SECTION 3.4
CULTURAL RESOURCES

As a result of the Initial Study (Appendix F),[1] the County of Los Angeles (County) determined that the Single-Family Residential Hauled Water Initiative for New Development (proposed initiative) would have the potential to result in significant impacts to cultural resources. Therefore, this issue has been carried forward for detailed analysis in this Environmental Impact Report (EIR). This analysis was undertaken to identify opportunities to avoid, reduce, or otherwise mitigate potential significant impacts to cultural resources and to identify potential alternatives. The analysis of cultural resources consists of a summary of the regulatory framework that guides the decision-making process, a description of the existing conditions within the proposed initiative study area, thresholds for determining if the proposed initiative would result in significant impacts, anticipated impacts (direct, indirect, and cumulative), mitigation measures, and level of significance after mitigation.

The proposed initiative was evaluated with regard to information contained in published and unpublished literature, databases, review of current and historic maps and aerial photographs to characterize the existing conditions in relation to biological resources, and modeling of potential development to estimate the anticipated area of potential effect. The evaluation also considered the policies, goals, and objectives of the adopted and proposed land use planning documents for the study area: Land Use Element and Conservation and Natural Resources Element of the Los Angeles County General Plan 2035,[2,3] the Antelope Valley Area Plan – Town & Country,[4] and the 2012 Santa Clarita Valley Area Plan.[5]

3.4.1 REGULATORY FRAMEWORK

The following regulatory framework identifies the federal, state, and local statutes, ordinances, or policies that govern the conservation and protection of cultural resources that will be considered by the County during the decision-making process for the proposed initiative.

[1] County of Los Angeles. September 2014. County of Los Angeles Single-Family Residential Hauled Water Initiative for New Development Initial Study. Prepared by: Sapphos Environmental, Inc., Pasadena, CA.

[2] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 6: Land Use Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch6.pdf

[3] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 9: Conservation and Natural Resources Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch9.pdf

[4] County of Los Angeles Department of Regional Planning. Approved 12 November 2014. Antelope Valley Area Plan – Town & Country: A Component of the Los Angeles County General Plan. Available at: http://planning.lacounty.gov/tnc

[5] County of Los Angeles Department of Regional Planning. 2012. 2012 Santa Clarita Valley Area Plan. Available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf

Federal

National Historic Preservation Act of 1966[6]

Enacted in 1966, the National Historic Preservation Act (NHPA) declared a national policy of historic preservation and instituted a multifaceted program, administered by the National Parks Service, to encourage the achievement of preservation goals at the federal, state, and local levels. The NHPA authorized the expansion and maintenance of the National Register of Historic Places (NRHP), established the position of State Historic Preservation Officer and provided for the designation of State Review Boards, set up a mechanism to certify local governments to carry out the purposes of the NHPA, assisted Native American tribes to preserve their cultural heritage, and created the Advisory Council on Historic Preservation (ACHP). Section 106 of the NHPA states that federal agencies with direct or indirect jurisdiction over federally funded, assisted, or licensed undertakings must take into account the effect of the undertaking on any historic property that is included in, or eligible for inclusion in, the NRHP, and that the ACHP must be afforded an opportunity to comment, through a process outlined in the ACHP regulations at 36 Code of Federal Regulations (CFR) Part 800, on such undertakings.

National Register of Historic Places

The NRHP was established by the NHPA of 1966 as "an authoritative guide to be used by federal, state, and local governments, private groups, and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment."[7] The NRHP recognizes properties that are significant at the national, state, and local levels. To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must also possess integrity of location, design, setting, materials, workmanship, feeling, and association. A property is eligible for the NRHP if it is significant under one or more of the following criteria:[8]

Criterion A: It is associated with events that have made a significant contribution to the broad patterns of our history.

Criterion B: It is associated with the lives of persons who are significant in our past.

Criterion C: It embodies the distinctive characteristics of a type, period, or method of construction; represents the work of a master; possesses high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction.

Criterion D: It has yielded, or may be likely to yield, information important in prehistory or history.

Cemeteries, birthplaces, or graves of historic figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations,

[6] U.S. Code, 16 USC 470.

[7] Code of Federal Regulations, 36 CFR 60.2.

[8] Code of Federal Regulations, 36 CFR 60.4.

reconstructed historic buildings, and properties that are primarily commemorative in nature are not considered eligible for the NRHP unless they satisfy certain conditions. In general, a resource must be at least 50 years of age to be considered for the NRHP, unless it satisfies a standard of exceptional importance.

Native American Graves Protection and Repatriation Act of 1990

The Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 sets provisions for the intentional removal and inadvertent discovery of human remains and other cultural items from federal and tribal lands. It clarifies the ownership of human remains and sets forth a process for repatriation of human remains and associated funerary objects and sacred religious objects to the Native American groups claiming to be lineal descendants or culturally affiliated with the remains or objects. It requires any federally funded institution housing Native American remains or artifacts to compile an inventory of all cultural items within the museum or with its agency and to provide a summary to any Native American tribe claiming affiliation.

State

California Environmental Quality Act

Pursuant to CEQA, a *historical resource* is a resource listed in, or eligible for listing in, the California Register of Historical Resources (CRHR). In addition, resources included in a local register of historic resources or identified as significant in a local survey conducted in accordance with state guidelines are also considered historical resources under CEQA, unless a preponderance of the facts demonstrates otherwise. According to CEQA, the fact that a resource is not listed in or determined eligible for listing in the CRHR or is not included in a local register or survey shall not preclude a Lead Agency, as defined by CEQA, from determining that the resource may be a historical resource as defined in California Public Resources Code (PRC) Section 5024.1.[9]

CEQA applies to archaeological resources when (1) the archaeological resource satisfies the definition of a historical resource or (2) the archaeological resource satisfies the definition of a "unique archaeological resource." A *unique archaeological resource* is an archaeological artifact, object, or site that has a high probability of meeting any of the following criteria:[10]

1. The archaeological resource contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.

2. The archaeological resource has a special and particular quality such as being the oldest of its type or the best available example of its type.

3. The archaeological resource is directly associated with a scientifically recognized important prehistoric or historic event or person.

[9] California Code of Regulations, Title 14, Chapter 3. Amended 6 October 2005. Guidelines for the Implementation of the California Environmental Quality Act, Section 15064.5(a).

[10] California Public Resources Code, Division 13, Section 21083.2(g).

Appendix G of the CEQA Guidelines provides a set of sample questions that guide the evaluation of potential impacts with regard to cultural resources.

Would the project:

(a) Cause a substantial adverse change in the significance of an historical resource as defined in §15064.5?

(b) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?

(c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

(d) Disturb any human remains, including those interred outside of formal cemeteries?[11]

Assembly Bill 52

Assembly Bill (AB) 52 (Statutes of 2014) creates a new category of environmental resources that must be considered under CEQA: "tribal cultural resources." The additional consulting provisions of AB 52 are applicable to a project for which a Notice of Preparation (NOP) is filed on or after July 20, 2015. The NOP for this EIR was initially published on September 17, 2014, and a revised NOP was published on May 20, 2015. The proposed initiative is therefore not subject to the additional consultation provisions of AB 52.

California Register of Historical Resources Program

Created in 1992 and implemented in 1998, the CRHR is "an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change."[12] Certain properties, including those listed in or formally determined eligible for listing in the NRHP and California Historical Landmarks (CHLs) numbered 770 and higher, are automatically included in the CRHR. Other properties recognized under the California Points of Historical Interest program, identified as significant in historic resources surveys, or designated by local landmarks programs may be nominated for inclusion in the CRHR. A resource, either an individual property or a contributor to a historic district, may be listed in the CRHR if the State Historical Resources Commission determines that it meets one or more of the following criteria, which are modeled on NRHP criteria:[13]

Criterion 1: It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

Criterion 2: It is associated with the lives of persons important in our past.

[11] California Code of Regulations, Title 14, Chapter 3. Amended 6 October 2005. Guidelines for the Implementation of the California Environmental Quality Act, Appendix G.

[12] California Public Resources Code, Section 5024.1(a).

[13] California Public Resources Code, Section 5024.1(c).

Criterion 3: It embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values.

Criterion 4: It has yielded, or may be likely to yield, information important in history or prehistory.

Resources nominated to the CRHR must retain enough of their historic character or appearance to be recognizable as historic resources and to convey the reasons for their significance.[14] It is possible that a resource whose integrity does not satisfy NRHP criteria may still be eligible for listing in the CRHR. A resource that has lost its historic character or appearance may still have sufficient integrity for the CRHR if, under Criterion 4, it maintains the potential to yield significant scientific or historical information or specific data. Resources that have achieved significance within the past 50 years also may be eligible for inclusion in the CRHR, provided that enough time has lapsed to obtain a scholarly perspective on the events or individuals associated with the resource.[15]

California Historical Landmarks Registration Program

CHLs are buildings, structures, sites, or places that have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value and that have been determined to have statewide historical significance by meeting at least one of the criteria listed below. The resource must also be approved for designation by the County Board of Supervisors (or the City or Town Council in whose jurisdiction it is located), be recommended by the State Historical Resources Commission, and be officially designated by the Director of California State Parks. The specific standards in use now were first applied in the designation of CHL No. 770. CHLs No. 770 and above are automatically listed in the CRHR.

To be eligible for designation as a Landmark, a resource must meet at least one of the following criteria:

- The first, last, only, or most significant of its type in the state or within a large geographic region (Northern, Central, or Southern California)
- Associated with an individual or group having a profound influence on the history of California
- A prototype of, or an outstanding example of, a period, style, architectural movement or construction or one of the more notable works or the best surviving work in a region of a pioneer architect, designer, or master builder

California Points of Historical Interest

California Points of Historical Interest are sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. Points of Historical

[14] Office of Historic Preservation. n.d. Technical Assistance Bulletin 6: California Register and National Register, A Comparison (for Purposes of Determining Eligibility for the California Register). Available at: www.ohp.parks.ca.gov

[15] Office of Historic Preservation. n.d. Technical Assistance Bulletin 6: California Register and National Register, A Comparison (for Purposes of Determining Eligibility for the California Register). Available at: www.ohp.parks.ca.gov

Interest designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the CRHR. No historic resource may be designated as both a Landmark and a Point. If a Point is later granted status as a Landmark, the Point designation will be retired. In practice, the Point designation program is most often used in localities that do not have a locally enacted cultural heritage or preservation ordinance.

To be eligible for designation as a Point of Historical Interest, a resource must meet at least one of the following criteria:

- The first, last, only, or most significant of its type within the local geographic region (city or county)
- Associated with an individual or group having a profound influence on the history of the local area
- A prototype of, or an outstanding example of, a period, style, architectural movement or construction or one of the more notable works or the best surviving work in the local region of a pioneer architect, designer, or master builder

Public Resources Code Sections 5097.9–5097.991

Section 5097.91 of the PRC established the NAHC, whose duties include the inventory of places of religious or social significance to Native Americans and the identification of known graves and cemeteries of Native Americans on private lands. Under Section 5097.9 of the PRC, a state policy of noninterference with the free expression or exercise of Native American religion was articulated along with a prohibition of severe or irreparable damage to Native American sanctified cemeteries, places of worship, religious or ceremonial sites, or sacred shrines located on public property. Section 5097.98 of the PRC specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner. Section 5097.5 states that is a misdemeanor to knowingly and willfully excavate, disturb, destroy, deface, or remove any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological sites, on public lands, except with the express permission of the public agency holding jurisdiction over the lands.

California Native American Graves Protection and Repatriation Act of 2001

Codified in the California Health and Safety Code Sections 8010–8030, the California Native American Graves Protection and Repatriation Act (Cal NAGPRA) is consistent with the federal NAGPRA. Intended to "provide a seamless and consistent state policy to ensure that all California Indian human remains and cultural items be treated with dignity and respect," Cal NAGPRA also encourages and provides a mechanism for the return of remains and cultural items to lineal descendants. Section 8025 established a Repatriation Oversight Commission to oversee this process. The Act also provides a process for non–federally recognized tribes to file claims with agencies and museums for repatriation of human remains and cultural items.

Health and Safety Code, Sections 7050 and 7052

Health and Safety Code, Section 7050.5, declares that, in the event of the discovery of human remains outside a dedicated cemetery, all ground disturbance must cease and the county coroner must be notified. Section 7052 establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

Penal Code, Section 622.5

Penal Code, Section 622.5, provides misdemeanor penalties for injuring or destroying objects of historic or archaeological interest located on public or private lands but specifically excludes the landowner.

Regional

Southern California Association of Governments Growth Management Policy No. 3.21

The Southern California Association of Governments (SCAG) Growth Management Chapter (GMC) has instituted policies regarding the protection of cultural resources. SCAG GMC Policy No. 3.21 "encourages the implementation of measures aimed at the preservation and protection of recorded and unrecorded cultural resources and archaeological sites."[16]

Local

Los Angeles County General Plan 2035

The County's cultural resources objective, found in the Conservation and Natural Resources Element of the General Plan 2035, is to preserve and protect cultural resources including historic, archaeological, and paleontological resources.[17] Under this objective, the County has established the following policies:[18]

- **Policy C/NR 14.1:** Mitigate all impacts from new development on or adjacent to historic, cultural, and paleontological resources to the greatest extent feasible.
- **Policy C/NR 14.2:** Support an inter-jurisdictional collaborative system that protects and enhances historic, cultural, and paleontological resources.
- **Policy C/NR 14.3:** Support the preservation and rehabilitation of historic buildings.
- **Policy C/NR 14.4:** Ensure proper notification procedures to Native American tribes in accordance with Senate Bill 18 (2004).
- **Policy C/NR 14.6:** Ensure proper notification and recovery processes are carried out for development on or near historic, cultural, and paleontological resources.

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[16] Southern California Association of Governments. 2001. SCAG Growth Management Chapter (GMC) Policy No. 3.21. Los Angeles, CA.

[17] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 9: Conservation and Natural Resources Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch9.pdf

[18] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 9: Conservation and Natural Resources Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter9_2014.pdf

Los Angeles County Historical Landmarks and Records Commission/ County Historic Preservation Ordinance

The Los Angeles County Board of Supervisors established a Register of Landmark and Historic Districts, effective September 1, 2015, which is the County's official list of local districts, sites, buildings, structures, and objects significant in history, American history, architecture, archeology, engineering, and culture pursuant to Title 22 – Planning and Zoning of the Los Angeles County Code, Part 28 of Chapter 22.52. The Los Angeles County Landmarks Commission (Commission) considers and recommends designation applications for Landmarks and Historic Districts defined as meeting one of more of the eligibility criteria and possessing integrity for designation by the Los Angeles County Board of Supervisors pursuant to Section 22.52.3060. The Landmarks Commission also reviews applications for Certificates of Appropriateness for major projects which may affect a County designated Landmark and/or Historic District for approval by the County Board of Supervisors.

3.4.2 EXISTING CONDITIONS

Paleontological Resources

A limited review of published and unpublished literature pertaining to paleontological and geological information was undertaken to determine the degree of paleontological sensitivity within the proposed initiative study area. The literature and records search was limited due to the large size of the combined subareas for the proposed initiative. The records search included a review through the online archival database with the University of California Museum of Paleontology (UCMP) online database concerning paleontological and geological identified geologic formations and rock units present within the seven subareas as the basis for making determination regarding the potential for paleontological resources to be present and potentially affected by the proposed initiative. A number of geologic units were evaluated to determine if they have previously yielded paleontological resources: Holocene and Pleistocene Quaternary alluvium, Quaternary landslide deposits, the Pleistocene Saugus and Harold Formations; the Pliocene Pico and Anaverde Formations; the Late Miocene Towsley, Ridge Basin Group, Sisquoc Formation, and Punch Bowl Formations; the Middle to Late Miocene Castaic, Monterey, Quail Lake, and Mint Canyon Formations; the early to Middle Miocene Tick Canyon Formation; the Miocene Fiss Fanglomerate and Crowder Formation; the Oligocene to Early Miocene Vasquez Formation; the Paleocene (Cretaceous?) San Francisquito Formation; Plutonic igneous rocks and metamorphic rocks of Cenozoic, Mesozoic, and Paleozoic ages. Many of the sedimentary units and Formations have produced significant vertebrate and plant fossils within Los Angeles County (Table 3.4.2-1, *Geologic Units with the Potential to Yield Paleontological Resources*).

TABLE 3.4.2-1
GEOLOGIC UNITS WITH THE POTENTIAL TO YIELD PALEONTOLOGICAL RESOURCES

Initiative Subarea	Potential for Significant Paleontological Resources	Geological Units with Paleontological Resource Potential
Acton	Yes	Pleistocene Quaternary alluvium
Castaic/Santa Clarita/Agua Dulce	Yes	Pleistocene older alluvium, Saugus Formation; Pliocene marine Pico Formation; Pliocene to Late Miocene marine Towsley Formation; Late Miocene marine Ridge Basin Group and Sisquoc Formations; Late to Middle Miocene marine, Monterey and Castaic Formations; Middle Miocene Mint Canyon Formation; Early to Middle Miocene Tick Canyon Formation
Antelope Valley Northeast	Yes	Late Pleistocene alluvium, Quaternary fanglomerates, and Pleistocene alluvial fan deposits
East San Gabriel Mountains	Yes	Quaternary older alluvium (Pleistocene); Plio-Pleistocene Saugus Formation
Lake Los Angeles/ Llano/Valyermo/ Little Rock	Yes	Pleistocene alluvium and Harold Formation; Pliocene Anaverde Formation; Late Miocene Punchbowl Formation; Miocene Crowder Formation; Cretaceous San Francisquito Formation
Lake Hughes/ Gorman/ West of Lancaster	Yes	Late Pleistocene older playa deposits and older fan deposits; Oligocene to Middle Miocene Gem Hill Formation?
Lancaster Northeast	Yes	Pleistocene channel deposits, eolian sands, and beach bar deposits

Because the proposed initiative includes a large geographic area with complex geology indicative of tectonic plate boundaries, the geology and paleontology of each subarea has been described individually below. All sedimentary units are terrestrial unless otherwise noted.

Acton. Surficial geology within the Acton subarea was mapped in 1996, 1997, and 2001 by Dibblee.[19,20,21] The literature review did not yield any fossil localities within the Acton subarea; however, Pleistocene Quaternary alluvium has the yielded significant paleontological resources and is considered to have high paleontological sensitivity.[22] Holocene Quaternary alluvium, Quaternary landslide deposits, the Vasquez Formation, plutonic igneous rocks, and metamorphic rocks are considered to have low paleontological sensitivity.

[19] Dibblee, T. W., Jr. 1996. Geologic Map of the Acton Quadrangle, Los Angeles County, California. Dibblee Geological Foundation Map DF-59 (Ehrenspeck, H. E., ed.), scale 1:24,000, colored, two cross-sections.

[20] Dibblee, T. W., Jr. 1997. Geologic Map of the Sleepy Valley and Ritter Ridge Quadrangles, Los Angeles County, California. Dibblee Geological Foundation Map DF-66 (Ehrenspeck, H. E., ed.), scale 1:24,000, colored, four cross-sections.

[21] Dibblee, T. W., Jr. 2001. Geologic Map of the Pacifico Mountain and Palmdale (South Half) Quadrangles, Los Angeles County, California. Dibblee Geological Foundation Map DF-76 (Ehrenspeck, H.E., ed.), scale 1:24,000.

[22] Jefferson, G. T., 1991. A Catalogue of Late Quaternary Vertebrates from California, Part Two, Mammals. Natural History Museum of Los Angeles County Technical Reports, no. 7, 129 p.

Castaic/Santa Clarita/Agua Dulce. The surficial geology of the Castaic/Santa Clarita/Agua Dulce subarea was mapped by Dibblee between 1991 and 1997.[23,24,25,26,27,28,29] The following rock units/formations have the potential to yield significant paleontological resources based on previous collections and/or age and lithology and are given high paleontological sensitivity: Pleistocene alluvial deposits.[30] the Saugus Formation, [31] the Pliocene marine, Pico Formation[32,33]; the Towsley Formation[34]; the Ridge Basin Group; the Sisquoc Formation; the Castaic Formation[35,36,37] the Monterey Formation; the Mint Canyon Formation;[38,39,40] and the Tick Canyon Formation.[41] Igneous

[23] Dibblee, T. W., Jr. 1991. Geologic Map of the San Fernando and Van Nuys (North 1/2) Quadrangles, Los Angeles County, California. Dibblee Geological Foundation DF-33 (Ehrenspeck, H. E., ed.), scale 1:24,000, colored. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[24] Dibblee, T. W., Jr. 1992. Geologic Map of the Oat Mountain and Canoga Park (North 1/2) Quadrangles, Los Angeles County, California. Dibblee Geological Foundation DF-36 (Ehrenspeck, H. E., ed.), scale 1:24,000, colored, one cross-section. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[25] Dibblee, T. W., Jr. 1993. Geologic Map of the Val Verde Quadrangle, Los Angeles and Ventura Counties, California. Dibblee Geological Foundation DF-50 (Ehrenspeck, H. E., ed.), scale 1:24,000, colored, one cross-section. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[26] Dibblee, T. W., Jr. 1996a. Geologic Map of the Newhall Quadrangle, Los Angeles County, California. Dibblee Geological Foundation Map DF-56 (Ehrenspeck, H. E., ed.), scale 1:24,000, colored, two cross-sections. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[27] Dibblee, T. W., Jr. 1996b. Geologic Map of the Mint Canyon Quadrangle, Los Angeles County, California. Dibblee Geological Foundation Map DF-57 (Ehrenspeck, H. E., ed.), scale 1:24,000, colored, three cross-sections. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[28] Dibblee, T. W., Jr. 1997a. Geologic Map of the Warm Springs Mountain Quadrangle, Los Angeles County, California. Dibblee Geological Foundation Map DF-64 (Ehrenspeck, H. E., ed.), scale 1:24,000, colored, three cross-sections. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[29] Dibblee, T. W., Jr. 1997b. Geologic Map of the Whitaker Peak Quadrangle, Los Angeles and Ventura Counties, California. Dibblee Geological Foundation Map DF-63 (Ehrenspeck, H. E., ed.), scale 1:24,000, colored, three cross-sections. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[30] Jefferson, G. T., 1991. A Catalogue of Late Quaternary Vertebrates from California, Part Two, Mammals. Natural History Museum of Los Angeles County Technical Reports, no. 7, 129 p.

[31] Jefferson, G. T., 1991. A Catalogue of Late Quaternary Vertebrates from California, Part Two, Mammals. Natural History Museum of Los Angeles County Technical Reports, no. 7, 129 p.

[32] Squires, R. L., Groves, L.T., and J. T. Smith. 2006. New Information on Molluscan Paleontology and Depositional Environments of the Upper Pliocene Pico Formation, Valencia Area, Los Angeles County, Southern California. Los Angeles County Museum of Natural History Contributions in Science 511.

[33] Fierstine, H.L., Huddleston, R.W, and G.T. Takeuchi. 2012. Catalog of Neogene Bony Fishes of Southern California: A Systematic Inventory of all Published Accounts. Occasional Papers of the California Academy of Sciences, 206 p.

[34] Kern, J. P. 1973. Early Pliocene Marine Climate and Environments of Eastern Ventura Basin, Southern California. University of California Publications in Geologic Sciences 96:1-117.

[35] Kellogg, R., 1925. Additions to the Tertiary History of the Pelagic Mammals on the Pacific Coast of North America. Contributions to Paleontology, Carnegie Institution of Washington, No. 348: 1-120.

[36] Kellogg, R., 1929. A New Cetothere from Southern California. University of California Publications, Bulletin of the Department of Geological Sciences 18: 449-457.

[37] Repenning, C. A. and R. H. Tedford. 1977. Otarioid Seals of the Neogene. U.S. Geological Survey Professional Paper 992: 1-93.

[38] Maxson, J. H. 1930. A Tertiary Mammalian Fauna from the Mint Canyon Formation of Southern California. Carnegie Institution of Washington Publications 404:77-112.

[39] Axelrod, D. I. 1940. The Mint Canyon Flora of Southern California: A Preliminary Statement. American Journal of Science 238: 577-585.

[40] Mount, J. D. 1971. A Late Miocene Flora from the Solemint Area, Los Angeles County, California. Bulletin of the Southern California Paleontological Society 3:1-4.

and metamorphic rocks and the Vasquez Formation have a low potential for yielding significant paleontological resources, and are therefore assigned low paleontological sensitivity within the subarea.

Antelope Valley Northeast. Surficial geological mapping covering the Antelope Valley Northeast subarea was completed by Dibblee, and Dixon and Ward.[42,43] Research for this subarea revealed no previously-known, significant paleontological resources from the Antelope Valley Northeast Subarea; however, Late Pleistocene alluvium has yielded significant vertebrate fossils in other areas of Los Angeles County.[44] Quaternary fanglomerates and Pleistocene alluvial fan deposits are usually coarse-grained and do not often produce significant paleontological resources. Because of this, Late Pleistocene alluvium within this subarea is determined to have a high sensitivity for paleontological resources, and Quaternary fanglomerates and Pleistocene alluvial fan deposits have moderate sensitivity for significant paleontological resources. Igneous rocks have a low potential to yield significant paleontological resources.

East San Gabriel Mountains. The geology of the East San Gabriel Mountains subarea was mapped by Dibblee in 1991.[45,46] Sedimentary units with high paleontological sensitivity include Quaternary older alluvium, Quaternary landslide deposits (if fine-grained), and the Plio-Pleistocene Saugus Formation. Igneous and metamorphic rocks mapped in the subarea have low paleontological sensitivity.

Lake Hughes/Gorman/West of Lancaster. The surficial geology of the Lake Hughes/Gorman/West of Lancaster subarea was mapped by Dibblee in 1959, and refined in the late 1990s, and again between 2006 and 2008.[47,48,49,50,51] The mapping was further refined by Dibblee and Minch in

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[41] Whistler, D.P., 1967. Oreodonts of the Tick Canyon Formation, Southern California, Paleobios, v. 1: 1-14.

[42] Dibblee, T. W., Jr. 1953. Geologic Map of the Rogers Lake and Kramer Quadrangles, Los Angeles County, California. U. S. Department of the Interior, Bulletin 1089, Plate 8, scale 1:62,500.

[43] Dixon, G.L. and A.W. Ward, 2002, Preliminary Geologic Map of the Rogers Lake South Quadrangle, Los Angeles and Kern Counties, California. US Geological Survey, Open-File Report OF-93-696, Scale 1:24,000.

[44] Jefferson, G. T. 1991 A Catalogue of Late Quaternary Vertebrates from California, Part Two, Mammals. Natural History Museum of Los Angeles County Technical Reports, no. 7, 129 p.

[45]Dibblee, T. W., Jr. 1991. Geologic Map of the San Fernando and Van Nuys (North 1/2) Quadrangles, Los Angeles County, California. Dibblee Geological Foundation DF-33 (Ehrenspeck, H. E., ed.), scale 1:24,000, colored. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[46] Dibblee, T. W., Jr. 1991a. Geologic Map of the Sunland and Burbank (North 1/2) Quadrangles, Los Angeles County, California. Dibblee Geological Foundation DF-32 (Ehrenspeck, H. E., ed.), scale 1:24,000, colored. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[47] Dibblee, T. W., Jr. 1959. Geologic Map of Rosamond Quadrangle, Los Angeles and Kern Counties, California. U.S. Geological Survey Open-File Map 59-30, scale 1:62,500. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[48] Dibblee, T. W., Jr. 1959a. Geologic Map of the Alpine Butte Quadrangle, Los Angeles County, California. U. S. Geological Survey Mineral Investigations Field Studies Map MF-222, scale 1:62,500. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[49] Dibblee, T. W., Jr. 1997c. Geologic Map of the Green Valley Quadrangle, Los Angeles County, California. Dibblee Geological Foundation Map DF-65 (Ehrenspeck, H. E., ed.), scale 1:24,000, colored, two cross-sections. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[50] Dibblee, T. W., Jr. 2006. Geologic Map of the Frazier Mountain & Lebec Quadrangles, Los Angeles, Ventura, & Kern Counties, California. Dibblee Geological Foundation Map DF-198 (Minch, J.A., ed.), scale 1:24,000. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

2002,[52,53,54] Lancaster and Holland in 2011,[55] and Hernandez and Lancaster in 2012.[56] The research for this subarea revealed no previously-known, significant paleontological resources within the proposed initiative boundaries; however, the following sediments have the potential to yield significant paleontological resources: older Quaternary sediments,[57] fine-grained sedimentary units,[58] the Pliocene Anaverde Formation,[59] and the Santa Margarita Formation.[60,61] Igneous and metamorphic rocks do not normally yield significant paleontological resources, and therefore are considered to have low paleontological sensitivity.

Lake Los Angeles/Llano/Valyermo/Littlerock. The geology of the Lake Los Angeles, Llano, Valyermo, Littlerock subarea was mapped by Dibblee between 1959 and 1960,[62,63,64] and Dibblee

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[51] Dibblee, T. W., Jr. 2008. Geologic Map of the Neenach & Willow Springs 15-minute Quadrangles: Kern & Los Angeles Counties, California. Dibblee Geological Foundation Map DF-198 (Minch, J.A., ed), scale 1:62,500. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[52] Dibblee, T. W., Jr. 2002. Geologic Map of the Burnt Peak Quadrangle, Los Angeles County, California. Dibblee Geological Foundation Map DF-83 (Minch, J.A., ed.), scale 1:24,000. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[53] Dibblee, T. W., Jr. 2002a. Geologic Map of the Lake Hughes and Del Sur Quadrangles, Los Angeles County, California. Dibblee Geological Foundation Map DF-82 (Minch, J.A., ed.), scale 1:24,000. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[54] Dibblee, T. W., Jr. 2002b. Geologic Map of the Liebre Mountain Quadrangle, Los Angeles County, California. Dibblee Geological Foundation Map DF-93 (Minch, J.A., ed.), scale 1:24,000. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[55] Lancaster, J.T. and P.J. Holland. 2011. Preliminary Geologic Map of the Little Buttes 7.5′ Quadrangle Los Angeles and Kern Counties, California. California Department of Conservation, scale 1:24,000. Available online at: http://www.conservation.ca.gov/cgs/rghm/rgm/Pages/preliminary_geologic_maps.aspx

[56]Hernandez, J.L., and J.T. Lancaster. 2011. Geologic Map of the Fairmont Butte 7.5′ Quadrangle, Los Angeles County, California. A Digital Database: California Geological Survey, Preliminary Geologic Maps, scale 1:24,000. Available online at: http://www.conservation.ca.gov/cgs/rghm/rgm/Pages/preliminary_geologic_maps.aspx

[57] Jefferson, G. T., 1991. A Catalogue of Late Quaternary Vertebrates from California, Part Two, Mammals. Natural History Museum of Los Angeles County Technical Reports, no. 7, 129 p.

[58] Dibblee, T. W., Jr. 1997c. Geologic Map of the Green Valley Quadrangle, Los Angeles County, California. Dibblee Geological Foundation Map DF-65 (Ehrenspeck, H. E., ed.), scale 1:24,000, colored, two cross-sections. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[59] Axelrod, D. I. 1950. The Anaverde Flora of Southern California. Carnegie Institution of Washington Publications 590:119-158.

[60] Durham, D. L. and W.O. Addicot, 1964. Upper Miocene and Pliocene Marine Stratigraphy in Southern Salinas Valley, California. Contributions to Stratigraphy, U.S. Geological Survey Bulletin 1194-E. 7p.

[61] Boessenecker, R.W. 2011. Herpetocetine (Cetacea: Mysticeti) Dentaries from the Upper Miocene Santa Margarita Sandstone of Central California. Paleobios 30(1):1-12.

[62] Dibblee, T. W., Jr. 1959a. Geologic Map of the Alpine Butte Quadrangle, Los Angeles County, California. U. S. Geological Survey Mineral Investigations Field Studies Map MF-222, scale 1:62,500. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[63] Dibblee, T. W., Jr. 1960. Preliminary Geologic Map of the Shadow Mountains Quadrangle, Los Angeles and San Bernardino Counties, California. U.S. Geological Survey Mineral Investigations Field Studies Map MF-227, scale 1:62,500. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[64] Dibblee, T. W., Jr. 1960a. Geology Map of the Lancaster Quadrangle, Los Angeles County, California. U.S. Geological Survey Mineral Investigations Field Studies Map MF-76, scale 1:62,500. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

and Minch in 2002.[65,66,67] Research for this subarea did not reveal any previously document paleontological localities within the proposed initiative boundaries; however, the following geological units and formations are considered to have high paleontological sensitivity: the Harold Formation, Pleistocene alluvium,[68] the Anaverde Formation,[69] the Punchbowl Formation,[70] the Crowder Formation,[71] and the San Francisqutio Formation. Igneous and metamorphic rocks have a low potential for yielding significant paleontological resources, and are therefore assigned low paleontological sensitivity within the subarea.

Lancaster Northeast. Surficial geological mapping of areas within the Lancaster Northeast subarea was conducted by Dibblee in 1959 and 1960,[72,73,74] and Ward and Dixon in 2002.[75] Research revealed no previously-known, significant paleontological resources from the Lancaster Northeast subarea; however, Pleistocene channel deposits, eolian sands, and beach bar deposits mapped in the area have the potential to yield significant paleontological resources. Because of this, these deposits are considered to have high sensitivity to paleontological resources. Quaternary alluvium recent playa clay, sand bars, windblown sand are too young to contain significant paleontological resources and are considered to have low paleontological sensitivity.

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[65] Dibblee, T.W., and J.A. Minch. 2002. Geologic Map of the Mescal Creek Quadrangle, Los Angeles and San Bernardino Counties, California. Dibblee Geological Foundation, Dibblee Foundation Map DF-81, scale 1:24,000. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[66] Dibblee, T.W., and J.A. Minch. 2002a. Geologic Map of the Valyermo Quadrangle, Los Angeles County, California. Dibblee Geological Foundation, Dibblee Foundation Map DF-80, scale 1:24,000. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[67] Dibblee, T.W., and J.A. Minch. 2002b. Geologic Map of the Juniper Hills Quadrangle [and Southern Littlerock Quadrangle], Los Angeles County, California. Dibblee Geological Foundation, Dibblee Foundation Map DF-79, scale 1:24,000. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[68] Jefferson, G. T., 1991 A Catalogue of Late Quaternary Vertebrates from California, Part Two, Mammals. Natural History Museum of Los Angeles County Technical Reports, no. 7, 129 p

[69] Axelrod, D. I. 1950. The Anaverde Flora of Southern California. Carnegie Institution of Washington Publications 590:119-158.

[70] Pagnac, D.C. 2009. Revised Large Mammal Biostratigraphy and Biochronology of the Barstow Formation (Middle Miocene), California. Paleobios. 29(2):48-59.

[71] Reynolds, R.E., Reynolds R.L., and E.H. Lindsay. 2008. Biostratigraphy of the Miocene Crowder Formation, Cajon Pass, Southwestern Mojave Desert, California; pp.237-253 in X. Wang and L. G. Barnes (eds.), Geology and Vertebrate Paleontology of Western and Southern North America, Contributions in honor of David P. Whistler, Natural History Museum of Los Angeles County Science Series 41:i-viii, 1-388.

[72] Dibblee, T. W., Jr. 1959. Geologic Map of Rosamond Quadrangle, Los Angeles and Kern Counties, California. U.S. Geological Survey Open-File Map 59-30, scale 1:62,500. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[73] Dibblee, T. W., Jr. 1959a. Geologic Map of the Alpine Butte Quadrangle, Los Angeles County, California. U.S. Geological Survey Mineral Investigations Field Studies Map MF-222, scale 1:62,500. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[74] Dibblee, T.W., Jr. 1960. Geology of the Rogers Lake and Kramer Quadrangles, California. U.S. Geological Survey Bulletin 1089-B, p. 73-139, map scale 1:62,500, colored. http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[75] Dixon, G.L. and A.W. Ward. 2002. Preliminary Geologic Map of the Rogers Lake South Quadrangle, Los Angeles and Kern Counties, California. U.S. Geological Survey, Open-File Report OF-93-696, Scale 1:24,000. Available online at: http://pubs.er.usgs.gov/

Archeological Resources

Regional Ethnography and Prehistoric Period

Ethnographic Context

The proposed initiative study areas are located at the convergence of several cultural spheres of influence. Traditional utilization of these areas likely varied over time, but included the Kitanemuk, Serrano, Tataviam, and Vanyume groups. Brief ethnographic reviews of each group are provided below. Native American Group Territories are shown in Figure 3.4.2-1, *Ethnographic Native American Group Territories in Southern California*.

The Kitanemuk

The Kitanemuk have been referred to as the main inhabitants of the Antelope Valley, but they are nonetheless one of the least- known groups in California.[76,77] Although the exact extent of the Kitanemuk is unknown, the Kitanemuk are thought to have inhabited the north and south faces of the Tehachapi Mountains, the Antelope Valley, and the westernmost extent of the Mojave Desert.[78] Kitanemuk territory included portions of the Lake Hughes/Gorman/West of Lancaster, Lancaster Northeast, and possibly Antelope Valley Northeast initiative subareas.

In contrast with the Kawaiisu to the north, the Kitanemuk culture shared more similarities with southern coastal groups such as the Chumash than with the Great Basin and Central Valley groups.[79] Chumash influences on the Kitanemuk are observed in Kitanemuk burial practices and religion. However, certain aspects of Kitanemuk culture reflected Great Basin and Central Valley groups, such as communal tule houses and basketry similar to the Central Valley Yokuts.[80] The Kitanemuk spoke a Serrano language of the Takic branch of Uto-Aztecan language family that was shared by groups living as far as Yucca Valley and Twentynine Palms. Kitanemuk buried their dead along with personal valuables. Like other Takic-speaking groups, the Kitanemuk had a patrilineal social organization. [81]

The Kitanemuk lived in permanent village sites that functioned as year-round base camps. During the spring, summer, and fall months, gathering expeditions were sent to satellite villages or temporary camps in pursuit of available seasonal resources.[82]

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[76] Sutton, Mark Q. 1979. Some Thoughts of the Prehistory of the Antelope Valley. Paper presented at the 1979 Annual Meeting of the Society for California Archaeology, San Luis Obispo, CA.

[77] Sutton, Mark Q. 1987. Some Aspects of Kitanemuk Prehistory. In Prehistory of the Antelope Valley, California: An Overview. Occasional Paper No. 1. Lancaster, CA: Antelope Valley Archaeological Society.

[78] Kroeber, A.L. 1925. Handbook of the Indians of California. New York: Dover Publications, Inc., p. 611.

