

## Chapter 6.0

# Other Considerations Required by CEQA

### 6.0.1 Cumulative Impacts

This section of the EIR provides an analysis of cumulative impacts of the proposed 2030 RTP, as required by Section 15130 of the CEQA Guidelines. In addition, an analysis of the cumulative global climate change impacts of the proposed 2030 RTP is provided in Section 4.7.

Cumulative impacts are defined in CEQA Guidelines Section 15355 as two or more individual effects that together create a considerable environmental impact or that compound or increase other impacts. “A cumulative impact occurs from the change in the environment, which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time” (Guidelines §15355[b]). By requiring an evaluation of cumulative impacts, CEQA attempts to ensure that large-scale environmental impacts will not be ignored.

Consistent with CEQA Guidelines Section 15130(a), the discussion of cumulative impacts in this EIR focuses on significant and potentially significant cumulative impacts. According to CEQA Guidelines Section 15130(b), “the discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.”

The following elements are necessary to an adequate discussion of cumulative impacts (CEQA Guidelines §15130[b]):

- Either (a) a list of past, present, and reasonably anticipated future projects producing related or cumulative impacts, including those projects outside the

control of the agency; or (b) a summary of projections contained in an adopted general plan or related planning document that is designed to evaluate regional or areawide conditions. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.

- A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available.
- A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable options for mitigating or avoiding any significant cumulative effects of the proposed projects.

In accordance with Section 15130(b)(1)(b), the analysis of the cumulative effects of the proposed 2030 RTP relies on the regional growth projections provided by SANDAG’s *2030 Regional Growth Forecast Update* (“Regional Growth Forecast”) (SANDAG 2006b). The Regional Growth Forecast provides estimates and forecasts of population and housing units for San Diego County (“the region”) for the period between 2006 and 2030. The Regional Growth Forecast is available for review on file at SANDAG and online at [www.sandag.org](http://www.sandag.org).

According to the forecast, the population of San Diego County (i.e., the unincorporated areas of the county and all of the incorporated cities) is projected to increase by 971,739 persons or approximately 32 percent between 2006 and 2030 to 3,984,753 persons (Table 6.1-1). The number of housing units is projected to increase by approximately 24 percent within the County during the 2006-2030 period.

**Table 6.1-1  
Projections for the City of San Diego and San Diego County, 2004 and 2030**

	Total Population		Total Housing Units	
	2004	2030	2004	2030
San Diego County	3,013,014	3,984,753	1,095,077	1,386,227

Source: SANDAG 2006b

The following cumulative impact analysis is based on the assumption that regional population growth will be consistent with the 2030 Regional Growth Forecast. Cumulative impacts are analyzed in light of the significance thresholds presented in Sections 4.1 through 4.13 of this EIR.

In summary, the proposed 2030 RTP would be expected to reduce regional transportation/circulation impacts that would otherwise be expected to occur if the proposed 2030 RTP were not implemented. Geology/paleontology and regional water supply impacts would be less than cumulatively significant.

Cumulatively significant land use, air quality, noise, biological resources, energy, cultural resources, hazards and hazardous materials, global climate change, water resources, and visual resources impacts will not be mitigated to a level below significance.

## Land Use

Physical changes to the environment associated with either the substantial conversion of undisturbed/vacant land, agricultural land, designated open space, or other natural resources lands, or conflicts with applicable adopted land use plans or zoning requirements could result in greater cumulative land use impacts when viewed in connection with cumulative development in San Diego County.

The substantial population growth and development within San Diego County since the 1950s involved the conversion of agricultural and undisturbed open space lands to urban uses that still continues today. In terms of agricultural land, during the period between 2002 and 2004 (the latest data available) the amount of land within San Diego County designated as agricultural lands decreased by 16,005 acres. While agricultural land has been converted all over the region, one typical pattern is apparent in the eastern Chula Vista area, generally east of I-805. Where previously there were rolling hills used for grazing and crop production, now there are the “new towns” of East Lake, Otay Ranch, and others. Although habitat conservation plans such as the MSCP and the MHCP preserve important open space and natural resource lands in San Diego County, cumulative development would also likely result in the conversion of additional unprotected open space and natural resource lands to urban development and related uses. As San Diego County develops in response to future projected population growth, existing agricultural, open space, and natural resource lands would continue to be converted to urban development and related uses. Projected population growth and additional housing units are anticipated to occur in accordance with adopted land use plans and policies.

The proposed 2030 RTP is based on an existing and planned land use patterns and would focus on improving mobility in the more dense nodes of urban development, rather than continued expansion into rural areas. In addition, the proposed 2030 RTP includes a \$206 million Smart Growth Incentive Program to encourage coordination between local land use planning and the proposed transportation network of the proposed 2030 RTP. The proposed 2030 RTP transportation network has also been developed with flexibility that will enable the network to evolve in concert with local land use plan changes. However, certain projects included in the proposed 2030 RTP would be located in areas of existing open space and agricultural uses. For example, planned and proposed projects, such as the SR 11 and SR 125 (south) in the Otay Mesa area, would result in a substantial change to currently vacant land and open space areas. New construction and/or right-of-way acquisition associated with projects proposed

in the proposed 2030 RTP could result in impacts to agricultural and other open space lands.

