
7.0 CUMULATIVE IMPACTS

7.1 INTRODUCTION

The California Environmental Quality Act (CEQA) Guidelines require that a project's cumulative impacts be discussed when "the incremental effect is cumulatively considerable" (*California Code of Regulations* [CCR], Title 14, Section 15130). Section 15065(a)(3) of the State CEQA Guidelines specifies that cumulatively considerable means "that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects". Further, Section 15355 of the State CEQA Guidelines defines cumulative impacts as follows:

- . . . two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.
- a) The individual effects may be changes resulting from a single project or a number of separate projects.
 - b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonable foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

When addressing cumulative impacts, Section 15130(b) of the State CEQA Guidelines states that an adequate discussion of significant cumulative impacts involves one of the following two elements, either:

- A. A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or
- B. A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency.

7.1.1 SECTION FORMAT

The cumulative impacts of each environmental category analyzed in Section 5.0 (i.e., 5.1–5.21) of this Draft EIR are analyzed under a separate subheading in this section. This section is arranged in the following manner:

- Introduction
- Approach to Cumulative Impact Analysis
 - Regional Growth
 - Related Projects
- Cumulative Impact Analysis
- Conclusion
- References

7.2 APPROACH TO CUMULATIVE IMPACT ANALYSIS

As discussed in Section 7.1 above, CEQA establishes that either the “list” or “projection” methods are appropriate to provide a basis to analyze cumulative impacts. To provide a comprehensive cumulative impact analysis, this Environmental Impact Report (EIR) uses both methods.

While not the sole source for the cumulative impact analysis, the regional growth method (i.e., projection method) for analyzing cumulative impacts is especially applicable to the Project because of its location and planned long-range buildout. As discussed further in Section 6.0, Growth-Inducing Impacts, although there is expansive undeveloped land in the area surrounding the Project site, there is limited land proximate to the Project site that is available for future development. The majority of surrounding lands are subject to development constraints, such as permanent conservation, limited infrastructure, public ownership, and/or topography. Refer to Exhibit 3-2, Project Vicinity Map, and Exhibit 4-12, Off-Site Mitigation Preserve, in this Draft EIR that demonstrate the location and extent of surrounding lands with development limitations. As such, the Project site is physically separated from most current, or potential future, development projects. This factor minimizes the potential for cumulative impacts that are associated with proximity to related projects, such as construction-related air quality and long-term aesthetics, for example.

Due to the long-range (20-year) buildout of the Project site, the regional growth projections are considered the best measure of full cumulative impacts for several reasons. The Project is consistent with the Los Angeles County General Plan 2035 and the Antelope Valley Area Plan (AVAP), which is a component of the General Plan and is the applicable Area Plan for the site. The Project is consistent with the goals of the Economic Opportunity Areas (EOAs), as designated in the AVAP. In addition, the Project would be consistent with applicable Southern California Association of Governments (SCAG) plans and policies, including the *2012--2035 Regional Transportation Plan/Sustainable Communities Strategy* (2012 RTP/SCS) and the 2016-2040 RTP/SCS, as discussed in Section 5.8, Land Use, Entitlements, and Planning. As discussed in Section 5.9, Population, Housing and Employment, the Project is consistent with the population, household, and employment growth forecasts for the

North Los Angeles County Subregion and for the traffic analysis zones (TAZs) where the site is located, as used in the 2012 RTP/SCS and would not exceed the housing and employment growth projections in the 2016 RTP/SCS.

An itemized list of currently proposed development projects would capture only a portion of expected growth in the area, and it is likely that over Centennial's 20-year timeframe, other developments will be proposed that cannot be foreseen now and would not be captured through a list of past, present, and probable future projects. Although local and regional planning agencies anticipate eventual growth for the region, the precise location and the characteristics of any future, yet-to-be-defined development cannot be determined at this time. Additionally, most, if not all, of the individual related projects considered in this analysis are included in regional growth projections. Finally, although projects are under consideration at any given time, there is no guarantee that they will be approved and, if they are approved, that they will be developed. For these reasons, the regional growth projections are considered the best measure of full cumulative impacts.

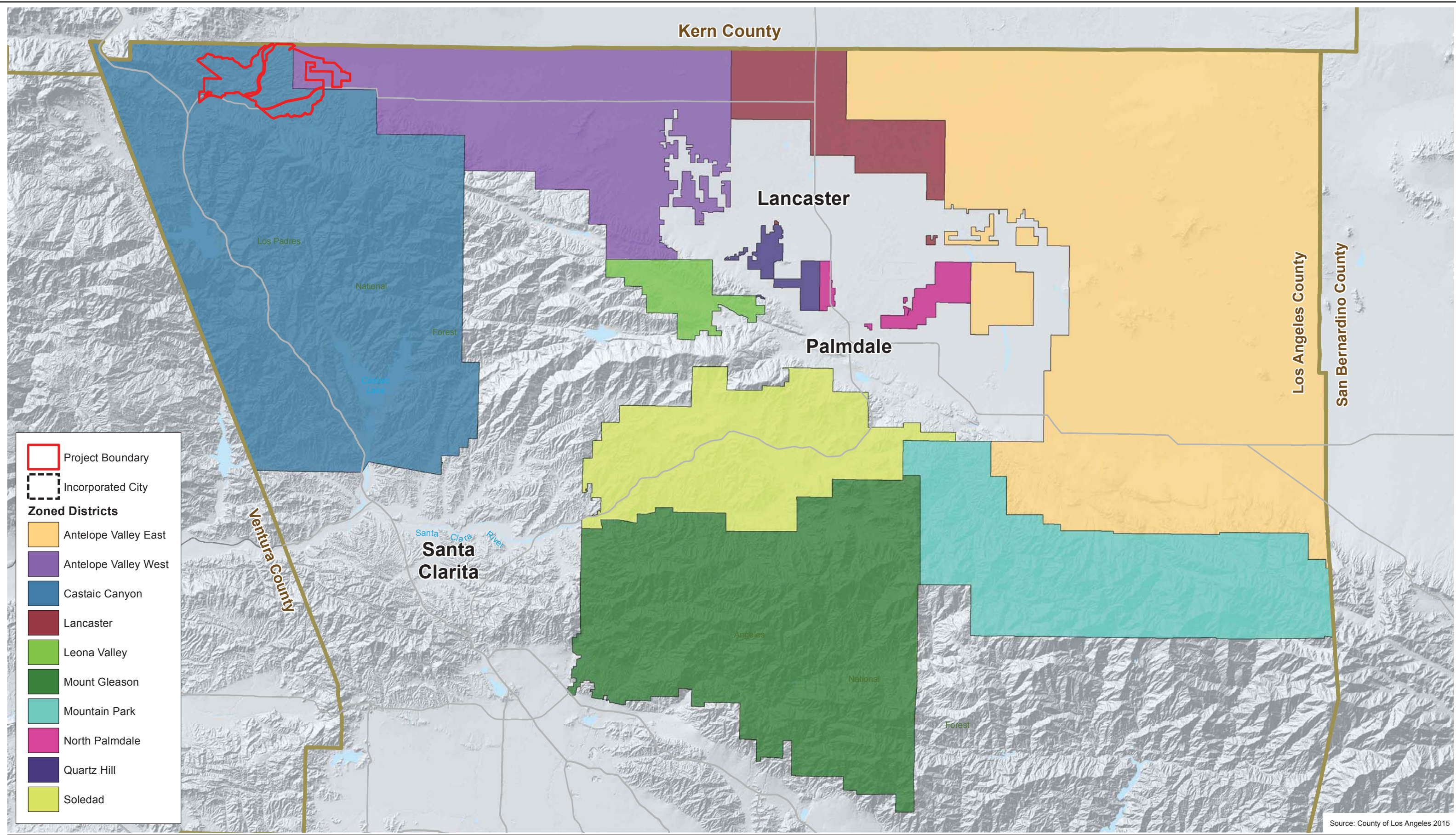
While there are limitations to the assessment of related projects (i.e., the "list" approach) for this Project, this section also includes a discussion of the anticipated growth currently being considered or entitled by local jurisdictions in the Project region to ensure a conservative and comprehensive analysis. The Project region, for purposes of the cumulative analysis, includes unincorporated County areas in the AVAP area, Santa Clarita Valley (SCV), southern Kern County (approximately south of Interstate [I] 5 and State Route [SR] 99) as well as the cities of Lancaster, Palmdale, and Santa Clarita. Collectively, this represents approximately one-half of the County of Los Angeles land area plus the southern portion of Kern County.

There is overlap between the regional growth projections and known development projects, as the anticipated growth numbers submitted to SCAG by individual jurisdictions are based, in part, on ongoing development activity. Ventura County projects were not included in this analysis because of the topographical barrier represented by the mountainous portion of the County near I-5. However, the traffic model used in this EIR accounts for trips that would cross the regional boundaries into the study area, both from Ventura County to the west and San Bernardino County to the east.

Exhibit 7-1, Los Angeles County Cumulative Impact Area, illustrates the area encompassed within Los Angeles County for the cumulative impact analysis. Further details regarding the method applied for regional growth and related projects, is presented below.

7.2.1 REGIONAL GROWTH

Applicable planning documents that serve as local and regional guides for future development include the *Los Angeles County General Plan* (County General Plan), the *Antelope Valley Area Plan* (AVAP), *Kern County General Plan*, and the regional growth projections developed by SCAG and the Kern Council of Governments (Kern COG). SCAG's 2012 RTP/SCS and 2016 RTP/SCS include growth projections for population, household and employment. Future development on the site under the *Centennial Specific Plan* is consistent with the growth projections for the area, as anticipated in the 2012 and 2016 RTP/SCS prepared by SCAG. The most current Kern COG projections were adopted as part of the *Kern*

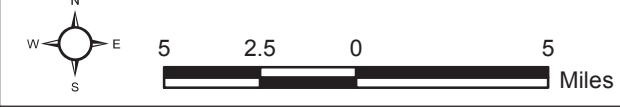


Source: County of Los Angeles 2015

Los Angeles County Cumulative Impact Area

Exhibit 7-1

Centennial Project



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COG 2014 Regional Transportation Plan/Sustainable Communities Strategy (Kern COG 2014 RTP/SCS) (Kern COG 2014).

