7.0 OTHER CONSIDERATIONS REQUIRED BY CEQA

This chapter addresses the following other considerations required by CEQA based on the impact analysis in Chapter 4.0 and alternatives analysis in Chapter 6.0: growth inducement, maximum theoretical buildout, significant irreversible impacts, and a summary of impact conclusions.

7.1 GROWTH INDUCEMENT

7.1.1 BACKGROUND

A project is defined as growth inducing when it: directly or indirectly fosters economic growth, population growth, or additional housing; removes obstacles for 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 4.13, under Impact POP-1, analyzes whether implementation of the proposed Plan would induce substantial increases in population, either directly (for example, by proposing new homes or businesses), or indirectly (for example, through extension of roads or other infrastructure).

7.1.2 ECONOMIC GROWTH, POPULATION GROWTH, ADDITIONAL HOUSING

From 2012 to 2050, the regional population is forecasted to increase by over 925,000 people (29 percent), over 326,000 housing units, and over 460,000 jobs. 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 unit, and employment growth in urbanized areas near existing and planned transportation infrastructure and in areas with existing utilities and municipal or public services. This growth pattern would preserve sensitive habitat, open space, and farmland. Approximately 1.3 million acres of land would be protected and preserved, more than half of the region's land area. The proposed Plan accommodates approximately 79 percent of all housing units and approximately 86 percent of all jobs within the Urban Area Transit Strategy (UATS), where the greatest public transit investments are focused. Over 80 percent of new housing in the region would be attached multifamily units.

The proposed Plan is resulting in construction of additional housing. However, the areas the proposed Plan targets for construction of these additional housing units is largely within previously developed areas. 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 2.0, Project Description, and Section 4.13, Population and Housing, further describe forecasted population, housing unit, and job growth within the region.

The planned transportation network improvements of the proposed Plan are intended to expand upon the current transportation network and enhance the transit-oriented opportunities to improve the mobility of people and goods around the region while reducing 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 4.13, Population and Housing, discusses forecasted regional population and employment growth associated with the proposed Plan. As described in Chapter 4 and Appendix P of the proposed Plan, implementation of the planned transportation network improvements and programs would benefit the regional economy. The economic effects of construction and operation of the planned transportation network, along with the economic effects of a more efficient network (relative to a "no build" scenario), including an average increase in the regional economy of approximately 53,000 jobs and $13 billion in gross regional product (GRP) per year. This equates to an increase of 2.5 percent in employment, and 4 percent in GRP between 2012 and 2050.

7.2 MAXIMUM THEORETICAL BUILDOUT SCENARIO

7.2.1 BACKGROUND

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 7.0-1 compares 2050 housing units and jobs under the 2050 forecast of the proposed Plan with the Maximum Theoretical Buildout Scenario.

Table 7.0-1
2050 Forecast for Housing Units and Jobs Comparison of the Proposed Plan and Maximum Theoretical Buildout Scenario

2050 Forecast	Proposed Plan	Maximum Theoretical Buildout	Percent increase relative to the proposed Plan
Housing Units	1,493,739	1,560,860	+4.5%
Jobs	1,911,405	2,020,319	+5.7%

Source: SANDAG 2015.

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 67,000 additional housing units (approximately 4.5 percent more than the proposed Plan forecast) and approximately 109,000 additional jobs (approximately 5.7 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 was estimated by analyzing maximum plan density on a parcel level. 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 affect 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 analysis excludes lands with specified developmental constraints, included but not limited to steep slopes (i.e., greater than 25 percent), FEMA 100-year floodplains and floodways, and conserved and preserved lands.

7.2.2 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 of the area and the aesthetic quality of many areas would be altered. New development and infrastructure would 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, and creating substantial sources of new light and glare. As with the proposed Plan, impacts to aesthetic resources would be reduced with the mitigation measures identified in Section 4.1, Aesthetics and Visual Resources, but impacts would remain significant and unavoidable.

7.2.3 AGRICULTURAL AND FORESTRY RESOURCES

Impacts to 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 to 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 to agriculture and forestry resources would be reduced with the mitigation measures identified in Section 4.2, Agriculture and Forestry Resources, but impacts would remain significant and unavoidable.