Implementation of the individual projects proposed in the proposed 2030 RTP includes environmental review and documentation pursuant to CEQA. Compliance with federal, state, and local regulations and the goals and policies of the proposed 2030 RTP would generally reduce incremental land use impacts, including project-level impacts on local land use plans, which are considered cumulatively less than significant. However, for some projects it is possible that adherence to regulations may not adequately avoid or reduce incremental impacts to agricultural lands and open space, and such projects would require additional measures. For each future project requiring mitigation (i.e., measures that go beyond what is required by existing regulations), site-specific measures such as those listed in Section 4.1 would reduce project-level impacts to agricultural and open space lands, although not to a level less than significant. Thus, the incremental impacts of the proposed 2030 RTP, when viewed in connection with the loss of agricultural and open space land associated with past, present, and reasonably foreseeable development projects in the County, remain cumulatively significant. Although conformance with existing federal, state, and local regulations and implementation of mitigation measures listed in Section 4.1 would lessen this impact, the incremental additional conversion of agricultural and open space land in the County is considered cumulatively considerable and cumulative agricultural and open space land impacts are considered cumulatively significant and unavoidable.

## **Regional Water Supply**

The effects of Regional Growth Forecast 2030 population projections on long-term regional water supply reliability and demand for regional water supply facilities and infrastructure are analyzed in the San Diego County Water Authority's (SDCWA) Updated 2005 Urban Water Management Plan (SDCWA 2007a). Potential water facility options and alternatives are discussed in the SDCWA Regional Water Facilities Master Plan Draft Report (SDCWA 2002) and Regional Water Facilities Master Plan Final Programmatic Environmental Impact Report (SDCWA 2003). Through its imported water supply and identified supplemental water sources, SDCWA plans to meet the County's water needs through the year 2030 (SDCWA 2007a).

Water usage associated with implementation of the proposed 2030 RTP, and the requisite usage of water for new roadway lane construction is considered negligible relative to the 2030 water supply. Therefore, it is anticipated that water supplies would be available to serve the proposed 2030 RTP from existing entitlements and resources and that the construction of new water supply treatment, storage, and delivery facilities or expansion of existing facilities beyond those already planned for the San Diego area would not be required. The

proposed 2030 RTP does not conflict with current regional water supply plans or policies.

Implementation of the individual projects proposed in the proposed 2030 RTP includes environmental review and documentation pursuant to CEQA. Compliance with federal, state, and local regulations would generally reduce incremental impacts to regional water supply. However, for some projects it is possible that adherence to regulations may not adequately avoid or reduce incremental impacts, and such projects would require additional measures. For each future project requiring mitigation (i.e., measures that go beyond what is required by existing regulations), site-specific measures such as those listed in Section 4.2 would ensure that project-level impacts to regional water supply are less than significant. Thus, the incremental water usage of the proposed 2030 RTP, when viewed in connection with the anticipated water usage of projected population growth, would not result in a level of demand for water, or construction of water supply facilities or infrastructure unanticipated by the SDCWA. The regional water supply impacts of the proposed 2030 RTP are not considered cumulatively considerable and cumulative impacts to regional water supply are considered less than significant.

## **Visual Resources**

Visual impacts related to the substantial blocking of panoramic views or views of significant landscape features or landforms (mountains, oceans, rivers, bay, or important man-made structures) as seen from a transportation facility or from a surrounding area; substantial alterations to appearance of, or from, state-designated or eligible scenic highways; and the addition of a visual element of urban character to an existing rural or open space area or the addition of a modern element to a historic area could result in greater cumulative impacts when viewed in connection with cumulative development in San Diego County.

Past and present cumulative development in San Diego County has substantially impacted the visual character of the County, including the addition of urban character to once rural or open space areas through the urbanization of large portions of the County, especially along the coast. Reasonably foreseeable future cumulative development to accommodate projected growth in population and housing units is anticipated to result in the urbanization of existing rural and open space areas. Cumulative development in the region has also resulted in the blocking of panoramic views of the ocean, bays, and other visual resources, and future impacts to views of such resources are likely as development occurs to accommodate the projected increases in population and housing units in the region.

The proposed 2030 RTP proposes projects that could significantly affect visual resources by expanding or adding new transportation elements in rural or open space areas (e.g., SR 11); blocking views from adjacent areas or intruding into

important vistas along roadways (via noise walls or facilities themselves); rail improvements such as double-tracking in the coastal rail corridor; and/or changing the scale, character, and quality of designated or eligible scenic highway corridors (e.g., SR 76).

