under the maximum theoretical buildout scenario, there would be more regional growth and land use change than under the proposed Plan. Under the proposed Plan, regional growth and land use change would not physically divide an established community or cause significant impacts (not evaluated elsewhere in the EIR) due to conflicts with land use plans, and these impacts would be less than significant. Given the limited amount of additional development, regional growth and land use change impacts would continue to be less than significant under maximum theoretical buildout conditions. However, transportation network improvement land use and planning impacts relating to physical division of an established community would continue to be significant and unavoidable as with the proposed Plan.

Like the proposed Plan, because the maximum theoretical build out scenario assumes maximum development allowed under the proposed Plan, it would not conflict with land use plans, policies and regulations, including general plans, specific plans, and community plans adopted for the purpose of avoiding or mitigating an environmental effect.

6.2.13 Mineral Resources

Under the maximum theoretical buildout scenario, additional vacant or undeveloped land in areas with known mineral resources or locally important resource recovery sites would be developed, restricting the ability to extract mineral resources in those areas. As with the proposed Plan, impacts on the availability of known mineral resources or locally important resource recovery sites would be reduced with the mitigation identified in 4.12, Mineral Resources, but would remain significant and unavoidable.

6.2.14 Noise and Vibration

The maximum theoretical buildout scenario would result in more regional growth and land use change than associated with the proposed Plan. The increased development density would increase the number of persons exposed to noise levels exceeding State and local noise standards. This increase in development would also generate noise levels that would increase ambient noise levels, and further expose noise-sensitive receptors to substantial temporary and permanent increases in ambient noise levels from construction and operation. The increased level of residential and nonresidential development under the maximum theoretical buildout scenario would result in an increase of new residents, visitors, and workers in the region compared to the proposed Plan, which would thereby increase vehicle trips on area roadways, increasing traffic noise levels. Increased construction and transportation trips under the maximum buildout scenario would increase vibration and groundborne noise generated in proximity to sensitive receptors. As with the proposed Plan, impacts would be reduced with the mitigation identified in Section 4.13, Noise and Vibration, but would remain significant and unavoidable.

Compliance with local jurisdiction general plans and FAA standards would reduce noise from airstrips and ensure land use compatibility with any new development, including additional development under the maximum theoretical buildout scenario. As such, impacts would remain less than significant under the maximum theoretical buildout scenario.

6.2.15 Population and Housing

To achieve the maximum theoretical buildout scenario, an increase in the overall level of housing and nonresidential development would occur region-wide. This would induce additional unplanned growth in some areas of the San Diego Region beyond the unplanned growth anticipated with the proposed Plan. Greater levels

of development and conversion to higher densities would also lead to displacement of residents and housing units, and potentially necessitate the construction of replacement housing, as older existing residential units are replaced. As with the proposed Plan, some impacts would be reduced with the mitigation identified in Section 4.14, Population and Housing, but would remain significant and unavoidable.

6.2.16 Public Services and Utilities

Maximum theoretical buildout would lead to increased regional growth and land use change within the region. This growth would require an increase of public services and recreational facilities, such as fire and police protection, schools, and libraries. This growth would also increase demands on governmental facilities, recreational facilities, wastewater collection and treatment facilities, stormwater drainage facilities, electric power, natural gas, telecommunications, and/or solid waste facilities, which would in turn necessitate the construction of additional or improved public facilities to maintain service ratios, and/or other performance standards. As with the proposed Plan, impacts on public services would be reduced with the mitigation identified in Section 4.15, Public Services and Utilities, but would remain significant and unavoidable.

Additionally, with increased regional growth and land use changes, there would be more demand for utilities such as wastewater treatment facilities, stormwater drainage facilities, electric power, natural gas, telecommunication facilities, and/or solid waste disposal facilities under the maximum theoretical buildout scenario. The construction of new or expanded utility facilities would cause significant environmental impacts in order to maintain service levels, such as facility capacity. As with the proposed Plan, impacts on utilities would be reduced with the mitigation identified in Section 4.15 but would remain significant and unavoidable.

6.2.17 Transportation

The maximum theoretical buildout scenario would increase demand on transportation systems compared to the proposed Plan. The proposed Plan would decrease VMT per capita below Base Year (2022) conditions, but not to the levels needed to achieve State GHG reduction targets. Due to the increased regional growth and land use change under maximum theoretical buildout, this scenario, notwithstanding higher population numbers, would likely not decrease VMT per capita further beyond what is anticipated under the proposed Plan and would increase total VMT compared to the proposed Plan. Impacts under the maximum theoretical buildout scenario, as with the proposed Plan, would be significant and unavoidable, even after the mitigation measures described in Section 4.16, Transportation, are applied.

As with the proposed Plan, implementation of regional growth and land use changes under maximum theoretical buildout would not induce substantial vehicle travel because transportation network improvements would be the same. Maximum theoretical buildout would also cause a greater percentage of peak period transit and walk/bike trips to work, a greater percentage of jobs within proximity to high frequency transit stops and bike facilities, and substantially more daily transit boardings. The percentage of population within 0.5 mile of a transit stop and average peak period travel time to work on transit would increase under the maximum theoretical buildout, but the performance of public transit, bicycle, or pedestrian facilities would not decrease. As such, the characteristics of the maximum theoretical build out, as with the proposed Plan, are generally consistent with applicable plans and policies and would not conflict with them.

Implementation of the proposed Plan would not change applicable design standards and transportation network improvements would be designed consistent with those standards. Likewise, the maximum theoretical buildout is not expected to change applicable design standards either and would be consistent with applicable standards.