7.2.4 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 particulate matter (PM_{10} and $PM_{2.5}$) associated with maximum theoretical buildout scenario have greater potential to result in violations of California Ambient Air Quality Standards for these pollutants, or to contribute substantially to existing violations. The proposed Plan results in cumulatively considerable increases in emissions of the nonattainment pollutants PM_{10} and $PM_{2.5}$, a significant impact. Maximum theoretical buildout would increase the magnitude of this impact.

The proposed Plan's toxic air contaminant (TAC) emissions would expose sensitive receptors to substantial pollutant concentrations, a significant impact. Emissions of TACs under the maximum theoretical buildout scenario would increase due to increases in 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 impacts would remain significant and unavoidable.

7.2.5 BIOLOGICAL RESOURCES

Impacts to biological resources would be greater under the maximum theoretical buildout scenario when compared to the proposed Plan impacts. 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 to biological resources. This would have an impact on sensitive natural communities and potential regulated waters; special status plant and wildlife species, and on regional corridors and movement. Mitigation measures to reduce these impacts are described in Section 4.4, Biological Resources, of this EIR for the proposed Plan. However, impacts for the proposed Plan would remain significant and unavoidable. These mitigation measures would also apply and reduce impacts from the theoretical buildout scenario. The maximum theoretical buildout scenario would consist of more development than the proposed Plan, and although impacts to biological resources would be reduced with the mitigation identified in Section 4.4, Biological Resources, the impacts 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 HCP/NCCP conservation plans. 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, impacts would be less than significant.

7.2.6 CULTURAL AND PALEONTOLOGICAL 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 under the theoretical buildout scenario. Development under the proposed Plan is more concentrated than it would be under 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, since 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. The maximum theoretical buildout scenario would result in more construction than under the proposed Plan, which would increase potential impacts to paleontological resources and unique geological features, and would potentially disturb human remains.

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. Compared to the proposed Plan, 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.

Section 4.5, Cultural and Paleontological Resources, describes mitigation measures that would reduce impacts to historical resources, unique archaeological resources, unique paleontological resources, or unique geologic feature. As with the proposed Plan, under maximum theoretical buildout these impacts would remain significant and unavoidable.

7.2.7 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 with the 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, the per capita energy consumption rates for the proposed Plan decrease by 13 to 29 percent from 2012 to 2020, 2035, and 2050. Therefore, even with the somewhat increased energy consumption under maximum theoretical buildout conditions, 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 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. The impact would be less than significant.

Forecasted regional growth and land use change under maximum theoretical buildout conditions would increase the total demand for energy compared to the proposed Plan. Therefore, additional generation facilities or expansion of existing facilities would be needed to produce more electricity. SDG&E would continue to meet RPS requirements, and therefore, energy demand would be met with a variety of renewable and nonrenewable resources. Additional demand for natural gas would also require the construction of new supply, conveyance, storage, and distribution infrastructure. Additional facilities, or modified facilities, would be required to supply petroleum-based or alternative transportation fuels to the region. Alternative transportation fuels include electricity and natural gas, and increased demand for these energy sources for transportation purposes could further increase the need for additional infrastructure. Regional growth and land use change would result in construction of new natural gas, electricity, or transportation fuel facilities or expansion of existing facilities, the construction of which would cause significant environmental effects. As with the proposed Plan, impacts would be reduced with implementation of the mitigation identified in Section 4.6, Energy, but impacts would remain significant and unavoidable.

7.2.8 GEOLOGY, SOILS, AND MINERAL 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. 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. However, impacts related to unstable soils, including expansive, collapsible, or unstable soils; landslides; and erosion or loss of topsoil would be significant under the maximum theoretical buildout scenario, as a result of the construction of regional growth and land use changes located in erosion-prone areas. Impacts would be greater than impacts associated with the proposed Plan, as a greater number of regional growth projects would be constructed. As described in Section 4.7, adherence to the 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 be less than significant.

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 to the availability of known mineral resources or locally-important resource recovery sites would be reduced with the mitigation identified in 4.7, Geology, Soils, and Mineral Resources, but impacts would remain significant and unavoidable.

7.2.9 GREENHOUSE GAS EMISSIONS

Compared to existing conditions, the proposed Plan's GHG emissions from would decrease for all horizon years (2020, 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 likely continue in a similar pattern as under the proposed Plan, which encourages compact development, supporting rather than impeding the CAS, the goals of AB 32, and local Climate Action Plans. Because 2020 GHG emissions under the proposed Plan are only slightly lower than an AB 32-based regional reference point, it is possible that emissions under maximum theoretical buildout could exceed this reference point, which would be a significant impact related to conflicts with AB 32. As with the proposed Plan, conflicts with the CAS and local CAPs would not be a significant impact.