Implementation of the individual projects proposed in the proposed 2030 RTP includes environmental review and documentation pursuant to CEQA. In general, compliance with federal, state, and local regulations and the goals and policies of the proposed 2030 RTP would reduce incremental visual resources impacts. However, for some projects it is possible that adherence to regulations may not adequately avoid or reduce incremental impacts, and such projects would require additional measures. For each future project requiring mitigation (i.e., measures that go beyond what is required by existing regulations), mitigation measures such as those listed in Section 4.3 would reduce significant project-level visual resources impacts to less than significant, or the project's incremental impacts may remain significant and unavoidable where no feasible mitigation exists. However, the degree of future impacts and applicability, feasibility, and success of future mitigation measures cannot be adequately known for each specific future project at this program level of analysis. Therefore, incremental visual resources impacts of the proposed 2030 RTP, when viewed in connection with the visual impacts of cumulative development elsewhere in the County, are considered cumulatively considerable and cumulative visual resources impacts are considered significant and unavoidable.

## **Traffic and Circulation**

The performance of the regional transportation network is a cumulative concern. The existing level of passenger and commercial vehicle and transit trips associated with past and present cumulative development in the County leads to congestion on the roadway, highway and freight systems. Cumulative development in the County associated with projected population growth would generate increased demand on the existing roadway, highway, transit, and freight systems of the transportation network. The purpose of the proposed 2030 RTP is to optimize the performance of the transportation network in light of projected population growth identified in the Regional Growth Forecast. As discussed in Section 4.4, implementation of the proposed 2030 RTP is expected to result in a less congested roadway system and a more accessible transit system than the No Project condition. The proposed 2030 RTP would serve to improve circulation throughout the region as demand on the transportation system increases due to projected population growth.

Implementation of the individual projects proposed in the proposed 2030 RTP includes environmental review and documentation pursuant to CEQA. Compliance with federal, state, and local regulations and the goals and policies of the proposed 2030 RTP would reduce incremental traffic and circulation impacts and mitigation measures would not be required. Therefore, the beneficial traffic

and circulation impacts of the proposed 2030 RTP are not cumulatively considerable when viewed in connection with the traffic and circulation impacts associated with projected population growth and cumulative development. Cumulative traffic and circulation impacts in the County are considered less than significant.

## Air Quality

The SDAB is currently designated as a nonattainment area with respect to state and federal standards for O<sub>3</sub>, and state standards for PM<sub>10</sub> and PM<sub>2.5</sub>. Past, present, and future development associated with the projected population growth for San Diego County would generate increased air pollutant emissions, such as PM<sub>10</sub>, PM<sub>2.5</sub>, and CO associated with construction activities, on- and off-road sources, and stationary sources. The 2004 RAQS and SIP set forth strategies to achieve state and federal air quality standards, respectively. Projects that conflict with or obstruct implementation of the RAQS or SIP for attainment of federal and state air quality standards would have cumulative impacts on the air quality of the entire County. Projects that conform to the RAQS and SIP would not have a significant impact on air quality. Conformity means that transportation activities will not create new air quality violations, worsen existing violations, or delay the attainment of NAAQS.

Actions and policies considered in the proposed 2030 RTP are intended to reduce congestion and would create a more efficient transportation network. The proposed 2030 RTP would contribute positively to the purposes of the RAQS, 8-hour O<sub>3</sub> attainment plan, and SIP for the attainment and maintenance of the NAAQS and CAAQS and would conform to the applicable attainment plans. The only pollutant associated with on-road sources that would increase between the baseline and 2030 under the proposed 2030 RTP would be PM<sub>10</sub>. Off-road emissions of NO<sub>x</sub> and PM<sub>2.5</sub> would also increase under implementation of the proposed 2030 RTP. In addition, implementation of the proposed 2030 RTP would result in exposure of sensitive to TACs such as CO, diesel PM, and other harmful pollutants and potentially significant air pollutant emissions during construction activities.

Implementation of the individual projects proposed in the proposed 2030 RTP includes environmental review and documentation pursuant to CEQA. Compliance with federal, state, and local regulations and the goals and policies of the proposed 2030 RTP would generally reduce incremental air quality impacts, including project-level impacts to the RAQS and SIP, which are considered cumulatively less than significant. In addition, on-road emissions are a small part of the total emissions for the SDAB, and the increase attributable to the proposed 2030 RTP would be less than 10 percent in 2030 compared to the baseline. It is therefore concluded that while the PM<sub>10</sub> increase would be an adverse impact, the quantity would not be considerable, and the impact would be less than significant. On-road emissions of the proposed 2030 RTP were

compared with the 2006 baseline to show that increases in PM<sub>10</sub> would not be cumulative considerable and emissions of other nonattainment pollutants would decrease, resulting in a less than significant impact.