Finally, as with the proposed Plan, the maximum theoretical buildout scenario would not lead to a lack of parking supply that would cause significant secondary environmental impacts not already accounted for.

6.2.18 Tribal Cultural Resources

Regional growth and land use changes forecasted under the maximum theoretical buildout scenario would result in ground disturbance that would occur during redevelopment and development of most of the region, including areas that are not planned for development under the proposed Plan. The area of ground disturbance would be greater than that anticipated under the proposed Plan, as areas not planned for regional growth and land use changes under the proposed Plan would be developed to their maximum densities. Development under the proposed Plan is more concentrated than it would be under maximum theoretical buildout. The likelihood of encountering tribal cultural resources is greatest on sites that have been minimally excavated in the past (e.g., undeveloped parcels, vacant lots, and lots containing surface parking, etc.). Projects under the maximum theoretical buildout scenario could involve underground parking areas, underground tanks, new pipelines, or replacement of pipelines, all at a lower depth than the previous development in previously graded areas, and in areas that were not previously developed. As such, additional significant ground disturbances are anticipated, and it is possible that more tribal cultural resources would be disturbed.

Therefore, compared to the proposed Plan, a greater number of tribal cultural resources would experience substantial adverse changes; this impact would continue to be significant. Section 4.17, Tribal Cultural Resources, identifies mitigation measures that would reduce impacts on tribal cultural resources. However, as with the proposed Plan, under maximum theoretical buildout these impacts would remain significant and unavoidable.

6.2.19 Water Supply

The maximum theoretical buildout scenario would increase water demand compared to the proposed Plan. A greater amount of water would be needed for the construction and operation of residential and nonresidential development, developed park space, and other necessary developments to accommodate this regional growth. The increased growth under the maximum theoretical buildout scenario would lead to increased water demands such that water supplies would be inadequate to serve these demands, and new or expanded water supplies or entitlements would be required. In addition, continued growth under the maximum theoretical buildout scenario would further impede groundwater basin sustainability. As with the proposed Plan, this water supply impact would be reduced with the mitigation identified in Section 4.18, Water Supply, but would remain significant and unavoidable.

Under the proposed Plan, regional growth and land use change would result in the construction of additional new water facilities or the expansion of existing facilities to adequately meet forecasted demand or capacity needs, the construction of which would cause significant environmental effects. Increased water demands under maximum theoretical buildout would accelerate the need for new or expanded water facilities. As with the proposed Plan, this impact would be reduced with the mitigation identified in Section 4.18 but would remain significant and unavoidable.

6.2.20 Wildfire

Given the relatively large amount of area within the San Diego region considered at high risk for wildland fires, additional regional growth and land use change under the maximum theoretical buildout scenario would expose additional people and structures to a significant risk of loss, injury, or death involving wildland fires. Adherence to the regulations described in Section 4.19.2 would reduce impacts associated with wildland fires to a degree but not to a level less than significant. Also, as with the proposed Plan, impacts would be reduced with the mitigation identified in Section 4.19, Wildfire, but the following significant and unavoidable impacts would remain: increased exposure of people and structures to risk of loss, injury, or death involving wildland fires; exposing project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire; installation of infrastructure that may exacerbate fire risk; and exposing people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes.

6.3 SIGNIFICANT IRREVERSIBLE IMPACTS

Implementation of the proposed Plan would result in permanent changes to the existing environments, which have been described throughout this EIR. While the proposed Plan focuses population and employment growth in existing urban areas while also providing transportation investments that support compact land development patterns and reduce sprawl, there will still be some conversions of undeveloped land to urbanized uses. These conversions are considered a permanent irreversible change and would occur directly through construction of development on undeveloped land. Land use changes and transportation network improvements would result in significant irreversible impacts on aesthetics and visual resources, including changes to existing community character and views. Future development projects associated with the proposed Plan would result in a direct irreversible loss of sensitive vegetation communities that supports rare, threatened, or endangered species, and impacts on these resources would be significant and irreversible. The development of currently undeveloped land and other land use changes would result in significant irreversible impacts on agricultural resources and forest lands, and the availability of known mineral resources. The proposed Plan would substantially induce irreversible population growth and increased density, which would displace existing housing units, and result in additional people that would be susceptible to noise impacts. As development occurs at urban edges, additional people and structures would be at risk from wildland fires.

The proposed Plan's regional growth and land use changes would result in the irreversible consumption of nonrenewable resources. This use will have an incremental and irreversible effect on such resources. The irreversible commitment of limited resources is inherent in any development project or, in the case of the proposed Plan, aggregated development projects. Resources anticipated to be irreversibly committed over the timespan of the proposed Plan include, but are not limited to, lumber and other related forest products; sand, gravel, and concrete; petrochemicals; construction materials; steel, copper, lead, and other metals; and water. Development associated with the proposed Plan represents a long-term commitment to the consumption of fossil fuel oil and natural gas. These increased energy demands relate to construction, lighting, heating, and cooling of residences and buildings, as well as construction and operation of transit systems.

6.4 SIGNIFICANT AND UNAVOIDABLE IMPACTS

Based on the analysis detailed in Chapter 4 of this EIR, implementation of the proposed Plan would result in significant and unavoidable impacts for the resource topics shown in Table 6-2. As required by CEQA Guidelines Section 15126.1(c), significant and unavoidable impacts listed in this table are described in further detail in the relevant sections of Chapter 4. Table 6-2 identifies significant and unavoidable impacts for each horizon year (2035 and 2050).