[79] Blackburn, T.C., and L.J. Bean. 1978. Kitanemuk. In Handbook of North American Indians, Vol. 8, ed. William C. Sturtevant. Washington, DC: Smithsonian Institution Press, p. 564.

[80] Kroeber, A.L. 1925. Handbook of the Indians of California. New York: Dover Publications, Inc., p. 612.

[81] Blackburn, Thomas C., and Lowell J. Bean. 1978. Kitanemuk. In Handbook of North American Indians, Volume 8: California, ed. William C. Sturtevant. Washington, DC: Smithsonian Institute, pp. 564-569.

[82] Earle, D. 1997. Ethnohistoric Overview of the Edwards Air Force Base Region and the Western Mojave Desert. Prepared for: AFFTC/EMXR, Edwards Air Force Base, CA. Prepared by: Earle and Associates, Palmdale, CA, p. 10.

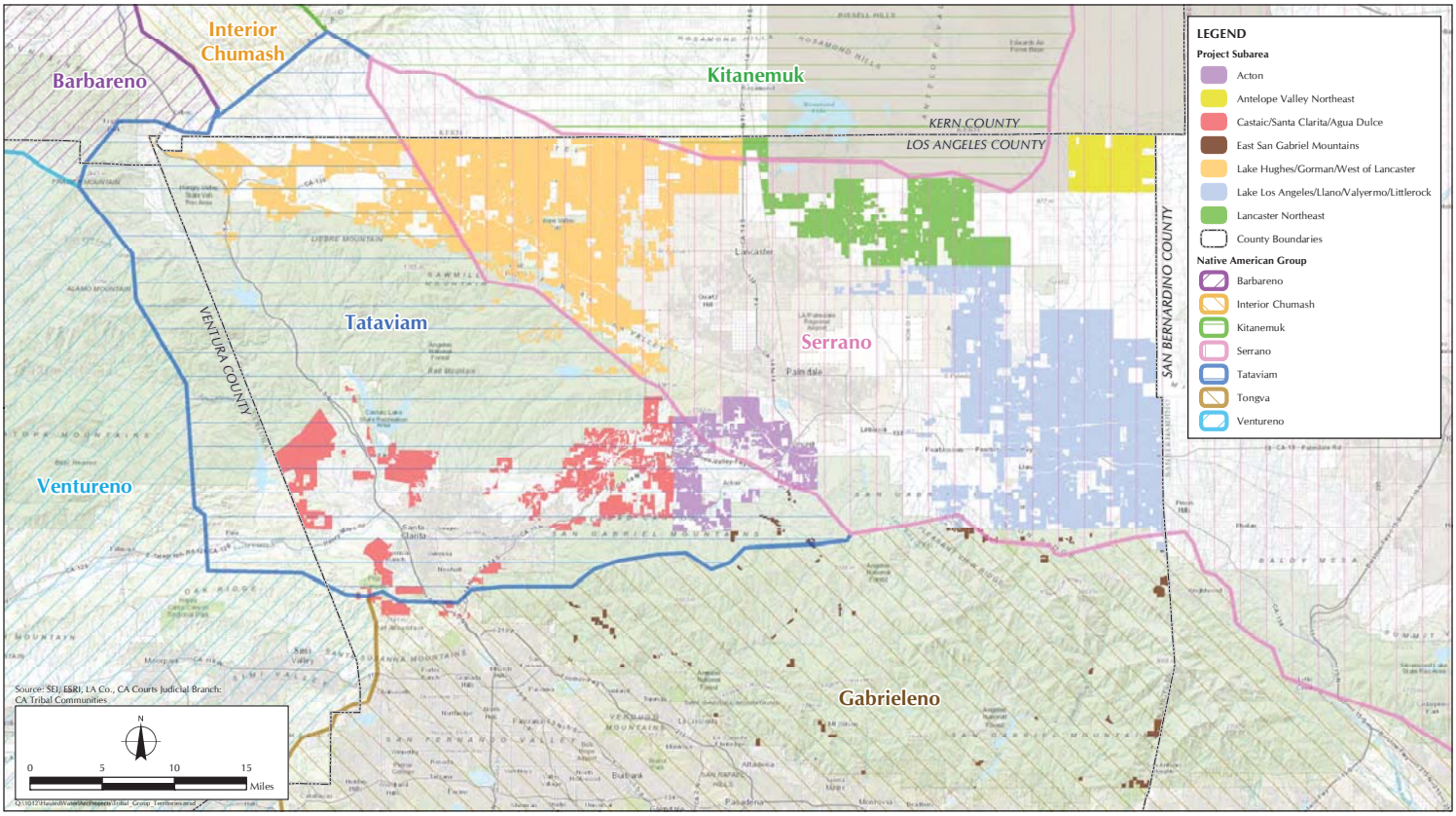

FIGURE 3.4.2-1

Ethnographic Native American Group Territories in Southern California

The Serrano

The term "Serrano" has been used to describe linguistic similarities between the Kitanemuk, Vanyume, Tataviam, and Serranos groups; however, the Serrano group refers to a small ethnic nationality that primarily inhabited the San Bernardino Mountains. [83] The word "Serrano" is from the Spanish term for "mountaineer" and the group's core inhabited lands are thought to have been the San Bernardino Mountains. Although it is difficult to determine the boundary of Serrano territory beyond the San Bernardino Mountains, the Transverse Mountains east of the Cajon Pass, the western Mojave Desert and the area from the Tehachapi Mountains to the northern Colorado Desert have all been attributed to Serrano territory.[84] Serrano territory included portions of the Lake Angeles/Llano/Valyermo/Littlerock, Lancaster Northeast, and Antelope Valley Northeast initiative subareas.

Related groups of the Serrano include the Gabrieliño and Luiseño to the west at the Pacific Coast, and the Cahuilla inhabiting the Colorado Desert. For much of the Late Prehistoric Complex, the Serrano band, likely inhabited the western Mojave Desert, in what is now the Cajon Pass and Barstow area. Little is known about early Serrano social organization because the band was not studied until the 1920s and by that time enculturation had seriously compromised their native lifeway.[85] The Serrano were a hierarchically ordered society with a chief who oversaw social and political interactions both within their own culture and with other groups. Like other local groups, the Serrano had multiple villages ranging from seasonal satellite villages to larger, more permanent villages.

The primary food staple varied depending on locality. Groups located in the mountain and foothill regions gathered acorns and piñon; desert groups gathered honey mesquite, piñon nuts, yucca roots, mesquite and cacti fruits.[86] In additional to this, deer, mountain sheep, antelope, rabbits, small rodents, and birds were hunted by the Serrano.[87]

Serrano villages were typically located near water sources and dwellings consisted of large, circular thatched and domed structures of willow covered with tule thatching. These tule houses could be built to house a large family. In addition to the living structure, a ramada (an open air structure for outdoor cooking) was located adjacent to the home.[88] A large ceremonial structure was often present and was used as the religious center where the lineage leader resided. Additional structures, such as granaries for food storage and sweathouses for ritual activities, were often located adjacent to pools or streams.[89]

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[83] Bean, Lowell J., and Charles R. Smith. 1978. Serrano. In Handbook of North American Indians, Volume 8: California, ed. William C. Sturtevant. Washington, DC: Smithsonian Institute, pp. 570-574.

[84] Kroeber, A.L. 1925. Handbook of the Indians of California. New York: Dover Publications, Inc., p. 611.

[85] Kroeber, A.L. 1925. Handbook of the Indians of California. New York: Dover Publications, Inc., p. 611.

[86] Bean, Lowell J., and Charles R. Smith. 1978. Serrano. In Handbook of North American Indians, Volume 8: California, ed. William C. Sturtevant. Washington, DC: Smithsonian Institute, pp. 570-574.

[87] Bean, Lowell J., and Charles R. Smith. 1978. Serrano. In Handbook of North American Indians, Volume 8: California, ed. William C. Sturtevant. Washington, DC: Smithsonian Institute, pp. 570-574.

[88] Bean, Lowell J., and Charles R. Smith. 1978. Serrano. In Handbook of North American Indians, Volume 8: California, ed. William C. Sturtevant. Washington, DC: Smithsonian Institute, pp. 570-574.

[89] Bean, Lowell J., and Charles R. Smith. 1978. Serrano. In Handbook of North American Indians, Volume 8: California, ed. William C. Sturtevant. Washington, DC: Smithsonian Institute, pp. 570-574.

Because of their inland location, Serrano society was left relatively intact during initial Spanish colonization, unlike groups that inhabited the coastal area. In 1772, Spanish explorer Pedro Fagès traveled through the Cajon Pass to the Mojave Desert in an attempt to identify the native groups in this region. Fages' ultimate goal was to place the Serrano under the supervision of a mission. By 1819, the Serrano were relocated to the Estancia of the Mission San Gabriel in Redlands.[90] At the time of relocation, there were likely on the order of 3,500 Serrano inhabiting the Mojave Basin. Between 1840 and 1860, a smallpox epidemic decimated the population. By 1910, the census recorded only 100 Serrano.[91]

The Tataviam

The existing ethnographic data on the Tataviam is limited and limited archaeological research has been directly linked to this group. Most of what is known about the Tataviam comes from the work of two anthropologists, John Harrington and Alfred Kroeber, and from data obtained from the San Fernando Mission's registers, as well as the limited archaeological record.[92]

Tataviam territory was bounded by the Chumash to the west, the Kitanemuk to the north, the Serrano to the east, and the Gabrielino to the south. Thus, their material culture, subsistence strategies, rock art representation, and religious practices resemble those of their neighbors, primarily the Gabrielino and Inland Chumash, as well as the Serrano and even the Kawaiisu, who were located to the north of the Kitanemuk.[93,94]

The Tataviam territory extended from the northwest to the southeast, and encompassed portions of the Antelope, San Fernando, and Santa Clarita Valleys. The center of their territory is assumed to have been the Santa Clarita Basin area (upper portion of the Santa Clara River), east of Piru Creek, just north of what is currently known as the Los Angeles Metropolitan area.[95] The northern portion of their territory probably included the foothills of Liebre Mountain and Sawmill Mountain, located at the southwestern edge of the Antelope Valley. The northeast boundary of Tataviam territory included the south-facing slopes of Sawmill Mountain and Sierra Pelona, extending southeast to Soledad Pass. The southeastern boundary is unclear but it is likely that the upper Soledad Canyon–Acton area was part of Tataviam territory, at least sometime during the Late Prehistoric period. The southern boundary included the high portions of the San Gabriel Mountains and continued to the west towards the Santa Susana Mountains. Piru Creek appears to be the westernmost boundary of the Tataviam territory.[96,97] Tataviam territory included portions of the Lake Hughes/Gorman/West of Lancaster, Castaic/Santa Clarita/Agua Dulce, and Acton initiative subareas.

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[90] Bean, Lowell J., and Charles R. Smith. 1978. Serrano. In Handbook of North American Indians, Volume 8: California, ed. William C. Sturtevant. Washington, DC: Smithsonian Institute, pp. 570-574.

[91] Bean, Lowell J., and Charles R. Smith. 1978. Serrano. In Handbook of North American Indians, Volume 8: California, ed. William C. Sturtevant. Washington, DC: Smithsonian Institute, pp. 570-574.

[92] King, Chester D., and Thomas C. Blackburn. 1978. Tataviam. In Handbook of North American Indians, Volume 8: California, ed. William C. Sturtevant. Washington, DC: Smithsonian Institute, p. 535-537.

[93] King, Chester D., and Thomas C. Blackburn. 1978. Tataviam. In Handbook of North American Indians, Volume 8: California, ed. by William C. Sturtevant. Washington, DC: Smithsonian Institute, pp. 535-537.

[94] Heizer, R.F. (ed). 1978. Key to Tribal Territories. In Handbook of North American Indians, Volume 8: California, ed. William C. Sturtevant. Washington, DC: Smithsonian Institute, p. ix.

[95] Johnson, John R. 1990. Tataviam Geography and Ethnohistory. In Journal of California and Great Basin Anthropology, 12(2): 191-214. Banning, CA: Malki Museum, Inc.

[96] King, Chester D., and Thomas C. Blackburn. 1978. Tataviam. In Handbook of North American Indians, Volume 8: California, ed. William C. Sturtevant. Washington, DC: Smithsonian Institute, pp. 535-537.

Linguistically the Tataviam (also known as Alliklik)[98] are considered to be part of the Takic subfamily of the Uto Aztecan linguistic family, who moved inland towards the west and along the California coast. The time frame of the Takic expansion is not clearly defined, because migration of the population throughout the region took place at different times. Moratto indicates that Uto-Aztecan speakers migrated to California and that by the end of the Early period (circa 1500-1200 BC) Takic groups, such as the Tataviam, the Gabrielino, and the northern Serrano, already had firmly established territories.[99]

Ethnographic and archaeological information indicates that the Tataviam lived in villages of various sizes, with large centers occupied by about 200 people, widely separated from each other. Large villages were considered to be the major centers. Very small satellite communities of 10 to 15 people were located near the large centers, while mid-size settlements of 20 to 60 people were situated among the large villages. The total Tataviam population at the time of contact is assumed not to have exceeded 1,000 people.[100] The village located at Vasquez Rocks is known as the Agua Dulce Village. According to King et al.,[101] the Agua Dulce Village was larger than the surrounding villages and was probably an important economic and political center. Alliances with other villages were maintained through intermarriage and trade. It is estimated that the population of the Agua Dulce Village was possibly as low as 50 people during the early portion of the Middle period and approximately 200 to 300 people towards the end of the Middle period and throughout the Historic period (after AD 1200).[102]

Tataviam subsistence strategies were very similar to those of neighboring groups. A variety of plant foods was part of their diet, including the buds of the yucca plant (*Yucca whipplei*), a major staple, as well as coast live oak acorns (*Quercus agrifolia*), sage (*Salvia mellifera*), juniper berries (*Juniperus californica*), and berries of holly-leaf cherry (*Prunus ilicifolia*). Their diet was also supplemented with insects, small mammals, deer, and possibly pronghorn.[103] The Tataviam cooked the flower stalks of the plant in earth ovens lined with rocks. The final product was stored and consumed throughout the year. The flowers, seeds, and leaves at the base of the plant were also consumed. Archaeological evidence suggests that the Tataviam, as well as most native Southern Californians, traveled a long distance to collect acorns during certain times of the year. Ethnographic information indicates that acorn was primarily processed using bedrock mortars.

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[97] Johnson, John R. 1990. Tataviam Geography and Ethnohistory. In Journal of California and Great Basin Anthropology, 12(2): 191-214. Banning, CA: Malki Museum, Inc.

[98] Kroeber, A. 1925. Handbook of the Indians of California. New York: Dover Publications, Inc., p. 995. (Used the term Alliklik, which was the name used by neighboring Chumash groups and roughly translates grunters or stammerers. The Kitanemuk used the term Tataviam or people facing the sun when referring to the inhabitants of the sunny upper Santa Clara River. The term Alliklik is considered to be derogatory, and therefore ceased to be used in literature around the mid 1970s.)

[99] Moratto, Michael J. [1984] 2004. California Archaeology. Salinas, CA: Coyote Press.

[100] King, Chester D., and Thomas C. Blackburn. 1978. Tataviam. In Handbook of North American Indians, Volume 8: California, ed. William C. Sturtevant. Washington, DC: Smithsonian Institute, pp. 535-537.

[101] King, Chester D., Charles Smith and Tom King. 1974. Archaeological Report Related to the Interpretation of Archaeological Resources Present at Vasquez Rocks County Park. Prepared for: County of Los Angeles Department of Parks and Recreation, p. 43.

[102] King, Chester D., Charles Smith and Tom King. 1974. Archaeological Report Related to the Interpretation of Archaeological Resources Present at Vasquez Rocks County Park. Prepared for: County of Los Angeles Department of Parks and Recreation, p. 33.

[103] King, Chester D., and Thomas C. Blackburn. 1978. Tataviam. In Handbook of North American Indians, Volume 8: California, ed. William C. Sturtevant. Washington, DC: Smithsonian Institute, pp. 535-537.

The Tataviam mortuary practices were influenced by their immediate neighbors, and archaeological evidence indicates that the Tataviam practiced both cremation and inhumation. Among the groups influencing the Tataviam were the Chumash; Coastal and inland Chumash were among the few that used inhumation exclusively.[104] The Gabrielino practiced both, inhumation and cremation,[105] until the establishment of the missions, when cremation was eliminated and inhumation alone became the norm. The Serrano cremated their deceased,[106] while the Kitanemuk preferred inhumation.[107] Based on his research of the Gabrielinos, McCawley[108] mentions that inhumation (more common along coastal groups) may have been a result of cultural influence by the Chumash or a practice adopted because of a scarcity of fuel required for cremations.[109] With interment came the practice of grave goods, a practice favored by most of the tribes in California. Grave goods usually consisted of beads of various materials, knifes, projectilepoints, and exotic trade items among other objects. Ethnographic studies, as well as archaeological evidence regarding the presence or absence of grave goods, and their quality, has been an important archaeological tool to determine social hierarchy among individuals in specific social groups. Excavations at two burial sites in the Agua Dulce Village (CA-LAN-361 and CA-LAN-373) show social differentiation, which is reflected as the presence of exotic trade items in the graves, or complete lack of any grave goods.

The Vanyume

Limited information is available on the Vanyume. The Vanyume are a small division of the Serrano linguistic group that lived in the Mojave Desert, near the Mojave River.[110] The Vanyume population was likely low and confined to several small villages. The Vanyume were hostile to the neighboring Serrano, but were reported to have good relations with the Mojave and Chemehuevi.[111] The Vanyume were hunters and gatherers, and shell beads and millingstones were known to have been used. The Vanyume are generally associated with life ways similar to the Serrano.[112] Vanyume territory may have included portions of the Lake Angeles/Llano/Valyermo/Littlerock, Lancaster Northeast, and Antelope Valley Northeast initiative subareas.

[104] Kroeber, A.L. 1925. Handbook of the Indians of California. New York: Dover Publications, Inc., p. 556.

[105] McCawley, William. 1996. The First Angelinos: The Gabrielino Indians of Los Angeles. Banning, CA: Malki Museum Press, p. 157.

[106] Bean, Lowell J., and Charles R. Smith. 1978. Serrano. In Handbook of North American Indians, Volume 8: California, ed. William C. Sturtevant. Washington, DC: Smithsonian Institute, pp. 570-574.

[107] Blackburn, Thomas C., and Lowell J. Bean. 1978. Kitanemuk. In Handbook of North American Indians, Volume 8: California, ed. William C. Sturtevant. Washington, DC: Smithsonian Institute, pp. 564-569.

[108] McCawley, William. 1996. The First Angelinos: The Gabrielino Indians of Los Angeles, Banning, CA: Malki Museum Press.

[109] McCawley, William. 1996. The First Angelinos: The Gabrielino Indians of Los Angeles. Banning, CA: Malki Museum Press, p. 157.

[110] Kroeber, A.L. 1925. Handbook of the Indians of California. New York: Dover Publications, Inc., p. 614.

[111] Kroeber, A.L. 1925. Handbook of the Indians of California. New York: Dover Publications, Inc., p. 614.

[112] Kroeber, A.L. 1925. Handbook of the Indians of California. New York: Dover Publications, Inc., p. 614.

Prehistoric Context

The proposed initiative study area is located at the boundary between two prehistoric cultural chronologies proposed by researchers: the California coastal chronology and the Mojave Desert chronology. For this reason, both the coastal and desert chronologies are presented below. Future work may provide support for a more precise chronology of this area.

Coastal Chronology

Several prehistoric cultural chronologies have been proposed for the coastal Southern California region with three of the most frequently cited sequences developed by William Wallace,[113] Claude Warren,[114] and Chester King.[115] Such chronologies provide a framework to discuss archaeological data in relation to broad cultural changes seen in the archaeological record. The chronological sequence presented herein represents an updated synthesis of these schemes as compiled by Glassow and others[116] for the Northern California Bight. This geographic area consists of the coastal area from Vandenberg Air Force Base south to Palos Verdes, as well as the Channel Islands and adjacent inland areas, including the San Fernando Valley and Los Angeles Basin.[117] The prehistoric sequence of the Northern California Bight can be divided into four broad temporal categories (Table 3.4.2-2, *Southern California Coastal Regional Chronology*). It should be noted that the prehistoric chronology for the region is being refined on a continuing basis, with new discoveries and improvements in the accuracy of dating techniques.

TABLE 3.4.2-2
SOUTHERN CALIFORNIA COASTAL REGIONAL CHRONOLOGY

Epoch	Coastal Region	Dates
Terminal Pleistocene / Early Holocene	Paleo-Coastal Period	Circa 9500 to 7000/6500 BC
Middle Holocene	Millingstone Period	Circa 7000/6500 to 1500/1000 BC
Late Holocene	Intermediate Period	1500/1000 BC to AD 750
Late Holocene	Late Period	AD 750 to Spanish contact

Terminal Pleistocene and Early Holocene: Paleo-Coastal Period (Circa 9500 to 7000/6500 BC)

Although data on early human occupation for the Southern California coast are limited, archaeological evidence from the northern Channel Islands suggests initial settlement within the

[113] Wallace, William J. 1955. A Suggested Chronology for Southern California Coastal Archaeology. Southwestern Journal of Anthropology 11: 214–30.

[114] Warren, Claude M. 1968. Cultural Tradition and Ecological Adaptation on the Southern California Coast. In Archaic Prehistory in the Western United States, ed. Cynthia Irwin-Williams. Eastern New Mexico University Contributions in Anthropology No. 1. Portales, NM: Eastern New Mexico University.

[115] King, Chester. 1990. Evolution of Chumash Society: A Comparative Study of Artifacts Used for Social System Maintenance in the Santa Barbara Channel Region before AD 1804. New York, NY: Garland.

[116] Glassow, Michael A., Lynn H. Gamble, Jennifer E. Perry, and Glenn S. Russell. 2007. Prehistory of the Northern California Bight and the Adjacent Transverse Ranges. In California Prehistory, Colonization, Culture, and Complexity, ed. Terry L. Jones and Kathryn A. Klar. New York, NY: Altamira.

[117] Glassow, Michael A., Lynn H. Gamble, Jennifer E. Perry, and Glenn S. Russell. 2007. Prehistory of the Northern California Bight and the Adjacent Transverse Ranges. In California Prehistory, Colonization, Culture, and Complexity, ed. Terry L. Jones and Kathryn A. Klar. New York, NY: Altamira.

region occurred at least 12,000 years before present (BP). At Daisy Cave (CA-SMI-261) on San Miguel Island, radiocarbon dates indicate an early period of use in the terminal Pleistocene, sometime between 9600 and 9000 calibrated (cal) BC.[118] Evidence of early human occupation in the Northern California Bight has also been found on nearby Santa Rosa Island, where human remains from the Arlington Springs Site (CA-SRI-1730) have been dated between 11,000 and 10,000 cal BC.[119] Archaeological data recovered from these and other coastal Paleoindian sites indicate a distinctively maritime cultural adaptation, termed the "Paleo-Coastal Tradition,"[120] which involved the use of seafaring technology and a subsistence regime focused on shellfish gathering and fishing.[121]

Relatively few sites have been identified in Los Angeles County that date to the terminal Pleistocene and early Holocene. Currently, the earliest reliable date for human occupation in the area derives from the La Brea Tar Pits (CA-LAN-159), where human bone has been dated to 8520 cal BC.[122] Evidence of possible early human occupation has also been found at the sand dune bluff site of Malaga Cove (CA-LAN-138), located between Redondo Beach and Palos Verdes.[123] Researchers have proposed that archaeological remains recovered from the lowermost cultural stratum at the site, which include shell, animal bone, and chipped stone tools, may date as early as 8000 cal BC.[124,125]

Middle Holocene: Millingstone Period (Circa 7000/6500 to 1500/1000 BC)

The Millingstone Period or Horizon, also referred to as the "Encinitas Tradition,"[126,127] is the earliest well-established cultural occupation of the coastal areas of the region. The onset of this period, which began sometime between 7000 and 6500 cal BC, is marked by the expansion of populations throughout the Northern California Bight. Regional variations in technology, settlement patterns, and mortuary practices among Millingstone sites have led researchers to define several local manifestations or "patterns" of the tradition.[128] Groups that occupied the San Fernando

[118] Erlandson, J.M., D.J. Kennett, B.L. Ingram, D.A. Guthrie, D.P. Morris, M.A. Tveshov, G.J. West, and P.L. Walker 1996. An Archaeological and Paleontological Chronology for Daisy Cave (CA-SMI-261), San Miguel Island, California. Radiocarbon, 38: 355–73.

[119] Johnson, J.R., T.W. Stafford Jr., H.O. Ajie, and D.P. Morris. 2002. Arlington Springs Revisited. In Proceedings of the Fifth California Islands Symposium, ed. D. Browne, K. Mitchell, and H. Chaney, pp. 541–45. Santa Barbara, CA: USDI Minerals Management Service and The Santa Barbara Museum of Natural History.

[120] Moratto, M.J. 1984. California Archaeology, pp. 103-113. Academic Press, New York.

[121] Rick, T.C., J.M. Erlandson, and R.L. Vellanoweth. 2001. Paleocoastal Fishing along the Pacific Coast of the Americas: Evidence from Daisy Cave, San Miguel Island, California. American Antiquity, 66: 595–614.

[122] Berger, R., R. Protsch, R. Reynolds, C. Rozaire, and J.R. Sackett. 1971. New Radiocarbon Dates Based on Bone Collagen of California Indians. Los Angeles, CA: Contributions to the University of California Archaeological Survey.

[123] Walker, Edwin Francis. 1951. Five Prehistoric Archaeological Sites in Los Angeles County, California. F. W. Hodge Anniversary Publication Fund VI. Los Angeles, CA: Southwest Museum.

[124] Moratto, M.J. 1984. California Archaeology, pp. 132. Academic Press, New York.

[125] Wallace, W.J. 1986. Archaeological Research at Malaga Cove. In Symposium: A New Look at Some Old Sites, ed. G.S. Breschini and T. Haversat. Salinas, CA: Coyote Press.

[126] Sutton, Mark Q. 2010. The Del Rey Tradition and Its Place in the Prehistory of Southern California. Pacific Coast Archaeological Society Quarterly, 44(2): 1–54.

[127] Sutton, Mark Q., and Jill K. Gardner. 2010. Reconceptualizing the Encinitas Tradition of Southern California. Pacific Coast Archaeological Society Quarterly, 42(4): 1–64.

[128] Sutton, Mark Q., and Jill K. Gardner. 2010. Reconceptualizing the Encinitas Tradition of Southern California. Pacific Coast Archaeological Society Quarterly, 42(4): 1–64.

Valley are thought to have been relatively small and highly mobile during this time, with a general subsistence economy focused on the gathering of shellfish and plant foods, particularly hard seeds, with hunting being of less importance.[129]

Two temporal subdivisions have been defined for the portion of the Topanga Pattern falling within the Millingstone Period: Topanga I (circa 6500 to 3000 BC) and Topanga II (circa 3000 to 1000 BC).[130] Topanga I assemblages are characterized by abundant manos and metates, core tools and scrapers, charmstones, cogged stone, and discoidals; projectile points are quite rare with those present resembling earlier, large, leaf-shaped forms.[131] Secondary inhumations with associated cairns are the most common burial form at Millingstone sites with small numbers of extended inhumations also identified. The subsequent Topanga II phase largely represents a continuation of the Topanga pattern with site assemblages characterized by numerous manos and metates, charmstones, cogged stones, discoidals, and some stone balls. A significant technological change in ground stone occurs at this time with the appearance of mortars and pestles at Topanga II sites suggesting the adoption of balanophagy by coastal populations.[132] The quantity of projectile points also notably increases in Topanga II site deposits indicating that the hunting of large game may have played a greater role in the subsistence economy than in earlier times. While secondary burials continue to be quite common, a few flexed inhumations have also been recovered from archaeological contexts dating to the Topanga II phase.

A number of Millingstone sites have been identified in the San Fernando Valley and surrounding areas. The early component of the Tank site (CA-LAN-1), located in the nearby Santa Monica Mountains appears to date to the Topanga I phase.[133] In addition, a marine shell sample from the Encino Village site (CA-LAN-43 / CA-LAN-111) yielded a radiocarbon date of 4570 ± 80, suggesting use of the southern portion of the valley during the Topanga I phase.[134] The presence of mortars and pestles alongside stemmed projectile points at the Chatsworth site (CA-LAN-21), located at the western edge of the San Fernando Valley, suggests a Topanga II presence.[135] Finally, the Big Tujunga Wash site, located at the eastern edge of the San Fernando Valley, may have also contained a Topanga II component.[136]

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[129] Glassow, Michael A., Lynn H. Gamble, Jennifer E. Perry, and Glenn S. Russell. 2007. Prehistory of the Northern California Bight and the Adjacent Transverse Ranges. In California Prehistory, Colonization, Culture, and Complexity, ed. Terry L. Jones and Kathryn A. Klar. New York, NY: Altamira.

[130] Sutton, Mark Q., and Jill K. Gardner. 2010. Reconceptualizing the Encinitas Tradition of Southern California. Pacific Coast Archaeological Society Quarterly, 42(4): 1–64, 8.

[131] Glassow, Michael A., Lynn H. Gamble, Jennifer E. Perry, and Glenn S. Russell. 2007. Prehistory of the Northern California Bight and the Adjacent Transverse Ranges. In California Prehistory, Colonization, Culture, and Complexity, ed. Terry L. Jones and Kathryn A. Klar. New York, NY: Altamira.

[132] Sutton, Mark Q., and Jill K. Gardner. 2010. Reconceptualizing the Encinitas Tradition of Southern California. Pacific Coast Archaeological Society Quarterly, 42(4): 1–64, 41.

[133] Sutton, Mark Q., and Jill K. Gardner. 2010. Reconceptualizing the Encinitas Tradition of Southern California. Pacific Coast Archaeological Society Quarterly, 42(4): 1–64, 8.

[134] Taylor, R.E., P.J. Ennis, P.J. Slota Jr. and L.A. Payen. 1989. Non-Age-Related Variations in Aspartic Acid Racemization in Bone from a Radiocarbon-dated Late Holocene Archaeological Site. Radiocarbon, 31(3): 1048-56.

[135] Sutton, Mark Q., and Jill K. Gardner. 2010. Reconceptualizing the Encinitas Tradition of Southern California. Pacific Coast Archaeological Society Quarterly, 42(4): 1–64, 8.

[136] Sutton, Mark Q., and Jill K. Gardner. 2010. Reconceptualizing the Encinitas Tradition of Southern California. Pacific Coast Archaeological Society Quarterly, 42(4): 1–64, 8.

Late Holocene: Intermediate Period (1500/1000 BC to AD 750)

The Intermediate Period, which encompasses the early portion of the "Del Rey Tradition" as defined by Sutton,[137] begins around 3500 BP. At this time, significant changes are seen throughout the coastal areas of Southern California in material culture, settlement systems, subsistence strategies, and mortuary practices. These new cultural traits have been attributed to the arrival of Takic speaking people from the southern San Joaquin Valley.[138] Biological, archaeological, and linguistic data indicate that the Takic groups who settled in the San Fernando Valley were ethnically distinct from the preexisting Hokan-speaking Topanga populations and are believed to be ancestral to ethnographic Gabrielino groups.[139] While archaeological evidence indicates that "relic" Topanga III populations continued to survive in isolation in the Santa Monica Mountains, these indigenous groups appear to have been largely replaced or absorbed by the Gabrielino or Chumash by 2000 BP.[140]

Intermediate Period sites within Los Angeles County are represented by the "Angeles Pattern" of the Del Rey Tradition.[141] Three temporal subdivisions have been defined for the portion of the Angeles Pattern that falls within the Intermediate Period: Angeles I (1500 to 600 BC), Angeles II (600 BC to AD 400), and Angeles III (AD 400 to 750).[142] The onset of the Angeles I phase is characterized by the increase and aggregation of regional populations and the appearance of the first village settlements. The prevalence of projectile points, single-piece shell fishhooks, and bone harpoon points at Angeles I sites suggests a subsistence shift in the Intermediate Period with an increased emphasis on fishing and terrestrial hunting and less reliance on the gathering of shellfish resources. Regional trade or interaction networks also appeared to develop at this time with coastal populations in Los Angeles County obtaining small steatite artifacts and *Olivella* shell beads from the southern Channel Islands and obsidian from the Coso Volcanic Field.[143] Finally, marked changes are seen in mortuary practices during the Angeles I phase with flexed primary inhumations and cremations replacing extended inhumations and cairns.

The Angeles II phase largely represents a continuation and elaboration of the Angeles I technology, settlement, and subsistence systems. One exception to this pattern is the introduction of a new funerary complex around 2600 BP consisting of large rock cairns or platforms which contain abundant broken tools, faunal remains, and cremated human bone. These mortuary features have generally been thought to represent the predecessor of the Southern California Mourning

[137] Sutton, Mark Q. 2010. The Del Rey Tradition and Its Place in the Prehistory of Southern California. Pacific Coast Archaeological Society Quarterly, 44(2): 1–54.

[138] Sutton, Mark Q. 2009. People and Language: Defining the Takic Expansion in Southern California. Pacific Coast Archaeological Society Quarterly, 41(2&3): 31-93.

[139] Sutton, Mark Q. 2009. People and Language: Defining the Takic Expansion in Southern California. Pacific Coast Archaeological Society Quarterly, 41(2&3): 31-93.

[140] Sutton, Mark Q., and Jill K. Gardner. 2010. Reconceptualizing the Encinitas Tradition of Southern California. Pacific Coast Archaeological Society Quarterly, 42(4): 1–64, 17.

[141] Sutton, Mark Q. 2010. The Del Rey Tradition and Its Place in the Prehistory of Southern California. Pacific Coast Archaeological Society Quarterly, 44(2): 1–54.

[142] Sutton, Mark Q., and Jill K. Gardner. 2010. Reconceptualizing the Encinitas Tradition of Southern California. Pacific Coast Archaeological Society Quarterly, 42(4): 1–64, 8.

[143] Koerper, Henry C., Roger D. Mason, and Mark L. Peterson. 2002. Complexity, Demography, and Change in Late Holocene Orange County. In Catalysts to Complexity: Late Holocene Societies of the California Coast, ed. M. Erlandson and Terry L. Jones. Perspectives in California Archaeology, Vol. 6. Los Angeles, CA: University of California, Los Angeles, Institute of Archaeology.

Ceremony.[144] Several important changes in the archaeological record mark the beginning of the Angeles III phase. At this time, larger seasonal villages characterized by well-developed middens and cemeteries were established along the coast or inland areas. Archaeological data from Angeles III sites indicate that residents of these settlements practiced a fairly diverse subsistence strategy which included the exploitation of both marine and terrestrial resources.[145] Notable technological changes occurred at this time with the introduction of the plank canoe and bow and arrow.[146] The appearance of new *Olivella* bead types at Angeles III sites indicates a reconfiguration of existing regional exchange networks with increased interaction with populations in the Gulf of California.[147] Finally, cremations increase slightly in frequency at this time with inhumations no longer placed in an extended position.[148] Intermediate Period sites in Los Angeles County include CA-LAN-2 and CA-LAN-197, both of which are located in the Santa Monica Mountains. The formal cemeteries at these sites are representative of the increased sedentism that occurred during the Intermediate Period.[149]

Late Holocene: Late Period (AD 750 to Spanish Contact)

The Late Period dates from approximately AD 750 until Spanish contact at AD 1542. Sutton[150] has divided this period, which falls within the larger Del Rey Tradition, into two phases: Angeles IV (AD 750-1200) and Angeles V (AD 1200-1550). The Angeles IV phase is characterized by the continued growth of regional populations and the development of large, sedentary villages. Although chiefdoms appear to have developed in the northern Channel Islands and Santa Barbara region after 850 BP,[151,152] little direct evidence has been found to suggest this level of social complexity existed in the San Fernando Valley during the late prehistoric period.[153]

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[144] Sutton, Mark Q. 2010. The Del Rey Tradition and Its Place in the Prehistory of Southern California. Pacific Coast Archaeological Society Quarterly, 44(2): 1–54.

[145] Sutton, Mark Q. 2010. The Del Rey Tradition and Its Place in the Prehistory of Southern California. Pacific Coast Archaeological Society Quarterly, 44(2): 1–54.

[146] Glassow, Michael A., Lynn H. Gamble, Jennifer E. Perry, and Glenn S. Russell. 2007. Prehistory of the Northern California Bight and the Adjacent Transverse Ranges. In California Prehistory, Colonization, Culture, and Complexity, ed. Terry L. Jones and Kathryn A. Klar. New York, NY: Altamira.

[147] Koerper, Henry C., Roger D. Mason, and Mark L. Peterson. 2002. Complexity, Demography, and Change in Late Holocene Orange County. In Catalysts to Complexity: Late Holocene Societies of the California Coast, ed. M. Erlandson and Terry L. Jones. Perspectives in California Archaeology, Vol. 6. Los Angeles, CA: University of California, Los Angeles, Institute of Archaeology.

[148] Sutton, Mark Q. 2010. The Del Rey Tradition and Its Place in the Prehistory of Southern California. Pacific Coast Archaeological Society Quarterly, 44(2): 1–54.

[149] Glassow, Michael A., Lynn H. Gamble, Jennifer E. Perry, and Glenn S. Russell. 2007. Prehistory of the Northern California Bight and the Adjacent Transverse Ranges. In California Prehistory, Colonization, Culture, and Complexity, ed. Terry L. Jones and Kathryn A. Klar. New York, NY: Altamira.

[150] Sutton, Mark Q. 2010. The Del Rey Tradition and Its Place in the Prehistory of Southern California. Pacific Coast Archaeological Society Quarterly, 44(2): 1–54.

[151] Arnold, Jeanne E. 1992. Complex Hunter-Gatherer-Fishers of Prehistoric California: Chiefs, Specialists, and Maritime Adaptations of the Channel Islands. American Antiquity, 57(1): 60–84.

[152] Gamble, Lynn H. 2005. Culture and Climate: Reconsidering the Effect of Palaeoclimatic Variability among Southern California Hunter-Gatherer Societies. World Archaeology, 37(1): 92–108.

[153] Sutton, Mark Q. 2010. The Del Rey Tradition and Its Place in the Prehistory of Southern California. Pacific Coast Archaeological Society Quarterly, 44(2): 1–54.