For some projects it is possible that adherence to regulations may not adequately avoid or reduce incremental impacts associated with off-road emissions of NO<sub>x</sub> and PM<sub>2.5</sub> from the growth of ship operations, construction emissions, and exposure of sensitive receptors to TACs and other harmful pollutants; such projects would require additional measures. For each future project requiring mitigation (i.e., measures that go beyond what is required by existing regulations), mitigation measures such as those listed in Section 4.5 would reduce significant project-level construction emissions, except for NO<sub>x</sub>, to less than significant. The incremental air quality impacts of the proposed 2030 RTP in connection with NO<sub>x</sub>, PM<sub>2.5</sub>, and TACs and other harmful pollutant emissions elsewhere in the County are considered cumulatively considerable and cumulative air quality impacts are considered significant and unavoidable.

Note to the reader: cumulative global climate change impacts are discussed below under Energy and Global Climate Change.

## Noise

Cumulative noise impacts in the County would generally be associated with construction activities, the operation of major regional transportation corridors, the operation of stationary sources such as power plants, and industrial land uses. Increased operational activity within major transportation corridors and increased operation of stationary sources could increase long-term noise levels, expose sensitive receptors to noise levels in excess of existing standards, and/or generate excessive groundborne vibration or noise levels.

Past and present development in the County has resulted in the development of stationary sources of noise such as power plants and industrial land uses within proximity of sensitive receptors. In addition, development associated with projected population growth is anticipated to be focused, at least to some extent, into mixed use communities developed at higher intensities and densities. As a result, new housing units may be located in close proximity to land uses with high noise levels such as industrial land uses operating machinery or entertainment venues or bars with loud music and/or patrons, and vice-versa, thus potentially exposing sensitive receptors to noise levels in excess of existing standards.

As discussed in Section 4.6, the proposed 2030 RTP proposes roadway, transit, and goods movement improvements that would accommodate increased use by trucks, buses, and trains and have the potential to expose sensitive receptors to significant noise levels. Examples include double-tracking of the Coaster, the expansion of transit facilities to areas currently not being served, and the accommodation of higher traffic volumes and facilitation of faster traffic speeds

on some of the region's freeways. The noise levels associated with these and similar improvements proposed in the proposed 2030 RTP would affect sensitive receptors near major transportation corridors throughout the County.

Implementation of the individual projects proposed in the proposed 2030 RTP would undergo environmental review and documentation pursuant to CEQA. In general, compliance with federal, state, and local regulations and the goals and policies of the proposed 2030 RTP would reduce incremental noise impacts. However, for some projects it is possible that adherence to regulations may not adequately avoid or reduce incremental impacts, and such projects would require additional measures. For each future project requiring mitigation (i.e., measures that go beyond what is required by existing regulations), mitigation measures such as those listed in Section 4.6 would reduce significant project-level noise impacts to less than significant. However, the project's incremental impacts may remain significant and unavoidable where no feasible mitigation exists. The degree of future impacts and applicability, feasibility, and success of future mitigation measures cannot be adequately known for each specific future project at this program level of analysis. Therefore, the exposure of sensitive receptors along major transportation corridors to significant noise levels cannot be reduced. When viewed in connection with the potential for the additional exposure of sensitive receptors along transportation corridors to stationary noise levels in excess of existing standards associated with past, present, and reasonably foreseeable development, incremental impacts of the proposed 2030 RTP are considered cumulatively considerable and cumulative noise impacts are considered significant and unavoidable.

## **Energy and Global Climate Change**

According to a report prepared by the U.S. Government Accountability Office (GAO), oil provides about one-third of all the energy used in the world (GAO 2007). The report also indicates that world oil consumption has increased steadily from 1983 to present and is projected to increase by about 40 percent by 2030 (GAO 2007). In addition, the United States is the world's largest consumer of petroleum, and the U.S. and California transportation sectors are almost entirely reliant petroleum-based fuels (GAO 2007). However, petroleum is a finite, nonrenewable resource. Other sources of transportation-related energy include natural gas and coal (often used to generate electricity), which are finite, nonrenewable global resources relied upon for energy throughout the world. Renewable transportation-related energy sources (i.e., those that do not involve the consumption of finite, nonrenewable resources) account for a minimal amount of world transportation-related energy consumption. Since the United States and the world are heavily reliant on petroleum and other nonrenewable finite resources for transportation-related and other energy needs, the excessive or wasteful consumption of finite, nonrenewable energy sources, especially petroleum-based fuels (e.g., gasoline and diesel), is a cumulative concern. Past and present development as well as development associated with projected

population growth would also increase consumption of nonrenewable energy sources such as petroleum-based fuels to power motor vehicles, natural gas for electricity and heating of homes and offices, and petroleum-based fuels associated with goods movement.