With respect to land use changes implemented by local jurisdictions and transportation network improvements implemented by other transportation project sponsors, SANDAG has no authority to require implementing agencies to implement or enforce project-specific mitigation measures. In addition, some programmatic mitigation may not be feasible or effective for particular projects based on project or site-specific circumstances. This results in many significant impacts being significant and unavoidable.

In each resource area section, this EIR identifies mitigation measures that generally are performance standards-based, which SANDAG shall and other implementing agencies "can and should" comply with in mitigating project-specific impacts. Where applicable, SANDAG then identifies examples of project-level mitigation measures that may be required by lead agencies, to meet performance standards. Lead agencies may also identify other comparable measures capable of reducing impacts below the specified threshold. SANDAG cannot require other lead agencies to adopt mitigation, and it is ultimately the responsibility of the lead agency to determine and adopt project specific mitigation as appropriate and feasible for each individual project. As a result, this EIR concludes significant and unavoidable for many impacts where SANDAG does not have authority to implement or enforce project-specific mitigation measures, or where State action might be needed reduce impacts to less-than-significant levels.

Table 6-2 Significant and Unavoidable Impacts

Impacts of the Proposed Plan in 2035 and 2050	Mitigation Measures	Level of Significance After Mitigation	
		2035	2050
4.1 Aesthetics and Visual Resources			
AES-1 Have a substantial adverse effect on a scenic vista Significant impact in 2035 and 2050	**AES-1a Protect Public Views of Scenic Vistas for Transportation Network Improvements** **AES-1b Protect Public Views of Scenic Vistas for Development Projects**	Significant and Unavoidable	Significant and Unavoidable
AES-2 Substantially damage scenic resources, including, but not limited to, trees, rocks, outcroppings, and historic structures within a state scenic highway or local scenic route Significant impact in 2035 and 2050	**AES-1a Protect Public Views of Scenic Vistas for Transportation Network Improvements** **AES-2a Reduce Impacts on Scenic Resources in a State Scenic Highway and Local Scenic Routes for Transportation Network Improvements** **AES-2b Reduce Impacts on Scenic Routes in a State Scenic Highway and Local Scenic Routes for Development Projects**	Significant and Unavoidable	Significant and Unavoidable
AES-3 Substantially degrade the existing visual character or quality of public views of the site and its surroundings, including adding a visual element of urban character to an existing rural or open space area, or conflicting with regulations governing scenic quality Significant impact in 2035 and 2050	**AES-1a Protect Public Views of Scenic Vistas for Transportation Network Improvements** **AES-2a Reduce Impacts on Scenic Resources in a State Scenic Highway and Local Scenic Routes for Transportation Network Improvements** **AES-2b Reduce Impacts on Scenic Resources in a State Scenic Highway and Local Scenic Routes for Development Projects** **AES-3a Reduce Impacts on Visual Character for Transportation Network Improvements** **AES-3b Reduce Impacts on Visual Character for Development Projects**	Significant and Unavoidable	Significant and Unavoidable
AES-4 Substantially degrade the existing visual character or quality of public views of the site and its surroundings by creating a new source of light or glare that would adversely affect day or nighttime views Significant impact in 2035 and 2050	**AES-4a Minimize Effects of Light and Glare for Transportation Network Improvements** **AES-4b Minimize Effects of Light and Glare for Development Projects** **BIO-2a: Implement Design, Minimization, and Avoidance Measures for Special-Status Animal Species**	Significant and Unavoidable	Significant and Unavoidable
C-AES-1 Make a cumulatively considerable contribution to adverse effects related to aesthetics and visual resources Cumulatively considerable in 2035 and 2050	**AES-1a Protect Public Views of Scenic Vistas for Transportation Network Improvements** **AES-1b Protect Public Views of Scenic Vistas for Development Projects** **AES-2a Reduce Impacts on Scenic Resources in a State Scenic Highway and Local Scenic Routes for Transportation Routes Improvements** **AES-2b Reduce Impacts on Scenic Routes in a State Scenic Highway and Local Scenic Routes for Development Projects** **AES-3a Reduce Impacts on Visual Character for Transportation Network Improvements** **AES-3b Reduce Impacts on Visual Character for Development Projects**	Cumulatively Considerable	Cumulatively Considerable

Impacts of the Proposed Plan in 2035 and 2050	Mitigation Measures	Level of Significance After Mitigation	
		2035	2050
	AES-4a Minimize Effects of Light and Glare for Transportation Network Improvements **AES-4b Minimize Effects of Light and Glare for Development Projects** **BIO-2a: Implement Design, Minimization, and Avoidance Measures for Special-Status Animal Species**		
4.2 Agriculture and Forestry Resources			
AG-1 Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, or other agricultural lands to nonagricultural use Significant impact in 2035 and 2050	**AG-1a Preserve Existing Agricultural Lands** **AG-1b Reduce Transportation Network Improvement and Development Conflicts with Agricultural Operations**	Significant and Unavoidable	Significant and Unavoidable
AG-2 Conflict with existing zoning for agricultural use or a Williamson Act contract Significant impact in 2035 and 2050	**AG-1a Preserve Existing Agricultural Lands** **AG-1b Reduce Transportation Network Improvement and Development Conflicts with Agricultural Operations**	Significant and Unavoidable	Significant and Unavoidable
FR-1 Convert or result in the loss of "Forest Land" as defined in the California Forest Legacy Act of 2007 (PRC Section 12220[G]) Significant impact in 2035 and 2050	**FR-1 Reduce Impacts on Forest Lands** **BIO-1a Implement Design, Minimization, and Avoidance Measures for Sensitive Natural Communities and Regulated Aquatic Resources** **BIO-1b Provide Compensatory Mitigation** **BIO-1e Implement Best Management Practices to Avoid Indirect Impacts**	Significant and Unavoidable	Significant and Unavoidable
C-AG-1 Make a cumulatively considerable contribution to adverse effects on agriculture and forestry resources Cumulatively considerable in 2035 and 2050	**AG-1a Preserve Existing Agricultural Lands** **AG-1b Reduce Transportation Network Improvement and Development Conflicts with Agricultural Operations** **FR-1 Reduce Impacts on Forest Lands** **BIO-1a Implement Design, Minimization, and Avoidance Measures for Sensitive Natural Communities and Regulated Aquatic Resources** **BIO-1b Provide Compensatory Mitigation** **BIO-1e Implement Best Management Practices to Avoid Indirect Impacts**	Cumulatively Considerable	Cumulatively Considerable
4.3 Air Quality			
AQ-2 Result in an operations-related cumulatively considerable net increase in nonattainment or attainment criteria pollutants, including VOC, NOx, PM10, PM2.5, and SOx Significant impact in 2035 and 2050	**AQ-2a Secure Incentive Funding** **AQ-2b Regional Plan VMT Credit/Banking Program** **GHG-4a Allocate Grant Funding to Projects that Reduce GHG Emissions** **GHG-4b Coordination and Support to SANDAG Member Agencies to Adopt, Update, and Monitor GHG Reduction Plans**	Significant and Unavoidable	Significant and Unavoidable