Several new types of material culture appear during the Angeles IV phase including Cottonwood series points, birdstone and "spike" effigies, *Olivella* cupped beads, and *Mytilus* shell disk beads. The presence of Southwestern pottery, Patayan ceramic figurines, and Hohokam shell bracelets at Angeles IV sites suggests some interaction between groups in Southern California and the Southwest. Notable changes are seen in regional exchange networks after 800 BP with an increase in the number and size of steatite artifacts, including large vessels, elaborate effigies, and *comals*, recovered from Angeles V sites. The presence of these artifacts suggests a strengthening of trade ties between coastal Los Angeles populations and the southern Channel Islands.[154] Finally, Late Period mortuary practices remain largely unchanged from the Intermediate Period with flexed primary inhumations continuing to be the preferred burial method.

Late Period sites in Los Angeles County include CA-LAN-227 and CA-LAN-229, which are situated in the Santa Monica Mountains. Both sites contain less Millingstone artifacts than earlier sites, but more mortars, pestles, projectile points, drills, beads, pipes, and bone tools.[155] Although these sites represent a move toward centralized sedentary villages during this period, it is unclear whether they represent year-round occupation or semi-permanent villages used as base settlements.[156]

Mojave Desert Chronology

The desert chronology consists of a brief outline of the currently accepted chronological framework for the Mojave Desert Region. Archaeological sequences are grouped into Late Pleistocene and Early, Middle, and Late Holocene time frames, with period and phase definitions varying by region. This report uses the set of period names that has been broadly applied to the Mojave Desert (Table 3.4.2-3, *Mojave Desert Regional Chronology*). It should be noted that the prehistoric chronology for the region is being refined on a continuing basis, with new discoveries and improvements in the accuracy of dating techniques.

TABLE 3.4.2-3
MOJAVE DESERT REGIONAL CHRONOLOGY

Epoch	Mojave Desert Region	Dates
Late Pleistocene	Paleoindian Period	12,000[157] to 10,000 BP
Early Holocene	Lake Mojave Period	Circa 10,000 to 7,000 BP
Middle Holocene	Pinto Period	Circa 7,000 to 4,000 BP
Late Holocene	Gypsum Period	Circa 4,000/3,500 to 1,500 BP
Late Holocene	Rose Spring Period	Circa 1,500 to 1,000/600 BP
Late Holocene	Late Prehistoric Period	Circa 1,000 BP to Contact AD 1770

[154] Koerper, Henry C., Roger D. Mason, and Mark L. Peterson. 2002. Complexity, Demography, and Change in Late Holocene Orange County. In Catalysts to Complexity: Late Holocene Societies of the California Coast, ed. M. Erlandson and Terry L. Jones. Perspectives in California Archaeology, Vol. 6. Los Angeles, CA: University of California, Los Angeles, Institute of Archaeology.

[155] Moratto, M. 1984. California Archaeology. pp. 141. Academic Press, Inc. Orlando, Florida.

[156] Glassow, Michael A., Lynn H. Gamble, Jennifer E. Perry, and Glenn S. Russell. 2007. Prehistory of the Northern California Bight and the Adjacent Transverse Ranges. In California Prehistory, Colonization, Culture, and Complexity, ed. Terry L. Jones and Kathryn A. Klar. New York, NY: Altamira.

[157] This date is subject to dispute among archaeologists.

Late Pleistocene: Pre-Projectile Point Period (Before 12,000 BP)

The earliest Pleistocene archaeological sites, which may be earlier than 12,000 years BP, are often referred to as pre-Clovis, or pre-projectile point and are viewed as controversial by many archaeologists because of the lack of dateable contexts and the uncertainty in the accuracy of dates obtained from some artifacts submitted for analysis.[158] One of the most thorough studies on this time period is Emma Lou Davis's 1978 study of Pleistocene Lake China, Ridgecrest, in eastern California.[159] Other examples are the Calico Early Man Site and the Manix Lake Lithic Industry.[160,161]

Late Pleistocene: Paleoindian Period (Circa 12,000 BP to 10,000 BP)

The subsequent Paleoindian Period is recognized throughout the west by the presence of fluted projectile points, such as the well-known Clovis points, and associated artifacts. Recent calibrations of these radiocarbon dates suggest that fluted points may be up to 2,000 years older than previously thought, with a range of about 13,000 to 11,000 calendar years BP.[162] Although many fluted points have been found in the Great Basin and Mojave Desert, none of these have been recovered in dateable contexts.[163] Davis identified several sites associated with the shoreline at Pleistocene Lake China that contained fluted points.[164] In the vicinity of the proposed initiative site, fluted points have been reported in the El Paso Mountains, Antelope Valley, and adjacent mountains.[165,166]

Fluted points have traditionally been interpreted as tools used for hunting Pleistocene megafauna due to their clear association with megafauna remains in the southwestern United States. However, more recent research suggests a more diversified subsistence strategy, one including the use of productive shallow lakes and marsh environments. This interpretation flows from the fact that nearly all fluted points sites in the Great Basin were found along the perimeter of the now-extinct

[158] Wallace, W.J. 1962. Prehistoric Cultural Development in the Southern California Deserts. American Antiquity, 28(2): 172–180.

[159] Davis, E.L. 1978. The Ancient Californians: Rancholabrean Hunters of the Mohave Lakes Country. Science Series 29. Los Angeles, CA: Natural History Museum.

[160] Leakey, L.S.B., R.D. Simpson, and T. Clements. 1968. Archaeological excavations in the Calico Mountains, California: Preliminary Report. Science, 160: 1022–1023.

[161] Simpson, R.D. 1958. The Manix Lake Archaeological Survey. The Masterkey, 32(1): 4–10.

[162] Fagan, Brian. 2005. Ancient North America: The Archaeology of a Continent. 4th Edition. London: Thames & Hudson, p. 12.

[163] Dillon, B.D. 2002. California Paleoindians: Lack of Evidence, or Evidence of Lack? In Essays in California Archaeology: A Memorial to Franklin Fenega, ed. W.J. Wallace and F.A. Riddell. Berkeley, CA: University of California Publications, pp. 110–128.

[164] Davis, E.L. 1978. The Ancient Californians: Rancholabrean Hunters of the Mohave Lakes Country. Science Series 29. Los Angeles, CA: Natural History Museum.

[165] Dillon, B.D. 2002. California Paleoindians: Lack of Evidence, or Evidence of Lack? In Essays in California Archaeology: A Memorial to Franklin Fenega, ed. W.J. Wallace and F.A. Riddell. Berkeley, CA: University of California Publications, pp. 110–128.

[166] Earle, D.D., B.L. Boyer, R.A. Bryson, R.U. Bryson, M.M. Campbell, J.J. Johannesmeyer, K.A. Lark, C.J. Parker, M.D. Pittman, L.M. Ramirez, M.R. Ronning, and J. Underwood. 1997. Cultural Resources Overview and Management Plan for Edwards Air Force Base, California, Volume 1, Overview of Prehistoric Cultural Resources. Prepared for: AFFTC/EMXR, Edwards Air Force Base, CA, p. 54.

lakes and marshes that existed during the Late Pleistocene and early Holocene.[167] Some argue that this distribution may represent a bias in the visibility of older sites in that exposed older surfaces, where such sites would be found, are typically more pervasive along washes and as the center of flat, playa bearing locations, in areas not obscured by younger deposits.[168] This bias would provide a narrow view of subsistence and adaptive strategies during the early Holocene to Late Pleistocene periods if in fact additional activity areas located away from these resources are not being recognized. Although the level of utilization and focus on these areas is debated, these environments would undoubtedly have provided a rich habitat for numerous plants and animals and were likely exploited by Paleoindian peoples.

Early Holocene: Lake Mojave Period (Circa 10,000 BP to 7000 BP)

The quantity of archaeological remains in the western United States increases at the beginning of the Holocene Period, about 10,000 years BP. Sites dating to the Early Holocene are found along the shorelines of Pleistocene dry lakes and are characterized by the occurrence of large stemmed and concave base projectile points, as well as other distinctive flaked stone tools. The point types that are associated with this period are known as Lake Mojave and Silver Lake projectile points, named for the dry lakes where they were first found.[169] Lake Mojave sites are relatively rare in the western Mojave Desert, but Earle et al. reported at least five sites on Edwards Air Force Base with Lake Mojave Period points.[170,171]

Little is known about the subsistence strategies during this period, although it is assumed that hunting was a primary focus. The presence of projectile points and the relative lack of ground stone tools indicative of plant processing lend credence to this view. Faunal assemblages at several sites of this period have also supported this assumption, with evidence for both small (e.g., lagomorph) and large (e.g., artiodactyl) animal exploitation.[172,173] As with the Paleoindian Period, however, the presence of Lake Mojave Period sites near extinct Pleistocene and early Holocene lakes suggest a diverse range of resources may have been utilized.

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[167] Grayson, Donald K. 1993. The Desert's Past: A Natural Prehistory of the Great Basin. Washington, DC: Smithsonian Institution Press.

[168] Basgall, M.E., and M.C. Hall. 1994. Perspectives on the Early Holocene Archaeological Record of the Mojave Desert. In Kelso Conference Papers 1987–1992, A Collection of Papers and Abstracts from the First Five Kelso Conferences on the Prehistory of the Mojave Desert, ed. G. Dicken Everson and Joan S. Schneider. Bakersfield, CA: California State University, Bakersfield, Museum of Anthropology, Occasional Papers in Anthropology, 4: 63–81.

[169] Campbell, E.W.C., W.H. Campbell, E. Antevs, C.E. Amsden, J.A. Barbieri, and F.D. Bode. 1937. The Archaeology of Pleistocene Lake Mojave. Southwest Museum, Paper No. 9. Los Angeles, CA.

[170] Sutton, Mark Q. 1987. Some Aspects of Kitanemuk Prehistory. In Prehistory of the Antelope Valley, California: An Overview. Occasional Paper No. 1. Lancaster, CA: Antelope Valley Archaeological Society, p. 229.

[171] Earle, D.D., B.L. Boyer, R.A. Bryson, R.U. Bryson, M.M. Campbell, J.J. Johannesmeyer, K.A. Lark, C.J. Parker, M.D. Pittman, L.M. Ramirez, M.R. Ronning, and J. Underwood. 1997. Cultural Resources Overview and Management Plan for Edwards Air Force Base, California, Volume 1, Overview of Prehistoric Cultural Resources. Prepared for: AFFTC/EMXR, Edwards Air Force Base, CA, p. 54.

[172] Basgall, M.E. 2000. The Structure of Archaeological Landscapes in the North-Central Mojave Desert. In Archaeological Passages: A Volume in Honor of Claude Nelson Warren, ed. J.S. Schneider, R.M. Yohe II, and J.K. Gardner. Hemet, CA: Western Center for Archaeology and Paleontology, Publications in Archaeology.

[173] Basgall, M.E., and M.C. Hall. 1994. Perspectives on the Early Holocene Archaeological Record of the Mojave Desert. In Kelso Conference Papers 1987–1992, A Collection of Papers and Abstracts from the First Five Kelso Conferences on the Prehistory of the Mojave Desert, ed. G. Dicken Everson and Joan S. Schneider. Bakersfield, CA: California State University, Bakersfield, Museum of Anthropology, Occasional Papers in Anthropology, 4: 63–81.

Middle Holocene: Pinto Period (Circa 7000 BP to 4000 BP)

The Middle Holocene is characterized by the appearance of Pinto series projectile points in the Mojave Desert.[174] Pinto points are smaller than Lake Mojave points, and their name derives from the Pinto Basin where they were first defined.[175] The period is not well delineated because of a paucity of chronometric data and disagreement on the definition and dating of the Pinto series.[176]

With the onset of the Middle Holocene, the climate became dryer and hotter throughout the deserts of the western United States. Sites dating to this time period exhibit diverse artifact assemblages, marked by the presence of both hunting tools and milling equipment. Many interpret these assemblages as a move from exploitation of only higher-ranked food items, such as large animals, to a more diversified subsistence strategy that also includes low-ranked resources such as seeds, as a response to the climatic shift to more arid conditions. Settlement patterns also appear to change in response to climatic conditions with a move from lakeshore habitats, which became dry, to areas around streams or springs.[177]

Late Holocene Gypsum Period (Circa 4000/3500 BP to 1500 BP)

About 4,000 years ago, climatic conditions shifted again, this time to the cooler, moister conditions characterizing the Late Holocene. This period is characterized by the replacement of Pinto points with Gypsum and Elko series projectile points. In the Owens Valley region, at approximately the same time period, Pinto points were replaced by Humboldt and Elko series projectile points.

An increase in population, trade, and social complexity is suggested with the more favorable climate conditions. The mortar and pestle appears to have been introduced during this period, which is hypothesized to mark the beginning of tree crop utilization, such as mesquite and oak. There was an increase in the use of seeds, including piñon, which is indicated by the presence of milling stones. However, hunting of a variety of fauna, including mountain sheep, remained an important part of the economy. This period is also marked by increased evidence of ritual activities as indicated by numerous rock art sites (e.g. Coso Range) and the discovery of split-twig figurines at Newberry Cave in the central Mojave Desert.[178] The presence of split-twig figurines also suggests interaction with the Southwest culture area during this time period.

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[174] Sutton, Mark Q. 1996. The Current Status of Archaeological Research in the Mojave Desert. Journal of California and Great Basin Anthropology, 18(2): 231.

[175] Campbell, E.W.C., and W.H. Campbell. 1935. The Pinto Basin Site. In Southwest Museum, Paper No. 9. Los Angeles, CA.

[176] Warren, C.N. 2002. Time, Form, and Variability: Lake Mojave and Pinto Periods in Mojave Desert Prehistory. In Essays in California Archaeology: A Memorial to Franklin Fenenga, ed. W.J. Wallace and F.A. Riddell. Berkeley, CA: University of California Archaeological Research Facility, pp. 129–141.

[177] Sutton, Mark Q. 1996. The Current Status of Archaeological Research in the Mojave Desert. Journal of California and Great Basin Anthropology, 18(2): 221–257.

[178] Smith, G.A., W.C. Schuiling, L. Martin, R.J. Sayles, and P. Jillson. 1957. San Bernardino County Museum Scientific Series 1, Newberry Cave, CA.

Late Holocene: Rose Spring Period (Circa 1500 to 1000/600 BP)

Throughout the Great Basin, Elko and other dart-size points were replaced about 1,500 years ago with Rose Spring and Eastgate projectile points, often grouped together under the label Rosegate.[179] This occurrence, which correlates with the introduction of the bow and arrow around AD 500,[180] may also mark the beginning of the Numic expansion, which many researchers believe emanated from southeastern California.

The appearance of Rose Spring series projectile points marks the beginning of the Rose Spring Period in the Mojave Desert.[181,182] Major villages and numerous other sites dating to this time period have been recorded in eastern California. Many of these contain bedrock milling features and portable milling stones, along with marine shell artifacts and obsidian from extralocal sources, suggesting long-distance trade. Two sites exhibit architectural features distinct to this period; at Cantil, there was evidence of a wickiup-like structure, and the Koehn Lake site shows evidence of a pit house.[183] Subsistence strategies during this time period appear to have shifted from one with a predominant focus on hunting of large game to one focused on utilization of a variety of plant resources, supplemented with some hunting of medium to small game such as lagomorphs and rodents.[184]

Late Holocene Late Prehistoric Period (Circa 1000 BP to Contact AD 1770)

The final time period is known as the Late Prehistoric in the Mojave Desert. The period began about 1000 BP and lasted until historic contact. Desert Side-notched and Cottonwood series projectile points replaced the larger points from the previous period, and pottery first appeared in the form of Owens Valley brown ware. During this period, trade networks increased along the Mojave River and over the San Gabriel Mountains, and groups from the Antelope Valley may have served as intermediaries among populations located in peripheral areas.[185] Subsistence strategies remained much the same from the Gypsum Period onward, with a focus on collection of plant resources, supplemented by hunting of medium to small animals.

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[179] Thomas, D. H. 1981. How to Classify the Projectile Points from Monitor Valley, Nevada. Journal of California and Great Basin Anthropology, 3(1): 7–43.

[180] Yohe, R.M. 1998. The Introduction of the Bow and Arrow and Lithic Resource Use at Rose Spring (CA-INY-372). Journal of California and Great Basin Anthropology, 20: 26–52.

[181] Lanning, E.P. 1963. Archaeology of the Rose Spring Site INY-372. American Archaeology and Ethnology, 49(3): 237–336.

[182] Yohe, R.M. 1998. The Introduction of the Bow and Arrow and Lithic Resource Use at Rose Spring (CA-INY-372). Journal of California and Great Basin Anthropology, 20: 26–52.

[183] Sutton, Mark Q. 1996. The Current Status of Archaeological Research in the Mojave Desert. Journal of California and Great Basin Anthropology, 18(2): 221–257.

[184] Sutton, Mark Q. 1996. The Current Status of Archaeological Research in the Mojave Desert. Journal of California and Great Basin Anthropology, 18(2): 221–257.

[185] Earle, D.D., B.L. Boyer, R.A. Bryson, R.U. Bryson, M.M. Campbell, J.J. Johannesmeyer, K.A. Lark, C.J. Parker, M.D. Pittman, L.M. Ramirez, M.R. Ronning, and J. Underwood. 1997. Cultural Resources Overview and Management Plan for Edwards Air Force Base, California, Volume 1, Overview of Prehistoric Cultural Resources. Prepared for: AFFTC/EMXR, Edwards Air Force Base, CA, p. 58.

Archaeological Resources Characterization

An abbreviated literature review and archaeological records search was conducted at the South Central Coastal Information Center (SCCIC) on April 29, 2014. The abbreviated records search included a review of spatial data and basic information of known relevant cultural resource survey and excavation reports, and previous reported cultural resources to ascertain the presence of known prehistoric and historic archaeological resources within the seven subareas of the proposed initiative. Copies of investigation reports and cultural resource site records were not reviewed individually for this analysis. The literature and records search was abbreviated due to the large size of the combined subareas for the proposed initiative. The information reviewed includes sufficient data necessary to determine the level of archaeological sensitivity for each subarea.

Historical Resources

Historic Period Context

The history of the areas covered by the proposed initiative is diverse and difficult to synthesize into a single narrative. For this reason, the historic context is broken into two regions: the Antelope Valley, which approximates the history of the Antelope Valley Northeast, Lake Angeles/Llano/Valyermo/Littlerock, Lake Hughes/Gorman/West of Lancaster, and Lancaster Northeast initiative subareas, and the Santa Clarita Valley, which approximates the history of the Acton, Castaic/Santa Clarita/Agua Dulce, East San Gabriel Mountain, and Acton initiative subareas.

Antelope Valley

European Discovery and the Mission Period (1772-1821)

The first documented expedition into Antelope Valley by a European was in 1772 and was led by Don Pedro Fages who traveled from San Diego to San Luis Obispo via Cajón Pass, Mojave Desert, Hughes Lake, Antelope Valley, Tejón Pass, Cañada de los Uvas (Grapevine Canyon), and Buena Vista Lake. Don Fages left the first written record of exploration in the south San Joaquin Valley.[186] In 1776, Francisco Garces is reported to have explored the region, including the Cummings and Tehachapi Valleys in the Tehachapi Mountains, when traveling from the San Joaquin Valley to the Mojave River near Barstow. Historic accounts also indicate that Garces left traces of his visit at Willow Springs (near Rosamond) and on Castle Butte (near California City).[187] After this time, little documentation exists for European explorations or visits to the Mojave Desert and beyond until the 1800s; however, it is certain that such contacts occurred. Aside from these minor encounters, Native Americans residing in these areas were likely indirectly affected by disruptions in trade caused by the European occupation in the coastal and adjacent areas.

In the early 1800s, the Spanish increased their efforts to incorporate Native Americans into the mission system. Native Americans from interior tribes were either brought or came to the San Gabriel and San Fernando missions, established in 1771 and 1797, respectively, which may have exerted influence as far as the upper Mojave River. Although the Spanish were determined to

[186] California Office of Historic Preservation. Accessed November 2007. Web site. California Historical Landmarks: Kern County. Available at: http://ohp.parks.ca.gov/default.asp?page_id=21423

[187] City of Mojave. Accessed 4 November 2007. Web site. Mojave's History. Available at: www.mojave.ca.us/history_IL.htm

gather all natives into the mission system, there are numerous examples of interior Native American villages not represented in the mission registers, such as in the southern Antelope Valley, suggesting low levels of interaction or influence prior to this time. For example, according to Earle, the first baptism of a Kawaiisu member was not recorded in the missions until 1821.[188] As a side effect of the increased number of missions in Southern California, native neophytes attempted to escape missions by running away and seeking refuge with interior tribes, such as in the Southern San Joaquin Valley or the Mojave Desert and adjacent mountains. This impacted the existing tribes in these areas because forays into these regions were made by the Spanish on numerous occasions to recapture these people, and some tribes became mixed with the influx of natives from different tribal territories. This tribal intermixing continued after the end of the mission system in 1834. With the reduction in the native populations, tribal interaction spheres necessarily increased and territorial boundaries became blurred.

The Mexican Period (1821-1846)

During the period of Mexican rule (1821–1846), the Antelope Valley remained relatively outside the frontier of Mexican settlement. The closest Mexican settlement was the Rancho San Francisquito in the Santa Clarita–Newhall area, located approximately 20 miles south of Antelope Valley. After the secession to the United States in 1848, however, this situation would change dramatically.

The American Period (1850-present)

The beginning of the Euro-American period is marked by the establishment of the state of California in 1850. In the following years, the Antelope Valley witnessed increased numbers of expeditions and explorations by Hispanic and American graziers, miners, and adventurers. A U.S. Army survey party was sent to the area in 1853 to search for possible railway routes that would connect the San Joaquin and Antelope Valleys. Fort Tejon was established soon thereafter in Grapevine Canyon on the west end of the Tehachapi Mountains. This signaled the opening of Euro-American settlement into the San Joaquin Valley and Tehachapi Mountains.[189]

Euro-American prospectors were drawn to the western Mojave Desert in the late nineteenth century by the mining potential of the Antelope Valley. Copper was first discovered in the area in 1884. Throughout the 1890s, the Antelope Valley experienced a series of successive rushes though the high costs associated with milling and transporting ore and the scarcity of water limited the success of these endeavors. One of the largest booms in the Antelope Valley occurred in 1894 following the discovery of gold by Ezra M. Hamilton at Tropico Hill north of Rosamond. After Hamilton's initial discovery, other miners found gold in the western Mojave Desert at Standard Hill and Soledad Mountain.[190,191,192] Mining towns such as Randsburg and Oro Grande were established

[188] Earle, D. 1997. Ethnohistoric Overview of the Edwards Air Force Base Region and the Western Mojave Desert. Prepared for: AFFTC/EMXR, Edwards Air Force Base, CA. Prepared by: Earle and Associates, Palmdale, CA, p. 44.

[189] Earle, D. 1997. Ethnohistoric Overview of the Edwards Air Force Base Region and the Western Mojave Desert. Prepared for: AFFTC/EMXR, Edwards Air Force Base, CA. Prepared by: Earle and Associates, Palmdale, CA, p. 50.

[190] Settle, Glen. 1965. Bears, Borax, and Gold. Rosamond, CA: The Kern-Antelope Historical Society, Inc.

[191] Miller, Ronald D., and Peggy J. Miller. 1976. Mines of the Mojave. Glendale, CA: La Siesta Press.

[192] Vredenburgh, Larry M., Gary L. Shumway, and Russell D. Hartill. 1981. Desert Fever: An Overview of Mining in the California Desert. Canoga Park, CA: Living West Press.

in the Antelope Valley during this period with Rosamond, Barstow, and Mojave serving as major suppliers for the mining operations.[193]

Euro-American settlers were also drawn to the western Mojave Desert by the agricultural potential of the area. In the late 1880s and early 1890s, rainfall was unusually plentiful, and farms in the Antelope Valley produced large crops of wheat, barley, and other grains.[194] A number of irrigation districts were established at this time, which provided water for the cultivation of a variety of fruit and nut trees. A severe drought between 1894 and 1904 devastated a number of these newly established farms and forced many settlers to abandon their land. An agricultural resurgence occurred in the Antelope Valley following the end of the drought. This resurgence was spurred by the introduction of gasoline-powered pumps, which enabled farmers to dig shallow wells for irrigation agriculture rather than relying solely on artesian water sources. The use of these pumps not only allowed for the replanting of crops that had previously thrived, but also enabled the large-scale cultivation of alfalfa, which by 1920 was the Antelope Valley's major crop.

Although there is evidence of cattle grazing in the Antelope Valley as early as the 1860s, ranching activities did not become prevalent until the late 1880s, when the influx of miners and speculators led to an increased demand for beef. The Rosamond area developed into an industrial center for cattle ranching.[195] By the 1920s, there was a dramatic decline in cattle ranching activities due to the growing population of the valley and disputes with sheep herders and alfalfa growers. Other livestock activities undertaken in the area include the seasonal grazing of sheep, which occurred as flocks were driven from the San Bernardino Valley to summer pastures in the nearby mountains.

As mining and ranching operations developed in the area in the late 1800s, a need arose for the transportation of goods and passengers between the desert towns and the main points of commerce. The first stagecoaches began operating in Kern County soon after Fort Tejon was established in 1854.[196] One of the most utilized stagecoach routes in the Antelope Valley went from El Monte and Los Angeles to Tehachapi via Willow Springs. According to Barras, lighter wagons utilized this route to get to Kern River country, while heavier teams may have traveled by way of Jawbone Canyon and Kelso Valley further to the east.[197] Another popular stagecoach route that crossed the Antelope Valley took travelers from Los Angeles to the San Joaquin Valley; this route followed the southern edge of the valley over the Tejon Pass.[198]

The construction of the Southern Pacific Railway across Antelope Valley began in the mid-1800s and was part of an inland route that ran between San Francisco and Los Angeles. Completed in 1876, the rail line changed the Antelope Valley from an isolated region to a magnet for settlers.

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[193] Earle, D., K. Lark, C.J. Parker, M. Ronning, and J. Underwood. 1998. Cultural Resources Overview and Management Plan for Edwards Air Force Base, California, Vol. 2, Overview of Historic Cultural Resources. Prepared by: Computer Sciences Corporation, Edwards Flight Test Center, Edwards Air Force Base, CA, p. 8.

[194] Stickel, E. Gary, and Lois J. Weinman-Roberts. 1980. An Overview of the Cultural Resources of the Western Mojave Desert. Environmental Research Archaeologists, Los Angeles. Prepared for: U.S. Department of the Interior, Bureau of Land Management, California Desert Planning Program, Riverside, CA.

[195] Settle, Glen A. 1967. Along the Rails from Lancaster to Mojave. Rosamond, CA: The Kern-Antelope Historical Society, Inc.

[196] Burmeister, Eugene. 1977. The Golden Empire: Kern County, California. Beverly Hills, CA: Autograph Press, p. 70.

[197] Barras, Judy. 1976. The Long Road to Tehachapi. Tehachapi, CA: The Tehachapi Heritage League, pp. 21–25.

[198] Barras, Judy. 1976. The Long Road to Tehachapi. Tehachapi, CA: The Tehachapi Heritage League, pp. 21–25.

The Southern Pacific Railroad established a number of towns in the area at this time, including Rosamond, Lancaster, and Mojave.[199]

Another important development in the history of the area was the construction of the Los Angeles Aqueduct. In the early 1900s, city leaders recognized that the water needs of the growing population of Los Angeles had exceeded the capacity of local sources. In 1904, the Owens Valley was identified as a likely source for additional water. After obtaining necessary water and land rights and approving a bond measure to fund construction, the City of Los Angeles began work in 1908 on the 233-mile-long aqueduct. In addition to building the aqueduct itself, the development of new infrastructure was required to support the project. The entire construction of the aqueduct required thousands of laborers, housed in camps alongside the aqueduct route, which left an imprint on the local economies. Becoming the country's largest municipal water system at the time, the Los Angeles Aqueduct was completed in 1913. In order to divert the full amount of authorized water, the City of Los Angeles later constructed a second aqueduct, completed in 1970, which largely parallels the course of the First Los Angeles Aqueduct.

The military arrived in the western Mojave Desert in 1928 when the dry lakebed near Muroc became an area for general aviation practices. In 1942, the facility was named Army Air Base, Lake Muroc, which later became Muroc Air Force Base in 1948. In 1949, the base was renamed Edwards Air Force Base.[200]

In the period following World War II, a fundamental shift occurred in the Antelope Valley's economy. Groundwater depletion, increased energy costs, and inflated land prices made irrigation farming increasingly difficult. As agriculture declined in importance in the 1950s, the expansion of Edwards Air Force Base and the establishment of Air Force Plant 42, a federally owned military aerospace facility, transformed the Antelope Valley into a hub of military aircraft design, testing, and production. Population boomed in the area throughout the following decades, with increased housing prices in the region resulting in the valley becoming a bedroom community to the Greater Los Angeles area. The 1980s and 1990s were marked by periods of rapid growth with the development of major housing tracts dramatically increasing the population of both Palmdale and Lancaster. Since 2000, the Antelope Valley has continued to expand as residential developments, small businesses, and light industry gradually replace the remaining agricultural fields and native desert scrubland.

Santa Clarita Valley

<u>European Discovery and the Mission Period (1769-1821)</u>

The first Europeans to pass through the Santa Clarita Valley were a group of Spanish explorers on their way to Monterey Bay from San Diego. Under the leadership of Gaspar de Portolá, the exploration party entered the Santa Clarita Valley on August 8, 1769, after previously crossing the Santa Monica Mountains and San Fernando Valley. The explorers named a river they encountered after St. Clare, thus giving the name of the Santa Clarita Valley and community. The group then headed north on their way to Santa Barbara.

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[199] Settle, Glen A. 1967. Along the Rails from Lancaster to Mojave. Rosamond, CA: The Kern-Antelope Historical Society, Inc.

[200] Greenwood, R.S., and M. McIntyre. 1980. Cultural Resources Overview for Edwards Air Force Base. Pacific Palisades, CA: Greenwood and Associates.

In August of 1795, an exploration party set out to identify a site for a new mission, to be located between the San Gabriel Mission and the San Buenaventura Mission. The requirements included that the land be viable for crops, be near a source of abundant water, and have an indigenous population that could be converted to Catholicism. With these objectives met, a site for the new mission was decided upon in the upper half of the Los Encinos Valle, as the San Fernando Valley was then called. The San Fernando Mission was established on September 8, 1797, and was the seventeenth mission founded by the Catholic Church in California. Father Fermin Francisco Lausen was appointed in charge of the mission. The name given to the mission honored King Ferdinand III of Spain (1217-1251). In order to assist in the establishment of the San Fernando Mission, several other California missions sent nearly 1,000 animals that included cattle, horses, mules, and sheep. Many native inhabitants of the Santa Clarita Valley, such as the Tataviam, were forcibly taken to the newly-constructed mission. While living at the mission, they were under the direction of the priests who required the Native Americans to farm (wheat, barley, corn, beans, peas, and fruit trees); raise cattle; cure hides; tend vineyards; make wine; and practice a trade, such as carpentry, masonry, tailoring or shoemaking. The mission's ranch lands eventually grew to include the Santa Clarita Valley.

The Mexican Period (1821-1846)

In 1821, when Mexico declared its independence from Spain, initially little changed for the missions. At that time there were approximately 1,000 Native Americans living and working at the San Fernando Mission. However, in 1834, the Mexican government secularized the California Missions, which resulted in the San Fernando Mission being turned over to Don Pedro Lopez, who acted as mission *majordomo* (governor of the mission). Between 1840 and 1846, six separate land grants were carved out of the former Rancho Misión San Fernando Rey de España. Eulogio de Célis was the first to acquire the entire 116,858-acre ranch for an estimated $14,000. Further encroachments on mission lands in the valley included Tujunga (1840), El Escorpión (1845), El Encino (1845), La Providencia (1845), and Cahuenga (1846). In 1846, California governor Pio Pico authorized the sale of remaining mission land to raise money to defend Mexican California from an inevitable American takeover.

Up to this period, gold was thought to be a myth in California. Native Americans told Spanish explorers they were familiar with gold, but for the entirety of Spanish California and the majority of Mexican California, none had been discovered. However, in 1842 the first gold in California in was discovered at Placerita Canyon, near Santa Clarita, by Francisco Lopez, Manuel Cota, and Domingo Bermudez.[201] The discovery set off a miniature gold rush in the Santa Clarita Valley, sending hundreds of local residents to the canyon in search of riches; however, the first shipment of gold from California only contained 18.3 ounces.[202]

The American Period (1850-present)

After Californian statehood was established in 1850, mining developed into a major presence in the Santa Clarita Valley region. In 1861, mines began operating in Soledad Canyon, initially pursuing copper but eventually switching to produce the majority of gold recovered in Los Angeles

[201] Guinn, J.M. An Extended A History of California and an Extended History of Los Angeles and Environs. Historic Record Company. Los Angeles. 1915.

[202] Guinn, J.M. An Extended A History of California and an Extended History of Los Angeles and Environs. Historic Record Company. Los Angeles. 1915.

County.[203] Soledad Canyon mines include the Red Rover, Don, and Emma mines. Iron, quartz and titanium were additionally mined periodically from Soledad Canyon. Beginning during the first half of the twentieth century, mining in the Santa Clarita Valley began to shift toward aggregate production and continues to the present.[204]

Petroleum was another natural resource to have an impact on the Santa Clarita Valley. Beginning in the 1860's, Los Angeles-based residents began prospecting for oil in the Santa Clarita Valley. On September 26, 1876, one of the first commercially successful oil wells on the west coast of the United States began producing at Pico Canyon in southwest Santa Clarita Valley.[205] The discovery led to an oil boom, creating the boom town of Mentryville, named after the owner of the successful well. The town included a school, blacksmith, machine shop, and bakery, but began to collapse at the turn of the century as new oil fields were quickly appearing.[206] Oil production in the Santa Clarita Valley continues to this day.

The construction of the Los Angeles Aqueduct was also important to the development of the Santa Clarita Valley. The entire construction of the aqueduct required thousands of laborers, housed in camps alongside the aqueduct route, which left an imprint on the local economies. Becoming the country's largest municipal water system at the time, the Los Angeles Aqueduct was completed in 1913. Obtaining water continued to have an impact on the Santa Clarita Valley, but the St. Francis Dam, completed in 1926, was to have a devastating impact on the region. The St. Francis Dam was constructed in San Francisquito Canyon in an ambitious plan to secure water for the growing Los Angeles metropolitan region. On the night of March 12/13, 1928, the dam failed catastrophically, unleashing an incredible volume of water on the Santa Clarita Valley.[207] The resulting flood killed 432 people, not including an unknown amount of migrant workers, and caused extensive damage to the Santa Clarita Valley. The failure of the St. Francis Dam is the largest engineering catastrophe in United States during the 20th century and is the second-worst disaster in California history, next to the 1906 San Francisco earthquake.

Historic Resources Characterization

An abbreviated literature review and records search was conducted at SCCIC on April 29, 2014. The records search included a review of spatial data and basic information for all known relevant previous investigation and previous reported cultural resources within the seven subareas of the proposed initiative. Copies of investigation reports and cultural resource site records were not reviewed individually for this analysis. The California Historic Resources Inventory (HRI), California Point of Historical Interest (SPHI), California Historical Landmarks (SHL), California Register of Historical Resources (CRHR), and National Register of Historical Places (NRHP) were searched to determine whether known historical resources are located within the seven subareas of

[203] Blanchard, Hugh. Mines of the Soledad. http://www.lagoldmines.com/index.php?page=143075.txt. Accessed October 8, 2014.

[204] Santa Clarita Historical Society. Soledad Canyon Mining Operations. http://www.scvhistory.com/scvhistory/jk0017.htm. Accessed October 8, 2014.

[205] Worden, Leon. The Story of Mentryville: California's Pioneer Oil Town. 1997. http://www.scvhistory.com/mentryville/mstory.htm. Accessed October 8, 2014.

[206] Worden, Leon. The Story of Mentryville: California's Pioneer Oil Town. 1997. http://www.scvhistory.com/mentryville/mstory.htm. Accessed October 8, 2014.

[207] Rogers, JD. The 1928 St. Francis Dam Failure and Its Impact on American Civil Engineering. http://web.mst.edu/~rogersda/st_francis_dam/St-Francis-Dam-for-ASCE-Press.pdf. Accessed October 8, 2014.

the proposed initiative. The literature and records search was abbreviated due to the large size of the combined subareas for the proposed initiative. The information reviewed includes sufficient data necessary to determine the level of cultural sensitivity for each subarea. Based on the information reviewed as part of the records search, there are no listed or eligible for listing NRHP properties within the subareas of the proposed initiative. However, there are six historical resources (all of which are archaeological) that are considered listed or eligible for listing on the CRHR, and located within three of the subareas shown below (refer to Table 3.4.2-4, *California Register Eligible and Listed Resources within the Proposed Initiative Subareas*).

TABLE 3.4.2-4
CALIFORNIA REGISTER ELIGIBLE AND LISTED RESOURCES WITHIN THE PROPOSED INITIATIVE SUBAREAS

Initiative Subarea	CRHR Eligible/Listed
Antelope Valley Northeast	0
Lancaster Northeast	0
Lake Hughes/Gorman/West of Lancaster	3
Castaic/Santa Clarita/Agua Dulce	2
Acton	0
Lake Los Angeles/Llano/Valyermo/Little Rock	1
East San Gabriel Mountains	0

Human Remains

Concurrent with record search data obtained by the SCCIC, the County of Los Angeles Local Management System (LMS), containing records for 63,000 categorized locations was analyzed for the presence of any cemeteries or burials within the proposed initiative. The records searches and consultation revealed that there are known cemeteries or burial sites within the record search area (Table 3.4.2-5, *Known Burials or Cemeteries within the Subareas Affected by the Proposed Initiative*).

TABLE 3.4.2-5
KNOWN BURIALS OR CEMETERIES WITHIN THE SUBAREAS AFFECTED BY THE PROPOSED INITIATIVE

Initiative Subarea	Known Burial or Cemetery
Antelope Valley Northeast	Negative
Lancaster Northeast	Negative
Lake Hughes/Gorman/West of Lancaster	Positive
Castaic/Santa Clarita/Agua Dulce	Positive
Acton	Positive
Lake Los Angeles/Llano/Valyermo/Little Rock	Positive
East San Gabriel Mountains	Negative

3.4.3 THRESHOLDS OF SIGNIFICANCE

The State CEQA Guidelines recommend the consideration of four questions when addressing the potential for significant impact to cultural resources:

Would the proposed initiative:

a. Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?

b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

d. Disturb any human remains, including those interred outside of formal cemeteries?

With respect to paleontological resources, CEQA does not specifically establish thresholds for significant impacts; however, Appendix G of the State CEQA Guidelines indicates that a project may have a significant effect on the environment if it would directly or indirectly destroy a unique paleontological resource or unique geologic feature.