As discussed in Section 4.7, implementation of the proposed 2030 RTP would increase the total amount of gasoline and diesel fuel consumption associated with the regional transportation system. The proposed 2030 RTP would also increase total on-road fuel consumption and systemwide VMT per capita, and increase transit passenger miles per capita. In addition, electricity consumption under the proposed 2030 RTP would be about 100 percent greater than existing conditions. Consumption of energy associated with ancillary project features such as lighting and traffic lights would also increase. Although the proposed 2030 RTP would increase energy consumption, the comprehensive program of improvements proposed in the plan would encourage efficient use of nonrenewable energy resources through increased opportunities for carpooling and public transit, integration with local land use planning efforts, support for increased use of rail to move goods, and improved traffic flows.

Implementation of the individual projects proposed in the proposed 2030 RTP includes environmental review and documentation pursuant to CEQA. Compliance with federal, state, and local regulations and the goals and policies of the proposed 2030 RTP would generally reduce incremental impacts associated with increased consumption of nonrenewable energy sources. However, for projects that would increase gasoline, diesel, or electricity consumption, or would include ancillary features such as lighting and traffic lights it is possible that adherence to regulations may not adequately avoid or reduce incremental impacts associated with the consumption of nonrenewable energy sources, and such projects would require additional measures. For each future project requiring mitigation (i.e., measures that go beyond what is required by existing regulations), mitigation measures such as those listed for energy and global climate change impacts in Section 4.7 would reduce significant project-level impacts associated with increased consumption of energy to less than significant, or the project's incremental impacts may remain significant and unavoidable where no feasible mitigation exists. However, the degree of future impacts and applicability, feasibility, and success of future mitigation measures cannot be adequately known for each specific future project at this program level of analysis. Therefore, the incremental increase in nonrenewable energy associated with the proposed 2030 RTP, when viewed in connection with consumption of finite, nonrenewable sources of energy elsewhere in the County, United States, and world, is considered cumulatively considerable and cumulative nonrenewable energy impacts are considered significant and unavoidable.

As discussed in Section 4.7, the incremental GHG emissions associated with construction and operation of the regional transportation network under implementation of the proposed 2030 RTP would cause a cumulatively

considerable incremental contribution to the significant cumulative (worldwide) impacts when viewed in connection with worldwide GHG emissions. By generating increased emissions that contribute to global climate change, construction activities and operation of the transportation system that would occur under the proposed 2030 RTP would incrementally contribute to the adverse economic, public health, natural resources, and other environmental impacts projected to occur in California and throughout the world as a result of global climate change. Although the implementation of the mitigation measures listed in Section 4.7 would reduce the project's GHG emissions, global warming impacts are considered cumulatively significant and unavoidable.

## **Geology/Paleontology**

All of San Diego County is susceptible to impacts from seismic activity. Although seismic activity can cause damage to substandard construction, new designs can significantly reduce potential damage. Earthquake-resistant designs employed on new structures minimize the impact to public safety from seismic events. In addition, the County includes geologic formations susceptible to slope failure, expansive soils, steep slopes, and erosion. The County also includes geologic formations with moderate to high paleontological resource potential through the San Diego area.

Past and present development in the County is susceptible to impacts from seismic activity due to substandard construction of older structures, development on or near fault lines or in areas with high potential for strong seismic activity susceptibility to slope failure, erosion, or other geologic impacts with potential to result in adverse impacts to people and/or property. Future development associated with projected population growth would increase the amount of people and structures exposed to the adverse impacts of seismic activity, slope failure, and increased erosion potential in the County, although existing regulations would minimize impacts to future development. Also, future development associated with projected population growth has the potential to be located in areas with moderate to high paleontological resource potential and result in impacts to such resources.

Portions of the proposed 2030 RTP transportation network would be constructed through geologic formations susceptible to slope failure, and on or adjacent to expansive soils. Portions of the transportation network would also be constructed on or in proximity to steep slopes, and would increase the amount of impervious surfaces and the removal of vegetative cover, resulting in increased erosion potential. The implementation of the proposed 2030 RTP would also result in disturbance of geologic formations with moderate to high paleontological resource potential through the San Diego area.

Implementation of the individual projects proposed in the proposed 2030 RTP includes environmental review and documentation pursuant to CEQA. In

general, compliance with federal, state, and local regulations and the goals and policies of the proposed 2030 RTP would reduce incremental impacts associated with geology/paleontology. However, for some projects it is possible that adherence to regulations may not adequately avoid or reduce incremental impacts, and such projects would require additional measures. For each future project requiring mitigation (i.e., measures that go beyond what is required by existing regulations), mitigation measures such as project-specific geotechnical investigations and paleontological surveys discussed in Section 4.8 would reduce significant project-level geological and paleontological impacts to a less than significant level. When accounting for project-specific requirements for geotechnical investigations and paleontological surveys, the geological and paleontological impacts of the proposed 2030 RTP would not result in greater cumulative impacts when viewed in connection with the potential for geological and paleontological impacts elsewhere in the County. Therefore, incremental impacts of the proposed 2030 RTP are considered less than cumulatively considerable and significant cumulative geological and paleontological impacts would not occur.