Impacts of the Proposed Plan in 2035 and 2050	Mitigation Measures	Level of Significance After Mitigation	
		2035	2050
	GHG-4c Allocate Funding for Zero-Emission Vehicle Infrastructure **GHG-4d Implement Measures to Reduce GHG Emissions from Transportation Projects** **GHG-4e Implement Measures to Reduce GHG Emissions from Development Projects** **TRA-2 Achieve Further VMT Reductions for Transportation and Development Projects**		
AQ-3 Result in construction-related emissions above regional mass emission thresholds Significant impact in 2035 and 2050	**AQ-3a Implement Construction Best Management Practices for Fugitive Dust** **AQ-3b Reduce Diesel Emissions During Construction from Off-Road Equipment** **AQ-3c Reduce Diesel Emissions During Construction from On-Road Vehicles** **GHG-4a Allocate Grant Funding to Projects that Reduce GHG Emissions** **GHG-4b Coordination and Support to SANDAG Member Agencies to Adopt, Update, and Monitor GHG Reduction Plans** **GHG-4c Allocate Funding for Zero-Emission Vehicle Infrastructure** **GHG-4d Implement Measures to Reduce GHG Emissions from Transportation Projects** **GHG-4e Implement Measures to Reduce GHG Emissions from Development Projects**	Significant and Unavoidable	Significant and Unavoidable
AQ-4 Expose sensitive receptors to substantial PM10 and PM2.5 concentrations Significant impact in 2035 and 2050	**AQ-2a Secure Incentive Funding** **AQ-2b Regional Plan VMT Credit/Banking Program** **AQ-4 Reduce Exposure to Localized Particulate and/or TAC Emissions** **GHG-4a Allocate Grant Funding to Projects that Reduce GHG Emissions** **GHG-4b Coordination and Support to SANDAG Member Agencies to Adopt, Update, and Monitor GHG Reduction Plans** **GHG-4c Allocate Funding for Zero-Emission Vehicle Infrastructure** **GHG-4d Implement Measures to Reduce GHG Emissions from Transportation Projects** **GHG-4e Implement Measures to Reduce GHG Emissions from Development Projects** **TRA-2 Achieve Further VMT Reductions for Transportation and Development Projects**	Significant and Unavoidable	Significant and Unavoidable
AQ-5 Expose sensitive receptors to substantial TAC concentrations Significant impact in 2035 and 2050	**AQ-2a Secure Incentive Funding** **AQ-2b Regional Plan VMT Credit/Banking Program** **AQ-4 Reduce Exposure to Localized Particulate and/or TAC Emissions** **AQ-5a Reduce Exposure to Localized Toxic Air Contaminant Emissions**	Significant and Unavoidable	Significant and Unavoidable

Impacts of the Proposed Plan in 2035 and 2050	Mitigation Measures	Level of Significance After Mitigation	
		2035	2050
	AQ-5b Reduce Exposure to Localized Toxic Air Contaminant Emissions during Railway Design **GHG-4a Allocate Grant Funding to Projects that Reduce GHG Emissions** **GHG-4b Coordination and Support to SANDAG Member Agencies to Adopt, Update, and Monitor GHG Reduction Plans GHG-4c Allocate Funding for Zero-Emission Vehicle Infrastructure** **GHG-4d Implement Measures to Reduce GHG Emissions from Transportation Projects** **GHG-4c Establish Funding Programs for Zero-Emission Vehicle Infrastructure** **GHG-4d Implement Measures to Reduce GHG Emissions from Transportation Projects** **GHG-4e Implement Measures to Reduce GHG Emissions from Development Projects** **TRA-2 Achieve Further VMT Reductions for Transportation and Development Projects**		
C-AQ-1 Make a cumulatively considerable contribution to adverse effects related to air quality Cumulatively considerable in 2035 and 2050	**AQ-2a Secure Incentive Funding** **AQ-2b Regional Plan VMT Credit/Banking Program** **AQ-3a Implement Construction Best Management Practices for Fugitive Dust** **AQ-3b Reduce Diesel Emissions During Construction from Off-Road Equipment** **AQ-3c Reduce Diesel Emissions from On-Road Vehicles** **AQ-4 Reduce Exposure to Localized Particulate and/or TAC Emissions** **AQ-5a Reduce Exposure to Localized Toxic Air Contaminant Emissions** **AQ-5b Reduce Exposure to Localized Toxic Air Contaminant Emissions during Railway Design** **GHG-4a Allocate Grant Funding to Projects that Reduce GHG Emissions** **GHG-4b Coordination and Support to SANDAG Member Agencies to Adopt, Update, and Monitor GHG Reduction Plans** **GHG-4c Allocate Funding for Zero-Emission Vehicle Infrastructure** **GHG-4d Implement Measures to Reduce GHG Emissions from Transportation Projects** **GHG-4e Implement Measures to Reduce GHG Emissions from Development Projects** **TRA-2 Achieve Further VMT Reductions for Transportation and Development Projects**	Cumulatively Considerable	Cumulatively Considerable