Under CEQA, a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. Substantial adverse change in the significance of an historical resource is defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired. The significance of an historical resource would be significantly impaired when a project demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the CRHR, a local register of historic resources pursuant to Section 5020.1(k) of the Public Resources Code, or historic resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code. CEQA also explicitly states that damage to archaeological sites that meet the definition of an historical resource or unique archaeological resource must be considered. In general, a project that follows the *Secretary of the Interior's Standards for the Treatment of Historic Properties* and associated guidelines shall be considered as mitigated to below the level of significance.[208]

While a significance threshold for impacts to human remains is not explicitly stated in CEQA, Appendix G of the CEQA Guidelines indicates that any disturbance of human remains could potentially be considered an impact to cultural resources, particularly with respect to Native American graves and burials.

[208] Weeks, Kay D. and Anne E. Grimmer. 1995. The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstruction Historic Buildings. Washington, DC: U.S. Department of the Interior, National Park Service.

3.4.5 IMPACT ANALYSIS

The analysis of significant impacts to cultural resources was based on a reasonable worst-case scenario that assumes the annual average rate of issuance of building permits over the 20-year 2015 to 2035 planning horizon would be approximately 32 per year in the Santa Clarita Valley and approximately 152 per year in the Antelope Valley for a total of 184 permits per year for both areas. The total anticipated building permits over the 20-year 2015 to 2035 planning horizon would be approximately 3,680. The number of parcels forecasted to be issued building permits over the 20-year planning horizon within each subarea is as follows: (1) 735 of 2,243 parcels in the Castaic/ Santa Clarita/ Agua Dulce subarea, (2) 737 of 1,246 parcels in the Acton subarea, (3) 847 of 15,166 parcels in the Lake Hughes/ Gorman/ West of Lancaster subarea, (4) 1,251 of 14,822 parcels in the Lake Los Angeles/ Llano/ Valyermo/ Littlerock subarea, (5) zero of 1,938 parcels in the Antelope Valley Northeast subarea, (6) 110 of 6,794 parcels in the Lancaster Northeast subarea, and (7) zero of 648 parcels in the East San Gabriel Mountains subarea. Impacts associated with hauled water infrastructure will include a storage tank, a septic leach field, and access for hauled water delivery vehicles. Based on the analysis it was determined that the average area of disturbance for each parcel was approximately 36 percent with the average size of lots was four acres.[209] Based on this analysis, potential impacts to cultural resources were determined.

The State CEQA Guidelines recommend the consideration of four questions when addressing the potential for significant impacts to cultural resources. Would the proposed initiative have any of the following effects:

IMPACT CUL-1: Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?

The proposed initiative would have the potential to result in impacts to historical resources related to a substantial adverse change in the significance of a historical resource previously known and unknown. The literature and records search identified six historic resources (Table 3.4.2-4) that have been previously documented within three of the seven subareas of the proposed initiative. However, the absence of previously documented historical resources in the remaining four subareas does not preclude the potential such resources to be present. Because much of these areas have not been previously surveyed or surveyed within the past 10 years, and/or the existing cultural resources present may not been evaluated for significance pursuant to CEQA, the potential for the identification of historic resources exists within all subareas. The probability to discover historic resources within the area defined for the proposed initiative is moderate to high. As described earlier in this section, the area has been utilized heavily in both the prehistoric and historic periods.

Although the current zoning allows for development of single-family residences, in accordance with the County's building permit process, the current building permit process does not require a cultural resources assessment prior to permitting single-family residential development initiatives. As such, the potential exists for the proposed initiative to affect historical resources (known and unknown), which constitutes a significant impact requiring the consideration of mitigation measures.

[209] Sapphos Environmental, Inc. 27 August 2014. Memorandum for the Record. Subject: Analysis of Residential Development and Existing Disturbance for Parcels within or near the Proposed Hauled Water Initiative Study Area. Prepared for: Los Angeles County Hauled Water Task Force.

IMPACT CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

The proposed initiative would have the potential to result in impacts to cultural resources related to a substantial adverse change in the significance of an archaeological resource. The records search and literature review indicate that large portions of the areas affected by the proposed initiative have not been assessed for cultural resources. Although the current zoning allows for development of single-family residences, in accordance with the County's building permit process, the current zoning does not require a cultural resources assessment prior to permitting single-family residential development. The area was heavily utilized during both prehistoric and historic periods, and consequently the probability to discover archaeological resources within the area defined for the proposed initiative is moderate to high. As such, the potential exists for the proposed initiative to affect archaeological resources (known and unknown), which constitutes a significant impact requiring the consideration of mitigation measures.

IMPACT CUL-3: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The proposed initiative would have the potential to result in impacts to paleontological resources related directly or indirectly to the destruction of a unique paleontological resource or unique geologic feature. As previously outlined, all subareas of the proposed initiative have geological units with a high sensitivity for significant paleontological resources (Table 3.4.2-1). Although the current zoning allows for development of single-family residences, in accordance with the County's building permit process, the current zoning does not require a cultural resources assessment prior to permitting single-family residential development initiatives. As such, the potential exists for the proposed initiative to affect paleontological resources (known and unknown), which constitutes a significant impact requiring the consideration of mitigation measures.

IMPACT CUL-4: Disturb any human remains, including those interred outside of formal cemeteries?

The proposed initiative may have the potential to disturb human remains, including those interred outside of formal cemeteries. The record search conducted at the SCCIC revealed known areas with possible burials, and because not all areas have been surveyed for cultural resources, there may be unknown areas with possible burials as well. Although the current zoning allows for development of single-family residences, in accordance with the County's building permit process, the current zoning does not require a cultural resources assessment prior to permitting single-family residential development initiatives. As such the potential exists for the proposed initiative to impact human remains (known and unknown), which constitutes a significant impact requiring the consideration of mitigation measures.

3.4.5 CUMULATIVE IMPACTS

IMPACT CUL-1: Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?

The proposed initiative would result in significant cumulative impacts to historic resources as defined in §15064.5 of the State CEQA Guidelines when taken into consideration with the four related projects: the Centennial Project, Northwest 138 Corridor Improvement (also known as the

High Desert Corridor Project), Newhall Ranch Specific Plan, and Northlake Specific Plan. The Newhall Ranch Specific Plan includes 20,885 residential units, and the Northlake Specific Plan includes 2,337 single-family dwellings. As the loss of historic resources occurs incrementally with development, the construction of these new residences would be cumulatively significant.

IMPACT CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

The proposed initiative would result in significant cumulative impacts to archaeological resources as defined in §15064.5 of the State CEQA Guidelines when taken into consideration with the four related projects: the Centennial Project, High Desert Corridor Project, Newhall Ranch Specific Plan, and Northlake Specific Plan. The Newhall Ranch Specific Plan includes 20,885 residential units, and the Northlake Specific Plan includes 2,337 single-family dwellings. As the loss of archaeological resources occurs incrementally with development, the construction of these new residences would be cumulatively significant.

IMPACT CUL-3: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The proposed initiative would result in significant cumulative impacts to unique paleontological resources, sites, or unique geologic features when taken into consideration with the four related projects: the Centennial Project, High Desert Corridor Project, Newhall Ranch Specific Plan, and Northlake Specific Plan. The Newhall Ranch Specific Plan includes 20,885 residential units, and the Northlake Specific Plan includes 2,337 single-family dwellings. As the loss of unique paleontological resources and unique geologic features occurs incrementally with development, the construction of these new residences would be cumulatively significant.

IMPACT CUL-4: Disturb any human remains, including those interred outside of formal cemeteries?

The proposed initiative would result in significant cumulative impacts to human remains, including those interred outside of formal cemeteries, when taken into consideration with the four related projects: the Centennial Project, High Desert Corridor Project, Newhall Ranch Specific Plan, and Northlake Specific Plan. The Newhall Ranch Specific Plan includes 20,885 residential units, and the Northlake Specific Plan includes 2,337 single-family dwellings. As disturbances to human remains can occur incrementally with development, the construction of these new residences would be cumulatively significant.

3.4.6 MITIGATION MEASURES

The proposed initiative would result in significant impacts to historical resources, archaeological resources, paleontological resources, and human remains, requiring the consideration of mitigation measures.

IMPACT CUL-1: Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?

No feasible mitigation measures have been identified.

IMPACT CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

No feasible mitigation measures have been identified.

IMPACT CUL-3: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

No feasible mitigation measures have been identified.

IMPACT CUL-4: Disturb any human remains, including those interred outside of formal cemeteries?

No feasible mitigation measures have been identified.

3.54.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

IMPACT CUL-1: Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?

The County has identified Best Practices that may be employed to avoid and minimize the significant direct, indirect, and cumulative impacts to cultural resources caused by a substantial adverse change in the significance of a historical resource, as defined in Section 15064.5 of the State CEQA Guidelines, that was not known to be present and is encountered during construction of a residential structure (please see Appendix D, *Best Practices*). The Best Practices include a record search at SCCIC, NAHC consultation, archaeological or architectural site survey, and monitoring of ground disturbance in high-sensitivity areas.

Where the property owner implements the Best Practices identified by the County, impacts to historical resources could be reduced to below the level of significance by stopping ground-disturbing activities in the area where historical resources are found until a qualified archaeologist can determine the importance of these resources. However, development of a single-family residence is a by-right land use subject to a non-discretionary building permit, and the County may not compel property owners to implement the identified Best Practices. Therefore, direct, indirect, and cumulative impacts to historical resources would be **significant and unavoidable**.

IMPACT CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

The County has identified Best Practices that may be employed to avoid and minimize the significant direct, indirect, and cumulative impacts to cultural resources caused by a substantial adverse change in the significance of an archeological resource, as defined in Section 15064.5 of the State CEQA Guidelines, that was not known to be present and is encountered during construction of a residential structure (please see Appendix D, *Best Practices*). The Best Practices include a record search at SCCIC, NAHC consultation, archaeological or architectural site survey, and monitoring of ground disturbance in high-sensitivity areas.

Where the property owner implements the Best Practices identified by the County, impacts to unique archeological resources could be reduced to below the level of significance by stopping ground-disturbing activities in the area where archaeological resources are found until a qualified

archaeologist can determine the importance of these resources. However, development of a single-family residence is a by-right land use subject to a non-discretionary building permit, and the County may not compel property owners to implement the identified Best Practices. Therefore, direct, indirect, and cumulative impacts on archeological resources would be **significant and unavoidable**.

IMPACT CUL-3: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The County has identified Best Practices that may be employed to avoid and minimize the significant direct, indirect, and cumulative impacts to cultural resources caused by the destruction of unique paleontological resources or sites or unique geological features, and the contribution of these potential losses at individual properties to cumulative destruction of unique paleontological resources and geological sites during construction of residential structures made possible by the proposed initiative (please see Appendix D, *Best Practices*). The Best Practices include the retention of a qualified paleontologist to evaluate resources where impacts are considered high and conduct a field survey in these areas.

Where the property owner implements the Best Practices identified by the County, impacts to unique paleontological resources and geologic features could be reduced to below the level of significance by stopping ground-disturbing activities in the area where paleontological resources are found until a qualified paleontologist can recover and salvage the fossil remains. However, development of a single-family residence is a by-right land use subject to a non-discretionary building permit, and the County may not compel property owners to implement the identified Best Practices. Therefore, direct, indirect, and cumulative impacts on unique paleontological resources and geologic features would be **significant and unavoidable**.

IMPACT CUL-4: Disturb any human remains, including those interred outside of formal cemeteries?

As part of the County of Los Angeles Department of Public Works, Building and Safety Division plan check and agency referral process, and the Department of Regional Planning Site Plan Review Application, property owners that have been determined to be eligible to develop properties using hauled water as the primary source of potable water would be notified of the requirement to comply with applicable provisions of the Native American Graves Protection and Repatriation Act of 1990; the Public Resources Code Section 5097.9 through 5097.991; California Native American Graves Protection and Repatriation Act of 2001; Health and Safety Code Sections 7050 and 7052; and Penal Code Section 622.5. The provisions of the respective statutes specify the required protocols for notification of the proper authorities, assessment of human remains, and process for repatriation of human remains (please see Appendix C, *Regulatory Measures*).

Compliance with applicable provisions of the Native American Graves Protection and Repatriation Act of 1990; the Public Resources Code Section 5097.9 through 5097.991; California Native American Graves Protection and Repatriation Act of 2001; Health and Safety Code Sections 7050 and 7052; and Penal Code Section 622.5 would be expected to reduce impacts to below the level of significance. The Los Angeles County Coroner shall be notified within 24 hours of the discovery of human remains. Upon discovery of human remains, there shall be no further excavation or disturbance of the site or any of that area reasonably suspected to overlie adjacent human remains until the Los Angeles County Coroner has determined that no investigation of the cause of death is required and the descendants from the deceased Native Americans have made a recommendation

to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98. Therefore, direct, indirect, and cumulative impacts on human remains, including those interred outside of formal cemeteries, would be **less than significant**.

SECTION 3.5
GREENHOUSE GAS EMISSIONS

As a result of the Initial Study (Appendix F),[1] the County of Los Angeles (County) determined that the proposed Single-Family Residential Hauled Water Initiative for New Development (proposed initiative) had the potential to result in impacts to greenhouse gas (GHG) emissions. Therefore, this issue has been carried forward for detailed analysis in this Environmental Impact Report (EIR).

Available GHG emissions data from the California Air Resources Board (CARB) were referenced for this analysis and evaluated with regards to federal, State, and regional policies and plans, including the Los Angeles County General Plan and the Los Angeles County Community Climate Action Plan, developed for the purpose of reducing greenhouse gas emissions. A technical report was prepared as part of the analysis (Appendix H, *Air Quality and Greenhouse Gas Emissions Technical Report*).

Definitions

California Air Pollution Control Officer's Association (CAPCOA): CAPCOA is a nonprofit association of the air pollution control officers from all 35 local air quality agencies throughout California.

Council on Environmental Quality (CEQ): The CEQ is a division of the Executive Office of the President that coordinates federal environmental efforts in the United States and works closely with agencies and other White House offices in the development of environmental and energy policies and initiatives.

Carbon dioxide (CO_2): Carbon dioxide is a colorless, odorless, and nonflammable gas that is the most abundant greenhouse gas in the Earth's atmosphere after water vapor.

Greenhouse Gases (GHG): GHGs trap heat in the Earth's atmosphere, leading to an increase in global warming.

Global warming potential (GWP): GWP is a relative measure of how much heat a greenhouse gas traps in the atmosphere.

Intergovernmental Panel on Climate Change (IPCC): The IPCC produces reports that support the United Nations Framework Convention on Climate Change (UNFCCC), which is the main international treaty on climate change.

Southern California Association of Governments (SCAG): SCAG is the nation's largest metropolitan planning organization, representing six counties, 191 cities, and more than 18 million residents. SCAG undertakes a variety of planning and policy initiatives to encourage a more sustainable Southern California now and in the future.

[1] Sapphos Environmental, Inc. September 2014. County of Los Angeles Single-Family Residential Hauled Water Initiative for New Development Initial Study. Prepared for: County of Los Angeles.

3.5.1 REGULATORY FRAMEWORK

Federal

Corporate Average Fuel Economy Standards

On April 1, 2010, the U.S. Environmental Protection Agency (U.S. EPA) and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced a new national program to reduce GHG emissions and improve fuel economy for new cars and trucks sold in the U.S. The U.S. EPA and NHTSA finalized a joint rule that established a national program consisting of new standards for model years 2012 through 2016 light-duty vehicles that would reduce GHG emissions and improve fuel economy. The U.S. EPA finalized the national GHG emissions standards under the Clean Air Act (CAA), and the NHTSA finalized the Corporate Average Fuel Economy standards under the Energy Policy and Conservation Act.

Furthermore, on August 9, 2011, the U.S. EPA and the NHTSA announced a new national program to reduce GHG emissions and improve fuel economy for new medium- and heavy-duty engines and vehicles sold in the U.S. The U.S. EPA and NHTSA finalized a joint rule that established a national program consisting of new standards for engines with model years 2014 through 2018. The agencies estimate that the combined standards will reduce carbon dioxide-equivalent (CO_{2e}) emissions by about 270 million metric tons and save about 530 million barrels of oil over the life of vehicles built for the 2014 to 2018 model years.

Memorandum for Heads of Federal Departments and Agencies: Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions

In February 2010, the CEQ released a guidance memorandum on the ways in which federal agencies can improve their evaluation and disclosure of greenhouse gas emissions under the National Environmental Policy Act (NEPA) for proposed federal actions. The guidance identified a reference point of 25,000 metric tons per year (mty) for direct CO_{2e} greenhouse gas emissions as an indicator that further NEPA review may be warranted. This reference point, however, is not intended to be used as a threshold for determining a significant impact or effect on the environment due to greenhouse gas emissions. The guidance also does not propose a reference point for indirect greenhouse gas emissions.

State

California Building Standards Code (Title 24)

The California Building Standards Code, Title 24, is authorized by California Building Standards Law (Health and Safety Code Sections 18901 through 18949.31) to administer the processes related to the adoption, approval, publication, and implementation of California's building codes. These building codes serve as the basis for the design and construction of buildings in California. Improved safety, sustainability, maintaining consistency, new technology and construction methods, and reliability are paramount to the development of building codes during each Triennial and Intervening Code Adoption Cycle. Amendments to California's building standards are subject to a lengthy and transparent public participation process throughout each code adoption cycle.

Executive Order S-03-05

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. Recognizing that California is particularly vulnerable to the impacts of climate change, Executive Order S-3-05 establishes statewide climate change emission reduction targets to reduce CO_{2e} to the 2000 level (473 million metric tons) by 2010, to the 1990 level (427 million metric tons of CO_{2e}) by 2020, and to 80 percent below the 1990 level (85 million metric tons of CO_{2e}) by 2050 (Table 3.5.1-1, *California Business-as-Usual Greenhouse Gas Emissions and Targets*).[2,3] The executive order directs the California Environmental Protection Agency (CalEPA) Secretary to coordinate and oversee efforts from multiple agencies (that is, Secretary of the Business, Transportation, and Housing Agency; Secretary of the Department of Food and Agriculture; Secretary of the Resources Agency; Chairperson of the Air Resources Board; Chairperson of the Energy Commission; and President of the Public Utilities Commission) to reduce greenhouse gas emissions to achieve the target levels. In addition, the CalEPA Secretary is responsible for submitting biannual reports to the governor and state legislature that outline (1) progress made toward reaching the emission targets, (2) impacts of global warming on California's resources, and (3) measures and adaptation plans to mitigate these impacts. To further ensure accomplishment of the targets, the CalEPA Secretary created a Climate Action Team composed of representatives from the aforementioned agencies to implement global warming emission reduction programs and report on the progress made toward meeting the statewide GHG targets established in this executive order. In December 2005, the first report was released, which stated, "the climate change emission reduction targets [could] be met without adversely affecting the California economy," and "when all [the] strategies are implemented, those underway and those needed to meet the Governor's targets, the economy will benefit."[4]

TABLE 3.5.1-1
CALIFORNIA BUSINESS-AS-USUAL GREENHOUSE GAS EMISSIONS AND TARGETS

Emission Level	Greenhouse Gas Emissions (million metric tons of CO_{2e})				
	1990	2000	2010	2020	2050
Business-as-usual emissions	427	473	532	596	762*
Target emissions	—	—	473	427	85

NOTE: Business-as-usual emissions reflect the projected emissions under a scenario without GHG control measures, where California would continue to emit greenhouse gases at the same per capita rate.
* The CARB has not yet projected 2050 emissions under a business-as-usual scenario. Therefore, 2050 business-as-usual emissions were calculated assuming a linear increase of emissions from 1990 to 2050.

Global Warming Solutions Act of 2006 (Assembly Bill 32)

AB 32, also known as the Global Warming Solutions Act of 2006, is a California State law that addresses climate change by establishing a comprehensive program to reduce GHG emissions from all sources throughout the state. AB 32 requires that CARB develop regulations and market mechanisms to reduce California's GHG emissions to 1990 levels by 2020. To achieve this goal,

[2] California Governor. 1 June 2005. Executive Order S-3-05. Sacramento, CA.

[3] California Climate Action Team. 3 April 2006. Climate Action Team Report to Governor Schwarzenegger and the Legislature. Sacramento, CA.

[4] California Climate Action Team. 3 April 2006. Climate Action Team Report to Governor Schwarzenegger and the Legislature. Sacramento, CA.

AB 32 mandates that CARB establish a quantified emissions cap; institute a schedule to meet the cap; implement regulations to reduce statewide GHG emissions from stationary sources; and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved.

Clean Car Standards (Assembly Bill 1493)

AB 1493 (Pavley), enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Regulations adopted by CARB apply to 2009 and later model year vehicles. CARB estimates that the regulation will reduce climate change emissions from light duty passenger vehicle fleet by 18 percent in 2020 and 27 percent in 2030.

Sustainable Communities Protection Act of 2008 (Senate Bill 375)

SB 375, also known as the Sustainable Communities Protection Act of 2008, outlines strategies for achieving the goals set forth in AB 32. Pursuant to SB 375, SCAG developed a Regional Transportation Plan (RTP) as part of its Sustainable Communities Strategy. As a way to significantly reduce GHG emissions in the future, the RTP focuses the majority of new housing and job growth in high-quality transit areas and other opportunity areas in existing main streets, downtowns, and commercial corridors, resulting in an improved jobs/housing balance and more opportunity for transit-oriented development.

Executive Order B-30-15

On April 29, 2015, Governor Brown issued Executive Order B-30-15 that states a new statewide policy goal to reduce GHG emissions 40 percent below their 1990 levels by 2030. The Executive Order establishes Greenhouse Gas emission reduction targets to reduce emissions to 80 percent below 1990 levels by 2050 and sets an interim target of emissions reductions for 2030 as being necessary to guide regulatory policy and investments in California in the midterm, and put California on the most cost-effective path for long-term emissions reductions. The Executive Order establishes a policy for California of targets as 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050, and orders "all State agencies with jurisdiction over sources of [GHG] emissions [to] … implement measures, pursuant to statutory authority, to achieve reductions of [GHG] emissions to meet the 2030 and 2050 [GHG] emissions reductions targets." It directs CARB to "update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent." It directs the Natural Resources Agency to update "Safeguarding California" (the State's climate adaptation strategy) every three years, as specified; directs state agencies to "take climate change into account in their planning and investment decisions, and employ full life-cycle cost accounting to evaluate and compare infrastructure investments and alternatives"; and orders the "state's Five-Year Infrastructure Plan [to] take current and future climate change impacts into account in all infrastructure projects." Among its other directives, the Executive Order provides that "State agencies' planning and investment shall be guided by the … principle that priority should be given to actions that both build climate preparedness and reduce GHG emissions.

Regional

Regional Comprehensive Plan

SCAG is the largest metropolitan planning area in the United States, encompassing 38,000 square miles, and has one of the largest concentrations of population, employment, income, business, industry, and finance in the world. SCAG forecasts reveal that the region's population is projected to increase by almost 5.1 million people from 2008 to 2035, employment by 2.2 million jobs, and the number of households by 1.8 million.[5] SCAG prepared an Regional Comprehensive Plan (RCP) to address important issues like housing, traffic/transportation, water, and air quality. In addition, SCAG updated its Regional Housing Needs Assessment (RHNA) in 2012 based on forecasts contained in its RTP. The RHNA is mandated by state housing law as part of the periodic process of updating local housing elements of the General Plan. These documents serve as advisory documents to local agencies in the Southern California region for their information and voluntary use for preparing local plans and handling local issues of regional significance. Within these documents, SCAG set forth various strategies and objectives to reduce greenhouse gas emissions and air quality impacts including, but not limited to:

- Reverse current trends in greenhouse gas emissions to support sustainability goals for energy, water supply, agriculture, and other resource areas
- Expand green building practices to reduce energy-related emissions from developments to increase economic benefits to business and residents
- Focus growth in existing and emerging centers and along major transportation corridors
- Target growth in housing, employment, and commercial development within walking distance and existing and planned transit stations
- Reduce vehicle miles traveled by concentrating new housing in highly developed areas serviced by public transit

County of Los Angeles General Plan

The proposed initiative subareas are located within the County and are subject to the Los Angeles County General Plan 2035.

For the purposes of addressing GHG emission goals and policies, the Los Angeles County General Plan 2035 was the primary planning document referenced for the County. The Air Quality Element summarizes the GHG emissions issues and outlines the goals and policies in the General Plan that will reduce GHG emissions. Of the 12 policies outlined in the Air Quality Element, the following five are applicable to the proposed initiative for the purpose of reducing GHG emissions:[6]

<u>Goal AQ 3:</u> Implementation of plans and programs to address the impacts of climate change.

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[5] Southern California Association of Governments (SCAG). n.d. Growth forecast for 2008 Regional Transportation Plan. Available online at: http://www.scag.ca.gov/forecast/index.htm

[6] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 8: Air Quality Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch8.pdf

- Policy AQ 3.1: Facilitate implementation and maintenance of the Community Climate Action Plan to ensure that the County reaches it climate changes and greenhouse gas emission reduction goals.
- Policy AQ 3.2: Reduce energy consumption in County operations by 20 percent by 2015.
- Policy AQ 3.3: Reduce water consumption in County operations.
- Policy AQ 3.4: Participate in local, regional, and state programs to reduce greenhouse gas emissions.
- Policy AQ 3.5: Encourage maximum amounts of energy conservation in new development and municipal operations.

Los Angeles County Community Climate Action Plan

The Los Angeles County Community Climate Action Plan (CCAP) was released on July 2014. It provides policy guidance for reducing GHG emissions generated within the unincorporated areas. The CCAP ensures that the County will be able to reduce its emissions to 1990 levels by 2020. The CCAP includes a comprehensive emissions inventory for the unincorporated areas and an analysis of the reduction needed to achieve County goals. It analyzes specific actions that result in reduced emissions and lays out a plan for their use and implementation. It also provides a mechanism for tracking and evaluating the County's progress in achieving its climate goals. The CCAP promotes development that is consistent with and supportive of the goals and policies of the General Plan. More specifically, it supports sustainable design and energy efficiency, as well as active and multimodal transportation strategies to reduce VMT.[7]

The purpose of the CCAP is to: (1) establish a baseline emissions inventory and reduction needed to meet County goals, (2) identify specific actions that will measurably reduce GHG emissions, (3) implement state and local level measures, and (4) provide a mechanism for ongoing tracking and updates to the CCAP.[8]

3.5.2 EXISTING CONDITIONS

California

The State of California Greenhouse Gas Inventory performed by CARB compiled statewide anthropogenic GHG emission and sinks. It includes estimates for carbon dioxide (CO_2), methane (CH_4), nitrogen oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs). The current inventory covers the years 2000 to 2013, and is summarized in Table 3.5.2-1, *State of California Greenhouse Gas Emissions by Sector*.

[7] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 8: Air Quality Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch8.pdf

[8] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 8: Air Quality Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch8.pdf

TABLE 3.5.2-1
STATE OF CALIFORNIA GREENHOUSE GAS EMISSIONS BY SECTOR

Sector	CO_{2e} Emissions (Million Metric Tons)													
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Electricity (In state)	59	63	50	48	49	45	50	54	54	53	47	41	51	51
Electricity (Imports)	46	59	59	65	66	63	55	60	66	48	44	47	44	40
Transportation	178	179	186	186	189	192	192	192	181	175	174	171	171	173
Industrial	105	104	105	104	107	105	103	100	101	99	103	103	104	104
Commercial	15	15	17	16	17	17	18	18	19	20	22	22	22	23
Residential	32	31	31	31	32	30	31	31	31	31	32	33	31	32
Agriculture & forestry	32	33	34	35	34	35	36	36	36	35	35	36	36	36
Not specified	1	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Total	469	485	483	486	495	488	486	493	490	462	456	455	461	459

SOURCE: California Air Resources Board. Accessed 24 April 2015. California Greenhouse Gas Inventory for 2000-2013 – by Sector and Activity. Available online at: http://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_sector_sum_2000-13_20150424.pdf

Data sources used to calculate this GHG inventory include California and federal agencies, international organizations, and industry associations. The calculation methodologies are consistent with guidance from the IPCC. The inventory is divided into seven broad categories in the inventory. These sectors include electricity (in state), electricity (imports), transportation, industrial, commercial, residential, agriculture and forestry. When accounting for greenhouse gases, all types of greenhouse gas emissions are expressed in terms of CO_{2e} and are typically quantified in metric tons (MT) or millions of metric tons (MMT).

Los Angeles County

The 2010 GHG inventory for the unincorporated Los Angeles County by sector is comprised of building energy (49 percent), transportation (42 percent), waste generation (7 percent), water conveyance and wastewater generation (2 percent), agriculture (<1 percent), and stationary sources (<1 percent) for a total of 7.9 MMT CO_{2e}. In the County, emissions are forecasted to increase throughout the community by approximately 13 percent from 2010 to 2020 and by 32 percent from 2010 to 2035. These increases will occur primarily because of increases in vehicle miles traveled (VMT), building energy use, and off-road equipment. As the population and employment in the unincorporated County grow, transportation activity and energy consumption will increase. Likewise, off-road equipment emissions will increase as a result of increased development and construction activity.[9]

3.5.3 THRESHOLDS OF SIGNIFICANCE

The potential for the proposed initiative to result in impacts related to GHG emissions was analyzed in relation to the questions outlined in Appendix G of the State CEQA Guidelines. Would the proposed initiative:

a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

In the absence of established GHG emission thresholds, this analysis will utilize the 25,000 metric tons of carbon dioxide equivalent ($MTCO_{2e}$) per year threshold recommended by the CAPCOA in January 2008.[10]

[9] County of Los Angeles Department of Regional Planning. July 2014. Unincorporated Los Angeles County Community Climate Action Plan. Available online at: http://planning.lacounty.gov/assets/upl/project/ccap_draft-201407.pdf

[10] California Air Pollution Control Officers Association. January 2008. CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act. Sacramento, CA.

3.5.4 IMPACT ANALYSIS

IMPACT GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The proposed initiative would result in significant impacts in relation to generating GHG emissions, either directly or indirectly, that may have a significant impact on the environment. Assuming a reasonable worst-case scenario, the proposed initiative has the potential to result in 184 building permits a year for residential development, or a total of 3,680 over the 2015 to 2035 planning horizon. Construction emissions associated with the proposed initiative would include construction of new single-family residences in each of the proposed initiative subareas where issuance of a building permit would be allowed based on the use of hauled water. Operational emissions associated with the proposed initiative would include delivery of hauled water once a week via diesel-powered trucks to and from residential developments within the proposed initiative subareas from water haulers. This would result in a total of 4,300 hauled water truck VMT daily. There would also be an additional 588,000 passenger car VMT per year for travel of the residents to and from the parcels. The construction and operational emissions of GHG emissions would be expected to exceed the threshold for significance established by CAPCOA (Table 3.5.4-1, *Proposed Initiative CO_2 and CO_{2e} Emissions*). Construction emissions encompass 184 single-family residences under construction at one time, while the operational emissions are inclusive of 3,680 residences at full build-out by 2035.

TABLE 3.5.4-1
PROPOSED INITIATIVE CO_2 AND CO_{2e} EMISSIONS

Emission Sources	CO_2 Emissions (Metric Tons/Year)	CO_{2e} Emissions (Metric Tons/Year)
Construction Emissions	27,375	27,471
Operational Emissions	103,573	105,108
CAPCOA Recommended Threshold*	**25,000**	**25,000**
Significant?	**Yes**	**Yes**

NOTE: *In the absence of established GHG emission thresholds, this analysis will utilize the 25,000 metric tons of carbon dioxide equivalent ($MTCO_{2e}$) per year threshold recommended by the California Air Pollution Control Officers Association (CAPCOA) in January 2008.

Based on the suggested thresholds proposed by the CAPCOA,[11,12] GHG emissions in the vicinity of the proposed initiative subareas are above the CAPCOA-suggested threshold. Therefore, the proposed initiative would result in significant impacts related to GHG emissions.

IMPACT GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The proposed initiative would result in significant impacts in relation to conflicting with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

[11] California Air Pollution Control Officers Association. January 2008. CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act. Sacramento, CA.

[12] U.S. Department of Energy, Energy Information Administration. Voluntary Reporting of Greenhouse Gases Program. Washington, DC. Available online at: http://www.eia.gov/oiaf/1605/

The proposed initiative subarea is located within unincorporated land in Los Angeles County and is therefore subject to the County's General Plan and CCAP. One of the goals of the CCAP is to reduce GHG emissions from the unincorporated areas of the County. The proposed initiative is in conflict with the CCAP because it would increase fuel use and transportation emissions above South Coast Air Quality Management District (SCAQMD) and Antelope Valley Air Quality Management District (AVAQMD) significance thresholds from passenger car trips and hauled water truck trips as well as contributing substantially to the energy and water use in the County through the addition of 3,680 new single-family residences.

3.5.5 CUMULATIVE IMPACTS

IMPACT GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Compared to CAPCOA's 25,000 $MTCO_{2e}$ per year threshold, the proposed initiative would result in significant cumulative impacts to GHG emissions when taken into consideration with the four related projects. The four related projects in the vicinity are the Centennial Project, High Desert Corridor Project, Newhall Ranch Specific Plan, and Northlake Specific Plan. The Newhall Ranch Specific Plan includes 20,885 residential units, and the Northlake Specific Plan includes 2,337 single-family dwellings. The construction of these new residences alongside the proposed project would be cumulatively significant.

IMPACT GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Compared to CAPCOA's 25,000 $MTCO_{2e}$ per year threshold, the proposed initiative would result in significant cumulative impacts to GHG emissions when taken into consideration with the four related projects. The four related projects in the vicinity are the Centennial Project, High Desert Corridor Project, Newhall Ranch Specific Plan, and Northlake Specific Plan. The Newhall Ranch Specific Plan includes 20,885 residential units, and the Northlake Specific Plan includes 2,337 single-family dwellings. The construction of these new residences alongside the proposed project would be cumulatively significant as it would conflict with the goals to reduce emissions and encourage smart growth as detailed in the County's General Plan and CCAP.

3.5.6 MITIGATION MEASURES

The proposed initiative would result in significant impacts related to generating substantial emissions of GHGs in the vicinity of the proposed initiative study area, requiring the consideration of mitigation measures.

IMPACT GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

MM-GHG-1: To mitigate potential impacts from the generation of GHG emissions for parcels determined to be eligible for development using hauled water as the primary source of potable water, applicants for building permits shall be required to conform to the California Green Building Standards Code, Chapter 4 Residential Mandatory Measures, in particular those that are consistent with strategies that have been identified in the County Climate Action Plan for use of hauled water as a primary source of potable water pursuant to the proposed initiative. The County shall notify applicants for building permits during plot plan review. Applicants shall conform specifically to the

General Requirements specified in the County of Los Angeles Department of Public Works, Building and Safety Division Green Building Standards Code, including the following: [13]

a) Building shall comply with the 2008 Building Energy Efficiency Standards Title 24, Part 1, Article 1, and Part 6 of the California Code of Regulations.
b) Plumbing fixtures and fixture fittings on the plans shall reduce the potable water use within the building by at least 20%.
c) Annular spaces around pipes, electrical cables, conduits, or other openings in plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry, or a similar method acceptable to the enforcing agency.
d) Fireplaces shall be direct vent sealed combustion chamber type. Indicate on the plans the manufacturer name and model number.
e) At the time of rough installation, during storage on the construction site, and until final startup of the heating and cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal, or other acceptable methods to reduce the amount of water, dust and debris which may collect in the system.
f) Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19% moisture content. Insulation products which are visibly wet or have high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities.
g) All mechanical exhaust fans in rooms with a bathtub or shower shall comply with the following:
    a. Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building.
    b. Fans must be controlled by a readily accessible humidistat unless functioning as a component of a whole house ventilation system. Humidity control shall be capable of adjustment between a relative humidity range between 50% and 80%.
h) Adhesives, sealants and caulks shall meet or exceed the standards outlined in Section 4.504.2.1 and comply with the VOC limits in Tables 4.504.1 and 4.504.2 as applicable in the Green Building Standards Code.
i) Paints and coatings shall meet or exceed the standards outlined in Section 4.504.2.2 and comply with the VOC limits in Table 4.504.3 in the Green Building Standards Code.
j) Aerosol paints and coatings shall meet or exceed the standards outlined in Section 4.504.2.3 in the Green Building Standards Code.
k) All carpet installed in the building interior shall meet all the testing and product requirements of one of the following:
    a. Carpet and Rug Institute's Green Label Plus Program OR

[13] County of Los Angeles Department of Public Works, Building and Safety Division. n.d. General Requirements. Available online at: https://dpw.lacounty.gov/bsd/lib/fp/Green%20Building/Building%20Application%20Dates%20July%201,%202012%20to%20Present/2010%20State%20Green%20Building%20Standards%20with%20Supplements/Residential/Residential%202011%20Green%20Building%20Standard%20Notes-July1.pdf

b. California Department of Public Health Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources using Environmental Chambers, Version 1.1 (SPEC 01350) OR
c. NSF/ANSI 140 at the Gold Level OR
d. Scientific Certifications Systems Indoor Advantage Gold

l) All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute Green Label Program. Carpet adhesives shall not exceed a VOC limit of 50 g/L.

m) A minimum of 50% of floor area receiving resilient flooring shall comply with one of the following:
a. The VOC emission limits defined in the CHPS criteria and listed on its High Performance Database, OR
b. CHPS criteria certified under the Greenguard Children & Schools program, OR
c. RFCI FloorScore program, OR
d. California Department of Public Health 2010 Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, Version 1.1 (SPEC 01350)

n) Composite wood products (hardwood plywood, particle board, and MDF) installed on the interior or exterior of the building shall meet or exceed the standards outlined in Table 4.504.5 in the Green Building Standards Code. Verification of compliance with these sections must be provided at the time of inspection.

IMPACT GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

MM-GHG-1.

3.5.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

IMPACT GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

As part of the County of Los Angeles Department of Public Works, Building and Safety Division plan check and agency referral process, and the Department of Regional Planning *Site Plan Review Application*, property owners that have been determined to be eligible to develop properties using hauled water as the primary source of potable water would be notified of the requirement to comply with applicable provisions of the California Green Building Standards Code (Part 11 of Title 24, California Code of Regulations) that provide building standards related to energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality that reduce greenhouse gas emissions over the life of the residential (please see Appendix C, *Regulatory Measures*).

In addition to **MM-GHG-1**, the County has identified Best Practices that may be employed to avoid and minimize the significant direct, indirect, and cumulative impacts to the environment from the generation of greenhouse gas emissions during construction and occupancy of residential structures made possible by the proposed initiative (please see Appendix D, *Best Practices*).