The AVAP EIR addressed cumulative impacts using solely the regional growth method. Specifically, SCAG's growth projections from the 2012 RTP/SCS for the North Los Angeles County Subregion were used in the AVAP EIR, for all topics except air quality, greenhouse gas (GHG) emissions, noise, and traffic. The North Los Angeles County Subregion includes the AVAP unincorporated area, Santa Clarita Valley, and the cities of Santa Clarita, Palmdale, and Lancaster. The AVAP EIR's cumulative analysis for the four topics listed above used the data from the North Los Angeles County Sub-Area Traffic Model; this traffic model is also used in this EIR and the cumulative analysis of impacts related to traffic for these topics.

It is noted that the Kern COG 2014 RTP/SCS and its associated growth projections are presented for each city and the unincorporated areas as well as County-wide, and do not have subregional areas defined that would enable the approximation of growth in the southern Kern County area. Therefore, the regional growth projections for SCAG's North County Subregion in the 2016 RTP/SCS and Kern COG's County-wide area in the Kern COG 2014 RTP/SCS are used as the basis of growth projections considered for cumulative impacts. Table 7-1, North Los Angeles County and Kern County Growth Projections, summarizes the SCAG (2012 base year and 2040 horizon year) and Kern COG (2010 base year and 2040 horizon year) projections. As shown, both the North Los Angeles County Subregion and Kern County are expected to experience substantial population, housing, and employment growth in the coming decades. The SCAG and Kern COG projections are discussed in more detail in Section 5.9, Population, Housing, and Employment.

**TABLE 7-1
NORTH LOS ANGELES COUNTY AND KERN COUNTY GROWTH PROJECTIONS**

	Population			Housing			Employment		
	2012	2040	Change	2012	2040	Change	2012	2040	Change
North Los Angeles County Subregion ^a	657,825	985,840	50%	200,990	331,399	65%	181,089	280,447	55%
Kern County ^b	2010	2040	Change	2010	2040	Change	2010	2040	Change
	839,600	1,444,100	72%	284,367	456,100*	79%	273,900 ^c	426,100 ^c	36%

* - household projection
Source: ^a SCAG 2016; ^b Kern COG 2014, ^c Caltrans 2014.

Utilizing these regional growth projections allows a more comprehensive evaluation of certain categories of cumulative impacts than relying on known projects identified by the local jurisdictions. It takes into account the effects of growth beyond the immediate study area. This information is particularly useful in evaluating the cumulative impacts associated with traffic, air quality, GHG emissions, noise, and traffic, because it provides growth assumptions consistent with the local general plans with a long-range horizon year.

7.2.2 RELATED PROJECTS

To determine the scope of growth associated with a listing of related projects to be considered in this cumulative impact analysis, development summaries were provided by the County of Los Angeles Department of Regional Planning; the Kern County Planning and Community Development Department; the City of Lancaster Planning Department; the City of Palmdale Planning Division; and the City of Santa Clarita Planning Division. These development summaries are provided in Appendix 7.0-A.

The development summary data include permits for several types of planning actions that would have no effect on the physical environment and/or would not generate growth that would result in a cumulative impact, such as permits to continue existing uses or renew conditional use permits (CUPs); sell or serve alcohol in an existing establishment; authorize existing, non-compliant uses; and authorize additions or renovations to existing development (e.g., pools/spas, patio covering, decks, room additions). Therefore, the total number of residential dwelling units and total square footage of non-residential development (e.g., commercial, industrial, public/institutional, and renewable energy) were quantified (where this data were available) for those projects with current applications, approved projects, and partially constructed projects in the Project region as a whole.

It is noted that some of the anticipated development may not ultimately be constructed, either in part or in whole. Also, some projects may already be fully constructed at the time the Project begins implementing its first phase, if approved. As such, the summary of related project development is based on a broad, worst-case approach to the anticipated land use development being considered in northern Los Angeles County and southern Kern County that could have the potential to result in cumulative impacts when considered in combination with the Project. Table 7-2, Related Project Development Summary, presents the total residential and non-residential land use development currently expected in each jurisdiction in the northern half of Los Angeles County and in southern Kern County. In the non-residential column, renewable energy projects are presented separately in acres (when present) while all other non-residential development expected to have a physical development impact is presented in square feet (sf).

**TABLE 7-2
RELATED PROJECT DEVELOPMENT SUMMARY**

Jurisdiction	Residential (du)	Non-Residential
Unincorporated Los Angeles County (AVAP) ^a	9,444	179,912 sf/20 ac (solar)
Southern Kern County ^{b,c}	15,450	25,308,400 sf
City of Lancaster ^d	14,122	4,379,860 sf/377 ac (solar)
City of Palmdale ^e	301	954,229 sf/224 ac (solar)
City of Santa Clarita ^f	5,551	7,202,640 sf
Totals	44,868	38,025,041 sf (38.0 million sf)/ 621 ac (solar)
AVAP: Antelope Valley Area Plan; du: dwelling unit; sf: square feet; ac: acres Note: All development summaries used in the generation of this table are available in Appendix 7.0-A. Sources: ^a Dea 2015. ^b Keith 2015a, 2015b ^c Kern County Planning Department 2014 ^d Lancaster 2015a, 2015b ^e Palmdale 2015 ^f Peterson 2015		

In addition to consideration of the total related project development in the region as of summer 2015 (i.e., at the time of Notice of Preparation [NOP] distribution), a second tier of the related project methodology involved assessing individual projects located in close proximity to the Project site that, due to this proximity, would have the most potential for cumulative impacts. As of 2017, these include the Burrows property, Gorman Post Ranch, Tejon Mountain Village, the Tejon Ranch Commerce Center (formerly named the Tejon Industrial Complex), the Grapevine Property, and the Northwest 138 Corridor Improvement Project (NW138 Project). All of these properties are included in the Table 7-2 with the exception of the Burrows property, as an application for development has not yet been filed with the County of Los Angeles Department of Regional Planning.

Burrows Property

The Burrows property occupies approximately 596 acres in a “J” shape located between the eastern Project boundary and 300th Street West. This property aligns with the Project site on all sides except the west, which meets 300th Street West. This property is also located within the West EOA, as designated within the AVAP. There is no pending application for entitlement with the County. Because of its location immediately adjacent to the Project site and discussions with County staff, this is considered a reasonably foreseeable project for purposes of the cumulative impact analysis. The property owner has indicated an intention to file an application for development of residential, park, school, and greenway uses.

Gorman Post Ranch

The Gorman Post Ranch project occupies approximately 2,720 acres in the northwestern corner of unincorporated Los Angeles County, just south of the Kern County border. Specifically, the site is located on Gorman Post Road approximately four miles to the west of

the Centennial Project's western boundary. The Gorman Post Ranch project proposes to develop 533 residential units and related features, including water tanks, sewer pump stations, debris basins, and street infrastructure on approximately 525 acres with the remaining approximately 2,195 acres as designated open space (County of Los Angeles 2011).

An Initial Study for the Gorman Post Ranch Project dated December 2006 (SCH No. 2007011064) was circulated in January 2007 (County of Los Angeles 2006). The document identifies potential effects associated with most topical areas on the CEQA checklist, including traffic, public services/utilities, aesthetics, biological resources, and cultural resources. Per the Initial Study, many of these potential impacts would be mitigated below the threshold of significance. The Draft Environmental Impact Report for this project remains in preparation as of January 2017.

Tejon Mountain Village

The Tejon Mountain Village (TMV) is a master-planned residential resort development to be located within Tejon Ranch, east of Lebec at the top of the Grapevine in Kern County. Although the TMV project site can presently only be accessed through Lebec at a travel distance of approximately 11 miles from the proposed entrance to the Centennial Project, it is located approximately 1 mile north of the northwesterly corner of the Centennial Project site.

The TMV site consists of approximately 28,000 acres, of which approximately 23,000 acres would be dedicated for permanent open space and approximately 5,000 acres developed with a total of 3,450 residential units, 160,000 sf of commercial uses, 750 hotel rooms, and two golf courses. The environmental documentation prepared for the TMV project identified significant and unavoidable impacts related to aesthetics (visual character and light/glare); air quality emissions of reactive organic gasses (ROG, which are also known as volatile organic compounds [VOCs]), nitrous oxides (NO_x), and respirable particulate matter with a diameter of 10 microns or less (PM₁₀); greenhouse gas emissions; hazards (exposure to wildlife); traffic-generated noise; population and housing; and cumulative traffic (Kern County 2009).

Tejon Ranch Commerce Center

The Tejon Ranch Commerce Center (TRCC) is a master-planned development project located on approximately 1,450 acres within Tejon Ranch, at the junction of the I-5 and SR-99 in the southernmost region of unincorporated Kern County (Kern County 2005). The I-5 freeway runs through the project site, with 350 acres on the west side and 1,100 acres on the east. The project is located approximately 18 miles north of the Project site.

The TRCC is partially constructed, and will contain a total of approximately 19.4 million sf industrial and commercial uses. As of September 2015, approximately 4.6 million sf of the approved 19.4 million sf have been built. As such, the cumulative impact analysis considers construction and operation of the remaining 14.8 million sf of approved development as part of the TRCC. The environmental documentation prepared for the TRCC project identified

significant and unavoidable impacts related to conversion of agricultural land and to air quality emissions of ROG (now known as VOCs), NO_x, and PM₁₀ (Kern County 2005).

Grapevine Project

Grapevine is a master-planned development project that encompasses approximately 8,010 acres of the 15,644-acre Grapevine Planning Area located just south of the TRCC employment center. The Grapevine project includes up to 12,000 residential units, up to approximately 10,748,400 sf of commercial development, parks, public and private recreation amenities, schools, public services, helipad(s), a transit center/park and ride, and water- and wastewater- treatment facilities (Kern County Planning Department 2014). A Draft Environmental Impact Report for the Grapevine project was circulated in 2016, and the project was approved by Kern County in December 2016 (Kern County 2017).