Under maximum theoretical buildout, development would likely 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. However, the maximum theoretical buildout scenario would likely still achieve, and not conflict with, SB 375's per capita GHG emission reduction targets set by CARB for the San Diego region.

The proposed Plan would be inconsistent with the State's ability to achieve the Executive Order B-30-15 and S-3-05 goals of reducing California's GHG emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. 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 s would be reduced with the mitigation identified in 4.8~~9~~, Greenhouse Gas Emissions, but impacts would remain significant and unavoidable.

7.2.10 HAZARDS AND HAZARDOUS MATERIALS

The increased construction that would occur as a result of 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 a less than significant impact related to hazardous emissions or handling hazardous materials during pre-construction, demolition, and/or construction activities for the theoretical buildout scenario. Regional growth and land use changes under the maximum theoretical buildout scenario would also result in an air traffic hazard for people residing or working within an airport land use plan or within 2 miles of a public or private airport, airstrip, or helipad, or result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in safety risks. Adherence to the regulations described Section 4.9.2 would minimize safety hazards related to airports and air traffic associated with implementation of the proposed Plan and the maximum theoretical buildout scenario, 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 developed under the proposed Plan, and redevelopment at higher densities, which would cause obstruction for emergency response vehicles or result in activities that would cause physical interference in the implementation of an emergency response and evacuation plans or interfere with adequate emergency access. However, 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 would be considered less than significant.

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 4.9.2 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 4.9, Hazards and Hazardous Materials, but there would remain an increased exposure of people and structures to risk of loss, injury, or death involving wildland fires and impacts would be significant and unavoidable.

7.2.11 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, all 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, impacts associated with hydrology and water quality would also be considered less than significant under the maximum theoretical buildout scenario.

7.2.12 LAND USE

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 conflict 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. Under both the proposed Plan and the maximum theoretical buildout scenario, however, transportation network improvement land use impacts would continue to be significant and unavoidable.

7.2.13 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 4.12, Noise and Vibration, but impacts would remain significant and unavoidable.

7.2.14 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 increases in population, either directly (for example, by proposing new homes or businesses), or indirectly (for example, through extension of roads or other infrastructure). Greater levels of development and conversion to higher densities would 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, impacts would be reduced with the mitigation identified in Section 4.13, Population and Housing, but impacts would remain significant and unavoidable.

7.2.15 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, storm water drainage facilities, and 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 to public services would be reduced with the mitigation identified in Section 4.14, Public Services and Utilities, but impacts 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, storm water drainage 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 to utilities would be reduced with the mitigation identified in Section 4.14, Public Services and Utilities, but impacts would remain significant and unavoidable.

7.2.16 TRANSPORTATION

The maximum theoretical buildout scenario would increase demand on transportation systems compared to the proposed Plan. Due to the increased regional growth and land use change under maximum theoretical buildout, this scenario would result in an increase in total annual VMT. 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 4.15, 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. As with the proposed Plan, maximum theoretical buildout would 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 miles of a transit stop and average peak period travel time to work on transit would increase under maximum theoretical buildout, but the performance of public transit, bicycle, or pedestrian facilities would not decrease.

Implementation of the proposed Plan would improve the rate of injury/fatal collisions for bicycles and pedestrians, and the rate of injury/fatal collisions for vehicles remains constant for all horizon years in the proposed Plan, but does not account for the proposed Plan's TSM and TDM investments or other vehicle technologies, which have historically been shown to improve safety. Impacts would be greater than under the proposed Plan, but given the small amount of additional growth, maximum theoretical buildout would not result in a substantially higher rate of systemwide accidents, collisions, injuries, or fatalities.

The construction of transportation network improvements and programs under maximum theoretical buildout would affect the supply of parking in the same manner as the proposed Plan. As with the proposed Plan, the maximum theoretical buildout scenario would not result in a loss of parking supply that would cause a significant environmental impact.

7.2.17 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. As with the proposed Plan, this water supply impact would be reduced with the mitigation identified in Section 4.16, Water Supply, but the impact 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 4.16, Water Supply, but the impact would remain significant and unavoidable.

7.3 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 development into existing urban areas and along existing or future transportation corridors, there will still be some conversion 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 to 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 to these resources would be significant and irreversible. The development of currently undeveloped land and other land use changes would result in significant irreversible impacts to 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, and construction and operation of transit systems.