Per capita GHG emissions would be greater than other single-family residences due to the use of diesel trucks to haul water to each single-family residence, constituting a significant and

unavoidable impact. Implementation of **MM-GHG-1** and voluntary implementation of Best Practices would not reduce these impacts to below the level of significance; therefore, impacts would remain **significant and unavoidable**.

IMPACT GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

As part of the County of Los Angeles Department of Public Works, Building and Safety Division plan check and agency referral process, and the Department of Regional Planning Site Plan Review Application, property owners that have been determined to be eligible to develop properties using hauled water as the primary source of potable water would be notified of the requirement to comply with applicable provisions of the California Green Building Standards Code (Part 11 of Title 24, California Code of Regulations) that provide building standards related to energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality that reduce greenhouse gas emissions over the life of the residential (please see Appendix C, *Regulatory Measures*).

Implementation of **MM-GHG-1** and voluntary implementation of Best Practices would not reduce conflicts with the County of Los Angeles General Plan Goals and Policies related to reduction of GHG, the County of Los Angeles Climate Action Plan or the 2012 Regional Transportation Plan/Sustainable Communities Strategy to below the level of significance; therefore, impacts would remain **significant and unavoidable**.

SECTION 3.6
HYDROLOGY AND WATER QUALITY

As a result of the Initial Study,[1] the County of Los Angeles (County) determined that the Single-Family Residential Hauled Water Initiative for New Development (proposed initiative) would have the potential to result in significant impacts to hydrology and water quality; therefore, this issue has been carried forward for detailed analysis in this environmental impact report (EIR). This analysis was undertaken to identify opportunities to avoid, reduce, or otherwise mitigate potential significant impacts to hydrology and water quality and to identify potential alternatives. The analysis of hydrology and water quality consists of a summary of the regulatory framework that guides the decision-making process, a description of the existing conditions within the proposed initiative study area, thresholds for determining if the proposed initiative would result in significant impacts, anticipated impacts (direct, indirect, and cumulative), mitigation measures, and level of significance after mitigation.

The proposed initiative would apply to the entirety of Los Angeles County. However, the area that would be affected by the proposed initiative, as determined by the County's GIS model, consists of 42,867 parcels in the unincorporated territory of Los Angeles County (County) (Figure 2.1-1, *Proposed Initiative Study Area*).[2] The combined proposed initiative study area consists of approximately 340,461 acres or approximately 532 square miles. The evaluation of hydrology and water quality is based on the consideration of 42,872 parcels, zoned for single-family residential development in the unincorporated area of Los Angeles County, that, since January 2003, have not been eligible for the issuance of building permits where the property owner has not been able to demonstrate a reliable source of potable water from a public or private water purveyor or groundwater. The proposed initiative would not authorize construction of single-family residential development per se. It simply provides for the use of hauled water as an allowable source of potable water as part of the Building and Safety Division plan check and agency referral process where the property is not located within a public or private water district and where potable water for domestic and fire protection requirements cannot be provided by an on-site groundwater well. A review of building permit application data from 1997 through 2003, a period during which some building permits were authorized using hauled water as a source of potable water, a total of approximately 150 building permits were issued per year in the proposed initiative study area, for single- family residential development not associated with subdivision development.[3] The analysis of the proposed initiative is based on the issuance of up to 184 permits per year in the proposed initiative study area (please see Section 2.7 of this EIR for additional details).

The analysis of impacts to hydrology and water quality were evaluated with respect to the Los Angeles Regional Water Quality Control Board (RWQCB); the Lahontan RWQCB; the Public Services and Facilities Element of the Los Angeles County General Plan 2035;[4] the 1986 Antelope

[1] County of Los Angeles. September 2014. County of Los Angeles Single-Family Residential Hauled Water Initiative for New Development Initial Study. Prepared by: Sapphos Environmental, Inc., Pasadena, CA.

[2] Assessor's Parcels Numbers for the referenced parcels are on file at the Los Angeles County Department of Regional Planning.

[3] County of Los Angeles Building and Safety Division building permit records have been digitally tracked since 1997; records were not readily available from before 1997.

[4] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 13: Public Services and Facilities Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch13.pdf

Valley Areawide General Plan;[5] the 2012 Santa Clarita Valley Area Plan;[6] the State Water Resources Control Board (SWRCB) OWTS Policy;[7] National Flood Insurance Program Flood Insurance Rate Maps for Los Angeles and Kern Counties; the U.S. Geological Survey (USGS) 7.5-minute topographic quadrangles where the proposed initiative study area is located; a review of published and unpublished literature; and the Water Supply, Hydrology and Water Quality Analysis performed to evaluate the proposed initiative (Appendix K, *Water Supply, Hydrology and Water Quality Analysis*). The water supply analysis for the Initiative was based on data that was available at the time of the release of the initial Notice of Preparation (NOP) in October 2014.[8]

3.6.1 REGULATORY FRAMEWORK

The proposed initiative would allow hauled water as the primary source of potable water for new single-family residential construction in unincorporated areas of Los Angeles County. This regulatory framework for hydrology and water quality summarize the federal, state, and local statutes, regulations, and ordinances that govern the development of single-family homes in the unincorporated territory of Los Angeles County.

Federal

Clean Water Act, Sections 401 and 404

Section 401 of the Clean Water Act of 1972 (CWA) established the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. Under the CWA, the U.S. Environmental Protection Agency (EPA) has implemented pollution control programs such as setting wastewater standards for surface waters. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit is obtained. The EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Point sources are discrete conveyances such as pipes or manmade ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit. In California, Section 401 of the federal CWA is administered and enforced by the SWRCB, which develops regulations to implement water-quality control programs mandated at the federal and state levels. To implement these programs, California has nine RWQCBs. The parcels that would be potentially eligible, pursuant to the proposed initiative, for development of a single-family home using hauled water are located within the jurisdiction of two RWQCBs: Lahontan RWQCB and Los Angeles RWQCB.

Section 404 of the CWA establishes a program, to regulate the discharge of dredged and fill material into waters of the United States, including wetlands. The U.S. Army Corps of Engineers

[5] County of Los Angeles Department of Regional Planning. 16 June 2015. Antelope Valley Area Plan – Town & Country. Available online at: http://planning.lacounty.gov/tnc/documents/

[6] County of Los Angeles Department of Regional Planning. 2012. Santa Clarita Valley Area Plan. Available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf

[7] State Water Resource Control Board. 19 June 2012. OWTS Policy, Water Quality Control Policy for Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment Systems.

[8] Although the NOP was originally circulated on September 17, 2014, subsequent refinements to the proposed initiative study area identified additional parcels that could potentially qualify to use hauled water under the proposed initiative and the NOP was recirculated for a 30-day comment period from May 1, 2015, to June 1, 2015.

(USACOE) administers the day-to-day program, including individual permit decisions and jurisdictional determinations; develops policy and guidance; and enforces Section 404 provisions.

Executive Order 11988, Flood Plane Management

The objective of Executive Order 11988, dated May 24, 1977, is the avoidance of, to the extent possible, long- and short-term adverse impacts associated with the occupancy and modification of the base floodplain (100-year floodplain) and the avoidance of direct and indirect support of development in the base floodplain wherever there is a practicable alternative. Under the Executive Order, the USACOE must provide leadership and take action to:

- Avoid development in the base floodplain unless it is the only practicable alternative;
- Reduce the hazard and risk associated with floods;
- Minimize the impact of floods to human safety, health, and welfare; and
- Restore and preserve the natural and beneficial values of the base floodplain.

The proposed initiative would be subject to Executive Order 11988 if it would result in long- and short-term adverse impacts to the 100-year floodplain.

National Flood Insurance Act of 1968 and Flood Disaster Protection Act of 1973

The National Flood Insurance Act of 1968 created the Federal Insurance Administration and made flood insurance available for the first time. The Flood Disaster Protection Act of 1973 made the purchase of flood insurance mandatory for the protection of property located in Special Flood Hazard Areas.

National Flood Insurance Program

In 1968, Congress created the National Flood Insurance Program (NFIP) to help provide a means for property owners to financially protect themselves. The NFIP offers flood insurance to homeowners, renters, and business owners if their community participates in the NFIP. Participating communities agree to adopt and enforce ordinances that meet or exceed FEMA requirements to reduce the risk of flooding.

State

Section 1602 of the State Fish and Game Code

The California Department of Fish and Wildlife (CDFW) is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, the Fish and Game Code (Section 1602) requires an entity to notify CDFW of any proposed activity that may substantially modify a river, stream, or lake. Notification is required by any person, business, state, or local government agency, or public utility that proposes an activity that would:

- Substantially divert or obstruct the natural flow of any river, stream or lake;
- Substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake; or
- Deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

The notification requirement applies to any work undertaken in or near a river, stream, or lake that flows at least intermittently through a bed or channel. This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water. If CDFW determines that the activity may substantially adversely affect fish and wildlife resources, a Lake or Streambed Alteration Agreement would be prepared. The Agreement includes reasonable conditions necessary to protect those resources and must comply with the California Environmental Quality Act (CEQA). The entity may proceed with the activity in accordance with the final Agreement.

Regional

Water Quality Control Plan for the Lahontan Region

The Lahontan RWQCB has prepared a Water Quality Control Plan for the Lahontan Region (Basin Plan). The Basin Plan for the Lahontan Region is the basis for the Regional Board's regulatory program. It sets forth water quality standards for the surface and ground waters of the region, which include both designated beneficial uses of water and the narrative and numerical objectives that must be maintained or attained to protect those uses. It identifies general types of water quality problems, which can threaten beneficial uses in the region. It then identifies required or recommended control measures for these problems. In some cases, it prohibits certain types of discharges in particular areas. This plan summarizes applicable provisions of separate State Board and Regional Board planning and policy documents (e.g., the Regional Board waiver policy), and of water quality management plans adopted by other federal, state, and regional agencies. The Lahontan RWQCB follows four major programs to implement the policies of the Federal Clean Water Act.

- **Water Quality**
  The Lahontan RWQCB works in coordination with the Regional Water Boards to preserve, protect, enhance and restore water quality.

- **Financial Assistance**
  The Lahontan RWQCB provides loans and grants for constructing municipal sewage and water recycling facilities, remediation for underground storage tank releases, watershed protection projects, and non-point-source pollution control projects. The State Water Board has several financial programs to help local agencies and individuals prevent or clean up pollution of the state's water.

- **Water Rights**
  Anyone wanting to divert water from a stream or river not adjacent to their property must first apply for a water right permit from the Lahontan RWQCB. The Lahontan RWQCB issues permits for water rights specifying amounts, conditions and construction timetables for diversion and storage. Decision-making stems from water availability, prior water rights and flows needed to preserve in-stream uses, such as recreation and fish habitat.

- **Enforcement**
  The Lahontan RWQCB and the nine RWQCBs are responsible for swift and fair enforcement when the laws and regulations protecting our waterways are violated. The SWRCB has recently created an Office of Enforcement to assist and coordinate

enforcement activities statewide. The Water Boards also work with federal, state and local law enforcement, as well as other environmental agencies to ensure a coordinated approach to protecting human health and the environment.

Water Quality Control Plan for the Los Angeles Region

The Los Angeles RWQCB has prepared a Water Quality Control Plan for the Los Angeles Region (Basin Plan), which includes the Coastal Watersheds of Los Angeles and Ventura Counties. The first essentially complete Basin Plan, which was established under the requirements of California's 1969 Porter-Cologne Water Quality Control Act (Section 13000 [Water Quality] et seq. of the California Water Code), was adopted in 1975 and revised in 1984. The latest version was adopted in 1994.

The Basin Plan assigned beneficial uses to surface and groundwater such as municipal water supply and water-contact recreation to all waters in the basin. It also set water-quality objectives, subject to approval by the EPA, intended to protect designated beneficial uses. These objectives apply to specific parameters (numeric objectives) and general characteristics of the water body (narrative objectives). An example of a narrative objective is the requirement that all waters must remain free of toxic substances in concentrations producing detrimental effects upon aquatic organisms. Numeric objectives specify concentrations of pollutants that are not to be exceeded in ambient waters of the basin.

The Los Angeles RWQCB is involved is the regulation of a number of activities that are relevant to the consideration of the proposed initiative:

- Prepares, monitors compliance with, and enforces Waste Discharge Requirements, including NPDES Permits;
- Implements and enforces local storm water control efforts;
- Enforces water quality laws, regulations, and waste discharge requirements;
- General Construction Activity Storm Water Discharges

RWQCB Construction Dewatering WDR

Construction within the proposed initiative area may require dewatering activities as a result of excavation or trenching is areas of shallow groundwater. Discharge of the removed water to surface waters requires Waste Discharge Requirements permits (WDRs) from the Lahontan RWQCB since the water could potentially be contaminated with chemicals from the construction activities. Discharge from dewatering activities would be considered a limited-threat discharge if the groundwater does not contain significant quantities of pollutants that could adversely affect beneficial uses of surface waters as designated in the Basin Plan. Limited-threat discharges would be covered under the RWQCB General Permit for Limited Threat Discharges to Surface Waters (Board Order No. R6T-2003- 0034). When construction would affect waters of the U.S., it would not be subject to the general construction dewatering NPDES permit. However, the RWQCB would require that Best Management Practices (BMPs) be implemented to comply with the WDRs.

County of Los Angeles

County of Los Angeles Low Impact Development Ordinance (Title 12, Chapter 12.84)

In response to Order No. R4-2012-0175, as amended by State Water Board Order WQ 2015-0075 NPDES Permit NO. CAS004001, Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges Within The Coastal Watersheds of Los Angeles County, Except Those Discharges Originating from the City of Long Beach MS4, the County has adopted a Low Impact Development (LID) Ordinance: Title 12, Chapter 12.84 of Los Angeles County Code of Ordinances. Under this ordinance, developments shall incorporate LID features as required by the County's LID Standards Manual to reduce or eliminate stormwater runoff, mitigate polluted discharges, and minimize erosion. All developments are required to implement source control measures, such as storm drain signage and outdoor storage material areas, to the maximum extent practicable. The ordinance categorizes new development and redevelopment projects as Designated, Non-Designated Projects, Streets, and Single-Family Hillside Homes.

- Designated Projects are new developments that are one acre or larger and add over 10,000 square feet of impervious surface area. Designated Projects also applies to redevelopment projects that add or replace either: five thousand square feet or more of impervious surface area on a site that has been previously developed; or ten thousand square feet or more of impervious surface area on a site that has been previously developed with a single family home.
    - Designated Projects are required to retain its entire Stormwater Quality Design Volume (SWQDv) on-site.
- Small Scale Non-Designated Projects.
    - Non-Designated Projects that consist of the development of four residential units or less are considered Small-Scale and are required to include two LID BMP features. BMPs that are intended to store or infiltrate stormwater, such as rain barrels or dry wells, shall have a capacity of 200 gallons.
- The development of streets and roads that results in over 10,000 square feet of impervious surfaces must comply with the LID Standards Manual and the USEPA's Green Streets 26. The County code does not specify if such projects are to retain the SWQDv, the difference between pre and post project SWQDv or to install two LID BMPs.
- Single-Family Hillside Homes located within a hillside management area, which is defined as an area with a natural slope of 25 percent or greater, are required to provide conservation of natural areas, slope and channel protection, storm drain signage, and divert roof runoff and surface flow to vegetated areas.

County of Los Angeles General Plan

The County Board of Supervisors adopted the Water and Waste Management element as a component of the County General Plan;[9] the provisions of the element were updated, revised, combined The Water Supply and Distribution section addresses policies direction for water resources of the County.

[9] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 13: Public Services and Facilities Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch13.pdf

Antelope Valley Area Plan – Town & Country

The Planning Area of the Antelope Valley Area Plan – Town & Country, a component of the adopted Los Angeles County General Plan, provides planning policies for 1,200 square miles of elevated desert terrain bounded by the San Gabriel Mountains on the south, Kern County to the north, and extending from Gorman on the west to San Bernardino County on the east, including 90 percent of the area that would be potentially affected by the proposed initiative.[10]

Chapter 5, *Public Safety, Services and Facilities Element*, establishes the following policy relevant to hydrology in consideration of the proposed initiative:

Goal PS 3: Protection of the public through flood hazard planning and mitigation.

- Policy PS 3.1: Limit the amount of potential development in Flood Zones designated by the Federal Emergency Management Agency through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.

- Policy PS 3.2: Require onsite stormwater filtration in all new developments through use of appropriate measures, such as permeable surface coverage, permeable paving of parking and pedestrian areas, catch basins, and other low impact development strategies.

- Policy PS 3.3: Review the potential local and regional drainage impacts of all development proposals to minimize the need for new drainage structures.

- Policy PS 3.4: Ensure that new drainage structures are compatible with the surrounding environment by requiring materials and colors that are consistent with the natural landscape. Discourage concrete drainage structures.[11]

2012 Santa Clarita Valley Area Plan

The Castaic/Santa Clarita/Agua Dulce subarea (10 percent of the area potentially affected by the proposed initiative) is located within the Planning Area of the Santa Clarita Valley Area Plan, which comprises the entire Santa Clarita Valley.[12] Relevant guiding principles stated in the Santa Clarita Valley Area Plan include:

- **Environmental Resources**
  11. New development shall be designed to improve energy efficiency, reducing energy and natural resource consumption by such techniques as … capture of storm runoff on-site, … native and drought-tolerant landscape.

[10] County of Los Angeles Department of Regional Planning. 16 June 2015. Antelope Valley Area Plan – Town & Country. Available online at: http://planning.lacounty.gov/tnc/documents/

[11] County of Los Angeles Department of Regional Planning. 16 June 2015. Antelope Valley Area Plan – Town & Country. Available online at: http://planning.lacounty.gov/tnc/documents/

[12] County of Los Angeles Department of Regional Planning. 2012. Santa Clarita Valley Area Plan. Available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf

Objective LU-7.3 Protect surface and ground water quality through design of development sites and drainage improvements.

- Policy LU-7.3.1: Promote the use of permeable paving materials to allow infiltration of surface water into the water table.
- Policy LU-7.3.2: Maintain stormwater runoff onsite by directing drainage into rain gardens, natural landscaped swales, rain barrels, permeable areas and use of drainage areas as design elements, where feasible and reasonable.
- Policy LU-7.3.3: Seek methods to decrease impermeable site area where reasonable and feasible, in order to reduce stormwater runoff and increase groundwater infiltration, including use of shared parking and other means as appropriate.
- Policy LU-7.3.6: Support emerging methods and technologies for the on-site capture, treatment, and infiltration of stormwater and greywater, and amend the County Code to allow these methods and technologies when they are proven to be safe and feasible.

3.6.2 EXISTING CONDITIONS

Water Quality

The existing topography within the proposed initiative study area results in the seven subareas being located in multiple watersheds with diverse water quality issues. The proposed initiative area is administered by two RWQCBs, Lahontan and Los Angeles, and related Basin Plans.

Castaic/Santa Clarita/Agua Dulce Subarea

The Santa Clarita Valley planning area is within the hydrological areas covered by the 1994 Water Quality Control Plan for the Santa Clara River Basin (California Department of Water Resources Hydrological Unit No. 403.51). The Santa Clarita Valley's available sources of drinking water include rivers, lakes, streams, ponds, reservoirs, springs, and wells. Water from this subarea is treated and delivered to the Santa Clarita Valley's four local water purveyors: Los Angeles County Waterworks District #36, Newhall County Waterworks District, Santa Clarita Water Division, and Valencia Water Company. Portions of the Santa Clara River watershed have been identified as an "impaired water body" by the SWRCB because waters in these areas exceed adopted standards for various pollutants. In 2005, the Upper Santa Clara River Chloride Total Maximum Daily Load (TMDL) became effective, outlining a 13-year plan to reduce chloride levels in the River. Chloride sources include State Water Project water imported into the valley for drinking water, reclaimed water from the Valencia and Saugus Water Reclamation Plants, and domestic sources (including water softeners and salt-water pools).

A Groundwater Management Plan is provided in Appendix G of Santa Clarita's 2010 UWMP. This plan states that the pumping capacity of some municipal wells has been impacted, but the impairment of these wells is not expected to prevent the pumping of groundwater needed to meet existing water supply plans.[13] The groundwater level in this area varies by season but generally provides a good yield.

[13] Castaic Lake Water Agency, December 2003. Groundwater Management Plan Santa Clara River Valley Groundwater Basin, East Subbasin.

Antelope Valley Groundwater Basin

California Department of Water Resources' (DWR) Bulletin 118 stated that three military installations in the Antelope Valley and Mojave River Valley groundwater basins are federal Superfund sites because of volatile organic compounds (VOCs) and other hazardous contaminants. These sites have a potential to impact groundwater quality. In Section 10.6 of the 2010 Integrated Regional Urban Water Management Plan (IRUWMP) for the Antelope Valley, it is stated that the water supplies for the study area are generally of good quality.

Lake Hughes/Gorman/West of Lancaster Subarea

The Los Angeles RWQCB has developed the Elizabeth Lake, Lake Hughes and Munz Lake Trash TMDL to attain the water quality standards for trash. The TMDL has been prepared pursuant to State and federal requirements to preserve and enhance water quality for impaired water bodies within coastal watersheds of Los Angeles and Ventura Counties.

Groundwater

The proposed initiative area is underlain by three major groundwater basins underlying the Santa Clarita planning area; the Santa Clara River Valley Groundwater Basin, East Subbasin, and the Acton Valley Groundwater Basin (Figure 3.6.2-1, *Groundwater Basins*).

The East Subbasin encompasses the upper Santa Clara River Valley and is made up of two aquifer systems: the Alluvium (also referred to as the Alluvial Aquifer) and the Saugus Formation. The Alluvial Aquifer generally underlies the Santa Clara River and its tributaries, and the Saugus Formation underlies nearly the entire Upper Santa Clara River area. Groundwater in the East Basin generally flows from east to west, following the movement of the Santa Clara River. The East Subbasin is the sole source of local groundwater for urban water supply in the Valley. Because up to 80 percent of the average annual precipitation occurs between November and March, most groundwater infiltration is in the form of winter-storm flow. However, the East Subbasin is also replenished by deep percolation of agricultural land, urban irrigation, percolation from septic tanks and leach field systems, and treated effluent from water reclamation plants.

The Acton Valley Groundwater Basin encompasses about 17 square miles and is bounded by the Sierra Pelona on the north and the San Gabriel Mountains on the south, east, and west. Groundwater in the basin is unconfined and found in alluvium and stream terrace deposits. The regional direction of groundwater flow is in a southwesterly direction toward Soledad Canyon. Replenishment of this basin is achieved through percolation of direct rainfall and infiltration of surface water runoff, agriculture and irrigation, and septic tanks. There is no pumping for urban water supply and distribution from this basin, although individual users in the far eastern portion of the planning area may have private wells in the Acton Valley Groundwater Basin.

The Antelope Valley Groundwater Basin underlies an extensive alluvial valley in the western Mojave Desert. The elevation of the valley floor ranges from 2,300 to 3,500 feet above sea level. The basin is bounded on the northwest by the Garlock fault zone at the base of the Tehachapi Mountains and on the southwest by the San Andreas fault zone at the base of the San Gabriel Mountains. The basin is bounded on the east by ridges, buttes, and low hills that form a surface and groundwater drainage divide and on the north by Fremont Valley Groundwater Basin at a

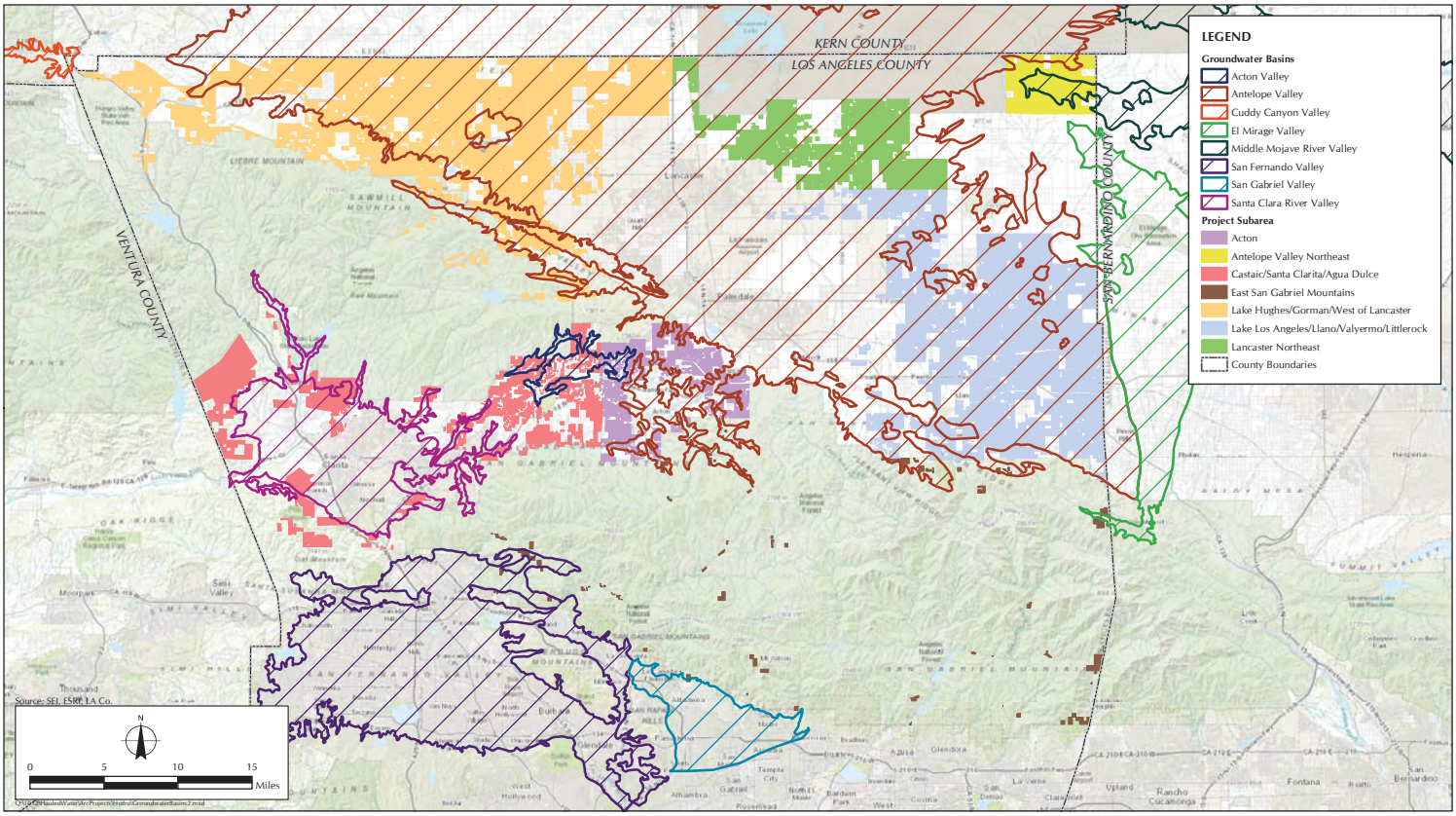

FIGURE 3.6.2-1
Groundwater Basins

groundwater divide approximated by a southeastward-trending line from the mouth of Oak Creek through Middle Butte to exposed bedrock near Gem Hill, and by the Rand Mountains farther east.

Drainage Patterns and Parcels Intersected by Blue-lines

There are approximately 6,567 parcels within the initiative study area that would intersect existing drainage patterns (Table 3.6.2-1, *Linear Miles of Parcels with Blue-Line Drainages*).

TABLE 3.6.2-1
LINEAR MILES OF PARCELS WITH BLUE-LINE DRAINAGES

Subarea	Number of Linear Miles Within Parcels Intersected by Blue-Lines
Acton	89
Castaic/Santa Clarita/Agua Dulce	249
Antelope Valley Northeast	97
East San Gabriel Mountains	40
Lake Hughes, Gorman, West of Lancaster	264
Lake Los Angeles/Llano/Valyermo/Littlerock	299
Lancaster Northeast	28
Total	**1,066**

Existing or Planned Stormwater Conveyance Systems

Flood-prone areas in Los Angeles County are managed pursuant to a Flood Management Plan (FMP) that includes a future-oriented approach to planning in flood risk areas. It is a pre-disaster planning approach that is required by FEMA for the County to continue to participate in the National Flood Insurance Program (NFIP). When a community chooses to join the NFIP, it must adopt and enforce minimum floodplain management standards for participation. The floodplain management requirements within the Special Flood Hazard Area (SFHA) are designed to prevent new developments from increasing the flood threat and to protect new and existing buildings from anticipated flood events. When a community chooses to join the NFIP, it must require permits for all development in the SFHA and ensure that construction materials and methods used would minimize future flood damage.[14] The Los Angeles County Flood Control District includes the vast majority of drainage infrastructure within incorporated and unincorporated areas in every watershed in the County, including 500 miles of open channel, 2,800 miles of underground storm drain, and an estimated 120,000 catch basins.[15]

However, due to rural nature of the majority of the proposed initiative study area, stormwater drainage facilities have not been developed to serve the majority of the properties. However, based on the 2012 average single-family residence household size of 3.5 people in unincorporated Los Angeles County and a reasonable worst-case scenario of approximately 184 building permits per year in northern unincorporated Los Angeles County, the proposed initiative would likely result in an annual population increase of 644 per year, or up to 12,880 additional people from the single-family residential development of the 3,680 subject parcels that would be expected to be

[14] Imperial County. April 2007. Imperial County Flood Management Plan.

[15] County of Los Angeles Department of Public Works. Accessed 18 November 2015. 100 Years 1915-2015. Available online at: http://dpw.lacounty.gov/lacfcd/

developed during the 2015–2035 planning period. The reasonable worst-case development scenario has the potential to result in the construction of new stormwater drainage facilities.

Housing within a 100-year Flood Hazard Zone/ Flood Hazards to People or Structures

Floodplains in Southern California are a unique hazard area; although flooding from rain-swollen rivers can occur in valley bottoms, a more common floodplain hazard is debris flow. Debris flows are common in mountain foothill areas, especially after fire and heavy rain events, when wet, heavy soils and rock slide down steep slopes and into valleys below. Areas with a history of such slides can often be identified by sloping, fan-shaped landforms at the base of mountains and hillsides.

Flood control channels are typically designed to move large volumes of water from one place to another rapidly, without property damage. A fully improved channel is usually concrete, severely limiting the aquatic habitat beneficial uses. Partially improved channels may only have levees on either side, but other flood control activities (such as channel straightening, vegetation clearing, and weed control using copper or other toxic materials) can reduce or eliminate the aquatic habitat. Storm flows themselves, not necessarily part of flood events, can and do eliminate streamside habitat in parts of the river through sheer scouring force every few years.

The National Flood Insurance Program administered by the Federal Emergency Management Agency (FEMA) has grouped the subareas according to Flood Hazards. There are approximately 13,502 parcels within the initiative study area that are within a FEMA flood hazard zone (Zone X and 0.2 percent annual chance of a flood hazard, represent a minimal flood hazard) (see Figure 3.6.2-2, *100-Year Flood Zones*; and Table 3.6.2-2, *FEMA Flood Insurance Hazard Zones*).

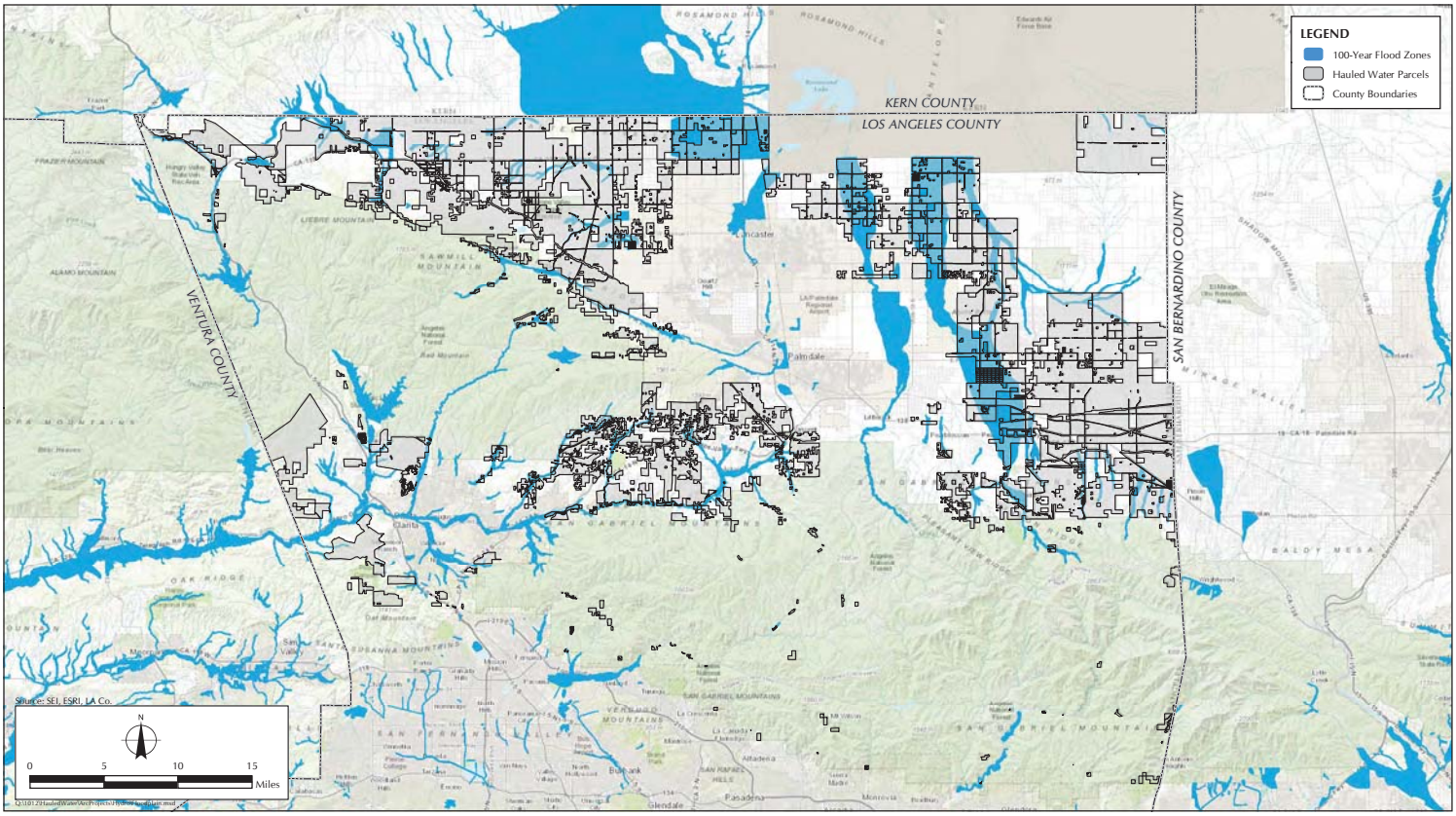

FIGURE 3.6.2-2
100-Year Flood Zones

TABLE 3.6.2-2
FEMA FLOOD INSURANCE HAZARD ZONES

Subarea	Flood Zone*	Number of Parcels Within a FEMA Flood Hazard Zone
Acton	A	58
	AO	10
Acton Total		**68**
Castaic/Santa Clarita/Agua Dulce	A	246
	AO	50
	AE	1
Castaic/Santa Clarita/Agua Dulce Total		**297**
Antelope Valley Northeast	A	59
Antelope Valley Northeast Total		**59**
East San Gabriel Mountains	0.2% annual chance flood hazard	8
	A	15
	AE	5
East San Gabriel Mountains Total		**28**
Lake Hughes, Gorman, West of Lancaster	0.2% annual chance flood hazard	2,359
	A	2,759
	AO	10
Lake Hughes, Gorman, West of Lancaster Total		**5,128**
Lake Los Angeles/Llano/Valyermo/Littlerock	0.2% annual chance flood hazard	23
	A	3,364
	AE	3
	AO	36
Lake Los Angeles/Llano/Valyermo/Littlerock Total		**3,426**
Lancaster Northeast	0.2% annual chance flood hazard	1,173
	A	3,618
Lancaster Northeast Total		**4,791**
Total		**13,500**

*A: An area inundated by 1% annual chance flooding, for which no Base Flood Elevation (BFE) has been determined.
AO: An area inundated by 1% annual chance flooding (usually sheet flow on sloping terrain), for which average depths have been determined; flood depths range from 1 to 3 feet.
AE: Areas subject to inundation by the 1-percent-annual-chance flood event determined by detailed methods.

Seiche, Tsunami, or Mudflows

The proposed initiative study area does not fall within a County inundation and tsunami hazard area. The topography of the proposed initiative study area ranges from flat slightly dissected desert plains to rolling hills to rugged mountains and canyons. Maximum and minimum elevations range from approximately 5,100 feet above mean sea level (MSL) in the southern part of the Lake Los Angeles/Llano/Valyermo/Littlerock subarea to 1,300 feet above AMSL in the East San Gabriel Mountains and southern portions of the Castaic/Santa Clarita/Agua Dulce subareas, respectively. The Castaic Reservoir is within the proposed initiative study area, and approximately 34 parcels are

downslope from the Castaic Reservoir, capable of creating a seiche. Some parcels within the proposed initiative study area are positioned in an area of potential mudflow (Table 3.6.2-3, *Landslide Incident and Susceptibility by Subarea*).

TABLE 3.6.2-3
LANDSLIDE INCIDENT AND SUSCEPTIBILITY BY SUBAREA

Subarea	Incidence	Parcels
Acton	Moderate landslide incidence (1.5-15% of the area is involved)	1,245
Castaic/Santa Clarita/Agua Dulce	High landslide incidence (over 15% of the area is involved in landsliding)	220
	Low landslide incidence (less than 1.5% of the area is involved)	309
	Moderate landslide incidence (1.5-15% of the area is involved)	1,764
Antelope Valley Northeast	Low landslide incidence (less than 1.5% of the area is involved)	1,938
East San Gabriel Mountains	High landslide incidence (over 15% of the area is involved in landsliding)	51
	Low landslide incidence (less than 1.5% of the area is involved)	7
	Moderate landslide incidence (1.5-15% of the area is involved)	610
Lake Hughes, Gorman, West of Lancaster	High landslide incidence (over 15% of the area is involved in landsliding)	14
	Low landslide incidence (less than 1.5% of the area is involved)	14,531
	Moderate landslide incidence (1.5-15% of the area is involved)	729
Lake Los Angeles/Llano/Valyermo/Littlerock	Low landslide incidence (less than 1.5% of the area is involved)	14,461
	Moderate landslide incidence (1.5-15% of the area is involved)	427
Lancaster Northeast	Low landslide incidence (less than 1.5% of the area is involved)	6,794
Total		**43,100**

3.6.3 THRESHOLDS OF SIGNIFICANCE

The potential for the proposed initiative to result in impacts to public services was analyzed in relation to the questions contained in Appendix G of the State CEQA Guidelines. Would the proposed initiative:

a. Violate any water quality standards or waste discharge requirements?

b. Substantially deplete groundwater supplies or interfere with groundwater recharge leading to a net deficit in aquifer volume or a lowering of the local groundwater table level (i.e., the production rate of preexisting nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?

c. Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation either on site or off site?

d. Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river or substantial increase in the rate or amount of surface runoff in a manner that would result in flooding either on site or off site?

e. Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

f. Otherwise substantially degrade water quality?

g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map, or other flood hazard delineation map?

h. Place structures within a 100-year flood hazard area that would impede or redirect flood flows?

i. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

j. Result in inundation by seiche, tsunami, or mudflow?