Impacts of the Proposed Plan in 2035 and 2050	Mitigation Measures	Level of Significance After Mitigation	
		2035	2050
4.4 Biological Resources			
BIO-1 Have a substantial adverse effect on any sensitive natural communities identified in local or regional plans, policies, regulations, or by CDFW or USFWS; or have a substantial adverse effect on state or federally regulated waters and wetlands through direct removal, filling, hydrological interruption, or other means Significant impact in 2035 and 2050	**BIO-1a Implement Design, Minimization, and Avoidance Measures for Sensitive Natural Vegetation Communities and Regulated Aquatic Resources** **BIO-1b Provide Compensatory Mitigation** **BIO-1c Prepare a Habitat Restoration Plan** **BIO-1d Prepare Habitat/Long-Term Management Plans** **BIO-1e Implement Best Management Practices to Avoid Indirect Impacts**	Significant and Unavoidable	Significant and Unavoidable
BIO-2 Have a substantial adverse effect, either directly or indirectly, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or listed by CDFW or USFWS, including their federally designated critical habitat, or species that are considered sensitive in CEQA Guidelines Section 15380 Significant impact in 2035 and 2050	**BIO-1a Implement Design, Minimization, and Avoidance Measures for Sensitive Natural Vegetation Communities and Regulated Aquatic Resources** **BIO-1b Provide Compensatory Mitigation** **BIO-1c Prepare a Habitat Restoration Plan** **BIO-1d Prepare Habitat / Long-Term Management Plans** **BIO-1e Implement Best Management Practices to Avoid Indirect Impacts** **BIO-2a Implement Design, Minimization, and Avoidance Measures for Special-Status Animal Species** **BIO-2b Provide Compensatory Mitigation for Special-Status Plant Species** **BIO-2c Provide Compensatory Mitigation for Special-Status Animal Species**	Significant and Unavoidable	Significant and Unavoidable
BIO-3 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 Significant impact in 2035 and 2050	**BIO-3a Facilitate Wildlife Movement**	Significant and Unavoidable	Significant and Unavoidable
C-BIO-1 Make a cumulatively considerable contribution to adverse effects on biological resources Cumulatively considerable in 2035 and 2050	**BIO-1a Implement Design, Minimization, and Avoidance Measures for Sensitive Natural Vegetation Communities and Regulated Aquatic Resources** **BIO-1b Provide Compensatory Mitigation** **BIO-1c Prepare a Habitat Restoration Plan** **BIO-1d Prepare Habitat / Long-Term Management Plans** **BIO-1e Implement Best Management Practices to Avoid Indirect Impacts** **BIO-2a Implement Design, Minimization, and Avoidance Measures for Special Status Animal Species** **BIO-2b Provide Compensatory Mitigation for Special-Status Plant Species** **BIO-2c Provide Compensatory Mitigation for Special-Status Animal Species** **BIO-3a Facilitate Wildlife Movement**	Cumulatively Considerable	Cumulatively Considerable

Impacts of the Proposed Plan in 2035 and 2050	Mitigation Measures	Level of Significance After Mitigation	
		2035	2050
4.5 Cultural Resources			
CULT-1 Cause a substantial adverse change in the significance of a historical resource or unique archaeological resource Significant impact in 2035 and 2050	**CULT-1a Develop Project-Level Measures for Development Projects and Transportation Network Improvements** **CULT-1b Implement Monitoring and Data Recovery Programs for Development Projects and Transportation Network Improvements**	Significant and Unavoidable	Significant and Unavoidable
C-CULT-1 Make a cumulatively considerable contribution to adverse effects on cultural resources Cumulatively considerable in 2035 and 2050	**CULT-1a Develop Project-Level Measures for Development Projects and Transportation Network Improvements** **CULT-1b Implement Monitoring and Data Recovery Programs for Development Projects and Transportation Network Improvements**	Cumulatively Considerable	Cumulatively Considerable
4.6 Energy			
Not applicable		Not applicable	Not applicable
4.7 Geology, Soils, and Paleontological Resources			
GEO-5 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature Significant impact in 2035 and 2050	**GEO-5a Identify the Potential for Unique Paleontological Resources or Unique Geologic Features for Development Projects or Transportation Network Improvements** **GEO-5b Impacts on Unique Paleontological Resources or Unique Geologic Features for Development Projects or Transportation Network Improvements**	Significant and Unavoidable	Significant and Unavoidable
C-PALEO-1 Make a cumulative considerable contribution to adverse effects on paleontological resources Cumulatively considerable in 2035 and 2050	**GEO-5a Identify the Potential for Unique Paleontological Resources or Unique Geologic Features for Development Projects or Transportation Network Improvements** **GEO-5b Impacts on Unique Paleontological Resources or Unique Geologic Features for Development Projects or Transportation Network Improvements**	Cumulatively Considerable	Cumulatively Considerable
4.8 Greenhouse Gas Emissions			
GHG-4 Be inconsistent with the state's ability to achieve the 2030 reduction target of SB 32 and 2045 reduction goal of AB 1279 Significant impact in 2030, 2045, and 2050	**GHG-4a Allocate Grant Funding to Projects that Reduce GHG Emissions** **GHG-4b Coordination and Support to SANDAG Member Agencies to Adopt, Update, and Monitor GHG Reduction Plans** **GHG-4c Allocate Funding for Zero-Emission Vehicle Infrastructure** **GHG-4d Implement Measures to Reduce GHG Emissions from Transportation Projects** **GHG-4e Implement Measures to Reduce GHG Emissions from Development Projects.** **AQ-3b Reduce Diesel Emissions During Construction From Off-Road Equipment** **AQ-3c Reduce Diesel Emissions During Construction From On-Road Vehicles**	Significant and Unavoidable (Year 2030)	Significant and Unavoidable (Years 2045 and 2050)