Northwest 138 Corridor Improvement Project

In anticipation of necessary regional improvements, the California Department of Transportation (Caltrans) has prepared a Project Study Report/Project Development Support (PSR/PDS) for the NW138 Project that addresses the long-term alignment and right-of-way needs of SR-138 between I-5 and SR-14. There is no implementation schedule in the PSR/PDS for the improvements along SR-138. A portion of Caltrans' SR-138 study area and the proposed re-alignment traverses the Project site, as depicted on Exhibit 4-7, Centennial Project – Circulation Plan, in Section 4.0, Project Description. Caltrans is the lead agency for the completion of the EIR/Environmental Impact Statement (EIS) for the NW138 Project, which was released for public comment in July 2016. The NW138 Project environmental document considers three build alternatives.

Build Alternative 1 improvements would include modifying the existing SR-138 roadway into a six-lane freeway and four-lane expressway sections, generally following the existing alignment of SR-138. A freeway is defined as a divided arterial highway with full control of access and with grade separations at intersections; and an expressway is defined as an arterial highway with at least partial control of access, which may or may not be divided or have grade separations. The portion of SR-138 between 300th Street West and I-5, which is applicable to the Project site, is envisioned by Caltrans to be a 6-lane freeway. This alternative would involve grade-separated undercrossings at the Cement Plant Road and 300th Street West intersections with SR-138; and a grade-separated overcrossing at the Gorman Post Road intersection; and a new grade separate structure (standard box culvert) east of Quail Lake near the airport. Build Alternative 1 would also include an extension of the existing reinforced concrete box (RCB) culvert at the Quail Lake Outlet into the west branch of the California Aqueduct.

Build Alternative 1 with Design Option is the same as Build Alternative 1 but adds a bypass route around the Antelope Acres community. However, this alternative would be the same in the Project site vicinity.

Build Alternative 2 improvements would include modifying the existing SR-138 roadway into six- or four-lane expressways and six-lane freeway sections, generally following the

existing alignment of SR-138. The portion of SR-138 between 300th Street West and Gorman Post Road, which is applicable to the Project site, is envisioned by Caltrans to be a six-lane expressway. This alternative would involve at-grade signalized intersections at Cement Plant Road and 300th Street West; a grade-separated overcrossing at the Gorman Post Road intersection (same as Build Alternative 1); and a new grade separate structure (standard box culvert) east of Quail Lake near the airport (same as Build Alternative 1). Same as Build Alternative 1, this alternative would include an extension of the existing RCB culvert at the Quail Lake Outlet into the west branch of the California Aqueduct.

Other Considerations

Phase 1 of the California High-Speed Rail project involves the construction and operation of the first high-speed rail system in the United States and would connect San Francisco to the Los Angeles Basin. Phase 2 of the system would eventually extend to Sacramento and San Diego, including up to 24 stations. The portion of the alignment nearest to the Project site is the Palmdale to Burbank Project Section, which would connect the Antelope Valley to the San Fernando Valley, with a proposed stations at the Palmdale Transportation Center and near the Burbank Airport. The proposed alignments of this Section would either follow the SR-14, or would be located to the east through the San Gabriel Mountains. The clearance of the environmental documents, and Record of Decision, for this Section is anticipated in 2017 (CHSRA 2016). However, there is no available funding source for this Section. Because the ultimate funding source is unknown, whether this Section is construction cannot be predicted and the timing cannot be assumed. As such, it is not considered a cumulative project for the purposes of this analysis.

7.3 CUMULATIVE IMPACT ANALYSIS

The thresholds of significance used in each section to evaluate Project-specific impacts are also applicable to the cumulative evaluation. For the cumulative evaluation, these thresholds are used to evaluate whether the related projects, together with the Centennial Project, would create significant cumulatively considerable impacts on the environment. Much of the cumulative evaluation is a qualitative judgment regarding the combined effects of the Project and buildout of a regional growth and related project development. The cumulative study area varies from one environmental topic to another depending upon the nature of the topic's related impacts. For example, cumulative air quality considerations encompass the air basin, while the cumulative loss of agricultural resources is a regional issue that is analyzed on a broader scale. Where the cumulative study area is different than the northern Los Angeles County area and southern Kern County as whole, the analysis indicates the topic-specific study area.

7.3.1 GEOTECHNICAL

As discussed in Section 5.1, Geotechnical, with implementation of Project Design Features (PDFs) and Mitigation Measures (MMs), which ensure compliance with applicable regulations, the Project would result in less than significant impacts related to fault rupture; seismic ground shaking; seismic-related ground failure (e.g., liquefaction, settlement, lateral spreading); or location on an unstable geologic unit (e.g., collapse, expansive soils, corrosive

soils). The Geotechnical Summary Report prepared for the Project concludes that there are no soil or geologic conditions present on or near the Project site that would preclude the safe development of all proposed land uses given incorporation of all existing and future, subdivision map-level, geotechnical recommendations into grading and construction plans and specifications (Geocon 2015). This includes compliance with County subdivision specifications, County building code requirements, and the Project-specific Grading Plan.

Geotechnical impacts tend to be site-specific in nature, while seismic conditions are regional in nature. Each related development site is subject to, at a minimum, uniform site development and construction standards relative to seismic and other geologic conditions that are prevalent within the region. Because future development of other project sites in Los Angeles County and Kern County would have to comply with current State and applicable County building codes and development requirements as they pertain to protection against identified geologic hazards, the Project's incremental contribution to cumulative geotechnical and seismic impacts would be less than significant. Development projects would be subject to applicable Seismic Design requirements and the Alquist-Priolo Earthquake Fault Zone Act, which restricts development on the traces of active faults. The Project components would not exacerbate or otherwise influence any geotechnical hazards for off-site development. Similarly, the related projects are not expected to have an adverse impact on the Project. Therefore, no significant cumulative geotechnical impacts would occur for the Project.

Cumulative impacts associated with landform alteration are more of an aesthetic issue than a geotechnical constraint. This is addressed in Section 7.5.13, Visual Resources. Erosion and downstream sedimentation is addressed as a water quality issue in Section 7.5.4.

7.3.2 HYDROLOGY AND FLOOD

As discussed in Section 5.2, Hydrology and Flood, the Project has been designed to meet or exceed the new development requirements of the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit, the County's Low Impact Development (LID) standards pursuant to Chapter 12.84 et seq. of the County code, and the County's LID Standards Manual. Specifically, the Project would implement site design, source control, LID, hydromodification, flow control, and runoff water quality best management practices (BMPs) and treatment requirements, ensured with implementation of mitigation. Impacts related to on-site hydrology would be less than significant. The Project would comply with and implement the requirements of the Construction General Permit issued by the State Water Resources Control Board (SWRCB, CAR000002, Order 2009-0009-DWQ as amended by Order 2010-0014-DWQ and Order 2012-0006-DWQ), ensuring a less than significant impact during construction activities.

As discussed in Section 4.0, the portions of the site located within the 100-year floodplain would be subject to a Floodplain Safety Overlay that precludes habitable residential, commercial, school, and institutional structures in the floodplain. There would be no housing development in on-site floodplains, and no significant impacts would occur from placing structures within a floodplain.

Potential mudflow impacts would be reduced to less than significant levels by (1) capturing debris flows in on-site basins and engineered and natural stream channels and (2) avoiding disturbance in on-site locations with slopes in excess of 25 percent that could generate mudflows. Storm water basins would be managed to avoid potential mosquito-borne health vectors by implementing California Department of Public Health (CDPH) recommendations and fully discharging captured storm water within 96 hours. Also, an integrated pest management program must be developed and confirmed during the County review and approval process for Project tract maps.

Cumulative impacts are evaluated relative to the approximate watersheds within which the Project site is located. Approximately 97.3 percent of the Project site, including locations that will be preserved in open space and remain undeveloped, is located within the Antelope Valley Watershed (95.5 percent of the site) and the much smaller Quail Lake Watershed to the south (1.8 percent of the site). Only projects within the same watershed would have the potential for cumulative impacts associated with hydrology and flooding. Projects outside the hydrologically defined watershed within which the Project is located could not result in impacts within the Project's watershed. Therefore, additional urbanized uses and increases in impervious surface areas in the Project site's vicinity could produce, if left unmitigated, increases in runoff volume, velocity, and peak discharge rates. Urbanized uses could also lead to potential erosion and sedimentation impacts. All future developments in the Antelope Valley and Quail Lake Watersheds would have to comply with the same flood-control criteria and general storm water drainage requirements with which the Project must comply. For example, the Project and all the related projects in the watershed would be required to comply with the Los Angeles County Department of Public Works' LID Manual. Through this process, applicants are required to demonstrate that their projects would not cause upstream or downstream properties to be adversely affected. All drainage systems in developments that carry runoff from developed areas must be able to carry the 2-year and 25-year storm runoff, while storm drains under major and secondary highways, open (main) channels, debris-carrying systems, and sumps must be designed to carry runoff from 50-year level storm. These requirements serve to minimize direct and cumulative impacts to runoff, debris production, water quality, and flooding potential to downstream areas. Therefore, development of the Project would not contribute to significant cumulative hydrology, flood, or drainage impacts.

7.3.3 HAZARDS AND FIRE SAFETY

Hazards and Hazardous Materials

After implementation of MMs, Project-specific impacts due to hazardous materials would be reduced to a less than significant level. Although some of the related projects would also have potential impacts associated with hazardous materials, the environmental concerns associated with hazardous materials are generally site-specific. Each project is required to address any issues related to hazardous materials or wastes. Federal, State, and local regulations require mitigation to protect against site contamination by hazardous materials. Therefore, there would be no significant cumulative hazardous materials impacts to which the Project would contribute.

The Quail Lake Skypark Airport, a single strip, private airport, is located east of Quail Lake and south of the Project site. A total of six aircraft, all of which are fixed wing, are currently based out of the Quail Lake Skypark Airport. No heliports are located in the Project vicinity. There is the potential that the number of flights could increase incrementally over time if regional population grows and demand for the Skypark increases. Given that the Project would not result in any flight operations, it would not contribute to a cumulative impact, nor would the impacts associated with related projects result in substantially greater impacts than what has been described Section 5.3. As such, overflights would not constitute a cumulative impact with regards to the Project. Impacts associated with the potential noise impacts of overflights are addressed in Section 5.12, Noise.