3.6.4 IMPACT ANALYSIS

IMPACT HYDRO-1: Violate Any Water Quality Standards or Waste Discharge Requirements?

Water Quality Standards

The development of single-family residences in the hauled water study area would be expected to contribute to significant direct, indirect, and cumulative impacts on violations of water quality standards because the study area is characterized by having minimal or no stormwater drainage facilities and County's LID ordinance does not require a specific reduction in pollutant discharges (Appendix G). Large areas of the proposed initiative study area not served by stormwater drainage, conveyance, or detention facilities. Therefore, the direct, indirect and cumulative impacts of the proposed initiative on water quality from the potential violation of water quality standards established in the Water Basin Plan consisting of four (4) or fewer residential units shall implement at least two (2) LID BMP alternatives listed in the LID Standards Manual. Additionally, the County LID Ordinance requires the property owner to maintain 200 gallons of infiltration by use of the LID BMPs.

At build-out, the issuance of 184 building permits per year within the proposed initiative area, at an average of 3.5 people per household, would likely result in an annual population increase of 644 per year, or up to 12,880 additional people from the single-family residential development of the 3,680 subject parcels that would be expected to be developed during the 2015–2035 planning period. This increase would add new pollutants to the stormwater runoff, such as metals from

vehicles and pesticides from landscape care. To determine the impact of the proposed initiative on existing conditions, the increased runoff from each parcel and potential impact to impaired water bodies was estimated.

LA County's LID Standards Manual requires developments to manage stormwater runoff. Developments are categorized as Designated or Non-Designated. The single-family homes proposed to be developed in the proposed initiative would be categorized as Small-Scale Non-Designated Projects based on the assumption that they are developed individually. Small-Scale Non-Designated Projects are required to implement at least two County approved BMPs. The BMPs can be used to retain stormwater runoff or mitigate pollutant discharges. The County's LID ordinance does not require a specific reduction in pollutant discharges, but it does have requirements on the size of the BMPs in the manual.

BMPs listed for Non-Designated Projects are not required to meet a specific pollutant load reduction or to retain a specified amount of runoff. They are only intended to reduce a development's pollutant load, but not necessarily to reduce all pollutant loads to a pre-development condition; therefore, each development of the Project would have the potential to result in an increase of pollutant discharges. Procedures from the County's LID Standards Manual were followed to determine the difference in the proposed initiative's pre- and post-development runoff volumes and potential pollutant loads.

The rainfall depth from Soledad Canyon, Gage 405 was used to estimate the 85th percentile storm depth for Santa Clarita Valley, and Little Gleason, Gage 1074, for East San Gabriel Mountains, per LA County's Spatial Distribution Analysis of the 85th Percentile 24-hr Rainfall A rainfall depth of 0.75-inches was used for the Antelope Valley since it was greater than the 85th percentile storm for that area. The total runoff volume generated by a general parcel in Antelope Valley, Santa Clarita Valley, and East San Gabriel Mountains for pre- and post-development conditions as required by LA County's LID Standards Manual is listed in Table 3.6.4-1, *Hydrology Results for 85th Percentile of Storm Event*.

TABLE 3.6.4-1
HYDROLOGY RESULTS FOR 85TH PERCENTILE OF STORM EVENT FOR A SINGLE PARCEL

	Storm	Rainfall Depth (inches)	Time of Concentration (minutes)	Peak Flow Rate (cfs)	24-Hour Runoff Volume (AF)
Antelope Valley					
Pre-development	85th Percentile	0.75	30	0.24	0.08
Post-development			30	0.35	0.11
Santa Clarita Valley					
Pre-development	85th Percentile	0.90	30	0.28	0.09
Post-development			30	0.41	0.13
East San Gabriel Mountains					
Pre-development	85th Percentile	1.28	30	0.72	0.13
Post-development			30	0.84	0.18

An increase of 0.04 AF of runoff would result for a typical developed parcel in Santa Clarita, and an increase in runoff of 0.03 AF is expected from a typical developed parcel in Antelope Valley. In the East San Gabriel Mountains, a runoff volume increase of 0.05 AF is expected. Parcels within the East San Gabriel Mountains are spread out and large, and concentrated pollutant loads are not expected to result from this subarea. Each parcel is estimated to produce a slightly increased amount of runoff from the area's 85th percentile rainfall depth. The proposed initiative's parcels would contain new or increased levels of pollutants due to the change in land use from undeveloped to residential. The common pollutants in urban stormwater runoff from single-family residential units and associated access roads are:

- Sediment and Floatables
- Pesticides and Herbicides
- Organic Materials
- Metals (Lead and Zinc)
- Oil and Grease
- Hydrocarbons
- Bacteria and Viruses
- Nitrogen and Phosphorus

Overall, runoff from the proposed initiative would increase relative to existing baseline, ranging from 0.02 AF to 0.05 AF per parcel developed. This increased runoff combined with typical pollutants generated on residential land uses could result in potentially significant water quality impacts to existing water bodies. Although implementation of BMPs, required pursuant to the County's LID Ordinance would reduce impacts, the implementation of two BMPs would not be expected to reduce impacts resulting from the increase in impervious surface and contribution of contaminants from the residential use of the property to below the level of significance. Therefore, the direct, indirect and cumulative impacts of the proposed initiative on water quality from the potential violation of water quality standards established in the Water Basin Plan would be expected to be significant and unavoidable.

Impact to Impaired Water Bodies

Increased runoff from the developed parcels is expected to contain pollutants that, if not treated, can result in a decline in water quality of the receiving water. Specific pollutants have discharge limits if the receiving water they are discharged to is classified as an impaired water body. If the receiving water body is an impaired water body per the Clean Water Act Section 303(d), it has pollutant discharge limits associated with it that are outlined in a National Pollutant Discharge Elimination System (NPDES) permit. Impaired water bodies within Los Angeles County that are near the proposed initiative are listed in Table 3.6.4-2, *Impaired Waters and Pollutants*.

TABLE 3.6.4-2
IMPAIRED WATERS AND POLLUTANTS

Water Body	Pollutant
Pyramid Lake	Mercury
Munz Lake	**Trash**[1]
Littlerock Reservoir	Manganese
Lake Hughes	**Trash**
Elizabeth Lake	Eurotrophic Organic Enrichment/Low Dissolved Oxygen **Trash** pH
Castaic Lake	Mercury
Mint Canyon Creek Reach 1	Nitrate and Nitrite
Piru Creek (from gaging station below Santa Felicia Dam to headwaters)	Chloride pH
Santa Clara River Reach 5 (Blue Cut gaging station to West Pier Hwy 99 Bridge)	Chloride **Coliform** Iron
Santa Clara River Reach 6 (W Pier Hwy 99 to Bouquet Cyn Rd)	Chloride Chlorphyrifos **Coliform**
Santa Clara River Reach 7 (Bouquet Canyon Rd to above Lang Gaging Station)	Chloride **Coliform** Iron

SOURCE: SWCRB, 2011.
[1]Pollutants shown in bold are common pollutants discharged from single-family developments.

There are several impaired water bodies in the region that runoff from proposed initiative development would potentially enter, particularly Elizabeth Lake and several reaches of Upper Santa Clara River. Elizabeth Lake was recorded as an impaired water body due to trash and reaches along Upper Santa Clara River have a TMDL for coliform due to impairments from non-point or unknown sources. The impaired water bodies and their pollutants that may receive runoff from the proposed initiative are listed in Table 3.6.4-2. The pollutants that are impacted by human activities are trash, nitrate and nitrite, coliform, and metals. As shown in Table 3.6.4-2, several of the water bodies that may be impacted by the project have trash and coliform impairments. The developments tributary to those water bodies may worsen the impairments of those water bodies if source control measures are not implemented at each development. Therefore, runoff from the development would cause an impact for these pollutants.

The development of single-family residences would require General Construction Activity Storm Water Permits to be obtained if the development disturbs greater than one acre of land Construction on parcels within the proposed initiative area has the potential to affect the quality of storm water runoff. As runoff picks up pollutants from the ground and carries these pollutants into the drainage system or directly into natural drainages, short-term, construction-related pollution associated with the proposed initiative would result. Parcel development would lead to an increase in stormwater runoff that could carry pollutants to impaired water bodies during (1) handling, storage, and disposal of construction materials containing pollutants; (2) maintenance and operation of construction equipment; and (3) earth-moving activities.

All developed parcels would be classified as Small-Scale Non-Designated Projects and would be required to include two BMPs per County's LID ordinance. While the BMPs would mitigate the

pollutant discharges from each site, they would not eliminate all polluted discharges from a site to mimic the pre-development condition. The impact of the individually developed parcels could potentially impact water quality of downstream water bodies.

IMPACT HYDRO-2: Substantially Deplete Groundwater Supplies or Interfere Substantially with Groundwater Recharge Such That There Would Be a Net Deficit in Aquifer Volume or a Lowering of the Local Groundwater Table Level (e.g., the Production Rate of Pre-existing Nearby Wells Would Drop to a Level That Would Not Support Existing Land Uses or Planned Uses for Which Permits Have Been Granted)?

The proposed initiative would be expected to contribute to depletion of groundwater supplies such that there would be a net deficit in the volume of the three groundwater basins. Antelope Valley Basin, Santa Clara River Basin, and Acton Valley Basin, or lowering the local groundwater table in the hauled water study area, constituting a significant impact. Antelope Valley Basin and Acton Valley Basin underlie the Antelope Valley-East Kern Water Agency (AVEK) service area and Santa Clara River Basin underlies the Castaic Lake Water Agency (CLWA) service area. In the Antelope Valley Basin, the groundwater is fully utilized and would not be able to support new groundwater wells. In the Santa Clara River Basin and Acton Valley Basin, the available groundwater is already accounted for by existing users. Water purveyors with existing groundwater wells can potentially increase their pumping amounts to supply water to the proposed initiative through contracts with other members that have pumping rights.

The amount of available water in a basin is also limited by the groundwater quality. A 2008 USGS publication on groundwater quality in the Antelope Valley Basin found high concentrations of perchlorate that would adversely impact human health at high quantities. Elevated concentrations of metals and trace elements occur in places that may limit ground water use for drinking water because of public health concerns or issues with taste, color, and odor. In the 2008 USGS study, there were 17 trace elements with human health thresholds, and four, arsenic, boron, chromium VI, and vanadium, were found to be over the drinking water limits. Arsenic was found to be over its maximum contaminant level as set by the EPA and adopted by CDPH (MCL-US) in five samples, and three samples contained levels of boron that exceeded its notification level (NL-CA). Four out of 19 wells sampled had concentrations of chromium VI that exceeded its MCL-CA of 10-ug/L.

Due to the contamination problem, there is a possibility that wells in the vicinity of the proposed initiative area would also be contaminated and further reduce the Antelope Valley basin's pumping capacity.

Water supply would be obtained through hauled water from surrounding water districts that utilize a combination of groundwater, imported water, surface water, and other sources. Surrounding water districts describe their groundwater use projections in their 2010 UWMPs, and all of the water districts rely to some extent on groundwater as their main water supply. By providing water to water haulers, it can be reasonably inferred that the districts would increase the amount of water they would obtain from their available sources, which includes groundwater. Additionally, depending on how water haulers are regulated, they may obtain water from local wells that are not managed by a water district, but are owned and operated by a landowner including the water hauler. In this case, there would also be increased groundwater pumping to provide water to the project. Therefore, impact to groundwater supplies from the proposed initiative is anticipated to be significant.

IMPACT HYDRO-3: Substantially Alter the Existing Drainage Pattern of the Site or Area, Including through the Alteration of the Course of a Stream or River, in a Manner That Would Result in Substantial Erosion or Siltation On or Off Site?

The proposed initiative is expected to result in less than significant impacts associated with hydrology and water quality in relation to altering the existing natural drainage pattern within the seven subareas. The issuance of 184 building permits with the proposed initiative area, at an average of 3.5 people per household, would likely result in an annual population increase of 644 per year, or up to 12,880 additional people from the single-family residential development of the 3,680 subject parcels that would be expected to be developed during the 2015–2035 planning period. A total of 6,567 parcels have blue-line drainages that are afforded protection pursuant to Section 404 of the Federal CWA and Section 1600 of the State Fish and Game Code, thus presenting the potential to substantially alter the existing drainage pattern in each of the seven subareas. The alteration of "waters of the United States" and "waters of the State" is subject to the regulatory authority of the USACOE and the CDFW, respectively. These agencies require a demonstration of no net loss of habitat values or function, prior to issuing a permit, or authorizing an activity to proceed under one of the existing nationwide permits. In addition, the alteration of drainages is inconsistent with land use goals, objectives, and policies specified by Section 1602 of the State Fish and Game Code, Policy 24 of the County of Los Angeles General Plan, and Policies 109 and 133 of the Antelope Valley Area Plan – Town & Country Plan.[16]

Additionally, given a 20-year planning horizon, it is expected that 3,680 single-family homes would be developed, resulting in approximately 9.2 million square feet of potential impervious surfaces resulting from the residential footprint using and average building square footage of 2,500 square feet. The substantial increase in impervious surfaces would alter existing drainage patterns, and increase the rate or amount of surface runoff. Additionally, Policy 107 and 114 of the Antelope Valley Area Plan – Town & Country Plan, as well the Environmental Resource Policy 11 of the Santa Clarita Valley Area Plan, discourage development that would affect drainage patterns and increase erosion and siltation.

However, as the proposed initiative area is made up of a distributed development pattern of generally nonadjacent parcels, increases in impervious surface would be distributed throughout the proposed initiative area and not be concentrated in one location. Therefore, increases in peak flow due to increased imperviousness would not be concentrated in a single stream or location. To mitigate the increased peak flows from each parcel due to the proposed initiative, mitigation measures would be implemented to reduce this impact, including the preparation of a site-specific drainage plan and the incorporation of BMPs, such as infiltration trenches, in order to attenuate post-construction drainage flows to pre-construction levels.

Two strategies are typically required to prevent materials from entering drainage courses. Amount of exposed soil is typically limited, and erosion control procedures are implemented for those areas that must be exposed. Appropriate dust suppression techniques, such as watering or tarping, are used in areas that must be exposed. Standard mitigation strategies for controlling fugitive dust emissions, such as covering truck loads and street sweeping, are also effective in controlling erosion and migration of pollutants. Erosion control devices, including temporary diversion dikes/berms, drainage swales, and siltation basins, are typically required around construction areas

[16] County of Los Angeles Department of Regional Planning. 16 June 2015. Antelope Valley Area Plan – Town & Country. Available online at: http://planning.lacounty.gov/tnc/documents/

to ensure that sediment is trapped and properly removed. When properly designed and implemented, these BMPs would ensure that short-term construction related water quality impacts would be less than significant.

IMPACT HYDRO-4: Substantially Alter the Existing Drainage Pattern of the Site or Area, Including through the Alteration of the Course of a Stream or River, or Substantially Increase the Rate or Amount of Surface Runoff in a Manner That Would Result in Flooding On Site or Off Site?

The issuance of 184 building permits with the proposed initiative area, at an average of 3.5 people per household, would likely result in an annual population increase of 644 per year, or up to 12,880 additional people from the single-family residential development of the 3,680 subject parcels that would be expected to be developed during the 2015–2035 planning period. A total of 6,567 parcels are located within existing drainage areas, thus presenting the potential to substantially alter the existing drainage pattern. The alteration of "waters of the United States" and "waters of the State" is subject to the regulatory authority of the USACOE and the CDFW, respectively. These agencies require a demonstration of no net loss of habitat values or function, prior to issuing a permit. In addition, the alteration of drainages is inconsistent with land use goals, objectives and policies specified by Section 1602 of the State Fish and Game Code, Policy 24 of the County of Los Angeles General Plan, and Policies 109 and 133 of the 1986 Antelope Valley Areawide General Plan. Standard NPDES requirements or BMPs would need to be employed to offset the increased runoff. Conformance with regulatory measures would reduce and avoid impacts. In addition, through the Building and Safety drainage review process, the developer of the single-family residence must demonstrate that there can be no substantial increase in storm water velocities or quantity downstream of the structure therefore, impacts would be less than significant.

IMPACT HYDRO-5: Create or Contribute Runoff Water That Would Exceed the Capacity of Existing or Planned Stormwater Drainage Systems or Providing Substantial Additional Sources of Polluted Runoff?

The proposed initiative would generate stormwater runoff in an area not currently served by an existing or planned stormwater drainage system. There are no existing stormwater drainage facilities in the proposed initiative study area. Construction of single-family residences throughout the proposed initiative area would increase impervious surfaces in each of the seven subareas and result in increased stormwater runoff. Stormwater drainage systems may be needed to divert stormwater flow from the properties. Property developers would have to consult the County Department of Public Works' Land Development Division to determine if new stormwater drainage facilities are required. Individual single-family residential developments may not be required to install stormwater drainage facilities. In aggregate, as developments occur, stormwater runoff would increase within the drainage areas. At that time, the local agency may elect to construct stormwater drainage facilities to prevent erosion and local flooding from the increased runoff. The increase in impervious surfaces could result in increased pollutants in surface runoff. New development as a result of the proposed initiative would consist of single-family residences and accessory structures and the pollutants resulting from this land use. All of the individual developments would be categorized as Small-Scale Non-Designated Projects by the County LID Standards Manual. Approved BMPs in the County LID Standards Manual are required to reduce the increased pollutant loads, but are not required to treat a specific size storm or to retain all of a development's stormwater runoff. However, through the Building and Safety drainage review process, the developer of the single-family residence must demonstrate that there can be no

substantial increase in storm water velocities or quantity downstream of the structure. Therefore, impacts would be less than significant.

IMPACT HYDRO-6: Otherwise Substantially Degrade Water Quality?

The proposed initiative would be expected to substantially degrade water quality in the hauled water study area, constituting a significant impact. The issuance of 184 building permits per year within the proposed initiative area, at an average of 3.5 people per household, would likely result in an annual population increase of 644 per year, or up to 12,880 additional people from the single-family residential development of the 3,680 subject parcels that would be expected to be developed during the 2015–2035 planning period. A total of 6,567 parcels are located within existing drainage areas, thus presenting the potential to degrade water quality.

IMPACT HYDRO-7: Place Housing within a 100-Year Flood Hazard Area as Mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or Other Flood Hazard Delineation Map?

The proposed initiative has the potential to result in significant impacts to hydrology and water quality in relation to placement of housing within a 100-year flood hazard area. Approximately 13,502 of the 42,872 parcels are located in a FEMA flood hazard area. Based on the 2012 average single-family residence household size of 3.5 people in unincorporated Los Angeles County and a reasonable worst-case scenario of development of 3,680 parcels, up to 12,880 people would be at risk for living in a flood hazard zone, depending on where development occurred. However, through the Building and Safety drainage review process, the developer of the single-family residence must demonstrate that all buildings and structures have been designed to withstand a 100-year flood event. In addition, there can be no substantial increase in storm water velocities or quantity downstream of the structure Therefore, impacts would be less than significant.

IMPACT HYDRO-8: Place within a 100-Year Flood Hazard Area Structures That Would Impede or Redirect Flood Flows?

The proposed initiative has the potential to place structures, including single-family residences and appurtenant structures such as roads, water towers, fences, garages, and outbuildings, within the 100-year Flood Hazard Area that would impede or redirect flood flows, constituting a significant impact. Several parts of the proposed initiative area are located in the boundaries of 100-year flood zones. The subareas of Lake Hughes/Gorman/West of Lancaster, Lancaster Northeast, and Lake Los Angeles/Llano/Valyermo/Littlerock include over 1,000 parcels within a FEMA Flood Zone A, which are areas that would be inundated by the one percent-annual-chance flood event (100-year storm). The flood zone within the Lake Hughes/Gorman/West of Lancaster subarea has an approximate volume of 967,680 AF, and the estimated additional runoff generated from a 100-year design storm from the Lake Hughes/Gorman/West of Lancaster subarea of 2,880 AF, which is about 0.2 percent of the flood zone volume, is not expected to have a significant impact on the existing flood zone.

Parcels within the Lancaster Northeast and Lake Los Angeles/Llano/Valyermo/Littlerock subareas are located within two large flood zones that are east of Palmdale and follow Rock Creek Wash from the San Gabriel Mountains to Edwards Air Force Base. The flood zones are about 20 to 25 miles long and vary from 0.5 to 2.5 miles in width. An estimate of the flood zones volumes was done by determining their areas and average depth in GIS based on National Park Service's USA topography data set.

- The west flood zone is estimated to have a surface area of 20,400 acres and an average depth of 10 feet for a total volume of 204,000 AF.

- The east flood zone is estimated to have an approximate surface area of 47,600 acres and an approximate average depth of 5 feet for a total volume of 238,000 AF.

The expected increase in runoff produced by a 100-year design storm from the Lancaster Northeast and Lake Los Angeles/Llano/Valyermo/Littlerock subareas is about 3,355 AF, which could result in an approximately 0.7 percent increase in the total volume of the east and west flood zones. This could increase the boundaries of the two existing flood zones, particularly where there is high concentration of development directly south of Edwards Air Force Base.

There are no large flood zones within the Santa Clarita Valley, but small flood zones are spread throughout the region. A flood zone exists around the flood plain of Santa Clara River, and some parts of the proposed initiative area are located within that flood plain. The branches of the Santa Clara River in which developments from the proposed initiative are proposed, particularly in the San Gabriel Mountains near Acton and Agua Dulce, would potentially increase as a result of the development. A portion of the northwest section of the Lake Hughes/Gorman/West of Lancaster subarea is situated above Quail Lake, which is a designated flood zone. Quail Lake has an approximate capacity of 7,580 AF, and the proposed initiative's development in this area would produce approximately 40 AF of runoff after a 100-year design storm. The projected runoff from the development is about one percent of the lake's total capacity; therefore, the proposed initiative could potentially result in an increase of the lake's flood zone boundary. A road exists on the south side of the lake at an elevation about 10 feet higher than the lake, and the increased proposed initiative runoff is not expected to have an impact on this road. Quail Lake is a storage reservoir for the west branch of the California Aqueduct, and measures should be taken to protect the lake.

Overall, the proposed initiative's hydrological impact on the area would impact the area's natural drainage and has the potential to expand existing flood zones by small amounts. The level of impact would vary by subarea. The dry lakes in the Antelope Valley Northeast subarea have the highest potential to be impacted by the proposed initiative since the majority of the runoff within Antelope Valley flows toward them. However, through the Building and Safety drainage review process, the developer of the single-family residence must demonstrate that all buildings and structures have been designed to withstand a 100-year flood event. In addition, there can be no substantial increase in storm water velocities or quantity downstream of the structure Therefore, impacts would be less than significant.

IMPACT HYDRO-9: Expose People or Structures to a Significant Risk of Loss, Injury, or Death Involving Flooding, Including Flooding as a Result of the Failure of a Levee or Dam?

The proposed initiative has the potential to expose people or structures to a significant risk of loss, injury, or death as a result of the failure of a levee or dam, as some parcels are located downstream of such facilities, constituting a significant impact. The Castaic Reservoir is within the proposed initiative study area, and approximately 34 parcels are downslope from the Castaic Reservoir dam. Potential failure of the Castaic Reservoir dam could expose people or structures to a significant risk of loss, injury, or death involving flooding. Furthermore, portions of the proposed initiative are located primarily in areas of hilly topography. It is anticipated that the proposed initiative would expose people or structures to a significant risk of loss, injury, or death due to mudflows. Therefore, the consideration of mitigation measures is required.

IMPACT HYDRO-10: Inundation by Seiche, Tsunami, or Mudflow?

The proposed initiative would not be expected to expose people or property to inundation by seiche, tsunami or mudflow. Seiche and tsunamis are the result of tectonic activity, such as an earthquake. A seiche is an oscillation of the surface of a landlocked body of water that can create a hazard to persons and structures on and in the vicinity of the water. A tsunami is a long-period, high-velocity tidal surge that can result in a series of very low (trough) and high (peak) sea levels, with the potential to inundate areas up to several miles from the coast, creating hazards to people or structures from loss, injury, or death. Most of the hazards created by a tsunami come when a trough follows the peak, resulting in a rush of sea water back into the ocean. A mudflow is a moving mass of soil-made fluid by a loss of shear strength, generally as a result of saturation from rain or melting snow. As such, the proposed initiative is not expected to increase the risk and hazard to individuals residing within unincorporated areas that lie within the vicinity of coastal waters of being subject to a seiche or tsunami. Therefore, implementation of the proposed initiative would not be expected to result in significant impacts to hydrology and water quality in relation to seiche, tsunamis, and mudflows.

3.6.5 CUMULATIVE IMPACTS

The incremental impact of the proposed initiative, when considered with the related past, present, or reasonably foreseeable, probable future projects including but not limited to the Town of Centennial, the High Desert Corridor Project, the Newhall Ranch Specific Plan, and the Northlake Specific Plan , would be expected to cause a significant cumulative impact to hydrology and water quality.

IMPACT HYDRO-1: Violate Any Water Quality Standards or Waste Discharge Requirements?

The incremental impact of the proposed initiative, when considered with the related past, present, or reasonably foreseeable, probable future projects including but not limited to the Town of Centennial, the High Desert Corridor Project, the Newhall Ranch Specific Plan, and the Northlake Specific Plan, would be expected to cause a significant cumulative impact to hydrology and water quality in relation to the violation of water quality standards and waste discharge requirements. Pursuant to the County LID Ordinance, a development project consisting of four (4) or fewer residential units shall implement at least two (2) LID BMP alternatives listed in the LID Standards Manual. Additionally, the County LID Ordinance requires the property owner to maintain 200 gallons of infiltration by use of the LID BMPs. The County-required BMPs would lessen the impact of each development, but each development would still discharge increased runoff and pollutants that would impact the existing area's hydrology and water quality. Larger projects would be required to comply with the provisions of the LID Standards Manual for large developments. However, impacts would remain significant.

IMPACT HYDRO-2: Substantially Deplete Groundwater Supplies or Interfere Substantially with Groundwater Recharge Such That There Would Be a Net Deficit in Aquifer Volume or a Lowering of the Local Groundwater Table Level (e.g., the Production Rate of Pre-existing Nearby Wells Would Drop to a Level That Would Not Support Existing Land Uses or Planned Uses for Which Permits Have Been Granted)?

The incremental impact of the proposed initiative, when considered with the related past, present, or reasonably foreseeable, probable future projects including but not limited to the Town of Centennial, the High Desert Corridor Project, the Newhall Ranch Specific Plan, and the Northlake

Specific Plan, would be expected to cause a significant cumulative impact to hydrology and water quality in relation to the depletion of groundwater supplies and groundwater recharge. The proposed initiative would be expected to contribute to depletion of groundwater supplies such that there would be a net deficit in the volume of the three groundwater basins Antelope Valley Basin, Santa Clara River Basin, and Acton Valley Basin, or lowering the local groundwater table in the hauled water study area, constituting a significant impact. Therefore, the proposed Initiative would result in significant cumulative impacts to hydrology and water quality in relation to the depletion of groundwater supplies and groundwater recharge.

IMPACT HYDRO-3: Substantially Alter the Existing Drainage Pattern of the Site or Area, Including through the Alteration of the Course of a Stream or River, in a Manner That Would Result in Substantial Erosion or Siltation On or Off Site?

The incremental impact of the proposed initiative, when considered with the related past, present, or reasonably foreseeable, probable future projects including but not limited to the Town of Centennial, the High Desert Corridor Project, the Newhall Ranch Specific Plan, and the Northlake Specific Plan , would be expected to cause a less than significant cumulative impacts to hydrology and water quality in relation to altering the drainage pattern or course of a stream or river or resulting in substantial erosion or siltation on-or off-site. Pursuant to the County LID Ordinance, a development project consisting of four (4) or fewer residential units shall implement at least two (2) LID BMP alternatives listed in the LID Standards Manual. Additionally, the County LID Ordinance requires the property owner to maintain 200 gallons of infiltration by use of the LID BMPs. The Building and Safety draining review process requires that the developer of a single family residence demonstrate that there will be no substantial increase in storm water velocities or quantity downstream of the structure. Therefore, the proposed Initiative would result in less than significant cumulative impacts to hydrology and water quality in relation to altering the drainage pattern or course of a stream or river or resulting in substantial erosion or siltation on or off site.

IMPACT HYDRO-4: Substantially Alter the Existing Drainage Pattern of the Site or Area, Including through the Alteration of the Course of a Stream or River, or Substantially Increase the Rate or Amount of Surface Runoff in a Manner That Would Result in Flooding On Site or Off Site?

The incremental impact of the proposed initiative, when considered with the related past, present, or reasonably foreseeable, probable future projects including but not limited to the Town of Centennial, the High Desert Corridor Project, the Newhall Ranch Specific Plan, and the Northlake Specific Plan , would be expected to cause a significant cumulative impact to hydrology and water quality in relation to substantially altering existing drainage patterns, altering the course of a stream or river, or increasing the rate or amount of surface runoff that would result in flooding on- or off-site. Pursuant to the County LID Ordinance, a development project consisting of four (4) or fewer residential units shall implement at least two (2) LID BMP alternatives listed in the LID Standards Manual. Additionally, the County LID Ordinance requires the property owner to maintain 200 gallons of infiltration by use of the LID BMPs. The Building and Safety draining review process requires that the developer of a single family residence demonstrate that there will be no substantial increase in storm water velocities or quantity downstream of the structure. Therefore, the proposed Initiative would result in less than significant cumulative impacts in relation to substantially altering existing drainage patterns, altering the course of a stream or river, or increasing the rate or amount of surface runoff that would result in flooding on- or off-site.

IMPACT HYDRO-5: Create or Contribute Runoff Water That Would Exceed the Capacity of Existing or Planned Stormwater Drainage Systems or Providing Substantial Additional Sources of Polluted Runoff?

The incremental impact of the proposed initiative, when considered with the related past, present, or reasonably foreseeable, probable future projects including but not limited to the Town of Centennial, the High Desert Corridor Project, the Newhall Ranch Specific Plan, and the Northlake Specific Plan, would be expected to result in less than significant impacts to hydrology and water quality in relation to creating or contributing to runoff water that would exceed the capacity of existing or planned stormwater drainage systems or providing substantial additional sources of polluted runoff.

Pursuant to the County LID Ordinance, a development project consisting of four (4) or fewer residential units shall implement at least two (2) LID BMP alternatives listed in the LID Standards Manual. Additionally, the County LID Ordinance requires the property owner to maintain 200 gallons of infiltration by use of the LID BMPs. The Building and Safety draining review process requires that the developer of a single family residence demonstrate that there will be no substantial increase in storm water velocities or quantity downstream of the structure. Therefore, the proposed initiative would result in less than significant cumulative impacts to hydrology and water quality in relation to creating or contributing to runoff water that would exceed the capacity of existing or planned stormwater drainage systems or providing substantial additional sources of polluted runoff.

IMPACT HYDRO-6: Otherwise Substantially Degrade Water Quality?

The incremental impact of the proposed initiative, when considered with the related past, present, or reasonably foreseeable, probable future projects including but not limited to the Town of Centennial, the High Desert Corridor Project, the Newhall Ranch Specific Plan, and the Northlake Specific Plan, would be expected to cause a significant impact to hydrology and water quality in relation to otherwise substantially degrading water quality. Pursuant to the County LID Ordinance, a development project consisting of four (4) or fewer residential units shall implement at least two (2) LID BMP alternatives listed in the LID Standards Manual. Additionally, the County LID Ordinance requires the property owner to maintain 200 gallons of infiltration by use of the LID BMPs. The County required BMPs would lessen the impact of each development, but each development would still discharge increased runoff and pollutants that would impact the existing area's hydrology and water quality. Therefore, the proposed Initiative would result in significant cumulative impacts to hydrology and water quality in relation to otherwise substantially degrading water quality.

IMPACT HYDRO-7: Place Housing within a 100-Year Flood Hazard Area as Mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or Other Flood Hazard Delineation Map?

The incremental impact of the proposed initiative, when considered with the related past, present, or reasonably foreseeable, probable future projects including but not limited to the Town of Centennial, the High Desert Corridor Project, the Newhall Ranch Specific Plan, and the Northlake Specific Plan, would be expected to result in less than significant impacts to hydrology and water quality in relation to placing housing within a 100-year flood hazard area as mapped on a federal flood hazard boundary or flood insurance rate map or other flood hazard delineation map. A total of 13,500 of the 42,867 Initiative parcels, or 31 percent, are within a FEMA flood insurance hazard zone. As a result, there is the potential to place housing within a 100-year flood hazard area.

However, through the Building and Safety drainage review process, the developer of the single-family residence must demonstrate that all buildings and structures have been designed to withstand a 100-year flood event. In addition, there can be no substantial increase in storm water velocities or quantity downstream of the structure.. Therefore, the proposed Initiative would result in less than significant cumulative impacts to hydrology and water quality in relation to placing housing within a 100-year flood hazard area as mapped on a federal flood hazard boundary or flood insurance rate map or other flood hazard delineation map.

IMPACT HYDRO-8: Place within a 100-Year Flood Hazard Area Structures That Would Impede or Redirect Flood Flows?

The incremental impact of the proposed initiative, when considered with the related past, present, or reasonably foreseeable, probable future projects including but not limited to the Town of Centennial, the High Desert Corridor Project, the Newhall Ranch Specific Plan, and the Northlake Specific Plan , would be expected to result in less than significant impacts to hydrology and water quality in relation to the placement of structures that would impede or redirect flood flows within a 100-year flood hazard area. A total of 13,500 of the 42,867 Initiative parcels, or 31 percent, are within a FEMA flood insurance hazard zone. As a result, there is the potential to place housing within a 100-year flood hazard area. However, through the Building and Safety drainage review process, the developer of the single-family residence must demonstrate that all buildings and structures have been designed to withstand a 100-year flood event. In addition, there can be no substantial increase in storm water velocities or quantity downstream of the structure. Therefore, the proposed Initiative would result in less than significant cumulative impacts to hydrology and water quality in relation to the placement of structures that would impede or redirect flood flows within a 100-year flood hazard area.

IMPACT HYDRO-9: Expose People or Structures to a Significant Risk of Loss, Injury, or Death Involving Flooding, Including Flooding as a Result of the Failure of a Levee or Dam?

The incremental impact of the proposed initiative, when considered with the related past, present, or reasonably foreseeable, probable future projects including but not limited to the Town of Centennial, the High Desert Corridor Project, the Newhall Ranch Specific Plan, and the Northlake Specific Plan , would be expected to cause a significant impact to hydrology and water quality in relation to the exposure of people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam. The proposed initiative has the potential to expose people or structures to a significant risk of loss, injury, or death as a result of the failure of a levee or dam. A total of 13,500 of the 42,867 Initiative parcels, or 31 percent, are within a FEMA flood insurance hazard zone. Some Initiative parcels are located downstream of existing levees or dams, constituting a significant impact. The Castaic Reservoir is within the proposed initiative study area, and approximately 34 parcels are downslope from the Castaic Reservoir dam. Potential failure of the Castaic Reservoir dam could expose people or structures to a significant risk of loss, injury, or death involving flooding. Furthermore, portions of the proposed initiative are located primarily in areas of hilly topography. It is anticipated that the proposed initiative would expose people or structures to a significant risk of loss, injury, or death due to mudflows. The County LID ordinance does not require measures to decrease flood risk. New roads that would be constructed as a result of the proposed initiative would also increase the area's flood risk since they are only required to adhere to the County LID standards manual and USEPA's Green Streets 26 without a specific retention standard to mimic pre-development hydrology. Without flood control facilities, the existing flood plain could be increased due to the new developments. Therefore, the proposed Initiative would result in significant cumulative

impacts to hydrology and water quality in relation to the exposure of people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.

IMPACT HYDRO-10: Inundation by Seiche, Tsunami, or Mudflow?

The incremental impact of the proposed initiative, when considered with the related past, present, or reasonably foreseeable, probable future projects including but not limited to the Town of Centennial, the High Desert Corridor Project, the Newhall Ranch Specific Plan, and the Northlake Specific Plan , would be expected to result in less than significant impacts in relation to the exposure of people or property to inundation by seiche, tsunami or mudflow. Seiche and tsunamis are the result of tectonic activity, such as an earthquake. A seiche is an oscillation of the surface of a landlocked body of water that can create a hazard to persons and structures on and in the vicinity of the water. A tsunami is a long-period, high-velocity tidal surge that can result in a series of very low (trough) and high (peak) sea levels, with the potential to inundate areas up to several miles from the coast, creating hazards to people or structures from loss, injury, or death. Most of the hazards created by a tsunami come when a trough follows the peak, resulting in a rush of sea water back into the ocean. A mudflow is a moving mass of soil-made fluid by a loss of shear strength, generally as a result of saturation from rain or melting snow. As such, the proposed initiative is not expected to increase the risk and hazard to individuals residing within unincorporated areas that lie within the vicinity of coastal waters of being subject to a seiche or tsunami. Therefore, the proposed Initiative would result in less than significant cumulative impacts to hydrology and water quality impacts in relation to the exposure of people or property to inundation by seiche, tsunami or mudflow.

3.6.6 MITIGATION MEASURES

A number of potential mitigation measures were evaluated in which County development standards currently reserved for larger developments would be applied to the individual single-family residential developments that would occur as a result of the proposed initiative.

IMPACT HYDRO-1: Violate Any Water Quality Standards or Waste Discharge Requirements?

No feasible mitigation measures have been identified.

IMPACT HYDRO-2: Substantially Deplete Groundwater Supplies or Interfere Substantially with Groundwater Recharge Such That There Would Be a Net Deficit in Aquifer Volume or a Lowering of the Local Groundwater Table Level (e.g., the Production Rate of Pre-existing Nearby Wells Would Drop to a Level That Would Not Support Existing Land Uses or Planned Uses for Which Permits Have Been Granted)?