## **Water Resources**

Future development associated with projected population growth in the County will result in increased impervious surfaces within the County's watersheds, which will result in hydrologic impacts associated with absorption rates, drainage patterns, or rates of surface runoff and impacts to floodplains. The majority of water bodies within San Diego County are part of hydrologic systems located in multiple jurisdictions. As a result, water pollution produced by urban development in one jurisdiction can result in water quality impacts that affect other jurisdictions or the entire County. Thus, regional water quality impacts are a cumulative concern.

The NPDES Municipal Permit requires Copermittees to collaborate on the development of a WURMP for each watershed. The WURMP documents address high-priority storm water quality issues found within the multiple regional watersheds. Compliance with the WURMP documents would help reduce both individual and cumulative impacts to water quality. Cumulative impacts would occur when the water quality impacts of two or more jurisdictions which, when considered together, are considerable or which compound or increase other effects. As the County develops in response to future population growth, water quality impacts to regional watersheds, some of which are located in areas where proposed 2030 RTP projects, would occur. Implementation of the transportation improvements proposed in the proposed 2030 RTP would increase the amount of impervious surface area and contribute to increased runoff within County watersheds. Runoff from new highways and other transportation facilities is known to carry pollutants and sedimentation and may contribute to downstream flooding. The propensity for this runoff to reach local surface waters is high, and therefore it is likely that pollutants and sedimentation

carried in the runoff would be deposited into surface waters. If left untreated, these pollutants and sediment could cause significant impacts by creating a water quality impairment, or exacerbating an existing impairment.

Implementation of the individual projects proposed in the proposed 2030 RTP includes environmental review and documentation pursuant to CEQA. Compliance with federal, state, and local policies, standards, and land use strategies that address water resource issues and the goals and policies of the proposed 2030 RTP would generally reduce incremental water quality impacts. However, for some projects it is possible that adherence to regulations may not adequately avoid or reduce incremental impacts, and such projects would require additional measures. For each future project requiring mitigation (i.e., measures that go beyond what is required by existing regulations), mitigation measures such as those listed in Section 4.9 would reduce significant project-level water quality impacts to less than significant. However, the incremental water quality impacts of the proposed 2030 RTP, when viewed in connection with the water quality impacts from past, present, and reasonably foreseeable development projects in the County, remain cumulatively significant. Although conformance with existing federal, state, and local regulations for grading and the protection of water quality combined with implementation of BMPs and mitigation measures discussed in Section 4.9 would lessen this impact, the incremental water quality impacts of cumulative development in the County to lagoons and other water bodies are considered cumulatively considerable and cumulative water quality impacts are considered significant and unavoidable.

## **Biological Resources**

Past and present development has resulted in adverse impacts to biological resources within the County at least since large-scale urbanization began in the middle of the 20<sup>th</sup> century. In addition, reasonably foreseeable future projects associated with population growth projected in the Regional Growth Forecast within the County are likely to target undeveloped areas within the County since undeveloped lands are often less expensive to acquire and develop. Implementation of these projects would contribute to the cumulative loss of sensitive habitats and biological resources throughout the County. Of particular concern is the potential loss of coastal sage scrub, wetlands and associated habitat, lagoons, native and nonnative grasslands, and southern mixed chaparral. These resources contain a variety of sensitive plant species and provide habitat for sensitive wildlife species. The loss of large open blocks of these habitats or resources would contribute to cumulatively significant impacts.

The projects proposed in the proposed 2030 RTP generally focus on improvements to existing urbanized corridors. However, implementation of some projects would result in the conversion of undeveloped lands and impacts to biological resources, such as direct impacts to native habitat and wildlife, including sensitive plant and wildlife species and wetlands. These impacts could

result from displacement and loss of habitat and adverse effects to wildlife as a result of ongoing noise, light, glare, and air pollution, and polluted runoff during the operation of the proposed facilities. Improvements to existing corridors such as double-tracking of the coastal rail corridor and the widening of I-5 also have the potential to impact biological resources.

Implementation of the individual projects proposed in the proposed 2030 RTP includes environmental review and documentation pursuant to CEQA. In general, compliance with federal, state, and local regulations and the goals and policies of the proposed 2030 RTP would reduce incremental biological resources impacts. However, for some projects it is possible that adherence to regulations may not adequately avoid or reduce incremental impacts, and such projects would require additional measures. For each future project requiring mitigation (i.e., measures that go beyond what is required by existing regulations), mitigation measures such as those listed in Section 4.10 would reduce significant project-level biological resources impacts to less than significant, or the project's incremental impacts may remain significant and unavoidable where no feasible mitigation exists. However, the degree of future impacts and applicability, feasibility, and success of future mitigation measures cannot be adequately known for each specific future project at this program level of analysis. Therefore, incremental biological resources impacts cannot be reduced and, when viewed in connection with regional impacts to unprotected species, habitats, and other resources, are considered cumulatively considerable and cumulative impacts to biological resources in the County are considered significant and unavoidable.