Fire Safety

As discussed in Section 5.3, Hazards and Fire Safety, portions of the Project site are designated as a Very High Fire Hazard Severity Zone and portions are designated as a High Fire Hazard Severity Zone. Therefore, consistent with County code requirements, a Fuel Modification Plan must be submitted to the Forestry Division and be preliminarily approved prior to permit issuance for any permanent habitable structure, in addition to compliance with all State and County fire code and access requirements. The extent and location of the fuel modification zones would be finalized with the County of Los Angeles Fire Department as part of implementation of individual tract maps.

With development of related projects located in wildfire hazard areas and projected growth in the region, new development and population would be introduced into the wildland/urban interface. As a result, the number of structures and people that would be affected by a wildland fire, and the potential losses if a fire occurs, would increase. However, each of the related projects would be required to meet local and State fire safety measures dependent on the fire hazard designation, including fuel modification, emergency access, building materials, and/or building methods. Therefore, the Project would result in a less than significant cumulative impact related to wildland fires.

7.3.4 WATER QUALITY

The geographic area for evaluating cumulative water quality impacts is comprised of the four drainage areas on the Project site, as shown on Exhibit 5.2-2, Drainage Areas on the Project Site, the East Drainage Area, the Oso Canyon Drainage Area, the Quail Lake Drainage Area, and the Gorman Creek Tributary Drainage Area. Outside the Project site, the remainder of the drainage areas are also largely undeveloped. Existing major roadways, which represent impervious surfaces and pollutant sources, include I-5, which traverses the Gorman Creek Tributary Drainage Area; Gorman Post Road in the Gorman Creek Tributary and East Drainage Areas; and SR-138 in the Quail Lake and the East Drainage Areas.

Surface Water Quality

As discussed in Section 5.4, Water Quality, the Project's surface runoff water quality, would comply with adopted and applicable federal, State, and County regulations with implementation of planned BMPs, which would be ensured by implementation of mitigation,

both during construction and operation. Regulatory standards applicable to the Project include those set forth by the MS4 Permit and LID Standards Manual; the Lahontan RWQCB and Los Angeles RWQCB Basin Plan benchmark water quality objectives; California Toxics Rule (CTR) criteria; the NPDES Construction General Permit; and the NPDES General Dewatering Permit/Limited Threat Discharge Permit. As determined by the Water Quality Technical Report, the anticipated quality of effluent expected from the Projects' BMPs would not contribute concentrations of pollutants of concern that would be expected to cause or contribute to a violation of the water quality standards in the Project's receiving waters. All future urban development occurring in the four drainage areas must also comply with these requirements. By extrapolating the results of the direct impact analysis, the Water Quality Technical Report states it can be predicted that analysis of other proposed development combined with existing conditions would have similar surface water quality results (Geosyntec 2016). Therefore, cumulative impacts on surface water quality of receiving waters from the Project and future urban development in the four drainage areas are addressed through compliance with the above-mentioned regulatory requirements and with compliance with Total Maximum Daily Loads (TMDLs), which are intended to protect beneficial uses of the receiving waters. Based on compliance with the applicable regulatory requirements, the Water Quality Technical Report (see Appendix 5.4-A) concludes that cumulative surface water quality impacts would be less than significant.

Groundwater Quality

As discussed in Section 5.4, Water Quality, the Project's discharges to groundwater are predicted to comply with adopted and applicable federal, State, and County regulations, as listed above under "Surface Water Quality"; this would be ensured with implementation of planned BMPs and implementation of mitigation, both during construction and post-development. As determined by the Water Quality Technical Report, the anticipated quality of storm water runoff discharges from the Project's developed areas and from irrigation to groundwater (including with recycled water that is tertiary-treated in compliance with *California Code of Regulations* Title 22 standards) and the operating permits of the wastewater reclamation facilities [WFRs] would not contribute loads or concentrations of pollutants of concern that would be expected to cause or contribute to a violation of the groundwater quality standards (Geosyntec 2016). All future urban development occurring in the Antelope Valley Watershed must also comply with these requirements. Therefore, cumulative impacts on groundwater quality from the Project and future urban development in the Antelope Valley Watershed are addressed through compliance with the above-mentioned regulations. Based on compliance with the applicable regulatory standards, the Water Quality Technical Report concludes that cumulative groundwater quality impacts would be less than significant (Geosyntec 2016).

7.3.5 LAND RESOURCES

Agricultural and Forestry Resources

As discussed in Section 5.5, Land Resources, the Project site and surrounding area are within the West EOA designation in the AVAP. Implementation of the Project would involve the conversion of approximately 642 acres of Prime Farmland to urban uses. As discussed, this

conversion of farmland on the Project site is consistent with the AVAP's intent to concentrate development that supports economic growth and stability within the designated EOA, which includes localized areas of farmland conversion, thereby preserving Important Farmland and other agricultural resources in the remainder of the Antelope Valley. Regardless, for the same reasons as described in the AVAP EIR, there is no feasible mitigation to reduce this impact to a less than significant level, and therefore would be a significant unavoidable impact of the Project. The on-site conversion of farmland (approximately 642 acres of Prime Farmland) is part of the total of 6,169 acres of Important Farmland that the AVAP EIR identified would be converted as part of future growth. However, the Project's contribution to conversion of agricultural resources is cumulatively considerable and is considered a significant and unavoidable impact.

Section 5.5 identifies less than significant impacts to forest land, timberland, and timberland production. The Project's designated off-site mitigation areas allow tree crops as a permitted use. The Project would not conflict with zoning for timberland or a Timberland Production Zone, as the site has not been designated as such. There would be a less than significant cumulative impact to forest resources with implementation of the Project.

Mineral Resources

Implementation of the Project would not result in cumulative impacts from the loss of availability of a known mineral resource because the Project site does not directly impact any mineral resources.

7.3.6 CULTURAL RESOURCES

Cultural resources (historic built environment, archaeology, tribal cultural resources, and paleontology) are non-renewable and irreplaceable resources. Projects undertaken in the region have the potential to cause direct and cumulative impacts to these resources through land development. On the Project site, no historic built environment resources are located within the Project's Area of Potential Effects (APE), so the Project would not contribute to any cumulative impacts to these resources despite possible impacts to these resources by other public and private developments in the vicinity.

Three prehistoric archaeological sites that meet the definition of a "historical resource" (as defined by CEQA) have been identified within the Project site APE, including within the development footprint. They include CA-LAN-3201, CA-LAN-3240 and CA-LAN-3242. In addition, two sites within the open space areas (CA-LAN-3206 and CA-LAN-3227) would be treated as eligible and protected from secondary impacts as they are immediately adjacent to the development footprint. Mitigation measures are included in this EIR that would ensure the identification, protection, and/or evaluation of these sites, including those that may be tribal cultural resources as defined under CEQA, and would reduce related impacts to a less than significant level. Specifically, data recovered from a site, combined with data from other sites in the region, would enhance the ability to examine and fully appreciate the diversity of human activities in the region. As a result, development of the Project would not contribute to a significant cumulative impact on archaeological resources.

Development of the Project site, in combination with other projects in the region where a parcel is underlain by the Quail Lake or Oso Canyon Formations, could lead to the progressive loss of fossil-bearing strata in either a rock unit that could be prospected for fossil remains or in unrecorded fossil sites. However, mitigation measures are included in this EIR that would require the identification, evaluation, recovery, and curation any significant fossils discovered during construction of the Project. Therefore, this cumulative impact would be reduced to a less than significant level with similar mitigation associated with each related project developed in the cumulative study area. Section 5097.98 of the *California Public Resources Code* and Section 7050.5 of the *California Health and Safety Code* mandate processes to be followed in the event of a discovery of any human remains. Implementation of these processes would be ensured by implementation of mitigation and would reduce potential impacts to a less than significant level.

7.3.7 BIOLOGICAL RESOURCES

Each related project identified in this section would result in impacts on biological resources in the region. The combined impacts of the development of the Project and all other aforementioned projects in the region would result in substantial direct and indirect impacts on biological resources. Two of the related projects in particular, Gorman Post Ranch and Tejon Mountain Village, would impact similar biological resources, such as native grasslands, oak woodlands, special status plant and wildlife species, drainages, and wildlife movement. Other general impacts include direct impacts related to habitat removal and loss of open space as well as indirect impacts including increases in disturbances such as noise, night lighting, exotic species introduction, vehicular traffic, and human interaction. Similar types of impacts would be expected with future development associated with regional growth projections. While it is not possible to predict precisely where development associated with regional growth would occur, it is likely that such future development would also result in the conversion of natural open space areas that presently support plants, wildlife, and other biological resources of the region to development of some kind.

As discussed in Section 5.7, Biological Resources, the Project would result in impacts on special status plant and wildlife species. These impacts would be reduced to a level considered less than significant with mitigation, which includes preservation of at least 12,832 acres of grassland. Impacts to most special status vegetation types on the Project site and in off-site areas would also be reduced to less than significant levels with mitigation. However, impacts on native grasslands are considered cumulatively significant after mitigation.

It is likely that most identified related projects, especially Gorman Post Ranch and Tejon Mountain Village, also have impacts on special status species. These impacts would be less than significant for the four following reasons:

- Highly sensitive species, such as those that are federally or State-listed, are uncommon in the region and therefore less likely to be impacted by one of the future projects.
- The California condor (*Gymnogyps californianus*), a highly sensitive species from the region, does not occupy the low lying valley floor areas that are likely to incur the

greatest level of disturbance from future development. In addition, the Tehachapi Upland Multiple Species Habitat Conservation Plan (TUMSHCP) provides for the long-term preservation of essential condor areas and considers development of the Tejon Mountain Village project.

- The open space preserve proposed as part of the Project, the resource protection provided in the nearby National Forest lands, and the Los Angeles County Significant Ecological Areas in the area together encompass a large portion of the region and provide a valuable haven for species as other parts of the region are developed.
- Related projects would mitigate Project-specific impacts related to biological resources, thus reducing the cumulative impacts.

As a result, cumulative impacts on special status plant and animal species are considered less than significant for the Project.