7.4 SIGNIFICANT AND UNAVOIDABLE IMPACTS

Based on the analysis of Chapter 4.0 of this EIR, implementation of the proposed Plan would result in significant and unavoidable impacts for the resource topics shown in Table 7.0-2. As required by CEQA Guidelines Section 15126.1(c), significant and unavoidable impacts listed in this table are described in further detail in Chapter 4.0. Table 7.0-2 identifies significant and unavoidable impacts for each horizon year (2020, 2035, and 2050).

Table 7.0-2
Summary of Significant and Unavoidable Impacts

Impacts of the Proposed Plan in 2020, 2035, and 2050	Mitigation Measures	Level of Significance After Mitigation		
		2020	2035	2050
4.1 Aesthetics and Visual Resources				
AES-1 Have a substantial adverse effect on a scenic vista. Significant impact in 2020, 2035, and 2050.	**AES-1A Protect Public Views of Scenic Vistas.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
AES-2 Substantially damage scenic resources, including but not limited to, trees, rocks, outcroppings, and historic bridges within a State scenic highway. Significant impact in 2020, 2035, and 2050.	**AES-2A Reduce Impacts to scenic resources within a state scenic highway.** **AES-2B Reduce Impacts to local scenic resources and public viewsheds.** **AES-1A Protect Public Views of Scenic Vistas.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
AES-3 Substantially degrade the character of an area, including adding a visual element of urban character to an existing rural or open space area or by creating substantial new sources of light or glare that would adversely affect day or nighttime views. Significant impact in 2020, 2035, and 2050.	**AES-3A Reduce impacts to visual character.** **AES-1A Protect Public Views of Scenic Vistas.** **AES-2A Reduce Impacts to scenic resources within a state scenic highway.** **AES-2B Reduce Impacts to local scenic resources and public viewsheds.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
4.2 Agricultural and Forestry Resources				
AG-1 Convert agricultural lands to nonagricultural use. Significant impact in 2020, 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	Significant and unavoidable
AG-2 Conflict with existing zoning for agricultural use or a Williamson Act contract. Significant impact in 2020, 2035, and 2050.	**AG-1A Preserve Existing Agricultural Lands.** **AG-1B Reduce Transportation Network**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable

Impacts of the Proposed Plan in 2020, 2035, and 2050	Mitigation Measures	Level of Significance After Mitigation		
		2020	2035	2050
	Improvement and Development Conflicts with Agricultural Operations.			
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 2020, 2035, and 2050.	**FR-1A Reduce Impacts to Forest Lands**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
4.3 Air Quality				
AQ-2 Violate any air quality standard or contribute substantially to an existing or projected air quality violation. Significant impact in 2020, 2035, and 2050.	**GHG-4A Allocate Competitive Grant Funding to Projects that Reduce GHG Emissions.** **GHG-4B Adopt a Detailed Regional Mobility Hub ~~Strategy~~ Implementation Plan to Reduce GHG Emissions.** **GHG-4C Fund Electric Vehicle Charging Infrastructure.** **GHG-4D Adopt a Plan for Transportation Fuels that Reduce GHG Emissions.** **GHG-4E Assist in the Preparation of Climate Action Plans and Other Measures to Reduce GHG Emissions.** **GHG-4F Implement Measures to Reduce GHG Emissions from Transportation Projects.** **GHG-4G Implement Measures to Reduce GHG Emissions from Transportation Projects.** **GHG-4H Implement Measures to Reduce GHG Emissions from Development Projects.** **AQ-2A: Implement Construction Best**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable

Impacts of the Proposed Plan in 2020, 2035, and 2050	Mitigation Measures	Level of Significance After Mitigation		
		2020	2035	2050
	Management Practices for Fugitive Dust. **AQ-4A: Reduce Exposure to Localized Particulate and/or TAC Emissions.** **AQ-4B: Reduce diesel emissions during construction from off-road equipment.** **AQ-4C: Reduce diesel particulate emissions from on-road vehicles used in construction.** **EN-3B Develop Energy Demand Calculations and Reduce Energy Demand.**			
AQ-3 Result in a cumulatively considerable net increase of emissions of any criteria pollutant for which the project region is in nonattainment under applicable NAAQS or CAAQS. Significant impact in 2020, 2035, and 2050.	**AQ-2A: Implement Construction Best Management Practices for Fugitive Dust.** **AQ-4A: Reduce Exposure to Localized Particulate and/or TAC Emissions.** **AQ-4B: Reduce diesel emissions during construction from off-road equipment.** **AQ-4C: Reduce diesel particulate emissions from on-road vehicles used in construction.** **GHG-4A Allocate Competitive Grant Funding to Projects that Reduce GHG Emissions.** **GHG-4B Adopt a Detailed Regional Mobility Hub Implementation Plan~~Strategy~~ to Reduce GHG Emissions.** **GHG-4C Fund Electric Vehicle Charging Infrastructure.** **GHG-4D Adopt a Plan for Transportation Fuels that Reduce GHG**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable

Impacts of the Proposed Plan in 2020, 2035, and 2050	Mitigation Measures	Level of Significance After Mitigation		
		2020	2035	2050
	Emissions. **GHG-4E Assist in the Preparation of Climate Action Plans and Other Measures to Reduce GHG Emissions.** **GHG-4F Implement Measures to Reduce GHG Emissions from Transportation Projects.** **GHG-4G Implement Measures to Reduce GHG Emissions from Transportation Projects.** **GHG-4H Implement Measures to Reduce GHG Emissions from Development Projects.** **EN-3B Develop Energy Demand Calculations and Reduce Energy Demand.**			
AQ-4 Expose sensitive receptors to substantial pollutant concentrations. Significant impact in 2020, 2035, and 2050.	**GHG-4A Allocate Competitive Grant Funding to Projects that Reduce GHG Emissions.** **GHG-4B Adopt a <u>Detailed</u> Regional Mobility Hub ~~Strategy~~ <u>Implementation Plan</u> to Reduce GHG Emissions.** **GHG-4C Fund Electric Vehicle Charging Infrastructure.** **GHG-4D Adopt a Plan for Transportation Fuels that Reduce GHG Emissions.** **GHG-4E Assist in the Preparation of Climate Action Plans and Other Measures to Reduce GHG Emissions.** **GHG-4F Implement Measures to Reduce GHG Emissions from**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable

Impacts of the Proposed Plan in 2020, 2035, and 2050	Mitigation Measures	Level of Significance After Mitigation		
		2020	2035	2050
	Transportation Projects. **GHG-4G Implement Measures to Reduce GHG Emissions from Transportation Projects.** **GHG-4H Implement Measures to Reduce GHG Emissions from Development Projects.** **AQ-4A: Reduce Exposure to Localized Particulate and/or TAC Emissions.** **AQ-4B Reduce diesel emissions during construction from off-road equipment.** **AQ-4C Reduce diesel particulate emissions from on-road vehicles used in construction.** **AQ-2A Implement Construction Best Management Practices for Fugitive Dust.** **EN-3B Develop Energy Demand Calculations and Reduce Energy Demand.**			
4.4 Biological Resources				
BIO-1 Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS; or have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act or on resources regulated by CDFW under Section 1600 et seq. of the CFGC. Significant Impact in 2020, 2035, and 2050.	**BIO 1A Implement Design and Avoidance Measures for Vegetation and Regulated Waters.** **BIO 1B Provide Compensatory Mitigation.** **BIO 1C Prepare a Mitigation and Monitoring Plan.** **BIO 1D Implement Best Management Practices to Avoid Indirect Impacts.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
BIO-2 Have a substantial adverse effect, either directly or	**BIO-2A Implement Design and**	Significant and	Significant and	Significant and

Impacts of the Proposed Plan in 2020, 2035, and 2050	Mitigation Measures	Level of Significance After Mitigation		
		2020	2035	2050
indirectly, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS, or species that meets the criteria for endangered, rare, or threatened in CEQA Guidelines §15380. Significant Impact in 2020, 2035, and 2050.	**Avoidance Measures for Special Status Species.** **BIO-2B Provide Compensatory Mitigation for Special Status Plant Species.** **BIO-2C Provide Compensatory Mitigation for Special Status Wildlife Species.** **BIO 1A Implement Design and Avoidance Measures for Vegetation and Regulated Waters.** **BIO 1B Provide Compensatory Mitigation.** **BIO 1C Prepare a Mitigation and Monitoring Plan.** **BIO 1D Implement Best Management Practices to Avoid Indirect Impacts.**	unavoidable	unavoidable	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 2020, 2035, and 2050.	**BIO 3A Facilitate Wildlife Movement.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
4.5 Cultural and Paleontological Resources				
CULT-1 Cause a substantial adverse change in the significance of a historical resource or unique archaeological resource. Significant impact in 2020, 2035, and 2050.	**CULT–1A Develop Project-Level Measures.** **CULT–1B Implement Monitoring and Data Recovery Programs.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
PALEO-1 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. Significant impact in 2020, 2035, and 2050.	**PALEO -1A Identify Potential for Unique Paleontological Resources or Unique Geologic Features.** **PALEO-1B Avoid or Reduce Impacts to**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable

Impacts of the Proposed Plan in 2020, 2035, and 2050	Mitigation Measures	Level of Significance After Mitigation		
		2020	2035	2050
	Unique Paleontological Resources or Unique Geologic Features.			
4.6 Energy				
EN-3 Require or result in the construction of new energy facilities or the expansion of such facilities to adequately meet projected demands, the construction of which could cause a significant environmental effect. Significant impact in 2020, 2035, and 2050	**EN-3A Mitigate Impacts of New or Expanded Energy Facilities.** **EN-3B Develop Energy Demand Calculations and Reduce Energy Demand.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
4.7 Geology, Soils, and Mineral Resources				
MR-1 Result in the loss of availability of known aggregate and mineral resources 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 on a local general plan, specific plan, or other land use plan. Significant impact in 2020, 2035, and 2050.	**MR-1A Conserve Aggregate and Mineral Resources.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
4.8 Greenhouse Gas Emissions				
GHG-4 Inconsistent with the State's ability to achieve the Executive Order B-30-15 and S-3-05 goals of reducing California's GHG emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. Significant impact in 2035 and 2050. Impact not applicable to 2020.	**GHG-4A Allocate Competitive Grant Funding to Projects that Reduce GHG Emissions (SANDAG).** **GHG-4B Adopt a Detailed Regional Mobility Hub ~~Strategy~~ Implementation Plan to Reduce GHG Emissions (SANDAG).** **GHG-4C Fund Electric Vehicle Charging Infrastructure (SANDAG).** **GHG-4D Adopt a Plan for Transportation Fuels that Reduce GHG Emissions (SANDAG).** **GHG-4E Assist in the Preparation of Climate Action Plans and Other**	Not applicable	Significant and unavoidable	Significant and unavoidable

Impacts of the Proposed Plan in 2020, 2035, and 2050	Mitigation Measures	Level of Significance After Mitigation		
		2020	2035	2050
	Measures to Reduce GHG Emissions (SANDAG). **GHG-4F Implement Measures to Reduce GHG Emissions from Transportation Projects (SANDAG).** **GHG-4G Implement Measures to Reduce GHG Emissions from Transportation Projects (Other Transportation Project Sponsors).** **GHG-4H Implement Measures to Reduce GHG Emissions from Development Projects (Local Governments).** **AQ-4A Reduce Exposure to Localized Particulate and/or TAC Emissions.** **AQ-4B Reduce diesel emissions during construction from off-road equipment.** **AQ-4C Reduce diesel emissions during construction from on-road vehicles.** **EN-3B Develop Energy Demand Calculations and Reduce Energy Demand.** **WS-1A Implement Water Conservation Measures.**			
4.9 Hazards and Hazardous Materials				
HAZ-5 Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. Significant impact in 2020, 2035, and 2050.	**HAZ-5A Reduce Wildfire Risk.** **HAZ-5B Ensure Emergency Response Services.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
4.10 Hydrology and Water Quality				