No feasible mitigation measures have been identified.

IMPACT HYDRO-3: Substantially Alter the Existing Drainage Pattern of the Site or Area, Including through the Alteration of the Course of a Stream or River, in a Manner That Would Result in Substantial Erosion or Siltation On or Off Site?

The consideration of mitigation measures is not required.

IMPACT HYDRO-4: Substantially Alter the Existing Drainage Pattern of the Site or Area, Including through the Alteration of the Course of a Stream or River, or Substantially Increase the Rate or Amount of Surface Runoff in a Manner That Would Result in Flooding On Site or Off Site?

The consideration of mitigation measures is not required.

IMPACT HYDRO-5: Create or Contribute Runoff Water That Would Exceed the Capacity of Existing or Planned Stormwater Drainage Systems or Providing Substantial Additional Sources of Polluted Runoff?

The consideration of mitigation measures is not required.

IMPACT HYDRO-6: Otherwise Substantially Degrade Water Quality?

No feasible mitigation measures have been identified.

IMPACT HYDRO-7: Place Housing within a 100-Year Flood Hazard Area as Mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or Other Flood Hazard Delineation Map?

The consideration of mitigation measures is not required.

IMPACT HYDRO-8: Place within a 100-Year Flood Hazard Area Structures That Would Impede or Redirect Flood Flows?

The consideration of mitigation measures is not required.

IMPACT HYDRO-9: Expose People or Structures to a Significant Risk of Loss, Injury, or Death Involving Flooding, Including Flooding as a Result of the Failure of a Levee or Dam?

No feasible mitigation measures have been identified.

IMPACT HYDRO-10: Inundation by Seiche, Tsunami, or Mudflow?

The consideration of mitigation measures is not required.

3.6.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The proposed initiative would result in an increase in stormwater runoff for the area since the existing area is undeveloped. The development would consist of low-density single-family homes and would be expected to increase the runoff of each developed parcel by about 26 percent to 48 percent. At build-out, each subarea is projected to increase its stormwater runoff by an average of about 26 percent, with the highest increase of 31 percent estimated for the Lake Hughes/Gorman subarea. Developed parcels would not be concentrated in one location, and there would be open space between most parcels. The open space between each parcel would not be developed and would not be expected to increase runoff flow. Additional runoff produced by the development would impact the area's existing drainage patterns increase flood plain size, increase volumes and peak flows within flood control channels and natural waterways, increase pollutant loads to receiving waters, and reduce water quality within receiving waters.

IMPACT HYDRO-1: Violate Any Water Quality Standards or Waste Discharge Requirements?

As part of the County of Los Angeles Department of Public Works, Building and Safety Division plan check and agency referral process, and the Department of Regional Planning Site Plan Review Application, property owners that have been determined to be eligible to develop properties using hauled water as the primary source of potable water would be notified of the requirement to comply with the County's LID Ordinance, requiring the use of two Best Management Practices (please see EIR Appendix C, *Regulatory Measures*). Although implementation of BMPs, required pursuant to the County's LID Ordinance would reduce impacts, the implementation of two BMPs would not be expected to reduce impacts resulting from the increase in impervious surface and contribution of contaminants from the residential use of the property to below the level of significance. Therefore, the direct, indirect and cumulative impacts of the proposed initiative on water quality from the potential violation of water quality standards established in the Water Basin Plan would be expected to be **significant and unavoidable**.

IMPACT HYDRO-2: Substantially Deplete Groundwater Supplies or Interfere Substantially with Groundwater Recharge Such That There Would Be a Net Deficit in Aquifer Volume or a Lowering of the Local Groundwater Table Level (e.g., the Production Rate of Pre-existing Nearby Wells Would Drop to a Level That Would Not Support Existing Land Uses or Planned Uses for Which Permits Have Been Granted)?

There are no feasible mitigation measures to avoid or reduce impacts for this issue area. Therefore, the direct, indirect and cumulative impacts of the proposed initiative on water quality from the potential to substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level would be expected to be **significant and unavoidable**.

IMPACT HYDRO-3: Substantially Alter the Existing Drainage Pattern of the Site or Area, Including through the Alteration of the Course of a Stream or River, in a Manner That Would Result in Substantial Erosion or Siltation On or Off Site?

As part of the County of Los Angeles Department of Public Works, Building and Safety Division plan check and agency referral process and the Department of Regional Planning Site Plan Review Application, property owners that have been determined to be eligible to develop properties using hauled water as the primary source of potable water would be notified of the requirement to comply with the County's LID Ordinance, requiring the use of two Best Management Practices (please see EIR Appendix C, *Regulatory Measures*). Through the Building and Safety drainage review process, the developer of the single-family residence must demonstrate that there can be no substantial increase in storm water velocities or quantity downstream of the structure. Therefore, the direct, indirect and cumulative impacts of the proposed initiative on hydrology and water quality in relation to altering the existing natural drainage pattern within the seven subareas would be expected to be **less than significant.**

IMPACT HYDRO-4: Substantially Alter the Existing Drainage Pattern of the Site or Area, Including through the Alteration of the Course of a Stream or River, or Substantially Increase the Rate or Amount of Surface Runoff in a Manner That Would Result in Flooding On Site or Off Site?

As part of the County of Los Angeles Department of Public Works, Building and Safety Division plan check and agency referral process and the Department of Regional Planning Site Plan Review

Application, property owners that have been determined to be eligible to develop properties using hauled water as the primary source of potable water would be notified of the requirement to comply with applicable provisions of Sections 401 and 404 of the Federal Clean Water Act, Section 1600 of the State Fish and Game Code, and the County's LID Ordinance that require that there is no net loss of habitat function or value, as the basis for issuance of Lake or Streambed Alteration Agreement (please see EIR Appendix C, *Regulatory Measures*). Therefore, the direct, indirect and cumulative impacts of the proposed initiative on hydrology and water quality in relation to altering the existing natural drainage pattern and increasing the amount of surface runoff within the seven subareas would be expected to be **less than significant**.

IMPACT HYDRO-5: Create or Contribute Runoff Water That Would Exceed the Capacity of Existing or Planned Stormwater Drainage Systems or Providing Substantial Additional Sources of Polluted Runoff?

The proposed initiative would generate stormwater runoff in an area not currently served by an existing or planned stormwater drainage system and has the potential to create additional sources of polluted runoff, constituting a significant impact. As part of the County of Los Angeles Department of Public Works, Building and Safety Division plan check and agency referral process and the Department of Regional Planning Site Plan Review Application, property owners that have been determined to be eligible to develop properties using hauled water as the primary source of potable water would be notified of the requirement to comply with the County's LID Ordinance, requiring the use of two Best Management Practices (please see EIR Appendix C, *Regulatory Measures*). Through the Building and Safety drainage review process, the developer of the single-family residence must demonstrate that there can be no substantial increase in storm water velocities or quantity downstream of the structure. Therefore, the direct, indirect and cumulative impacts of the proposed initiative on hydrology and water quality in relation to the creation or contribution of runoff water that would exceed the capacity of existing or planned stormwater drainage systems or providing substantial additional sources of polluted runoff would be expected to be **less than significant.**

IMPACT HYDRO-6: Otherwise Substantially Degrade Water Quality?

There are no feasible mitigation measures to avoid or reduce impacts for this issue area. As part of the County of Los Angeles Department of Public Works, Building and Safety Division plan check and agency referral process, and the Department of Regional Planning Site Plan Review Application, property owners that have been determined to be eligible to develop properties using hauled water as the primary source of potable water would be notified of the requirement to comply with the County's LID Ordinance, requiring the use of two Best Management Practices (please see EIR Appendix C, *Regulatory Measures*). Therefore, the direct, indirect and cumulative impacts of the proposed initiative on hydrology and water quality in relation to the substantial degradation of water quality would be expected to remain **significant and unavoidable**.

IMPACT HYDRO-7: Place Housing within a 100-Year Flood Hazard Area as Mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or Other Flood Hazard Delineation Map?

As part of the County of Los Angeles Department of Public Works, Building and Safety Division plan check and agency referral process, and the Department of Regional Planning Site Plan Review Application, property owners that have been determined to be eligible to develop properties using hauled water as the primary source of potable water would be notified of the requirement to comply with the Federal Executive Order 11988 the National Flood Insurance Act of 1968 and the

Flood Disaster Protection Act of 1973, requiring conformance with ordinances that meet or exceed FEMA requirements to reduce the risk of flooding (please see EIR Appendix C, *Regulatory Measures*). Therefore, the direct, indirect and cumulative impacts of the proposed initiative on hydrology and water quality in relation of placement of housing within a 100-year flood hazard area would be expected to be **less than significant**.

IMPACT HYDRO-8: Place within a 100-Year Flood Hazard Area Structures That Would Impede or Redirect Flood Flows?

As part of the County of Los Angeles Department of Public Works, Building and Safety Division plan check and agency referral process and the Department of Regional Planning Site Plan Review Application, property owners that have been determined to be eligible to develop properties using hauled water as the primary source of potable water would be notified of the requirement to comply with the Federal Executive Order 11988 the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973, requiring conformance with ordinances that meet or exceed FEMA requirements to reduce the risk of flooding (please see EIR Appendix C, *Regulatory Measures*). Therefore, the direct, indirect and cumulative impacts of the proposed initiative on hydrology and water quality in relation to the placement of structures within a 100-year flood hazard area that would impede or redirect flood flows would be expected to be **less than significant**.

IMPACT HYDRO-9: Expose People or Structures to a Significant Risk of Loss, Injury, or Death Involving Flooding, Including Flooding as a Result of the Failure of a Levee or Dam?

There are no feasible mitigation measures to avoid or reduce impacts for this issue area. The proposed initiative has the potential to expose people or structures to a significant risk of loss, injury, or death as a result of the failure of a levee or dam, as some parcels are located downstream of such facilities. Therefore, the direct, indirect and cumulative impacts of the proposed initiative on hydrology and water quality in relation to the exposure of people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam would be expected to remain **significant and unavoidable**.

IMPACT HYDRO-10: Inundation by Seiche, Tsunami, or Mudflow?

The consideration of mitigation measures is not required, and impacts would be **less than significant**.

SECTION 3.7
LAND USE AND PLANNING

As a result of the Initial Study,[1] the County of Los Angeles (County) determined that implementation of the Single-Family Residential Hauled Water Initiative for New Development (proposed initiative) would have the potential to result in significant impacts related to land use and planning. Therefore, this issue has been carried forward for detailed analysis in this Environmental Impact Report (EIR). This analysis was undertaken to identify opportunities to avoid, reduce, or otherwise mitigate potential significant impacts from land use and planning and to identify potential alternatives.

The analysis of land use and planning consists of a summary of the regulatory framework that guides the decision-making process, a description of the existing conditions for the proposed initiative study area, thresholds for determining if the proposed initiative would result in significant impacts, anticipated impacts (direct, indirect, and cumulative), mitigation measures, and level of significance after mitigation.

The proposed initiative was evaluated with regard to the Los Angeles County General Plan 2035 ,[2] Los Angeles County Zoning Ordinance,[3] the 2015 Antelope Valley Area Plan – Town & Country,[4] the 2012 Santa Clarita Valley Area Plan,[5] Los Angeles County Department of Public Health Bureau of Environmental Protection Drinking Water Program,[6] the State of California Department of Health Services as related to potable drinking water standards and regulations,[7,8] the California Energy Commission, the California Department of Forestry and Fire Protection,[9,10] and the California

[1] County of Los Angeles. September 2014. County of Los Angeles Single-Family Residential Hauled Water Initiative for New Development Initial Study. Prepared by: Sapphos Environmental, Inc.

[2] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County General Plan 2035: Chapter 3: Land Use Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch3.pdf

[3] County of Los Angeles Department of Regional Planning. Accessed 23 May 2014. Los Angeles County, California, Code of Ordinances – Title 22 Planning and Zoning. Available online at: http://library.municode.com/HTML/16274/level1/TIT22PLZO.html

[4] County of Los Angeles Department of Regional Planning. Adopted 16 June 2015. Town & Country - Antelope Valley Plan. Available online at: http://planning.lacounty.gov/tnc/documents/

[5] County of Los Angeles Department of Regional Planning. 2012. Santa Clarita Valley Area Plan. Available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf, Page 3-4, Section IV. Planning Area.

[6] County of Los Angeles Department of Public Health Bureau of Environmental Protection Drinking Water Program. 1 January 2003. Potable Water Availability Requirements for Residential and Commercial Development. Baldwin Park, CA.

[7] California Department of Health Services' Drinking Water Program and the California Conference of Directors of Environmental Health. 19 September 2002. Bulk Hauled Water Policy. Letter to County Planning and Building Departments.

[8] State of California Department of Health Services, Governor Gray Davis, and California Conference of Directors of Environmental Health. 7 February 2003. Re: Federal Safe Drinking Water Act Amendments Affecting Potable Water. Letter to County Planning and Building Departments.

[9] California Department of Forestry and Fire Protection. Accessed 30 July 2015. Wildland Hazard/Building Codes. Available online at: http://calfire.ca.gov/fire_prevention/fire_prevention_wildland.php.

[10] California Board of Forestry. Accessed 30 July 2014. Title 14 – Natural Resources Division 1.5 – Department of Forestry Chapter 7 – Fire Protection Subchapter 2 SRA Fire Safe Regulations Articles 1-5 (SRA Fire Safe Regulations). Available online at: http://www.rsf-fire.org/assets/documents/ordinances/ordinances/SRAFireSafeRegulations.pdf

Department of Fish and Wildlife Natural Community Conservation Planning as related to the Desert Renewable Energy Conservation Plan (DRECP)[11] and the West Mojave Plan.[12]

Definitions

There are several terms used throughout the analysis that are defined here for the benefit of the reader:

Habitat Conservation Plan (HCP): A habitat conservation plan (HCP) is defined by the U.S. Fish and Wildlife Service (USFWS) as a planning document that is normally required as part of an application for an incidental take permit for rare, threatened, or endangered species pursuant to Section 10(1) of the Federal Endangered Species Act. HCPs describe the anticipated effects of the proposed taking, how the impacts will be minimized and mitigated and how the HCP is to be funded.

Land Use Designation: A land use classification with associated land use or management policies. Land use designations are applied to specific areas through the County land use planning processes and culminate in the adoption of a land use element to the General Plan. Some land use designations have been established through legislation (e.g., National Forest) while other designations such as Significant Ecological Areas have been established through policy or planning processes.

Land Use Element: The land use element is one of seven mandatory elements of the General Plan required pursuant to General Land Use Law in California.

Ordinance: A law set forth by a governmental authority. A municipal regulation.[13]

Natural Community Conservation Plan: A Natural Community Conservation Plan (NCCP) is defined by the Natural Community Conservation Planning Act of 1991 to be the state counterpart to the federal HCP. It provides a means of complying with the Natural Community Conservation Planning Act (NCCP Act) and securing take authorization at the State level, to support an incidental take permit pursuant to Section 2081 of the California Endangered Species Act. The primary objective of the NCCP program is to conserve natural communities at the ecosystem scale while accommodating compatible land uses. To be approved by CDFW, an NCCP must provide for the conservation of species and protection and management of natural communities in perpetuity within the area covered by permit.

Significant Ecological Area (SEA): Significant Ecological Areas (SEAs) are ecologically important land and water systems that support valuable habitat and are often essential to the preservation of biological resources. SEAs are areas where the County deems it important to facilitate a balance between development and resource conservation.

Zoning Designation: The regulation of the use of real property by local government, which restricts a particular territory to residential, commercial, industrial, or other uses. The local governing body considers the character of the property as well as its fitness for particular uses. It must enact the regulations in accordance with a well-considered and comprehensive plan intended to avoid arbitrary

[11] California Department of Fish and Wildlife. Accessed 4 June 2014. Natural Community Conservation Planning (NCCP). Available online at http://www.dfg.ca.gov/habcon/nccp/.

[12] U.S. Department of the Interior Bureau of Land Management. March 2006. Available online at: http://www.blm.gov/ca/st/en/fo/cdd/wemo.html

[13] Merriam-Webster. Accessed 31 October 2014. Available online at: http://www.merriam-webster.com/dictionary/ordinance

exercise of government power. A comprehensive plan is a general design to control the use of properties in the entire municipality, or at least in a large portion of it. Individual pieces of property should not be singled out for special treatment. For example, one or two lots may not be placed in a separate zone and subjected to restrictions that do not apply to similar adjoining lands.[14]

3.7.1 REGULATORY FRAMEWORK

The proposed initiative study area is located entirely within unincorporated Los Angeles County, including the 42,867 subject parcels zoned for single-family residential development, which, since January 2003, have not been eligible for building permits where a feasible source of potable water from a water purveyor or groundwater water well could not be demonstrated, because the County does not currently have provisions for recognizing "hauled water" as a reliable source of potable water. This regulatory framework summarizes the federal, State, and local statutes, regulations, and guidance documents that would need to be considered in relation to the consideration of the proposed initiative.

Federal

Endangered Species Act of 1973 (ESA)

The federal ESA was established by Congress in order to "provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved [and] to provide a program for the conservation of such … species." HCPs, established under Section 10(a)(1)(B) of the ESA, are planning documents that provide for partnerships with non-federal parties to conserve the ecosystems upon which listed (and candidate) species depend, ultimately contributing to their recovery. The USFWS requires HCPs as part of an application for an incidental take permit. HCPs describe the anticipated effects of the proposed taking, how those impacts will be minimized or mitigated, and how the HCP is to be funded.

Desert Renewable Energy Conservation Plan (DRECP)

The DRECP is a proposed multispecies HCP/NCCP intended to conserve threatened and endangered species and natural communities and streamline the development of renewable energy projects in the Mojave and Colorado Desert regions of Southern California. The DRECP is focused on the desert regions of the state and adjacent lands in seven counties: Imperial, Inyo, Kern, Los Angeles, Riverside, San Bernardino, and San Diego. The DRECP is divided into two phases: Phase I, which accounts for more than 10 million acres of federal public lands; and Phase II, which accounts for a currently undisclosed amount of non-federal lands. The release of the Final EIS for Phase I occurred in November 2015, and Phase II is currently ongoing. The purpose of the DRECP NCCP/HCP is to provide for orderly development of renewable energy projects in a manner that conserves habitat for federally and State-listed endangered species. The DRECP is both an HCP and a NCCP. NCCPs comply with the State Natural Community Conservation Plan Act and HCPs comply with the federal ESA.[15] The

[14] The Free Dictionary. Accessed 31 March 2014. Available online at: http://legal-dictionary.thefreedictionary.com/Zoning

[15] California Energy Commission. Accessed 1 June 2014. Available online at: http://www.drecp.org/draftdrecp/files/d_Volume_III/III.11_Land_Use_and_Policies.pdf

DRECP identifies National Conservations Lands and designates Areas of Critical Environmental Concern, wildlife allocations, and National Scenic and Historic Trail management corridors.[16]

West Mojave Plan

The West Mojave Plan is an amendment to BLM's California Desert Conservation Area Plan. The plan includes an HCP component that provides a program for complying with the federal ESA on public and private lands within the West Mojave Plan area. Together, the West Mojave Plan and the proposed HCP component cover 9.3 million acres north of the Los Angeles metropolitan area in four counties: Inyo, Kern, Los Angeles, and San Bernardino. The purpose of the plan is to create a comprehensive strategy to conserve and protect almost 100 sensitive desert species and natural communities.[17] The West Mojave Plan and its HCP component have been adopted on public lands and have not been adopted on private lands. The West Mojave Plan currently only applies to a project that has a federal nexus.[18] The West Mojave Plan only applies to a project that has a federal nexus.

State

Executive Order S-03-05

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. Recognizing that California is particularly vulnerable to the impacts of climate change, Executive Order S-3-05 establishes statewide climate change emission reduction targets to reduce carbon dioxide-equivalent (CO_{2e}) to the 2000 level (473 million metric tons) by 2010, to the 1990 level (427 million metric tons of CO_{2e}) by 2020, and to 80 percent below the 1990 level (85 million metric tons of CO_{2e}) by 2050.[19,20] The executive order directs the California Environmental Protection Agency (CalEPA) Secretary to coordinate and oversee efforts from multiple agencies (that is, Secretary of the Business, Transportation, and Housing Agency; Secretary of the Department of Food and Agriculture; Secretary of the Resources Agency; Chairperson of the Air Resources Board; Chairperson of the Energy Commission; and President of the Public Utilities Commission) to reduce greenhouse gas emissions to achieve the target levels. In addition, the CalEPA Secretary is responsible for submitting biannual reports to the governor and state legislature that outline (1) progress made toward reaching the emission targets, (2) impacts of global warming on California's resources, and (3) measures and adaptation plans to mitigate these impacts. To further ensure accomplishment of the targets, the CalEPA Secretary created a Climate Action Team composed of representatives from the aforementioned agencies to implement global warming emission reduction programs and report on the progress made toward meeting the statewide greenhouse gas targets established in this executive order. In December 2005, the first report was released, which stated, "the climate change emission reduction targets [could] be met without adversely affecting the California economy," and "when all [the]

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[16] California Energy Commission. Accessed 1 June 2014. Available online at: http://www.drecp.org/draftdrecp/files/d_Volume_III/III.11_Land_Use_and_Policies.pdf

[17] U.S. Department of the Interior Bureau of Land Management. March 2006. Available at: http://www.blm.gov/ca/st/en/fo/cdd/wemo.html

[18] U.S. Department of the Interior Bureau of Land Management. March 2006. Available at: http://www.blm.gov/ca/st/en/fo/cdd/wemo.html

[19] California Governor. 1 June 2005. Executive Order S-3-05. Sacramento, CA.

[20] California Climate Action Team. 3 April 2006. Climate Action Team Report to Governor Schwarzenegger and the Legislature. Sacramento, CA.

strategies are implemented, those underway and those needed to meet the Governor's targets, the economy will benefit."[21]

Executive Order B-30-15

On April 29, 2015, Governor Brown issued Executive Order B-30-15 that states a new statewide policy goal to reduce GHG emissions 40 percent below their 1990 levels by 2030. The Executive Order establishes Greenhouse Gas emission reduction targets to … reduce emissions to 80 percent below 1990 levels by 2050[,] and sets an interim target of emissions reductions for 2030 as being necessary to guide regulatory policy and investments in California in the midterm, and put California on the most cost-effective path for long-term emissions reductions. The Executive Orders establishes a policy for California of targets as 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050, and orders "[a]ll State agencies with jurisdiction over sources of [GHG] emissions [to] … implement measures, pursuant to statutory authority, to achieve reductions of [GHG] emissions to meet the 2030 and 2050 [GHG] emissions reductions targets." It directs CARB to "update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent." It directs the Natural Resources Agency to update "Safeguarding California" (the State's climate adaptation strategy) every three years, as specified; directs state agencies to "take climate change into account in their planning and investment decisions, and employ full life-cycle cost accounting to evaluate and compare infrastructure investments and alternatives"; and orders the "state's Five-Year Infrastructure Plan [to] take current and future climate change impacts into account in all infrastructure projects." Among its other directives, the Executive Order provides that "State agencies' planning and investment shall be guided by the … principle that priority should be given to actions that both build climate preparedness and reduce GHG emissions.

Global Warming Solutions Act of 2006 (Assembly Bill 32)

AB 32, also known as the Global Warming Solutions Act of 2006, is a California state law that addresses climate change by establishing a comprehensive program to reduce greenhouse gas emissions from all sources throughout the state. AB 32 requires that CARB develop regulations and market mechanisms to reduce California's greenhouse gas emissions to 1990 levels by 2020. To achieve this goal, AB 32 mandates that CARB establish a quantified emissions cap; institute a schedule to meet the cap; implement regulations to reduce statewide greenhouse gas emissions from stationary sources; and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved.

Sustainable Communities Protection Act of 2008 (Senate Bill 375)

SB 375, also known as the Sustainable Communities Protection Act of 2008, outlines strategies for achieving the goals set forth in AB 32. Pursuant to SB 375, SCAG developed a Regional Transportation Plan (RTP) as part of its Sustainable Communities Strategy. As a way to significantly reduce greenhouse gas emissions in the future, the RTP focuses the majority of new housing and job growth in high-quality transit areas and other opportunity areas in existing main streets, downtowns, and commercial corridors, resulting in an improved jobs/housing balance and more opportunity for transit-oriented development.

[21] California Climate Action Team. 3 April 2006. Climate Action Team Report to Governor Schwarzenegger and the Legislature. Sacramento, CA.

State of California Department of Public Health (CDPH) Bulk Hauled Water Policy Advisory Notice

On February 7, 2003, the California State Department of Health Services and the California Conference of Directors of Environmental Health issued an advisory on the use of hauled water as a result of Federal Safe Drinking Water Act amendments. The letter expressed concerns that some new construction was being allowed where the source of the domestic water supply had been identified by the project proponent as hauled water. The letter went on to state, "The use of hauled water for domestic purposes should only be allowed to serve existing facilities where the original supply is no longer adequate due to a loss of quantity or quality and where an approved source cannot be acquired. The Department of Health Services and the Directors of Environmental Health do not support the use of irrigation ditch water, hauled water (from any source), or similar unacceptable sources of water for any new construction and request that this practice be eliminated."[22,23]

Title 14 – Natural Resources Division 1.5 – Department of Forestry Chapter 7 – Fire Protection Subchapter 2 SRA Fire Safe Regulations Articles 1-5 (SRA Fire Safe Regulations)

The SRA Fire Safe Regulations constitute basic wildland fire protection standards of the California Board of Forestry. The regulations were prepared and adopted to establish minimum wildfire protection standards in conjunction with building construction, and development within a State Responsibility Area (SRA).

Section 2800–2835, Natural Community Conservation Planning Act of 1991, as Amended

The Natural Community Conservation Planning Act of 1991, as amended in 2003 (California Fish and Game Code Section 2800-2835) established the Natural Community Conservation Planning program for the protection and perpetuation of the State's biological diversity. The CDFW established the program in order to conserve natural communities at the ecosystem level while accommodating compatible land use. An NCCP identifies and provides for the regional or area-wide protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity. The CDFW provides support, direction, and guidance to participants in order to ensure that NCCPs are consistent with the State ESA.

Regional

Southern California Area of Governments (SCAG) 2012 RTP/SCS

2016–2040 Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS) (2016 RTP/SCS) updates the last adopted 2012 RTP/SCS, last amended in September 2014, by refining goals, objectives, and policies and the list of projects, and extending the planning horizon to 2040. As with the 2012 RTP/SCS, the 2016 RTP/SCS is intended to continue the region's various strategies that improve the balance between land use and transportation and transit systems, both current and future. Pursuant to the federal Safe, Accountable, Flexible, Efficient, Transportation Equity Act – a Legacy for Users (SAFETEA-LU),

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[22] California Department of Health Services' Drinking Water Program and the California Conference of Directors of Environmental Health. 19 September 2002. Bulk Hauled Water Policy. Letter to County Planning and Building Departments.

[23] State of California Department of Health Services, Governor Gray Davis, and California Conference of Directors of Environmental Health. 7 February 2003. Re: Federal Safe Drinking Water Act Amendments Affecting Potable Water. Letter to County Planning and Building Departments.

SCAG shall prepare and update a transportation plan for its metropolitan planning area every four years to ensure that the plan adequately addresses future travel needs and is consistent with the federal Clean Air Act. SCAG is required by federal law to create an RTP that determines the needs of the transportation system and prioritizes proposed transportation projects. The RTP is also necessary to obtain and allocate federal funding for regional transportation projects. SCAG does not implement individual projects in the RTP. As with the 2012 RTP/SCS, the 2016 RTP will include an SCS pursuant to California's Sustainable Communities and Climate Protection Act of 2008 (SB 375). SCAG is preparing the 2016 RTP/SCS in accordance with all relevant federal and state laws. The 2016 RTP/SCS is scheduled for consideration by SCAG's Regional Council for adoption in April 2016.

The SCAG 2012 RTP/SCS goals relevant to the consideration of the proposed initiative are as follows:

> **RTP/SCS G6:** Protect the environment and health for our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking)
> **RTP/SCS G7:** Actively encourage and create incentives for energy efficiency, where possible
> **RTP/SCS G8:** Encourage land use and growth patterns that facilitate transit and non-motorized transportation

Local

Los Angeles County Department of Public Health, Environmental Health, Bureau of Environmental Protection Drinking Water Program Potable Water Availability Requirements for Residential and Commercial Development

On January 1, 2003, the Los Angeles County Department of Public Health, Environmental Health, Bureau of Environmental Protection Drinking Water Program issued an advisory based on the State Department of Public Health advisory entitled "Potable Water Availability Requirements for Residential and Commercial Development." The letter stated, "Hauled water does not provide the equivalent level of protection of public health or the consistent level of reliability as that permitted by a public water system or an approved on-site water source. Therefore, hauled water does not satisfy the requirements for potable water for new residential or commercial construction. For new residential and commercial construction, only public water systems or approved private water wells satisfy the requirements for potable water."[24] Additional information discussing this issue can be found in Section 1.1.1 in the EIR.

County of Los Angeles General Plan

Los Angeles County General Plan 2035

The Los Angeles County General Plan 2035 provides a policy framework for how and where the County will grow through the year 2035. The General Plan 2035 accommodates new housing and jobs within the unincorporated areas in anticipation of population growth in the County and region. The General Plan 2035 was adopted by the Los Angeles County Board of Supervisors on October 6, 2015 and replaces the adopted General Plan including all of the elements with the exception of the

[24] County of Los Angeles Department of Public Health Bureau of Environmental Protection Drinking Water Program. 1 January 2003. Potable Water Availability Requirements for Residential and Commercial Development. Baldwin Park, CA.

Housing Element.[25] One of the Guiding Principles, and related policy goals and policies, of the General Plan 2035 relevant to the consideration of the proposed initiative is as follows:

Guiding Principles

2. Ensure community services and infrastructure are sufficient to accommodate growth: Coordinate an equitable sharing of public and private costs associated with providing community services and infrastructure to meet growth needs. Community-based services, such as schools, parks, libraries, police and fire services, and waste management are essential elements in all communities. In urban areas, quality of life is further dependent on infrastructure such as water and sewer systems, flood protection, utilities, and circulation systems and traffic signalization. Successful land use planning and growth management relies upon orderly and efficient planning and placement of community services where appropriate and sufficient services to all communities, and develop urban infrastructure where it is commensurate with urban growth. Planning for community services and infrastructure must be context-sensitive. The General Plan establishes policies and programs to ensure appropriate service levels for all communities, and provide urban infrastructure for new urban developments.

Policy PS/F 1.1: Discourage development in areas without adequate public services and facilities.[26]

Goal S3: An effective regulatory system that prevents or minimizes personal injury, loss of life, and property damage due to fire hazards.

Policy S-3.1: Discourage high density and intensity development in VHFHSZs.

Policy S-3.6: Ensure adequate infrastructure, including ingress, egress, and peak load water supply availability for all projects located in FHSZs

Antelope Valley Area Plan – Town & Country

The Antelope Valley Area Plan – Town & Country (Antelope Valley Area Plan) was adopted by the Los Angeles County Board of Supervisors in November of 2014. It updates and supersedes the 1986 Antelope Valley Areawide General Plan. The Antelope Valley Area Plan is the policy framework providing overarching goals and policies to achieve a vision. It primarily describes the general type of development allowed and total number of homes per acre. The Acton, Antelope Valley Northeast, East San Gabriel Mountains, Lake Hughes/Gorman/West of Lancaster, Lake Los Angeles/Llano/Valyermo/Littlerock, and Lancaster Northeast subareas are completely within the Town and Country - Antelope Valley Plan.

[25] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 9: Conservation and Natural Resources Element. Available online at: http://planning.lacounty.gov/generalplan

[26] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County General Plan 2035, Chapter 13: Public Services and Facilities Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch13.pdf

The planning area of the Antelope Valley Area Plan,[27] a component of the adopted Los Angeles County General Plan 2035, provides planning policies for 1,200 square miles of elevated desert terrain bounded by the San Gabriel Mountains on the south, Kern County to the north, and extending from Gorman on the west to San Bernardino County on the east, including approximately 90 percent of the area that would be potentially affected by the proposed initiative.

The Antelope Valley Area Plan includes the following goals and policies related the Hauled Water Initiative:

Chapter 2: Land Use

Goals LU 1: A land use pattern that maintains and enhances the rural character of the unincorporated Antelope Valley.

- Policy LU 1.1: Direct the majority of the unincorporated Antelope Valley's future growth to rural town center areas and identified economic opportunity areas, through appropriate land use designations, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.

Goal LU 2: A land use pattern that protects environmental resources.

- Policy LU 2.1: Limit the amount of potential development in Significant Ecological Areas, including Joshua Tree Woodlands, wildlife corridors, and other sensitive habitat areas, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan. (Figure 2.3-2, Los Angeles County Land Use Designations – Antelope Valley Area Plan).
- Policy LU 2.2: Except within economic opportunity areas, limit the amount of potential development within Scenic Resource Areas, including water features, significant ridgelines, and Hillside Management Areas, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan (Figure 2.3-2).
- Policy LU 2.3: Except within economic opportunity areas, limit the amount of potential development in Agricultural Resource Areas, including important farmlands designated by the State of California and historical farmland areas, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan. (Figure 2.3-2).
- Policy LU 2.6: Except within economic opportunity areas, limit the amount of potential development near the National Forests and on private lands within the National Forests, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan. (Figure 2.3-2).

Goal LU 3: A land use pattern that minimizes threats from hazards.

- Policy LU 3.1: Except within economic opportunity areas, prohibit new development on fault traces and limit the amount of development in Seismic Zones, through

[27] County of Los Angeles Department of Regional Planning. 16 July 2015. Town & Country - Antelope Valley Plan. Available online at: http://planning.lacounty.gov/tnc/documents/

appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan (Figure 2.3-2).

- Policy LU 3.2: Except within economic opportunity areas, limit the amount of potential development in Very High Fire Hazard Severity Zones, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan (Figure 2.3-2).
- Policy LU 3.3: Except within economic opportunity areas, limit the amount of potential development in Flood Zones designated by the Federal Emergency Management Agency, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan (Figure 2.3-2).
- Policy LU 3.4: Except within economic opportunity areas, limit the amount of potential development on steep slopes identified as Hillside Management Areas, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan (Figure 2.3-2).
- Policy LU 3.6: Except within economic opportunity areas, limit the amount of potential residential development in airport influence areas and near military lands, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan. (Figure 2.3-2).

Goal LU 4: A land use pattern that promotes the efficient use of existing and/or planned Infrastructure and public facilities.

- Policy LU 4.1: Direct the majority of the unincorporated Antelope Valley's future growth to the economic opportunity areas and areas that are served by existing or planned infrastructure, public facilities, and public water systems, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.

Goal LU 5: A land use pattern that decreases greenhouse gas emissions.

- Policy LU 5.1: Ensure that development is consistent with the Sustainable Communities Strategy adopted in 2012, an element of the Regional Transportation Plan developed by the Southern California Association of Governments.

In addition to the Land Use Goals and Policies, the Antelope Valley Area Plan also includes Special Management Areas. Special Management Areas, identified in the Countywide General Plan, are environmental features found throughout rural town areas and rural preserve areas. Goals and Policies regarding these Special Management Areas are provided in the other Elements of this Area Plan, as follows:

- Agricultural Resource Areas – Conservation and Open Space Element (Goal COS 6 and related policies, Goal COS 7 and related policies)
- Flood Zones – Public Safety, Services and Facilities Element (Goal PS 7 and related policies)
- Hillside Management Areas – Land Use Element (Goal LU 3 and related policies), Conservation and Open Space Element (Goal COS 5 and related policies, Goal COS 16 and related policies, Goal COS 19 and related policies), Public Safety, Services and Facilities Element (Goal PS 6 and related policies)
- Landslide Zones – Public Safety, Services and Facilities Element (Goal PS 6 and related policies)

- Liquefaction Zones – Public Safety, Services, and Facilities Element (Goal PS 6 and related policies)
- Mineral Resource Areas – Conservation and Open Space Element (Goal COS 8 and related policies)
- Scenic Resource Areas – Conservation and Open Space Element (Goal COS 5 and related policies, Goal COS 15 and related policies)
- Seismic Zones – Public Safety, Services and Facilities Element (Goal PS 6 and related policies)
- Significant Ecological Areas – Land Use Element (Goal LU 2 and related policies), Conservation and Open Space Element (Goal COS 4 and related policies, Goal COS 16 and related policies, Goal COS 18 and related policies, Goal COS 19 and related policies)
- Very High Fire Hazard Severity Zones – Conservation and Open Space Element (Goal COS 5 and related policies, Goal COS 16 and related policies), Public Safety, Services and Facilities Element (Goal PS 7 and related policies)

Chapter 4: Conservation and Open Space

Water Resources

Goal COS 1: Growth and development are guided by water supply constraints.

- Policy COS 1.1: Require that all new development proposals demonstrate a sufficient and sustainable water supply prior to approval.
- Policy COS 1.2: Limit the amount of potential development in areas that are not or not expected to be served by existing and/or planned public water infrastructure through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.

Biological Resources

Goal COS 4: Sensitive habitats and species are protected to promote biodiversity.

- Policy COS 4.1: Direct the majority of the unincorporated Antelope Valley's future growth to rural town center areas and economic opportunity areas, minimizing the potential for habitat loss and negative impacts in Significant Ecological Areas.
- Policy COS 4.2: Limit the amount of potential development in Significant Ecological Areas, including the Joshua Tree Woodlands, wildlife corridors, and other sensitive habitat areas, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.
- Policy COS 4.4: Require new development in Significant Ecological Areas, to consider the following in design of the project, to the greatest extent feasible:
    - Preservation of biologically valuable habitats, species, wildlife corridors and linkages;
    - Protection of sensitive resources on the site within open space;
    - Protection of water sources from hydromodification in order to maintain the ecological function of riparian habitats;

- Placement of development in the least biologically sensitive areas on the site, prioritizing the preservation or avoidance of the most sensitive biological resources onsite;
- Design of required open spaces to retain contiguous undisturbed open space that preserves the most sensitive biological resources onsite and/or serves to maintain connectivity;
- Maintenance of watershed connectivity by capturing, treating, retaining and/or infiltrating storm water flows on site; and
- Consideration of the continuity of onsite open space with adjacent open space in project design.