Development of the Project would result in impacts on several sensitive vegetation types including oak woodlands, native grasslands, and wildflower fields. (See Section 5.21, Climate Change, for an analysis of changes in carbon sequestration capacity due to vegetation change.) Implementation of the Project's mitigation measures would enhance, restore, and create these vegetation types within the proposed open space preserve and would therefore reduce impacts to less than significant levels for all vegetation types except native grasslands. It is likely that most of the identified related projects would also have impacts on sensitive vegetation types. Impacts would be mitigated in accordance with County standards with implementation of standard County mitigation requirements and/or "no net loss" conditions of permits from some resource agencies (e.g., Streambed Alteration Agreements issued by the California Department of Fish and Wildlife [CDFW]). Although cumulative impacts would occur, these are expected to be less than significant after mitigation for all but one vegetation type (native grasslands) due to the applicable regulations that substantially minimize such impacts. Due to the cumulative loss of native grasslands in the larger region and the state as a whole and the lack of a widely accepted definition for "native grassland" or a published standard for a mitigation ratio, impacts on native grasslands are considered cumulatively significant after mitigation.

The Project's impacts on federally protected wetland resources and on State-protected wetlands and their associated habitat are reduced to less than significant levels after mitigation. Specifically, a Wetland Habitat Creation and Enhancement Plan would be developed and would further reduce related impacts. Other mitigation requires permits and/or agreements to be obtained from the U.S. Army Corps of Engineers (USACE), the CDFW, and Regional Water Quality Control Board (RWQCB), as well as the development of a Storm Water Pollution Prevention Plan (SWPPP) that incorporates BMPs for reducing or eliminating construction-related pollutants in the site runoff. Although these are Project-specific measures, they would serve to reduce cumulative impacts and, as such, cumulative impacts on riparian habitat and other sensitive vegetation types would be less than significant.

The related projects are likely to reduce such impacts to less than significant through adherence to federal and State regulations. Such regulations normally require the

replacement of all lost functions and values within the same region of impact. Therefore, the region is not expected to incur substantial losses of State or federally protected wetlands, their associated riparian habitat, or other jurisdictional waters. The cumulative impact on State and federally protected wetland resources is considered less than significant. Similarly, cumulative impacts on oak trees, as protected under the County of Los Angeles Oak Tree Ordinance (#88-0157), are expected to be fully mitigated and result in a less than significant cumulative impact for the Project.

The Centennial Project would result in an impact on regional wildlife movement that is reduced to a less than significant level following mitigation; however, the Project may also contribute to a cumulative significant impact when combined with projects in the region. Because movement events for some larger species may occur very rarely, the success of each event may be particularly important. Due to the potentially heightened sensitivity of movement through the region for some species, the potential for a project or set of projects (e.g., Gorman Post Ranch, Tejon Mountain Village, Grapevine, or the Northwest 138 Corridor Improvement Project) to substantially interfere with a wildlife corridor is greater.

Indirect impacts such as increases in disturbances like noise, night lighting, non-native species introduction, vehicular traffic, domestic pet interactions, and human interaction may all also contribute to wildlife movement interference. Since the locations of many future projects in the region are unknown, there is the potential they may occur within important movement corridors. There are no specific regulations or permit conditions protecting this resource, and successful mitigation for such impacts is generally difficult. Therefore, the effects of the Project combined with future regional development would result in a cumulatively significant impact on wildlife movement.

As stated in Section 5.7, Biological Resources, because most of the larger wildlife species in the region do not typically cross large expanses of sparsely vegetated landscape (such as the majority of the Project site), the central and eastern portions of the Project site are not likely to be used by wildlife to move between and within the regional open space areas in the site vicinity. The Project site provides unobstructed local movement opportunities for small animals within large portions of the site. While the Project would result in a cumulatively significant impact on wildlife movement and on native grasslands, no other impacts to biological resources resulting from Project implementation were found to be cumulatively significant.

7.3.8 LAND USE, ENTITLEMENTS, AND PLANNING

As discussed in Section 5.8, Land Use, Entitlements, and Planning, the Project would be consistent with the Los Angeles County General Plan and the AVAP (a component of the General Plan and the applicable Area Plan for the site), with the accompanying amendments to the County General Plan Master Plan of Highways and the AVAP Highway Plan, zone change for the Project site to Specific Plan, and other associated entitlements, and would be consistent with applicable regional (Southern California Association of Governments) plans and policies, including the 2012-2035 RTP/SCS and 2016-2040 RTP/SCS.

The Antelope Valley is a predominantly rural area where significant growth has occurred and is expected to continue. A number of Rural Town Centers are located in the Antelope Valley and three Economic Opportunity Areas (EOAs) have been designated by the AVAP that are slated for more substantial, urbanized growth. The West EOA is located at the northwestern section of the Antelope Valley where future development is anticipated due to its location along the planned Northwest 138 Corridor Improvement Project, the I-5, and new commercial and housing developments in Kern County. This EOA covers the Project site, and the Project would accommodate future development, as planned in the West EOA.

Because the Project is consistent with the Los Angeles County General Plan and the AVAP, with the accompanying plan amendments, zone change and other associated entitlements, and SCAG's RTP/SCS, no mitigation is required. Additionally, related projects would be required to comply with the applicable land use plans or they would not be approved without a general plan amendment. Therefore, implementation of the Project would not conflict with existing land use plans, policies, or regulations of agencies, and the Project would not contribute to a significant cumulative impact.

The AVAP has been challenged in court, but no injunction against implementation of plan has been sought or granted. The County's General Plan was adopted in October 2015, and was not challenged and is in effect. Consistent with land use law and CEQA requirements, these land use plans are being implemented and the environmental impact reports (EIRs) prepared for each plan have been considered as part of this Project EIR and each is incorporated by reference. This EIR does not tier from, nor is it legally reliant upon, the EIRs for either the AVAP or the General Plan. Should the approval and adoption of the AVAP or its accompanying EIR be invalidated, a possible judicial remedy could effectively revive the now-superseded former (1986) Antelope Valley Areawide General Plan (AVAGP). In that case, the Project would require an AVAGP amendment, in addition to a zone change to "Specific Plan" and other entitlements, including a Conditional Use Permit for development within a SEA. Upon approval of these AVAGP plan amendments, the zone change, and other associated entitlements, the Project would have less than significant land use impacts. Therefore, the Project would not result in a cumulatively considerable contribution to impacts related to conflict with applicable land use policy or division of communities.

7.3.9 POPULATION, HOUSING, AND EMPLOYMENT

As discussed in Section 5.9, Population, Housing, and Employment, the Project would accommodate growth in the Antelope Valley consistent with the AVAP and the intent of the designated West EOA. The Project would provide for growth in employment, housing, and population that is consistent with the growth projections for the area, as incorporated into the AVAP and with the housing and employment growth projections used by SCAG in the development of the 2012–2035 RTP/SCS and the 2016–2040 RTP/SCS. The Project would also contribute to meeting the State-mandated Regional Housing Needs Assessment (RHNA) housing production targets for the County of Los Angeles. The Project would be consistent with the AVAP's strategy for increasing the jobs/housing ratio in the unincorporated area of the Antelope Valley, within designated EOAs. There would be less than significant impacts related to the potential displacement of people or housing units as a result of the Project since the majority of the Project site is undeveloped. While the Project would result in

substantial growth, because it would be consistent with local and regional growth assumptions.

Population, housing, and employment impacts would be less than significant and no mitigation would be required in relation to approved County and regional plans. Population, housing and employment growth would be substantial relative to existing Project site conditions because the site is currently undeveloped and unoccupied; hence, this impact is significant. However, no mitigation would be appropriate since the Project is consistent with approved land use and growth plans in the region. Regarding growth-inducing impacts, the existence of the Project makes it reasonably foreseeable that additional development proposals seeking AVAP amendments would be made outside the West EOA, which is considered a significant adverse indirect growth-inducing impact.

7.3.10 TRAFFIC, ACCESS AND CIRCULATION

The traffic analysis provided in Section 5.10, Traffic, Access, and Circulation, indicates that, under existing plus Project conditions and 2035 cumulative conditions, the Project would contribute to significant impacts along SR-138 in regards to the percent of time-spent-following between the I-5 and SR-14 interchanges; it would also contribute to increased delay for side street vehicles, traffic signal requirements, and intersection capacity at multiple locations along SR-138 between the westerly access of the Project area and SR-14. Under cumulative conditions, the Project contributes to a significant cumulative impact to the I-5 mainline freeway; the truck lane in between the Grapevine and Fort Tejon Road interchanges; the segment between the SR-138 and Parker Road interchange and the segment from Magic Mountain Parkway to SR-14 interchange. Impacts are shown at eight intersections at I-5 interchanges when applying the impact criteria of the County of Los Angeles. In addition, at the I-5/SR-138 interchange, the connector ramps from westbound SR-138 to southbound I-5 and from northbound I-5 to eastbound SR-138 are forecasted to exceed 1,500 vehicles per hour under cumulative conditions, which results in the need for an auxiliary lane at the point the connector ramp meets the I-5 mainline. At the SR-14/SR-138 interchange, the SR-14 southbound on-ramp would require a second lane on the on-ramp and the SR-14 northbound off-ramp to SR-138 would need an additional lane and an auxiliary lane on the SR-14 mainline.

For 2035 cumulative conditions, the SR-138 was analyzed as a limited access facility with grade-separated interchanges, consistent with the Northwest 138 Corridor Project currently being advanced by Caltrans. The Project would be fully mitigated and all ramp-arterial intersections would operate at a level of service (LOS) B or better. Mitigation measures for impacts to the I-5 and off-site intersections involving fair share contributions to identified improvements would reduce all cumulative traffic impacts to a less than significant level. The proposed Centennial Transportation Improvement Program (CTIP) Agreement provides a mechanism for the needed transportation improvements to be implemented by providing advance funding for planning, design, and construction of certain improvements and establishing a funding program to collect fair shares for other improvements. With these traffic mitigation assurances, there would not be a significant cumulative impact from Project traffic. However, if Caltrans does not implement planned and needed improvements on State facilities, the Project would contribute to significant unavoidable impacts since the

County (as the Lead Agency) has no control over these facilities and cannot enforce the construction of the needed improvements.