Impacts of the Proposed Plan in 2035 and 2050	Mitigation Measures	Level of Significance After Mitigation	
		2035	2050
	TRA-2 Achieve Further VMT Reductions for Transportation and Development Projects **WS-1a Implement Water Conservation Measures for Transportation Network Improvements** **WS-1b Implement Water Conservation Measures for Development Projects**		
C-GHG-1 Make a cumulative considerable contribution to adverse effects to GHG emissions Cumulatively considerable in 2030, 2035, 2045, and 2050	**GHG-4a Allocate Grant Funding to Projects that Reduce GHG Emissions** **GHG-4b Coordination and Support to SANDAG Member Agencies to Adopt, Update, and Monitor GHG Reduction Plans** **GHG-4c Allocate Funding for Zero-Emission Vehicle Infrastructure** **GHG-4d Implement Measures to Reduce GHG Emissions from Transportation Projects** **GHG-4e Implement Measures to Reduce GHG Emissions from Development Projects** **AQ-3b Reduce Diesel Emissions During Construction From Off-Road Equipment** **AQ-3c Reduce Diesel Emissions During Construction From On-Road Vehicles.** **TRA-2 Achieve Further VMT Reductions for Transportation and Development Projects** **WS-1a Implement Water Conservation Measures for Transportation Network Improvements** **WS-1b Implement Water Conservation Measures for Development Projects**	Cumulatively Considerable	Cumulatively Considerable
4.9 Hazards and Hazardous Materials			
HAZ-4 Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan or result in inadequate emergency access Significant impact in 2035 and 2050	**HAZ-4: Demonstrate Consistency with Adopted Emergency Response or Evacuation Plans or Emergency Access**	Significant and Unavoidable	Significant and Unavoidable
C-HAZ-1 Make a cumulatively considerable contribution to adverse effects related to emergency response and evacuation plans and emergency access Cumulatively considerable in 2035 and 2050	**HAZ-4: Demonstrate Consistency with Adopted Emergency Response or Evacuation Plans or Emergency Access**	Cumulatively Considerable	Cumulatively Considerable

Impacts of the Proposed Plan in 2035 and 2050	Mitigation Measures	Level of Significance After Mitigation	
		2035	2050
4.10 Hydrology and Water Quality			
Not applicable	Not applicable	Not applicable	Not applicable
4.11 Land Use			
LU-1 Physically divide an established community Significant impact in 2050	**LU-1a Provide Access and Connections for Transportation Network Improvements**	Less than Significant	Significant and Unavoidable
C-LU-1 Make a cumulatively considerable contribution to adverse impacts related to land use and planning Cumulatively considerable in 2050	**LU-1a Provide Access and Connections for Transportation Network Improvements**	Not Cumulatively Considerable	Cumulatively Considerable
4.12 Mineral Resources			
MR-1 Result in the loss of availability of known aggregate and mineral resources supply sites that would be of value to the region and the residents of the state, or result in the loss of availability of a locally-important mineral resource recovery site delineated in a local general plan, specific plan, or other land use plan Significant impact in 2035 and 2050	**MR-1a Conserve Aggregate and Mineral Resources During Planning and Design of Development Projects** **MR-1b Conserve Aggregate and Mineral Resources During Planning and Design of Transportation Network Improvements**	Significant and Unavoidable	Significant and Unavoidable
C-MR-1 Make a cumulatively considerable contribution to adverse effects related to mineral resources Cumulatively considerable in 2035 and 2050	**MR-1a Conserve Aggregate and Mineral Resources During Planning and Design of Development Projects** **MR-1b Conserve Aggregate and Mineral Resources During Planning and Design of Transportation Network Improvements**	Cumulatively Considerable	Cumulatively Considerable
4.13 Noise and Vibration			
NOI-1 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; or generate a substantial absolute increase in ambient noise Significant impact in 2035 and 2050	**NOI-1a Implement Construction Noise Reduction Measures for Development Projects and Transportation Network Improvements** **NOI-1b Implement Operational Noise Reduction Measures for Transportation Network Improvements** **NOI-1c Implement Operational Noise Reduction Measures for Development Projects**	Significant and Unavoidable	Significant and Unavoidable