## **Cultural Resources**

Past and present development in the County has resulted in adverse impacts to historic and archaeological resources in the County. Future development associated with the population growth projections of the Regional Growth Forecast would involve ground-disturbing activities such as grading or excavation with the potential to result in additional adverse impacts to historic and/or archaeological resources or prehistoric human remains. In addition, future development within the County could involve impacts associated with the substantial alteration, relocation, or demolition of historic buildings, structures, objects, landscapes, and sites. Archaeological resources and prehistoric human remains may be difficult to detect prior to construction activities, as they are generally located below the ground surface. The potential to affect important archaeological sites and prehistoric human remains exists if a development activity requires even minimal grading and/or excavation. The likelihood of encountering archaeological resources is greatest on sites that have been minimally excavated in the past (e.g., undeveloped parcels, vacant lots, and lots containing surface parking; undeveloped areas around historic buildings; under buildings with post, pier, slab, or shallow wall foundations without basements; etc.). As discussed in Section 4.11, implementation of new or widened highways,

rail alignments, border crossings, transit stations and other new facilities in the proposed 2030 RTP could impact significant prehistoric or historic properties and archaeological sites, including human remains.

Implementation of the individual projects proposed in the proposed 2030 RTP includes environmental review and documentation pursuant to CEQA. In general, compliance with federal, state, and local regulations and the goals and policies of the proposed 2030 RTP would reduce incremental cultural resources impacts. However, for some projects it is possible that adherence to regulations may not adequately avoid or reduce incremental impacts, and such projects would require additional measures. For each future project requiring mitigation (i.e., measures that go beyond what is required by existing regulations), mitigation measures those listed in Section 4.11 would reduce significant project-level cultural resources impacts to less than significant. Impacts to these resources associated with the proposed 2030 RTP would result in cumulative impacts when viewed in connection with the large-scale adverse impacts to historic and archaeological resources associated with past, present and reasonably foreseeable development in the County. Therefore, the incremental cultural resources impacts of the proposed 2030 RTP are considered cumulatively considerable and these cumulative impacts to cultural resources in the County are considered significant and unavoidable.

## **Hazards and Hazardous Materials**

Future development associated with increased population growth projected in the Regional Growth Forecast would increase the number of people potentially exposed to health and safety impacts related to hazardous materials transportation safety, hazardous materials in industrial areas or former agricultural lands, physical interference with emergency response or emergency evacuation plans, seiche, tsunami, mudflow, urban and wildland fires, aircraft operations accidents, and flooding. For example, future development would likely occur, at least to some extent, within high risk fire areas. In addition, past and present development in the County exposes people to health and safety impacts from hazardous materials in industrial areas, flooding, and urban and wildland fires. Although regulations, plans and programs are in place to reduce the exposure of people to these health and safety impacts, such impacts cannot be avoided entirely. As discussed in Section 4.12, implementation of the proposed 2030 RTP could involve potential risks to human health and/or the environment from exposure to the hazards described above.

Implementation of the individual projects proposed in the proposed 2030 RTP includes environmental review and documentation pursuant to CEQA. In general, compliance with federal, state, and local regulations and the goals and policies of the proposed 2030 RTP would reduce incremental impacts associated with exposure to hazards and hazardous materials. However, for some projects it is possible that adherence to regulations may not adequately avoid or reduce

incremental impacts, and such projects would require additional measures. For each individual future project requiring mitigation (i.e., measures that go beyond what is required by existing regulations), mitigation measures such as those listed in Section 4.12 would reduce significant project-level hazards and hazardous materials impacts to less than significant. However, the incremental impacts of the proposed 2030 RTP associated with exposure to hazards and hazardous materials cannot be avoided entirely. Thus, when viewed in connection with the potential for health and safety impacts associated with past, present, and reasonably foreseeable future development, the incremental impacts of the proposed 2030 RTP are considered cumulatively considerable and cumulative health and safety impacts associated with exposure to hazards and hazardous materials in the County are considered significant and unavoidable.

## **6.0.2 Significant Environmental Effects Cannot Be Avoided if the Proposed Project Is Implemented**

Implementation of the proposed 2030 RTP would result in significant irreversible direct environmental impacts that could not be avoided in 7 of the 12 CEQA-required issue areas evaluated in this EIR. Unavoidable direct impacts would occur in the areas of Land Use, Visual Resources, Air Quality, Noise, Energy, Biological Resources, and Cultural Resources. Unavoidable cumulative impacts would occur in 9 of the 12 CEQA-required issue areas: Land Use; Visual Resources; Air Quality; Noise; Energy; Water Resources; Biological Resources; Cultural Resources; and Hazards and Hazardous Materials. Although not an issue area required by CEQA, unavoidable cumulative impacts associated with Global Climate Change would also occur. Implementation of the proposed 2030 RTP would not be able to avoid these impacts.