7.3.11 AIR RESOURCES

As discussed in Section 5.11, Air Resources, the northern 91 percent of the site lies within the boundaries of the Antelope Valley Air Quality Management District (AVAQMD), while the remaining 9 percent lies within the South Coast Air Quality Management District (SCAQMD). The Project's construction emissions would exceed AVAQMD annual mass emissions thresholds for nitrogen oxides (NO_x) and SCAQMD daily mass emissions thresholds for volatile organic compounds (VOC) and NO_x; these emissions would remain significant and unavoidable with implementation of mitigation. Construction activity near previously completed and occupied residences could result in exceedance of ambient air quality standards and exposure of sensitive receptors to substantial local emissions (i.e., not mass emissions) of respirable particulate matter with a diameter of 10 microns or less (PM₁₀) and fine particulate matter with a diameter of 2.5 microns or less (PM_{2.5}) that would remain significant and unavoidable with implementation of mitigation. At buildout of the Project, in 2035, long-term operational emissions of VOC, NO_x, carbon monoxide (CO), PM₁₀, and PM_{2.5} would exceed AVAQMD and SCAQMD thresholds. These emissions would remain significant and unavoidable with implementation of mitigation.

Pursuant to the Los Angeles County Department of Regional Planning Environmental Checklist, any project that results in "a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)" is considered to result in a cumulatively significant impact, and is addressed under Threshold 11-5 in Section 5.11, Air Resources. Both districts are in federal and State nonattainment for ozone (O₃). The SCAQMD is also in federal and State nonattainment for particulate matter (PM₁₀ and PM_{2.5}). The AVAQMD is in State nonattainment for PM₁₀. As concluded in Section 5.11, construction annual emissions of NO_x (an O₃ precursor) would be directly significant and therefore cumulatively considerable and significant. Construction daily emissions of VOC and NO_x (O₃ precursors) would be directly significant and therefore cumulatively considerable and significant. Construction mass emissions of PM₁₀ and PM_{2.5} would not be directly or cumulatively significant. Long-term operational emissions of PM₁₀, PM_{2.5}, and O₃ precursors VOC and NO_x, would be directly significant and therefore cumulatively considerable and significant.

7.3.12 NOISE

Section 5.12, Noise, of this EIR assesses potential noise impacts from Project construction, Project-related traffic generation, on-site stationary noise sources, and off-site noise sources.

Because noise naturally attenuates with distance, cumulative construction noise impacts would occur only if there was Project construction activity in the immediate proximity of construction activity from another project and if both activities are near a common sensitive receptor at the same time.

The NW138 Corridor Improvement Project would occur along the length of the SR-138, including on the portion that is adjacent to the Project site. It is likely that both the Project and the SR-138 would have construction activities occurring at the same time. However, it is unlikely that the construction for both projects would occur simultaneously adjacent to the same noise-sensitive receptors along SR-138. Because of the large size of the Project site, the potential for this to occur is limited to the perimeter of the Project site at a location where both the NW138 Improvement Project and the Project would be actively constructing facilities at the same time. The potential for this occurrence is also low due to the mobile nature of construction activities (moving from area to area on a site or alignment). The construction schedule for the NW138 Improvement Project is unknown at this time. However, to minimize impacts due to construction noise, Caltrans projects are subject to the Caltrans Standard Specifications in Section 148.02, "Noise Control," and also by Standard Special Provision S5-310, "Noise Control" (Caltrans 2016), which ensure that construction noise does not significantly affect adjacent sensitive receptors.

There is also a possibility of concurrent construction activities on both the Project site and the Burrows Property adjacent to the eastern Project boundary and 300th Street West. However, an entitlement application has not yet been filed with the County of Los Angeles for the Burrows Property, and therefore, the potential for overlapping construction cannot be reasonably determined. The Centennial Project's noise analysis (Section 5.12, Noise) determines that there would be less than significant construction and stationary noise impacts with implementation of the mitigation program. Therefore, there would not be cumulative noise impacts related to construction of the Project or proposed stationary noise sources on the Project site.

Stationary source noise is controlled by the standards of the County Noise Ordinance, which limits noise levels at the property line between the Project site and an adjacent off-site receptor. The NW138 Improvement Project would not have operational stationary sources. Stationary source noise from future development projects near the Project site would be limited by the County noise ordinance and would not have the same common property boundary with a sensitive receptor as the Project. There would be no cumulative stationary source noise impact.

In addition to construction and stationary source noise, the Project would generate mobile source noise from traffic. The noise analyses in Section 5.12 of this EIR identifies the future traffic noise exposures that would occur in the Project traffic noise study area both with and without the Project. The analysis of traffic noise is inherently a cumulative analysis because the calculation of buildout traffic noise exposures considers the anticipated future traffic volumes based on regional growth models as described in the Project traffic impact analysis, Appendix 5.11-A of this EIR (Stantec 2017). In other words, the cumulative analysis of traffic volumes includes noise generated by the Project and other projects in the traffic noise study area (as described in Section 5.12). The noise study determines that there would be less than significant traffic noise impacts to proposed on-site land uses with implementation of the mitigation program; therefore, there would not be cumulative traffic noise impacts at future on-site receptors (Wieland Acoustics 2011).

Regarding off-site receptors, the analyses in Section 5.12 determines that, at the completion of Project buildout (2035), operation of the Project would expose some existing off-site noise-sensitive receptors adjacent to SR-138 between Gorman Post Road and Old Ridge Route Road to increases in exterior ambient noise levels that exceed the 3 A-weighted decibels (dBA) threshold criterion due to Project-related traffic. The impact would be considered significant and unavoidable because feasible mitigation to reduce these impacts is not within County jurisdiction. Therefore, when considering the additional regional traffic on SR-138, the Project would contribute to significant and unavoidable cumulative impacts to these receptors.

The vibration analysis in Section 5.12 identifies potential vibration impacts from pile driving and from the operation of heavy equipment very near sensitive receptors. Mitigation would require that vibration-inducing construction activities be designed to limit vibrations to less than the County's performance standard. All projects near the Project site must comply with County standards to minimize vibration impacts to less than significant levels; therefore, cumulative vibration impacts would also be less than significant.

7.3.13 VISUAL RESOURCES

The geographic context for cumulative visual impacts generally encompasses the site and adjacent areas that share viewsheds or lines of sight with the site, as provided by open expanses of open land, agricultural land, and low density developments in the Antelope Valley and distant views of the foothills and ridgelines of the Tehachapi and San Gabriel Mountains.

The cumulative impacts on visual resources from the Project and related projects in the area would be expected with new development throughout the site and surrounding areas. The construction of new structures and associated infrastructure would lead to visual changes that could be cumulatively considerable when assessed in combination with growth and development that would be visible to area residents, employees, visitors, and passing motorists. This growth and development may not necessarily be considered adverse to the visual character of the area, since development would occur in areas planned for development (such as EOAs in the Antelope Valley and City centers) and other areas are protected as permanent open space or designated a rural preserve areas. In addition, applicable design standards (including those contained in the *Centennial Specific Plan*) and the design review process for individual developments would ensure the construction of aesthetically pleasing developments in the area.

Mountain and hillside views are expected to remain visible to public views, as a large portion of these areas have been or would be preserved as permanent open space or would support limited development. Hillside management and scenic resource regulations would limit development in the hillsides and areas with scenic resources. However, the Project would develop a community in a largely undeveloped area, and the accompanying visual change is considered significant and unavoidable, even with mitigation. While the related projects would not all be visible in the same viewsheds as the Project, visual changes in the surrounding areas that would result from continued development would contribute to the

Project's impact. Thus, cumulative impacts on visual resources would also be significant and unavoidable.

There are limited light and glare sources in the area. Although the Project would include preparation of an Exterior Lighting Plan (also referred to as "the Dark Sky Plan") to minimize glare and limit light spillover, Project implementation would introduce development at a scale that would result in significant increases in lighting levels. The related projects would also increase lighting levels at individual development sites. While these related projects would not be located adjacent to the site, increases in ambient lighting levels would occur throughout the Project area. Regulations that prevent glare and light spillover into adjacent properties, including Specific Plan design standards and guidelines, would reduce impacts, but increases in sky glow are expected to occur. This impact would be significant and unavoidable with the Project and would be cumulatively significant and unavoidable, even after mitigation.

7.3.14 PARKS AND RECREATION

As discussed in Section 5.14, Parks and Recreation, the Project would provide abundant on-site park acreage and other recreational facilities, and the planned parkland would meet, and substantially exceed, the State and County parkland requirements; this would be ensured by implementation of mitigation. Each future project in the region that includes implementation of a residential subdivision would be required to meet State (i.e., Quimby Act) and local, if any, parkland requirements. As discussed in Section 5.14, the Project is not anticipated to result in substantial deterioration of any existing recreation facilities or trails, nor would the Project require off-site construction or expansion of recreation facilities or trails. As regional growth occurs, the demand for various types of parks and other recreation facilities would increase. Since the Project provides adequate parkland and trails onsite to serve the Project's residents and since it exceeds the public parks requirement in an area with little local parkland, the Project's contribution to increased demand for parks and recreational facilities would not be cumulatively considerable, and there would be a less than significant cumulative impact.

7.3.15 EDUCATION

As detailed in Section 5.15, Education, the Project site is within the jurisdiction of two public elementary school districts and one public high school district. The Project includes development sites for one Kindergarten (K) through 5th grade school, five K-8th grade schools, and one high school, which would be ensured by implementation of mitigation. In addition, the Project Applicant has signed agreements with the school districts for a contribution to facilitate the financing, construction, and operation of new school facilities in the Project area. As with the Project, each future project with residential and commercial/industrial development would be required to either pay developer's fees in compliance with Senate Bill (SB) 50 (i.e., the Leroy Greene School Facilities Act) or seek an alternate resolution or agreement with affected school districts to offset the cost of public school construction. Section 65996(b) of the *California Government Code* states that the provisions of the developer fee legislation (i.e., SB 50) provide full and complete school facilities mitigation. As the Project would provide on-site school facilities and would

implement agreements with the three affected school districts, the Project's contribution to increased demand for schools would not be cumulatively considerable, and there would be a less than significant cumulative impact.