Impacts of the Proposed Plan in 2020, 2035, and 2050	Mitigation Measures	Level of Significance After Mitigation		
		2020	2035	2050
Not applicable				
4.11 Land Use				
LU-1 Physically divide an established community. Significant impact in 2035 and 2050.	**LU-1A Provide Access and Connections.**	Not applicable	Significant and unavoidable	Significant and unavoidable
LU-2 Conflict with the land use portion of adopted local general plans or other applicable land use plans, including specific plans and community plans adopted for the purpose of avoiding or mitigating an environmental effect. Significant impact in 2035 and 2050.	**LU-2A Reduce Conflicts with Land Use Plans.** **POP-2A Design Projects to Reduce Displacement.**	Not applicable	Significant and unavoidable	Significant and unavoidable
4.12 Noise and Vibration				
N-1 Expose persons to or generation of noise levels in excess of standards established in local general plans or noise ordinances, or applicable standards of other agencies. Significant impact in 2020, 2035, and 2050.	**N-1A Implement Construction Noise Reduction Measures.** **N-1B Implement Operational Noise Reduction Measures.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
N-2 Cause a substantial temporary or periodic increase in ambient noise levels. Significant impact in 2020, 2035, and 2050.	**N-1A Implement Construction Noise Reduction Measures.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
N-3 Cause a substantial permanent increase in ambient noise levels. Significant impact in 2020, 2035, and 2050.	**N-1B Implement Operational Noise Reduction Measures.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
N-4 Expose persons to or generation of excessive groundborne vibration or groundborne noise levels. Significant impact in 2020, 2035, and 2050.	**N-4A Implement Construction Vibration Reduction Measures.** **N-4B Implement Vibration-reducing Measures for Rail Operations.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
4.13 Population and Housing				
POP-1 Induce substantial increases in population, either directly (for example, by proposing new homes or businesses), or indirectly (for example, through extension of roads or other infrastructure).	No feasible mitigation measures available.	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable

Impacts of the Proposed Plan in 2020, 2035, and 2050	Mitigation Measures	Level of Significance After Mitigation		
		2020	2035	2050
Significant impact in 2020, 2035, and 2050.				
POP-2 Displace substantial numbers of people or housing units, which would necessitate the construction of replacement housing elsewhere. Significant impact in 2020, 2035, and 2050.	**POP-2A Design Projects to Reduce Displacement.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
4.14 Public Services and Utilities				
PS-1 Result in the substantial physical deterioration of public facilities or cause 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, schools, libraries, and recreation facilities. Significant impact in 2020, 2035, and 2050.	**PS-1A Implement Mitigation Measures for New/Expanded Public Service Facilities.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
U-1 Result in the expansion or construction of wastewater collection and treatment facilities to adequately meet projected capacity needs, the construction of which could cause significant environmental impacts. Significant impact in 2020, 2035, and 2050.	**U-1A Implement Mitigation Measures for New/Expanded Wastewater Facilities.** **WS-1A Implement Water Conservation Measures.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
U-2 Require or result in the construction of new storm water drainage facilities or the expansion of existing facilities, the construction of which could cause significant environmental impacts. Significant impact in 2020, 2035, and 2050.	**U-2A Implement Mitigation Measures for New/Expanded Storm Water Drainage Facilities.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
U-3 Require or result in the construction of new solid waste disposal facilities or the expansion of existing facilities, the construction of which could cause significant environmental effects. Significant impact in 2035 and 2050.	**U-3A Implement Mitigation Measures for New/Expanded Solid Waste Facilities.** **U-3B Reduce Construction Waste.** **U-3C Implement Green Building Measures.**	Not applicable	Significant and unavoidable	Significant and unavoidable
4.15 Transportation				

Impacts of the Proposed Plan in 2020, 2035, and 2050	Mitigation Measures	Level of Significance After Mitigation		
		2020	2035	2050
T-1 Increase average daily vehicle miles traveled per capita or total vehicle miles traveled. Significant impact in 2020, 2035, and 2050.	**GHG-4A Allocate Competitive Grant Funding to Projects that Reduce GHG Emissions.** **GHG-4B Adopt a Detailed Regional Mobility Hub ~~Strategy~~ Implementation Plan to Reduce GHG Emissions** **GHG-4E Assist in the Preparation of Climate Action Plans and Other Measures to Reduce GHG Emissions.** **GHG-4H Implement Measures to Reduce GHG Emissions from Development Projects.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
4.16 Water Supply				
WS-1 Increase demands on existing water supplies such that they would be inadequate to serve future demands, and new or expanded water supplies or entitlements would be needed. Significant impact in 2020, 2035, and 2050.	**WS-1A Implement Water Conservation Measures.** **WS-1B Use Reclaimed Water.** **WS-1C Ensure Adequate Water Supply.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable
WS-2 Require or result in the construction of new water treatment or distribution facilities or the expansion of existing facilities to adequately meet forecast demand or capacity needs, the construction of which could cause a significant environmental effect. Significant impact in 2020, 2035, and 2050.	**WS-2A Mitigation Measures for New or Expanded Water Facilities.** **WS-1A Implement Water Conservation Measures.** **WS-1B Use Reclaimed Water.** **WS-1C Ensure Adequate Water Supply.**	Significant and unavoidable	Significant and unavoidable	Significant and unavoidable