Impacts of the Proposed Plan in 2035 and 2050	Mitigation Measures	Level of Significance After Mitigation	
		2035	2050
NOI-2 Generation of excessive groundborne vibration or groundborne noise levels Significant impact in 2035 and 2050	**NOI-2a Implement Construction Groundborne Vibration and Noise Reduction Measures** **NOI-2b Implement Groundborne Vibration and Noise Reduction Measures for Rail Operations**	Significant and Unavoidable	Significant and Unavoidable
C-NOI-1 Make a cumulatively considerable contribution to adverse effects related to noise and vibration Cumulatively considerable in 2035 and 2050	**NOI-1a Implement Construction Noise Reduction Measures for Development Projects and Transportation Network Improvements** **NOI-1b Implement Operational Noise Reduction Measures for Transportation Network Improvements** **NOI-1c Implement Operational Noise Reduction Measures for Development Projects** **NOI-2a Implement Construction Groundborne Vibration and Noise Reduction Measures** **NOI-2b Implement Groundborne Vibration and Noise-Reduction Measures for Rail Operations**	Cumulatively Considerable	Cumulatively Considerable
4.14 Population and Housing			
POP-1 Induce substantial unplanned population growth to areas of the region either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., by extending roads and other infrastructure) Significant impact in 2035 and 2050	**POP-1a Coordinate with Local Jurisdictions to Reduce Substantial Unplanned Population Growth**	Significant and Unavoidable	Significant and Unavoidable
POP-2 Displace substantial numbers of people or housing units, which would necessitate the construction of replacement housing elsewhere Significant impact in 2035 and 2050	**POP-2a Design Development Projects to Reduce Displacement** **POP-2b Design Transportation Network Improvement Projects to Reduce Displacement**	Significant and Unavoidable	Significant and Unavoidable
C-POP-1 Make a cumulatively considerable contribution to adverse effects related to population and housing Cumulatively considerable in 2035 and 2050	**POP-1a Coordinate with Local Jurisdictions to Reduce Substantial Unplanned Population Growth** **POP-2a Design Development Projects to Reduce Displacement** **POP-2b Design Transportation Network Improvement Projects to Reduce Displacement**	Cumulatively Considerable	Cumulatively Considerable
4.15 Public Services, Recreation, and Utilities			
PS-1 Result in substantial adverse physical impacts associated with the provision of or need for new or physically altered (i.e., expanded) public facilities, in order to maintain adequate fire and police protection,	**PS-1 Implement Mitigation Measures for New/Expanded Public Service Facilities**	Significant and Unavoidable	Significant and Unavoidable

Impacts of the Proposed Plan in 2035 and 2050	Mitigation Measures	Level of Significance After Mitigation	
		2035	2050
emergency services, schools, libraries, and recreation facilities Significant impact in 2035 and 2050			
REC-1 Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated Significant impact in 2035 and 2050	**REC-1 Implement Mitigation Measures for Parks and Other Recreational Facilities**	Significant and Unavoidable	Significant and Unavoidable
U-1 Result in the expansion, relocation, or construction of wastewater collection and treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities to adequately meet projected capacity needs, the construction of which could cause significant environmental impacts Significant impact in 2035 and 2050	**U-1a Implement Mitigation Measures for New/Expanded Wastewater, Stormwater, Electrical, Natural Gas, and Telecommunications Facilities Associated with Development Projects** **U-1b Implement Mitigation Measures for New/Expanded Stormwater Facilities Associated with Transportation Network Improvements**	Significant and Unavoidable	Significant and Unavoidable
U-2 Generate solid waste in excess of state or local standards or in excess of the capacity of local infrastructure; impair the attainment of solid waste reduction goals; or fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste Significant impact in 2035 and 2050	**U-2a Implement Mitigation Measures for New/Expanded Solid Waste Facilities** **U-2b Reduce Construction Waste** **U-2c Reduce Operational Waste**	Significant and Unavoidable	Significant and Unavoidable
C-PS-1 Make a cumulatively considerable contribution to adverse effects related to public services Cumulatively considerable in 2035 and 2050	**PS-1 Implement Mitigation Measures for New/Expanded Public Service Facilities**	Cumulatively Considerable	Cumulatively Considerable
C-U-1 Make a cumulatively considerable contribution to adverse effects related to utilities Cumulatively considerable in 2035 and 2050	**U-1a Implement Mitigation Measures for New/Expanded Wastewater, Stormwater, Electrical, Natural Gas, and Telecommunications Facilities Associated with Development Projects** **U-1b Implement Mitigation Measures for New/Expanded Stormwater Facilities Associated with Transportation Network Improvements** **U-2a Implement Mitigation Measures for New/Expanded Solid Waste Facilities** **U-2b Reduce Construction Waste** **U-2c Reduce Operational Waste**	Cumulatively Considerable	Cumulatively Considerable