7.3.16 FIRE AND LAW ENFORCEMENT SERVICES

Fire Services

As discussed in Section 5.16, Fire and Law Enforcement Services, the Los Angeles County Fire Department has indicated that the proposed fire stations on the Project site would provide adequate fire service to the Project, which includes conceptual locations for up to four new fire stations. The number, location, and construction of the proposed fire stations would be ensured by implementation of mitigation. The Project, in combination with other development, would contribute to increased demand for fire protection services. Each future project would be required to provide facilities and/or fees, as applicable, for each jurisdiction (i.e., County of Los Angeles, County of Kern, cities of Lancaster, Palmdale, and Santa Clarita) to ensure they would be adequately served by fire protection services. The Project's contribution to increased demand for fire protection services would not be cumulatively considerable, and there would be a less than significant cumulative impact.

Law Enforcement Services

As discussed in Section 5.16, through coordination with the Los Angeles County Sheriff's Department, facilities required to adequately serve the Project were identified and have been included in the Conceptual Land Use Plan. The Project, in combination with other development, would contribute to increased demand for law enforcement services. As future growth occurs in unincorporated County areas and in other surrounding jurisdictions, the law enforcement agency serving that jurisdiction would be required to assess the demands placed on local stations and the staff and facilities needed to serve that growth, to be supported by general fund, taxes, and other revenues that occur with urban development. As the Project would provide the necessary on-site law enforcement facilities, the Project's incremental contribution to law enforcement services would not be cumulatively considerable, and there would be a less than significant cumulative impact.

There would also be an increased demand placed on the California Highway Patrol (CHP) as regional growth is developed. As stated in Section 5.16, there are no long-range planning documents or uniform staffing requirements used by the CHP to project future needs in each service area. As future projects are implemented, the Area Commander would be required to assess the demands placed on the local office. The increased revenues generated by the Project (via motor vehicle registration fees paid by new on-site residents and businesses) would provide funding that would partially offset increased demand on CHP services. The Project's incremental contribution to CHP's law enforcement services would not be cumulatively considerable and there would be a less than significant cumulative impact.

7.3.17 OTHER PUBLIC SERVICES

Library Services

Development occurring in Los Angeles County and Kern County surrounding the Project site that contributes to the resident population would increase the demand placed on public library facilities and services. To meet the Project's anticipated library demand, the Project includes a conceptual location for a public library in the Town Core in Village 3, just north of SR-138, which would be built and equipped as a turn-key facility to be part of the County of Los Angeles Public Library system; this would be ensured by implementation of mitigation. As with the Project, each related project would be required to meet the respective County's library mitigation fees to allow for construction and/or expansion of facilities and services to accommodate the needs of the surrounding area's population. Also, increases in property taxes due to new development would provide additional funds. In addition, one of the related Projects, Tejon Mountain Village, located in Kern County would also involve the construction of an on-site library (Kern County 2009). The Los Angeles County Library System monitors library use and changes in service demand that may require additional personnel, library materials, or facilities. This evaluation assists in balancing demand with services in different geographic areas of Los Angeles County, to help prevent adverse cumulative impacts on library services to the extent resources are available where needed. As such, the impact on nearby Kern County and Los Angeles County library services attributable to the Project (when combined with other related projects) would not be cumulatively considerable.

Solid Waste

Solid waste collection services are provided in the Project area under a non-exclusive franchise system, and future growth and development in the region would result in additional demands for private solid waste collection and disposal services. Increases in demand for waste collection services are expected to be met with increases in staffing, facilities, and equipment to provide the needed services. The Project's contribution to impacts on private solid waste collection services would not be cumulatively considerable.

Waste generation from new developments requiring landfill disposal are expected to decrease landfill capacity over time. There is remaining permitted capacity of approximately 133.14 million cubic yards (mcy) at the four major landfills serving the Project area, which have a permitted daily capacity of 25,000 tons per day). The Project's estimated annual solid waste volume would require disposal of 13,849 tons per year (approximately 44.4 tons per day; this is based on 312 days per year, i.e., 6 days a week, which is when most solid waste facilities operate) and would represent approximately 0.18 percent of the landfills' daily permitted capacity, not including capacity at minor landfills, remote landfills, or out-of-County landfills.

County of Los Angeles, County of Kern, and State waste reduction and recycling programs and regulations are expected to reduce solid waste generation, resulting in less landfill disposal demand and, in turn, extend of the life of existing landfills. However, permitted Class III landfill capacity cannot be guaranteed at the time of Project buildout and through the life of the Project, which are beyond the required 15-year Los Angeles Department of Public

Works (LACDPW) planning horizon for solid waste disposal. Therefore, while the County is committed to handling all solid waste generated in the County now and in the future, to be conservative, this EIR concludes that the Project would result in a significant impact on the County's anticipated Class III landfill capacity. The Project's contribution to solid waste disposal and associated landfill capacity during long-term operation would be cumulatively considerable.

The Project allows for a Materials Recovery Facility/Transfer Station (MRF/TS) in the Utility land use designation, which could be operated by a private or public entity. If an MRF/TS is established, it could include a green waste mulching and composting facility, which would assist the County in meeting its solid waste diversion goals.

As described in Section 5.17.3, construction of the Project is estimated to result in approximately 150,728 tons of construction wastes requiring disposal over the 20-year Project buildout period, after waste diversion; this is approximately 7,537 tons per year or 29.0 tons per day. This finite waste stream was determined to result in a less than significant impact related to Class III landfill space. Similarly, the comparatively limited proportion of hazardous waste compared to the total municipal waste stream is expected to be accommodated by the permitted Class I and Class II landfills currently in operation in Southern California, and there would be a less than significant impact. Therefore, the Project's contribution to landfill space for construction and hazardous waste disposal would not be cumulatively considerable.

Other Public Facilities

Implementation of the Project would require County services for the maintenance of on-site public roadways, parks, and other public infrastructure. In order to facilitate the maintenance of County-owned facilities that would be developed as part of the Project, land would be provided to the County for the development of two on-site maintenance yards for the County of Los Angeles Departments of Public Works and Parks and Recreation. The County may also construct, equip, and operate a permanent new animal control facility adjacent to the maintenance yards, if such a permanent facility is needed in the Project area. Impacts on other public facilities would be less than significant. Therefore, the Project's impact on other public facilities attributable to the Project (when combined with other related projects) would not be cumulatively considerable.

7.3.18 WATER RESOURCES

At buildout the Project is estimated to require 11,365 acre-feet per year (afy) of water for residential, commercial, landscaping and other purposes, of which 6,788 afy would be treated for potable use, and 4,577 afy would consist of recycled water treated to state standards under Title 22 of the *California Code of Regulations* for unrestricted reuse in on-site wastewater treatment facilities. The Project would utilize several types of water supply and on- and off-site water banking facilities to meet potable demand. Available supplies include groundwater and imported water return flows in accordance with the approved Antelope Valley Adjudication Judgment and Physical Solution, State Water Project (SWP) supplies secured for Project use and imported to the site under an agreement with the

Antelope Valley–East Kern Water Agency (AVEK), and AVEK service area deliveries that would occur only when SWP supplies are most abundant. Indoor wastewater would be conveyed to on-site treatment facilities, treated, and distributed to meet approximately 38 percent of the buildout water demand.

The Project's water supplies would sustainably meet buildout potable and recycled water demands and would maintain an average annual reserve supply of more than 79,000 acre-feet (af) after buildout has been achieved. The Project's water facilities would be owned and operated by a Project Water Purveyor regulated by the California Public Utilities Commission (CPUC) or organized as a Community Services District, a statutory water district or other entity with the appropriate capacity to own, operate, and maintain the Project's water system. The Project Water Purveyor would be funded through a rate-payer system and fees. Until the Project Water Purveyor is established, Centennial Founders, LLC (Project Applicant) would be responsible for all Project-related water services. All of the Project's water supplies and the design, permitting, financing, and construction of all treatment, collection and distribution infrastructure would be provided by the Project Applicant. The Project is required to provide the County with two water use reports, the first at the end of the fifth year following first occupancy or the occupancy of the 4,000th dwelling unit (whichever occurs later) and the second at the end of the 10th year or the occupancy of the 10,000th dwelling unit (whichever occurs later) to verify that the required water use rates are being achieved and to identify response measures if necessary to meet future water demand. No additional Project development would occur until any required water use report response measures have been implemented to the satisfaction of the County.

As discussed in Section 5.18, potential Project impacts to water supplies would be less than significant with mitigation, and no additional mitigation is required. The construction of off-site systems would not result in significant impacts to water supplies and no mitigation is required.

As discussed in Section 5.18, the AVAP and County General Plan EIRs estimated potential future water demands associated with the full buildout of the AVAP and County General Plan within the Antelope Valley region, which was projected to occur after 2035. The EIRs concluded that, while water supplies within the Antelope Valley would be sufficient to meet demand up to 2035 during average years, available water plans and projections, including the Antelope Valley Integrated Regional Water Management Plan (AVIRWMP) indicated that supplies would not sufficient to meet dry and multiple-dry year demand by 2035. The EIRs also concluded that, since there were no water supply projections extending after 2035, and potential buildout of the AVAP and General Plan in the region after 2035 could further increase regional water demand, it was uncertain if water supplies would be sufficient to meet future AVAP and General Plan demand after 2035 and cumulative impacts to water supplies would be significant and unavoidable (DRP 2014, 2015b).

The Project would help to reduce the water supply cumulative impact identified in the AVAP and General Plan EIRs because it would achieve water use efficiencies that would be below existing average rates in the region and would ensure that the Project-related increment of future regional growth considered in the AVAP and General Plan EIRs would occur with a high level of water conservation, including state-of-the art household and irrigation

installations and significantly enhanced recycled water use. Nevertheless, as determined during the AVAP and General Plan update CEQA review process, assuming buildout of the AVAP and General Plan in the Antelope Valley, regional water demands could exceed existing and planned supplies under post-2035 conditions. The Project has sufficient supplies to meet demand; Project-level impacts to water supply would be less than significant; and the Project would result in an increment of regional growth that incorporates state of art water use and conservation measures that would reduce per capita demand below existing levels. These conservation and efficiency measures would reduce but not eliminate the cumulative regional water supply impacts identified in the AVAP and General Plan EIRs, and would be significant and unavoidable.