## **6.0.3 Significant Irreversible Environmental Changes Which Would Be Caused by the Proposed Project Should It Be Implemented**

Implementation of the proposed 2030 RTP would result in permanent changes to the existing environment that have been described throughout this EIR. The conversion of undeveloped and agricultural land to urbanized uses is considered a permanent change. The conversions would occur directly through construction of new facilities on undeveloped land, and indirectly through development of surrounding lands, which could not have occurred without construction of new transportation facilities. Construction of new projects in undeveloped areas would create increased human activity, traffic, and noise.

Biological habitat fragmentation could occur with the construction of linear transportation facilities including both highway and fixed rail alignments. Adverse effects to wildlife from noise associated with traffic on a new roadway or transit alignment could occur. Coastal wetlands would be displaced by transportation facilities. These changes would be irreversible.

Implementation of projects programmed in the proposed 2030 RTP would involve the consumption of energy derived from nonrenewable sources, such as petroleum and natural gas. The consumption of nonrenewable energy sources would be considered permanent. In addition, the fuel and electricity consumed under the proposed 2030 RTP would release a substantial amount of GHGs gases into the atmosphere, where they will remain for hundreds of years. Building materials could be considered permanently consumed, although these might be recyclable in part at some future date.

The loss of, or adverse impacts to, historic or archaeological resources or other cultural resources during the construction of projects programmed in the proposed 2030 RTP would be considered irreversible.

## 6.0.4 Effects Not Found to Be Significant

Implementation of the proposed 2030 RTP would not create significant direct impacts in the issue areas of Regional Water Supply, Transportation/ Circulation, Geology/Paleontology, Water Resources, and Hazards and Hazardous Materials with the implementation of mitigation measures identified in this EIR. Significant cumulative impacts would not occur in the issue areas of Regional Water Supply, Transportation/Circulation, and Geology/Paleontology. If required environmental review at the individual project level of analysis results in the identification of significant impacts for any of these issue areas, feasible mitigation measures beyond those identified in this EIR would be evaluated and implemented at the individual project level.

## 6.0.5 Mandatory Findings of Significance

The CEQA Guidelines require a discussion of Mandatory Findings of Significance (§15065). There are four subsections to this requirement. The exact CEQA language is provided for greater detail.

- a) *Does the proposed action have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or pre-history?*

Section 4.10 of the EIR discusses the potential impacts to biological resources. There is the potential for the project to impact biological resources, including impacts to sensitive plant and wildlife species through the loss of open space, loss of habitat, and direct construction activity impacts. These potential impacts, except for those associated with wetlands in coastal lagoons and estuaries, could be mitigated to below a level of significance and would not result in substantial loss of habitat, cause a population to substantially drop, or eliminate a plant or animal community. Given the programmatic nature of this EIR, it is currently unknown whether mitigation measures such as enhancement of lagoons or mitigation replacement measures would achieve a no net loss of habitat along coastal lagoons. Therefore, the project has the potential to degrade and/or threaten the habitat of fish or a wildlife species. Section 4.11 describes the potential for impacts to cultural resources. This section concludes that there is the potential to impact cultural resources. However, mitigation would reduce this impact to below a level of significance and, therefore, the proposed 2030 RTP would not eliminate important examples of California history or prehistory.

- b) *Does the proposed action have the potential to achieve short-term, for the disadvantage of long-term, environmental goals?*

The proposed 2030 RTP works to meet the region's long-term mobility needs, to better connect transportation and land use policy decisions, and to create a transportation network that would serve the region through the year 2030. The project does not attempt to meet short-term goals but rather designs a plan that would continually improve the San Diego region's transportation system as it is implemented.

- c) *Does the proposed project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a proposed action are considerable when viewed in connection with the effects of probable future proposed actions).*

The proposed project would result in cumulatively considerable impacts to visual resources, air quality, noise, water quality, biological resources, land use, and global climate change as disclosed in Section 6.0.1 of this EIR.

- d) *Does the proposed action have environmental effects which will cause substantial adverse effects on human beings either directly or indirectly?*

The majority of impacts discussed in the EIR would be mitigated to below a level of significance. The proposed 2030 RTP would result in significant impacts to visual resources, resulting generally from the alteration of the existing visual environment. Though this is considered a significant and unavoidable environmental impact, the change in visual characteristics of

an area would not result in substantial adverse effects on human beings either directly or indirectly. However, the proposed 2030 RTP would also result in significant air quality impacts associated with substantial NO<sub>x</sub> emissions and exposure to TACs and other harmful air pollutants. Although mitigation measures would generally reduce these air quality impacts below a level of significance for most projects, there may be projects for which significant air quality impacts would remain significant and substantial direct adverse effects on human beings would occur. In addition, the project's GHG emissions would indirectly contribute to the impacts that global climate change is projected to have on human populations throughout the world.

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