Impacts of the Proposed Plan in 2035 and 2050	Mitigation Measures	Level of Significance After Mitigation	
		2035	2050
C-REC-1 Make a cumulatively considerable contribution to adverse effects related to recreational resources Cumulatively considerable in 2035 and 2050	**REC-1 Implement Mitigation Measures for Parks and Other Recreational Facilities**	Cumulatively Considerable	Cumulatively Considerable
4.16 Transportation			
TRA-2 Conflict or be inconsistent with CEQA Guidelines Section 15064.3 by not achieving the substantial VMT reductions needed to help achieve statewide GHG reduction goals Significant impact in 2030, 2035, 2045, and 2050	**TRA-2 Achieve Further VMT Reductions for Transportation and Development Projects** **AQ-2b Regional Plan VMT Credit/Banking Program** **GHG-4a Allocate Grant Funding to Projects that Reduce GHG Emissions** **GHG-4b Coordination and Support to SANDAG Member Agencies to Adopt, Update, and Monitor GHG Reduction Plans** **GHG-4d Implement Measures to Reduce GHG Emissions from Transportation Projects** **GHG-4e Implement Measures to Reduce GHG Emissions from Development Projects**	Significant and Unavoidable (2030 and 2035)	Significant and Unavoidable (2045 and 2050)
C-TRA-1 Make a cumulatively considerable contribution to adverse effects to transportation Cumulatively considerable in 2030, 2035, 2045,and 2050	**TRA-2 Achieve Further VMT Reductions for Transportation and Development Projects** **AQ-2b Regional Plan VMT Credit/Banking Program** **GHG-4a Allocate Grant Funding to Projects that Reduce GHG Emissions** **GHG-4b Coordination and Support to SANDAG Member Agencies to Adopt, Update, and Monitor GHG Reduction Plans** **GHG-4d Implement Measures to Reduce GHG Emissions from Transportation Projects** **GHG-4e Implement Measures to Reduce GHG Emissions from Development Projects**	Cumulatively Considerable (2030 and 2035)	Cumulatively Considerable (2045 and 2050)
4.17 Tribal Cultural Resources			
TCR-1 Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074as 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 either (1) 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 (2) determined by the lead agency, in its discretion and supported by	**TCR-1a Implement Tribal Cultural Resources Mitigation Measures for Development Projects and Transportation Network Improvements** **TCR-1b Implement Monitoring and Mitigation Programs for Development Projects and Transportation Network Improvements**	Significant and Unavoidable	Significant and Unavoidable

Impacts of the Proposed Plan in 2035 and 2050	Mitigation Measures	Level of Significance After Mitigation	
		2035	2050
substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1 Significant impact in 2035 and 2050			
C-TCR-1 Make a cumulatively considerable contribution to adverse effects on tribal cultural resources Cumulatively considerable in 2035 and 2050	**TCR-1a Implement Tribal Cultural Resources Mitigation Measures for Development Projects and Transportation Network Improvements** **TCR-1b Implement Monitoring and Mitigation Programs for Development Projects and Transportation Network Improvements**	Cumulatively Considerable	Cumulatively Considerable
4.18 Water Supply			
WS-1 Not have sufficient water supplies available to serve the projected regional demand during normal, dry and multiple dry years Significant impact in 2050	**WS-1a Implement Water Conservation Measures for Transportation Network Improvements** **WS-1b Implement Water Conservation Measures for Development Projects** **WS-1c Ensure Adequate Water Supply for Development Projects**	Not applicable	Significant and Unavoidable
WS-2 Substantially decrease groundwater supplies, or interfere substantially with groundwater recharge such that the proposed Plan would impede sustainable management of groundwater basins or obstruct implementation of a sustainable groundwater management plan Significant impact in 2035 and 2050.	**WS-1a Implement Water Conservation Measures for Transportation Network Improvements** **WS-1b Implement Water Conservation Measures for Development Projects** **WS-2 Implement Groundwater Measures to Ensure Sustainable Yield for Development Projects**	Significant and Unavoidable	Significant and Unavoidable
WS-3 Require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects Significant impact in 2035 and 2050	**WS-1a Implement Water Conservation Measures for Transportation Network Improvements** **WS-1b Implement Water Conservation Measures for Development Projects** **WS-2 Implement Groundwater Measures to Ensure Sustainable Yield for Development Projects** **WS-3 Implement Measures for New or Expanded Water Facilities**	Significant and Unavoidable	Significant and Unavoidable
C-WS-1 Make a cumulatively considerable contribution to adverse effects to water supply Cumulatively considerable impact in 2035 and 2050	**WS-1a Implement Water Conservation Measures for Transportation Network Improvements** **WS-1b Implement Water Conservation Measures for Development Projects** **WS-1c Ensure Adequate Water Supply for Development Projects** **WS-2 Implement Groundwater Measures to Ensure Sustainable Yield for Development Projects** **WS-3 Implement Measures for New or Expanded Water Facilities**	Cumulatively Considerable	Cumulatively Considerable

Impacts of the Proposed Plan in 2035 and 2050	Mitigation Measures	Level of Significance After Mitigation	
		2035	2050
4.19 Wildfire			
WF-1 Increase risk of wildland fire ignition and directly or indirectly expose people or structures to significant risk of loss, injury, or death involving wildland fires Significant impact in 2035 and 2050	**WF-1 Reduce Wildfire Risk for Development and Transportation Projects**	Significant and Unavoidable	Significant and Unavoidable
WF-2 Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire Significant impact in 2035 and 2050	**WF-1 Reduce Wildfire Risk for Development and Transportation Projects**	Significant and Unavoidable	Significant and Unavoidable
WF-3 Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. Significant impact in 2035 and 2050	**WF-1 Reduce Wildfire Risk for Development and Transportation Projects** **WF-3 Reduce Wildfire Risk Related to New or Expanded Infrastructure Required to Support Regional Growth and Land Use Development**	Significant and Unavoidable	Significant and Unavoidable
WF-4 Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes Significant impact in 2035 and 2050	**WF-4 Reduce Post-Fire Risks Related to Flooding, Landslides, Slope Instability, or Drainage Changes for Development and Transportation Projects**	Significant and Unavoidable	Significant and Unavoidable
C-WF-1 Make a cumulatively considerable contribution to adverse effects related to wildfire Cumulatively considerable in 2035 and 2050	**WF-1 Reduce Wildfire Risk for Development and Transportation Projects** **WF-3 Reduce Wildfire Risk Related to New or Expanded Infrastructure Required to Support Regional Growth and Land Use Development** **WF-4 Reduce Post-Fire Risks Related to Flooding, Landslides, Slope Instability, or Drainage Changes for Development and Transportation Projects**	Cumulatively Considerable	Cumulatively Considerable

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