7.3.19 WASTEWATER

The Project would construct two new wastewater reclamation facilities (WRFs) providing solids handling, biogas reuse, and recycled water treated to unrestricted reuse standards under Title 22 of the *California Code of Regulations*; a wastewater collection system; and recycled water system that would be dedicated to serve the needs of the Project site, to be ensured with implementation of mitigation. The WRFs would be required to obtain Waste Discharge Requirements and other approvals issued by the Lahontan RWQCB and would comply with the State Water Resources Control Board's Recycled Water Use Policy. Because the Project's wastewater management system would be self-contained and would not connect with or otherwise impact any other existing or planned wastewater systems that may exist in off-site areas in the future, the Project would not result in any cumulative impacts related to compliance with Waste Discharge Requirements of either the Lahontan RWQCB or Los Angeles RWQCB, nor would it result in cumulative impacts to wastewater treatment facilities or capacity in the area.

7.3.20 DRY UTILITIES

Electricity

Existing, planned, and foreseeable future projects within Southern California Edison's (SCE's) service area would contribute to increased demands for electrical service. As part of their long-range planning efforts, SCE evaluates the long-term growth projections when determining their long-range demand. The CPUC oversees and regulates service providers, including SCE, to ensure that adequate service levels are available to accommodate projected regional growth at fair prices. The Project's increase in demand for electricity would not be cumulatively considerable since SCE has stated its ability to provide service to the Project site and the surrounding area into the foreseeable future (See Section 5.20, Dry Utilities).

Fossil Fuels (Natural Gas and Petroleum)

Existing, planned, and foreseeable future projects in the Southern California Gas Company (SoCalGas) service area would contribute to increased demands for natural gas service. California's existing natural gas supply is regionally diverse and includes supplies from onshore and offshore California sources, the southwestern United States, the Rocky Mountains, and Canada. Additional pipeline capacity and interstate pipeline access allows

for long-term supply availability to serve existing, planned, and foreseeably future development. SoCalGas has indicated there are adequate natural gas supplies to accommodate the estimated demand of the Project as well as other existing and projected demands (SoCalGas 2006). Therefore, no significant cumulative impacts are anticipated.

The crude oil consumed in California comes from both in-state and out-of-state sources. Project construction and operations would result in consumption of petroleum. The majority of fuel consumption resulting from the Project would involve the use of motor vehicles. Petroleum fuel consumption associated with the Project is a function of the vehicle miles traveled (VMT) as a result of Project construction and operations. As discussed in Sections 5.10 (Traffic, Access, and Circulation), 5.11 (Air Resources), and 5.21 (Climate Change), the Project would result in an increase in VMT which, in turn, could result in additional fuel consumption and energy use associated with transportation. It should, however, be noted that, as a result of anticipated fuel efficiency improvements, additional VMT would not necessarily result in a proportional increase in fuel consumption. Moreover, the Project incorporates a variety of features intended to reduce VMT associated with the Project, thereby reducing petroleum consumption, both through energy-efficient site planning and building design as well as transportation improvements and vehicle trip reductions. As discussed further in Section 5.10, Traffic, Access and Circulation, the Project would construct and/or provide funding for necessary traffic and transit improvements to ensure there are less than significant traffic impacts; without these improvements, the Project-generated trips would otherwise result in increased gasoline usage and less efficient gasoline consumption due to traffic congestion. For these reasons, no significant cumulative transportation energy impacts are anticipated.

Telephone

The CPUC oversees and regulates service providers (including AT&T, who would be the Project's service provider) to ensure that adequate service levels are available to accommodate projected regional growth at fair prices. The Project's increase in demand for telephone lines would not be cumulatively considerable since AT&T has indicated it has the ability to provide service to the Project site and the surrounding area into the foreseeable future.

Cable Television

Existing, planned, and foreseeable future projects within the service area of the cable television (CATV) service provider (CalNeva Broadband or other provider yet to be determined) chosen for the Project would contribute to increased demands for CATV service. The CPUC oversees and regulates CATV service providers to ensure that adequate service levels are available to accommodate projected regional growth at fair prices. The Project's increase in demand for CATV service would not be cumulatively considerable as the CPUC ensures that whichever company chosen would be able to provide service to the Project site and the surrounding area into the foreseeable future.

7.3.21 CLIMATE CHANGE

The County acknowledges the consensus among leading scientists that, without action to reduce GHG emissions, climate change due to global warming will pose a considerable threat to the environment and to human health and society (DRP 2015d). Climate change is a global phenomenon and the significance of GHG emissions is most appropriately considered on a cumulative level. The *Final Unincorporated Los Angeles County Community Climate Action Plan 2020* (CCAP) is part of the County General Plan and was adopted along with the General Plan on October 6, 2015. The analysis of Project consistency with each of the CCAP goals and policies shows that the Project is fully consistent with the CCAP. The Project is also consistent with the SCAG 2016–2040 RTP/SCS; AVAP policies; and State GHG-reducing regulatory programs, including those that, as the California Air Resources Board (CARB) has concluded, put California on a trajectory toward meeting the 2050 GHG reduction goals set forth in several Executive Orders. The Project's GHG emissions per service person would be less than the SCAQMD-recommended screening threshold. The Project would nonetheless emit GHGs at an estimated rate of 244,379 metric tons of carbon dioxide equivalent per year (MTCO_{2e}/year), which would exceed the AVAQMD's threshold of 100,000 MTCO_{2e}/year and would contribute to the global inventory of GHGs.

To date, the vast majority of other states and nations have not followed California's lead in mandating GHG-emission reductions across a broad spectrum of economic sectors and have not enacted regulations similar to those adopted in California, which already has nearly the lowest level of GHGs per capita of any state. The County of Los Angeles has no jurisdictional control or responsibility for GHG reductions in other parts of California, and certainly not in the context of global action. Therefore, because of the global context of GHG emissions and the Project's forecasted GHG emission rate, the environmental impact related to GHG emissions is considered to be cumulatively considerable, and the impact would be significant.

7.4 CONCLUSION

The Project's cumulative impact analysis includes the consideration of regional conditions and includes proposed and approved development throughout the Santa Clarita Valley and Southern Kern County. Table 7-3, Significant and Unavoidable Cumulative Impacts, summarizes the information provided in this section and thus identifies significant cumulative impacts that would be associated with Project implementation.

**TABLE 7-3
SIGNIFICANT AND UNAVOIDABLE CUMULATIVE IMPACTS**

Resource/Impact Category	Specific Impact Conclusion
Biological Resources	As a conservative assessment, the Project would result in cumulatively significant impacts to native perennial grasslands and wildlife movement.
Land Resources	The on-site conversion of farmland (approximately 642 acres of Prime Farmland) is part of the total of 6,169 acres of Important Farmland that the AVAP EIR identified would be converted as part of future growth. However, the Project's contribution to conversion of agricultural resources is cumulatively considerable and is considered a significant and unavoidable impact.
Traffic, Access and Circulation	The Project would contribute to cumulatively significant impacts without pending improvements by Caltrans.
Air Quality	Because the Project would result in both significant and unavoidable construction and operational emissions in the AVAQMD and the SCAQMD, both of which are in federal nonattainment for O ₃ and PM ₁₀ , it would contribute to cumulative impacts.
Noise	Traffic noise increases would exceed the 3 dBA CNEL criterion at identified receptors along SR-138, resulting in a significant impact. The impact would be considered significant and unavoidable because feasible mitigation to reduce these impacts is not within County jurisdiction, and would also be considered cumulatively significant in the context of additional regional traffic along the SR-138.
Visual Resources	The Project would be a component of, and result in cumulatively significant changes to, long-range views from public land. The Project would also contribute to cumulatively significant light pollution ("sky glow") impacts.
Solid Waste	The Project's estimated annual municipal solid waste disposal would represent a nominal incremental contribution to the combined daily disposal rate for the landfills serving the Project area. However, permitted Class III landfill capacity cannot be guaranteed at the time of Project buildout and throughout the life of the Project; therefore, the Project's contribution to municipal solid waste disposal is considered a cumulatively significant impact.
Water Resources	With mitigation, there would be a less than significant direct impacts to groundwater supplies, groundwater recharge rates, groundwater levels, and to existing and potential future well uses. As determined during the AVAP and General Plan update CEQA review process, cumulative regional water demands could exceed existing and planned supplies under post-2035 conditions. No feasible mitigation can be incorporated at a Project level to reduce this regional impact. As a result, cumulative water supply impacts would be significant and unavoidable.
Population, Housing, and Employment	Population, housing and employment growth would be substantial relative to existing Project site conditions because the site is currently undeveloped and unoccupied; hence, this impact is significant.

**TABLE 7-3
SIGNIFICANT AND UNAVOIDABLE CUMULATIVE IMPACTS**

Resource/Impact Category	Specific Impact Conclusion
Climate Change	Although the Project would be consistent with the Los Angeles County CCAP, the SCAG 2016 RTP/SCS, the AVAP policies, complies with GHG-reducing regulatory programs, and the GHG emissions per service person would be less than the SCAQMD-recommended screening threshold, the Project would nonetheless emit GHGs at an estimated rate of 244,379 metric tons per year that would contribute to the global inventory of GHGs. The Project's GHG efficiency would be 3.02 which would not exceed the SCAQMD-staff-proposed "plan-level" 4.1 GHG efficiency threshold, but would exceed the SCAQMD-staff-proposed "project-level" 3.0 GHG efficiency threshold. Therefore, the environmental impact related to greenhouse gas emissions is considered to be cumulatively considerable and the impact would be significant.
Caltrans: California Department of Transportation; AVAQMD: Antelope Valley Air Quality Management District; SCAQMD: South Coast Air Quality Management District; O ₃ : ozone; PM10: respirable particulate matter with a diameter of 10 microns or less; dBA: A-weighted decibels; CNEL: Community Noise Equivalent Level; SR: State Route; AVAP: Antelope Valley Area Plan; CEQA: California Environmental Quality Act; CCAP: Community Climate Action Plan; SCAG: Southern California Association of Governments; RTP/SCS: Regional Transportation Plan/Sustainable Communities Strategy; GHG: greenhouse gas; AB: Assembly Bill	

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