2012 Santa Clarita Valley Area Plan

The 2012 Santa Clarita Valley Area Plan states that residential growth in the Santa Clarita Valley, initiated in the 1960s, has been primarily catalyzed by the need for affordable housing in proximity to job centers in the Los Angeles basin and San Fernando Valley after the designation of Interstate 5 as a federal highway. Relevant guiding principles and goals and policies stated in the 2012 Santa Clarita Valley Area Plan include:

- **Management of Growth**
  1. Growth in the Santa Clarita Valley shall account for the visions and objectives for each community and must be consistent with principles, as subsequently defined in this document, for the protection of the Valley's significant environmental resources. It must also be based on the availability of or ability to provide adequate infrastructure, schools, and public services, and must be carefully planned to benefit the community's economy, lifestyles, and needs.
  2. Growth shall occur within and on the periphery of previously developed areas, rather than as "leapfrog" development or in areas of critical environmental habitat or natural hazards, and taking into consideration accessibility to infrastructure and public services.

- **Goal LU-1:** Urban Form – An interconnected Valley of Villages providing diverse lifestyles, surrounded by a greenbelt of natural open space.

  - **Objective LU-1.1:** Maintain an urban form for the Santa Clarita Valley that preserves an open space greenbelt around the developed portions of the Valley, protects significant resources from development, and directs growth to urbanized areas served with infrastructure.

    - **Policy LU-1.1.2:** On the Land Use Map, concentrate urban development within flatter portions of the Santa Clarita Valley floor in areas with limited environmental constraints and served with infrastructure.

Los Angeles County General Plan Housing Element

Two of the Los Angeles County General Plan Housing Element stated goals and policies are particularly relevant to consideration of the proposed initiative:[28]

> **Goal 2:** Sustainable communities with access to employment opportunities, community facilities and services, and amenities.
>
> **Policy 2.1:** Support the development of housing for low and moderate income households and those with special needs near employment and transit.

Los Angeles County Code of Ordinances – Title 22 Planning and Zoning

For each zone that occurs within the hauled water initiative study area, the County Code provides development standards that govern permitted land uses, minimum lot area, maximum height limit, required parking, yard requirements, and other standards as appropriate. The applicable zoning designations permit the construction of a single-family residence and are separated into agricultural, residential, special purpose and combining, commercial, and industrial zones (Table 3.7.1-1, *Zoning Designations*).

TABLE 3.7.1-1
ZONING DESIGNATIONS*

Zone Category	Zoning Designation	Single-Family Residential Entitlement Process
Agricultural Zones	A-1, Light Agricultural	Permitted Use
	A-2, Heavy Agricultural	Permitted Use
Residential Zones	R-1, Single-Family Residence	Permitted Use
	R-2, Two-Family Residence	Permitted Use
	R-A, Residential Agricultural	Permitted Use
	RPD, Residential Planned Development	Permitted Use
Special Purpose and Combining Zones	C-R, Commercial Recreation	Conditional Use Permit
	MXD-RU, Rural Mixed Use*	Conditional Use Permit
	O-S, Open Space**	Not Permitted
Commercial Zones	C-RU, Rural Commercial	Conditional Use Permit
	CPD, Commercial Planned Development**	Not Permitted
	C-3, Unlimited Commercial**	Not Permitted
Industrial Zones	M-1, Light Manufacturing**	Not Permitted
	MPD, Manufacturing-Industrial Planned**	Not Permitted

NOTE: *Only includes zoning designations within the project study area.
** There may be instances where the land use designation and zoning designation may be inconsistent such that the land use designation allows for by-right development of a single-family residence, but the zoning allows such a use contingent on a conditional use permit or does not permit development of a single-family residence. In those instances, a property owner may be able to apply for an entitlement, such as a conditional use permit, that would allow the owner to proceed with the entitlement process for a single-family residence.

[28] County of Los Angeles Department of Regional Planning. 30 April 2014. Housing Element. Available online at: http://planning.lacounty.gov/assets/upl/project/housing_element.pdf

Other mechanisms in Title 22 that establish development standards are community standards districts (CSD). CSD regulations supplement the countywide zoning and subdivision regulations. CSDs are established as supplemental districts to provide a means of implementing special development standards contained in adopted neighborhood, community, area, specific and local coastal plans within the unincorporated areas of Los Angeles County, or to provide a means of addressing special problems which are unique to certain geographic areas within the unincorporated areas of Los Angeles County.[29] The project area contains five CSDs (Table 3.7.2-1).

TABLE 3.7.1-2
COMMUNITY STANDARDS DISTRICTS WITHIN THE STUDY AREA

Community Standards District	Hauled Water Initiative Subareas				
	Acton	Antelope Valley Northeast	Castaic/ Santa Clarita/ Agua Dulce	East San Gabriel Mountains	Lake Hughes/ Gorman/ West of Lancaster
Acton	×			×	
Agua Dulce			×		
Altadena				×	
Castaic Area			×		
Leona Valley					×

Portions of the Castaic/Santa Clarita/Agua Dulce subarea are located within the Castaic Area and Agua Dulce CSDs. A small portion of the Lake Hughes/Gorman/West of Lancaster subarea is located within the Leona Valley CSD, the majority of the project parcels in the Acton subarea are located within the Acton CSD, and one parcel in the East San Gabriel Mountains subarea is located within the Altadena CSD (Figure 2.4-1).

3.7.2 EXISTING CONDITIONS

Established Communities

There are 22 established communities within the Hauled Water Initiative study area (Table 3.7.2-1, *Established Communities within the Study Area*). The majority of these communities generally consist of low-density rural residential development. However, the communities of Altadena, Stevenson Ranch, Castaic/Val Verde, and Quartz Hill are of a more suburban character, including a range of multi-family and single-family residences (Figure 3.7.2-1, *Established Communities*).

[29] County of Los Angeles Department of Regional Planning. April 11, 2016. Available online at: http://planning.lacounty.gov/view/community_standards_districts

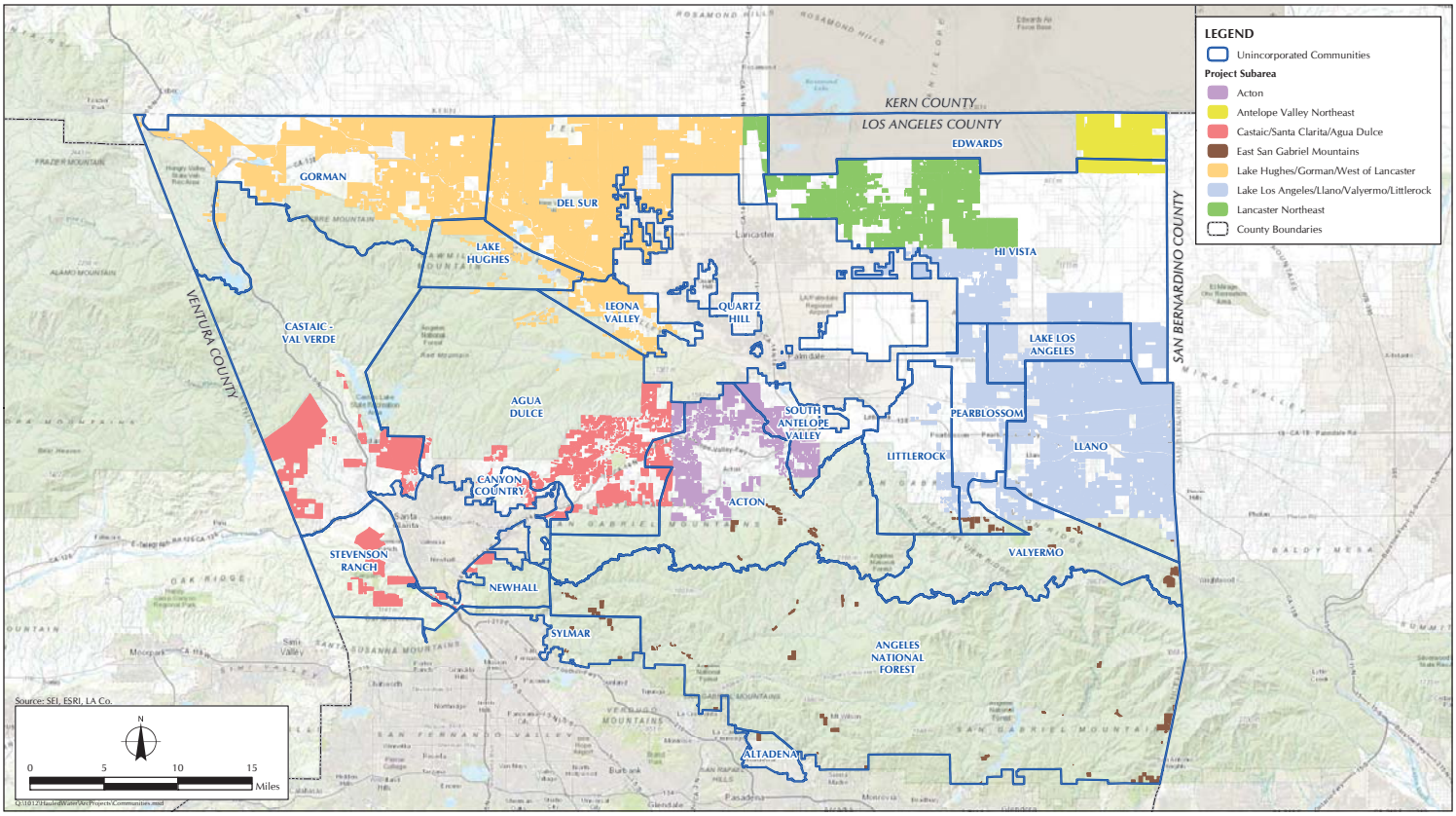

FIGURE 3.7.2-1
Established Communities

TABLE 3.7.2-1
ESTABLISHED COMMUNITIES WITHIN THE STUDY AREA

Established Community	Hauled Water Initiative Sub Area						
	Acton	Antelope Valley Northeast	Castaic/ Santa Clarita/ Agua Dulce	East San Gabriel Mountains	Lake Hughes/ Gorman/ West of Lancaster	Lake Los Angeles/ Llano/ Valyermo/ Littlerock	Lancaster Northeast
Acton	×			×			
Agua Dulce			×				
Altadena				×			
Angeles National Forest				×			
Canyon Country			×				
Castaic-Val Verde			×				
Del Sur					×		×
Edwards							×
Gorman					×		
Hi Vista						×	×
Lake Hughes/ Elizabeth Lake					×		
Lake Los Angeles						×	
Leona Valley					×		
Littlerock				×			
Llano				×		×	
Newhall			×				
Pearblossom				×		×	
Quartz Hill					×		
South Antelope Valley	×						
Stevenson Ranch			×				
Sylmar				×			

Los Angeles County General Plan Planning Areas

All seven subareas are located in the 2012 Santa Clarita Valley Area Plan and the Antelope Valley Area Plan planning areas as designated in the adopted Land Use Element of the Los Angeles County General Plan 2035 (Figure 2.3-1).[30]

[30] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County General Plan 2035. Available online at: http://planning.lacounty.gov/generalplan

Land Use Plans, Policies, and Regulations

State and Regional Policies Related to Net and Per Capita Reduction of Greenhouse Gas Emissions

With regard to polices relating to net and per capita reduction of greenhouse gas emissions, none of the 42,867 parcels within the proposed initiative area are located within a high-quality transit area as identified by SCAG, 1,614 or 3 percent of the 42,867 parcels are located within one mile of an area of anticipated employment growth by SCAG, none of the 42,867 parcels are within one-quarter mile of a dedicated bicycle or pedestrian route of travel, and 1,045 or 2 percent of the 42,867 parcels are located within one-quarter mile of an existing or planned public transit route.

Title 14 – Natural Resources Division 1.5 – Department of Forestry Chapter 7 – Fire Protection Subchapter 2 SRA Fire Safe Regulations Articles 1-5 (SRA Fire Safe Regulations)

A total of 6,456 or 15 percent of the 42,867 parcels potentially eligible for the use of hauled water are located in areas of high to very high fire hazard. The area of these parcels totals 9,060 acres or 14 square miles, which is 26 percent of the total area of parcels potentially eligible for hauled water.

Potable Water Advisory

All 42,867 parcels in the proposed initiative study area are located outside a public or private water district, thus requiring the property owner to demonstrate that a groundwater well is a feasible source for the provision of potable water. The percentage of the parcels within the proposed initiative study area with access to potable water via groundwater well is unknown.

Los Angeles County General Plan Land Use Designations

The 42,867 parcels that are the subject of the proposed initiative fall within 13 land use designations described in the Land Use Element of the adopted Los Angeles County General Plan 2035 (Figure 1.5.2-1, Figure 1.5.2-2, and Table 2.3-2, *Adopted Los Angeles County General Plan Land Use Designations by Subarea*). Development of a single-family residence is an allowable use in each of the 13 land use designations. Construction of a single-family residence is subject to application and approval of a building permit. However, currently, in order to obtain a building permit, the parcel must be located in a public or private water district or have access to potable water from an on-site well.

Zoning

The 42,867 parcels that are the subject of the proposed initiative fall within 14 zoning designations described in the Los Angeles County, California, Code of Ordinances – Title 22 Planning and Zoning[31] (Figure 2.4-1, and Table 2.4-1, *Los Angeles County Zoning Designations by Subarea*).

Development of a single-family residence is a permitted use in five of the 14 zone designations, a conditional use permit is required in three zone designations, and is not permitted in five zoning designations. For the instances where the zoning designation on a parcel does not allow development

[31] County of Los Angeles Department of Regional Planning. Accessed 24 May 2014. Los Angeles County, California, Code of Ordinances – Title 22 Planning and Zoning. Available online at: http://library.municode.com/HTML/16274/level1/TIT22PLZO.html

of a single-family residence as a by-right use, a property owner may be able to apply for an entitlement, such as a zone change that would allow the owner to proceed with the entitlement process for a single-family residence.

Housing Element

None of the parcels identified in the proposed initiative area are needed to accommodate project growth over the identified 20-year planning horizon. The areas identified in the Housing Element that have been identified to accommodate future population growth through the Regional Housing Needs Assessment (RHNA) are identified as the Newhall Ranch Specific Plan and the Northlake Specific Plan. These two specific plans are located within the Santa Clarita Valley Area Plan of the Los Angeles County General Plan and the Castaic/Santa Clarita/Agua Dulce subarea[32] (Figure 2.3-4, *Regional Housing Needs Assessment Allocation Sites*).

Antelope Valley Area Plan – Town & Country

The Antelope Valley Area Plan includes Special Management Areas. Special Management Areas, identified in the Countywide General Plan, are environmental features found throughout the planning area. Table 3.7.2-2, *Antelope Valley Area Plan – Town & Country Goals and Policies*, identifies proposed initiative parcels in relation to Special Management Areas and Goals and Policies.

[32] County of Los Angeles Department of Regional Planning. 30 April 2014. Housing Element. Available online at: http://planning.lacounty.gov/assets/upl/project/housing_element.pdf

TABLE 3.7.2-2
ANTELOPE VALLEY AREA PLAN – TOWN & COUNTRY
GOALS AND POLICIES

Policy Area	Plan Element	Goals and Policies	Number of Antelope Valley Plan Parcels	Percentage of Antelope Valley Plan Total Parcels
Agricultural Resource Areas	Conservation and Open Space Element	Goal COS 6 and related policies, Goal COS 7 and related policies	406	1%
Flood Zones	Public Safety, Services and Facilities Element	Goal PS 7 and related policies	13,500	31%
Hillside Management Areas	Land Use Element	Goal LU 3 and related policies	2,570	0.006%
	Conservation and Open Space Element	Goal COS 5 and related policies, Goal COS 16 and related policies, Goal COS 19 and related policies		
	Public Safety, Services and Facilities Element	Goal PS 6 and related policies		
Landslide Zones	Public Safety, Services and Facilities Element	Goal PS 6 and related policies	1,361	3%
Liquefaction Zones	Public Safety, Services, and Facilities Element	Goal PS 6 and related policies	4,037	9%
Scenic Resource Areas	Conservation and Open Space Element	Goal COS 5 and related policies, Goal COS 15 and related policies	110	0.2%
Seismic Zones	Public Safety, Services and Facilities Element	Goal PS 6 and related policies	397	1%
Significant Ecological Areas	Land Use Element	Goal LU 2 and related policies	15,662	39%
	Conservation and Open Space Element	Goal COS 4 and related policies, Goal COS 16 and related policies, Goal COS 18 and related policies, Goal COS 19 and related policies		
Very High Fire Hazard Severity Zones	Conservation and Open Space Element	Goal COS 5 and related policies, Goal COS 16 and related policies	4,082	10%

2012 Santa Clarita Valley Area Plan

The majority of the Castaic/Santa Clarita/Agua Dulce subarea is located within the planning area of the 2012 Santa Clarita Valley Area Plan. However, approximately 10 percent of the area potentially affected by the proposed initiative is located within the planning area of the Antelope Valley Area Plan. The Castaic/Santa Clarita/Agua Dulce subarea consists of 1,246 parcels consisting of 18,067 acres or 2.9 percent of parcels potentially eligible for the use of hauled water. Approximately 1,574 or 70 percent of the 2,244 parcels located within the 2012 Santa Clarita Valley Area Plan contain some areas of slopes over 50 percent (26.6 degrees). These parcels are distributed somewhat evenly throughout the community of Agua Dulce. However, in the communities of Castaic and Santa Clarita, the parcels

are generally distributed in outlying, mountainous areas (Figure 2.1-7). The 2012 Santa Clarita Valley Area Plan, which comprises the entire Santa Clarita Valley, provides goals, policies, and maps to establish zoning regulations and guide new development proposals within the planning area.[33]

Habitat Conservation Plan and Natural Community Conservation Plan

DRECP

The DRECP was undertaken due to statewide and national concerns regarding habitat fragmentation and loss of habitat for listed and candidate species. The DRECP is a joint federal and State planning effort involving the BLM, USFWS, the California Energy Commission, and the CDFW. The CEQA Notice of Preparation was released on July 28, 2011. The DRECP is a proposed multispecies HCP intended to conserve threatened and endangered species and natural communities in the Mojave and Colorado Desert regions of Southern California, while also facilitating the timely permitting of renewable energy projects to help meet the State's goal of providing at least 33 percent of electricity generation through renewable energy by 2020 and the federal government's goal of increasing renewable energy generation on public land. As planned, the approved DRECP and associated permits would provide renewable energy developers and entities undertaking DRECP conservation efforts with authorization for the incidental take of certain endangered, threatened, and special-status plant and animal species for covered activities (as defined in the DRECP). Such authorizations would be granted by agencies that are formal participants in the DRECP.[34] The public review period for the Draft EIS/EIR began on September 26, 2014, and ended on February 23, 2015. The final adoption of the DRECP is in progress. A Final EIS/EIR is expected in the late fall of 2015, with a record of decision in early 2016.[35]

The DRECP has proposed approximately 88 percent of the area of the proposed initiative or approximately 250,085 acres consisting of 39,845 parcels of the proposed initiative study area in the Antelope Valley as a part of the DRECP.[36] However, the plan is focused solely on the development of renewable energy, particular wind, solar, geothermal, and biogas and has no provisions related to single-family residential development. The DRECP is both an HCP and a NCCP. NCCPs comply with the State Natural Community Conservation Plan Act, and HCPs comply with the Federal ESA. Areas of private land ownership within the DRECP are subject to the policies and regulations of the local agencies and jurisdictions of the seven counties in the DRECP planning area. As a result, Los Angeles County land use designations that allow single-family residential development, and associated regulations that apply to single-family residential development, would also apply to areas within the DRECP.[37]

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[33] County of Los Angeles Department of Regional Planning. 2012. Santa Clarita Valley Area Plan. Available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf, Page 3-4, Section IV. Planning Area.

[34] California Energy Commission. Accessed June 1, 2014. Available online at: http://www.energy.ca.gov/2011publications/DRECP-1000-2011-001/DRECP-1000-2011-001.pdf

[35] California Energy Commission. Accessed 16 July 2015. Available online at: http://www.drecp.org/documents/faq_Path_Forward.pdf

[36] California Department of Fish and Wildlife. Accessed 4 June 2014. Natural Community Conservation Planning (NCCP). Available online at http://www.dfg.ca.gov/habcon/nccp/.

[37] California Energy Commission. Accessed 1 June 2014. Available online at: http://www.drecp.org/draftdrecp/files/d_Volume_III/III.11_Land_Use_and_Policies.pdf

All of the Antelope Valley Northeast, Lake Los Angeles/Llano/Valyermo/Littlerock, and Lancaster Northeast subareas are within the boundary of the DRECP. Approximately 50 percent of the Acton subarea and approximately 80 percent of the Lake Hughes/Gorman/West of Lancaster subarea are within the DRECP. The Castaic/Santa Clarita/Agua Dulce and Kagel Canyon subareas are outside of the DRECP (Figure 3.7.2-1, *Desert Renewable Energy Conservation Plan Area*).

West Mojave Plan

Approximately 90 percent or 38,974 of the parcels under consideration for the use of hauled water are located within the jurisdictional boundaries of the West Mojave Plan. However, the West Mojave Plan HCP applies only to lands administered by the Bureau of Land Management (BLM). None of the parcels are under lands administered by the BLM. The West Mojave Plan is an amendment to BLM's California Desert Conservation Area Plan. The Plan includes an HCP component that provides a program for complying with the federal ESA on public and private lands within the West Mojave Plan area. Together, the West Mojave Plan and the proposed HCP component cover 9.3 million acres north of the Los Angeles metropolitan area in four counties: Inyo, Kern, Los Angeles and San Bernardino. The purpose of the plan is to create a comprehensive strategy to conserve and protect almost 100 sensitive desert species and natural communities.[38] The West Mojave Plan and its HCP component have been adopted on public lands and have not been adopted on private lands. The West Mojave Plan currently only applies to a project that has a federal nexus.

3.7.3 THRESHOLDS OF SIGNIFICANCE

The potential for the proposed initiative to result in impacts related to land use and planning was analyzed in relation to the questions contained in Appendix G of the State CEQA Guidelines. Would the proposed initiative:

a. Physically divide an established community?

b Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

c. Conflict with any applicable habitat conservation plan or natural community conservation plan?

3.7.4 IMPACT ANALYSIS

As a result of the Initial Study (Appendix F to the EIR), the County determined that the proposed initiative would result in less than significant impacts to land use and planning in relation to physical division of an established community. Therefore, that issue has not been carried forward for analysis in the EIR. However, the Initial Study identified potential significant impacts to land use and planning due to the potential for the proposed initiative to conflict with applicable adopted land use plans, policies, or regulations; and due to the potential for the proposed initiative conflict with any applicable habitat conservation plan or natural community conservation plan.

[38] U.S. Department of the Interior Bureau of Land Management. March 2006. Available at: http://www.blm.gov/ca/st/en/fo/cdd/wemo.html

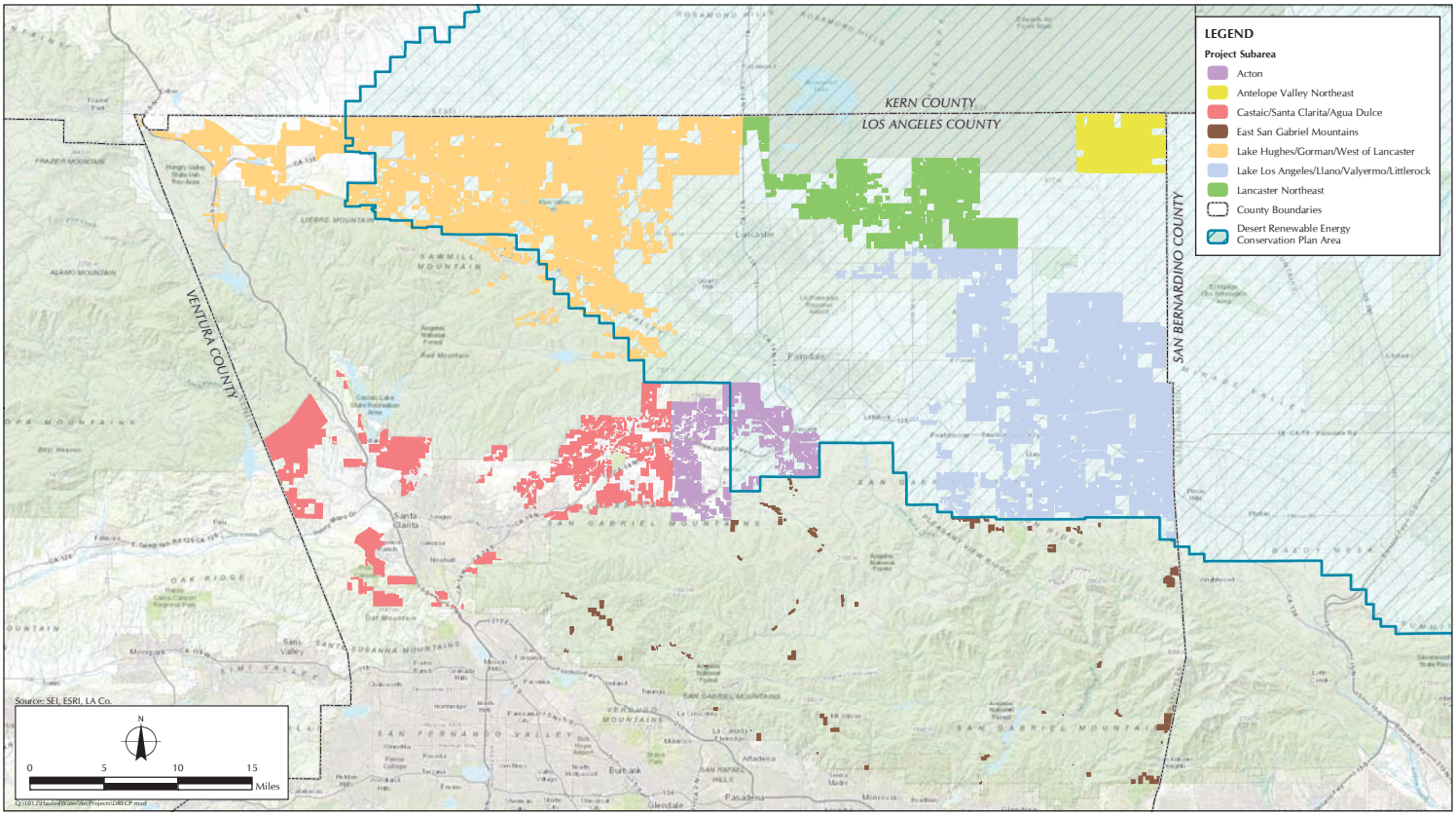

FIGURE 3.7.2-2
Desert Renewable Energy Conservation Plan Area

IMPACT LU-1: Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Allowing hauled water to be used for new single-family residential development where a water purveyor or well water is not available conflicts with federal, State, regional, and County planning goals, policies, and regulations.

Federal

Federal Endangered Species Act

There are 27 species that are listed or candidate species under protection of the federal ESA or California ESA (CESA) that have the potential to be present on or within the vicinity of parcels affected by the proposed initiative. Therefore, the proposed initiative has the potential to indirectly impact up to eight listed plants and 19 listed animals. The entirety of the Antelope Valley Northeast subarea, consisting of 1,820 parcels and 16.7 square miles, is within designated critical habitat for the desert tortoise (*Gopherus agassizii*). This consists of 0.4 percent of the entirety of designated critical habitat in California for the species.

The reasonable worst-case scenario assumes the annual average rate of issuance of building permits over the 20-year 2015 to 2035 planning horizon would be approximately 32 per year in the Santa Clarita Valley and approximately 152 per year in the Antelope Valley for a total of 184 permits per year for both areas. The total anticipated building permits over the 20-year 2015 to 2035 planning horizon would be approximately 3,680. Approximately 16,473 acres or 5 percent of the proposed initiative study area is located within critical habitat. Given the reasonable worst-case scenario of 184 building permits per year for a total of 3,680 building permits over the 20-year planning horizon, it can be expected that 5 percent of these 3,680 building permits or 184 parcels will be issued for areas within critical habitat over the 20-year planning period. With a four-acre average parcel size, this would result in 736 acres of potential development in areas designated as critical habitat. With an average area of disturbance of 36 percent, this would result in 265 acres of critical habitat disturbance. Encouraging housing development in these areas of critical habitat for federally listed species would conflict with Section 9 of the federal ESA to promote the survival and recovery of listed species. Authorization of "incidental take" of federally listed endangered species is subject to Section 7 or Section 10(a) of the federal ESA. Section 10(a)(1)(B) permits (incidental take permits) may be issued if take is incidental and does not jeopardize the survival and recovery of the species. As defined in the federal ESA, individuals, organizations, states, local governments, and other nonfederal entities are affected by the designation of critical habitat only if their actions occur on federal lands; require a federal permit, license, or other authorization; or involve federal funding.

State

State of California Department of Public Health (CDPH) Bulk Hauled Water Policy Advisory Notice

The proposed initiative is inconsistent and conflicts with the guidance provided in the Department of Health Services Advisory Letter recommending against the use of hauled water based on the reasonable worst-case scenario of 184 building permits per year for a total of 3,680 building permits over the 20-year planning horizon. The CDPH advises against the use of hauled water, indicating that

using hauled water may result in substandard conditions, and may not protect public health by exposing homeowners to an unreliable and potentially unsafe alternative water supply.[39,40]

Title 14 – Natural Resources Division 1.5 – Department of Forestry Chapter 7 – Fire Protection Subchapter 2 SRA Fire Safe Regulations Articles 1-5 (SRA Fire Safe Regulations)

The proposed initiative would not conflict with SRA Fire Safe Regulations as new single-family residential development in SRA areas would be required to meet all of the requirements of the SRA Fire Safe Regulations as part of the County building permit application process.

Regional

Southern California Area of Governments (SCAG) 2012 RTP/SCS

The proposed initiative would be inconsistent with the following three SCAG 2012-2035 RTP/SCS policies related to orderly growth:

> **RTP/SCS G6:** Protect the environment and health for our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking)
>
> **RTP/SCS G7**: Actively encourage and create incentives for energy efficiency, where possible
>
> **RTP/SCS G8:** Encourage land use and growth patterns that facilitate transit and non-motorized transportation

The initiative would facilitate development in areas not adequately served by public transportation, alternative modes of travel, and public infrastructure. The proposed initiative is expected to result in direct significant impacts as a result of substantial population growth in the unincorporated areas of northern Los Angeles County and indirect significant impacts as a result of construction of roads and infrastructure in areas beyond those areas specified by the adopted plans.

Additionally, the Initiative would conflict with the SCAG Regional Comprehensive Plan by encouraging housing in areas that are deficient in employment opportunities. A total of 1,614 or 3 percent of the 42,867 parcels are located within one mile of an area of anticipated employment growth by SCAG. The proposed initiative would result in population, housing, and employment growth inconsistent with the regional level of growth projected under SCAG's RTP Growth Forecast. The Initiative would also conflict with the Los Angeles County General Plan Housing Element by encouraging housing in areas outside of the recommended RHNA allocation areas.

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[39] California Department of Health Services' Drinking Water Program and the California Conference of Directors of Environmental Health. 19 September 2002. Bulk Hauled Water Policy. Letter to County Planning and Building Departments.

[40] State of California Department of Health Services, Governor Gray Davis, and California Conference of Directors of Environmental Health. 7 February 2003. Re: Federal Safe Drinking Water Act Amendments Affecting Potable Water. Letter to County Planning and Building Departments.

County

Letter – Los Angeles County Department of Public Health, Environmental Health, Bureau of Environmental Projection Drinking Water Program – Potable Water Availability Requirements for Residential and Commercial Development 1-1-2003

> The use of hauled water for new single family residential development conflicts with the County's policy for not allowing hauled water as identified in their January 1, 2003 letter. The use of hauled water for new single-family construction does not provide the equivalent level of protection of public health or the consistent level of reliability as that permitted by a public water system or an approved on-site water source. Therefore, hauled water does not satisfy the requirements for potable water for new residential or commercial construction. For new residential and commercial construction, only public water systems or approved private water wells satisfy the requirements for potable water.

The County would need to revise the definition of allowable sources of potable water to include hauled water. As a result of revising the definition of allowable sources of potable there would not be a conflict with this policy as the proposed initiative would revise the definition of the permissible use of hauled water. However, the County's current policy based on the January 1, 2003 letter conflicts with the proposed initiative.

Los Angeles County General Plan 2035

> **Policy PS/F 1.1:** Discourage development in areas without adequate public services and facilities

Allowing the development of single-family residences using hauled water would conflict with Policy PS/F 1.1 by facilitating development, in areas without adequate public services. A total of 12,262 parcels or 29 percent would be outside of a 12-minute response time for fire and emergency response services. Similarly, the annual issuance of 184 building permits with the proposed initiative, at an average of 3.5 people per household, would likely result in an annual population increase of 12,880 additional people from the development of the 3,680 subject parcels that would be expected to be developed during the 2015–2035 planning period.

Based on the Sheriff Department standard of one officer per thousand residents, the proposed initiative would likely result in the need for 13 additional officers to service new development within the seven subareas during the course of the 2015–2035 planning period. Existing Sheriff Department facilities are at capacity, thus requiring the construction of new facilities, likely at least one facility per subarea. This would require additional police protection services and facilities beyond the seven existing County Sheriff's stations that would serve the subject parcels. In addition, 1,067 parcels would be expected to be developed in areas that are not supported by adequate fire protection services. The ability to provide adequate police protection to support development of single-family residences on 3,680 parcels, consistent with the provisions of Policy PS/F 1.1, would require allocation of additional staffing resources and would likely require expansion of existing facilities, and/or construction of new facilities.

> **Policy C/NR 3.8:** Discourage development in areas with identified significant biological resources, such as SEAs

Facilitating the development of single-family residences using hauled water would conflict with Policy C/NR 3.8 by facilitating development, in areas designated as SEAs. As of the adoption of the 2035 General Plan Update, there are ten existing SEAs present on 146,715 acres of the proposed initiative parcels, making up approximately 43 percent of the total study area (Table 3.3.2-11).. Given the reasonable worst-case scenario of 184 building permits per year for a total of 3,680 building permits over the 20-year planning horizon, it can be expected that 23 percent of these 3,680 building permits or 846 parcels will be issued for areas within SEAs. With a four-acre average parcel size, this would result in 3,385.6 acres of potential development in areas designated as critical habitat. With an average area of disturbance of 36 percent, this would result in 1,218.8 acres of SEA disturbance. Potential development of single-family residences in SEAs would conflict with Policy C/NR 3.8.

As of the adoption of the 2035 General Plan Update, there are ten existing SEAs present on 146,715 acres of the proposed initiative parcels, making up approximately 43 percent of the total study area. Given the reasonable worst-case scenario of 184 building permits per year for a total of 3,680 building permits over the 20-year planning horizon, it can be expected that 23 percent of these 3,680 building permits or 846 parcels will be issued for areas within SEAs. With a 4-acre average parcel size, this would result in 3,385.6 acres of potential development in areas designated as critical habitat. With an average area of disturbance of 36 percent, this would result in 1,218.8 acres of SEA disturbance.

The proposed initiative would conflict with the following goals and policies with regard to public safety and fire protection in the Los Angeles County General Plan 2035:

> **Goal S3:** An effective regulatory system that prevents or minimizes personal injury, loss of life, and property damage due to fire hazards.
>
> > **Policy S-3.1** Discourage development in VHFHSZs, particularly in areas with significant biological resources

However, the proposed initiative would not conflict with Policy S-3.6, as any new single-family residential development in SRA areas would be required to meet all of the requirements of the SRA Fire Safe Regulations as part of the County building permit application process including ingress, egress, and peak load water supply availability.

> > **Policy S-3.6:** Ensure adequate infrastructure, including ingress, egress, and peak load water supply availability for all projects located in VHFHSZs

A total of 6,456 or 15 percent of the 42,867 parcels potentially eligible for the use of hauled water are located in areas of high to very high fire hazard. The area of these parcels totals 9,060 acres or 14 square miles, which is 26 percent of the total area of parcels potentially eligible for hauled water.

Los Angeles County General Plan Housing Element

Two of the Los Angeles County General Plan Housing Element stated goals and policies are particularly relevant to consideration of the proposed initiative:[41]

[41] County of Los Angeles Department of Regional Planning. 30 April 2014. Housing Element. Available online at: http://planning.lacounty.gov/assets/upl/project/housing_element.pdf

Goal 2: Sustainable communities with access to employment opportunities, community facilities and services, and amenities.

Policy 2.1: Support the development of housing for low and moderate income households and those with special needs near employment and transit.

The proposed initiative would conflict with the above General Plan Housing Element Goal No. 2 by encouraging new single family development in areas that are deficient in employment opportunities, community facilities and services, and amenities. Additionally, the proposed initiative would conflict with Policy 2.1 by encouraging new single family development not located near employment and transit. The proposed initiative would also conflict with the General Plan Housing Element by encouraging new single family development outside of the RHNA allocation area.

Antelope Valley Area Plan – Town & Country

Although the proposed initiative would comply with some of the goals and policies of the Antelope Valley Area Plan to maintain the majority of the unincorporated Antelope Valley as Rural Land allowing for single-family homes on large lots (Policy LU 1.3), the proposed initiative would conflict with the following land use goals and policies of the Antelope Valley Area Plan because it would not maintain the rural character of the unincorporated Antelope Valley (Goal LU 1).

- The proposed initiative would not direct the majority of unincorporated Antelope Valley's future growth to rural town center areas and identified economic opportunity areas, through appropriate land use designations, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan (Policy LU 1.1).

- The proposed initiative would not limit the amount of potential development in Significant Ecological Areas, , as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan. (Policy LU 2.1).

- The proposed initiative would not limit the amount of potential development, Except within economic opportunity areas, within Scenic Resource Areas and Hillside Management Areas, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan (Policy LU 2.2).

- The proposed initiative would not limit the amount of potential development, Except within economic opportunity areas, in Agricultural Resource Areas (Policy LU 2.3) , as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.

The proposed initiative would not, except within economic opportunity areas, limit the amount of potential development or near the National Forests and on private lands within the National Forests, , as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan(Policy LU 2.6).

- The proposed initiative, except within economic opportunity areas, would not maintain a land use pattern that minimizes threats from hazards as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan (Goal LU 3).

- The proposed initiative, except within economic opportunity areas, would not prohibit new development on fault traces and limit the amount of development in Seismic Zones, through appropriate land use designations with very low residential densities as

indicated in the Land Use Policy Map (Map 2.1) of this Area Plan, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan (Policy LU 3.1).

- The proposed initiative, except within economic opportunity areas, would not limit the amount of potential development in Very High Fire Hazard Severity Zones, through appropriate land use designations with very low residential densities (Policy LU 3.2).

- The proposed initiative, except within economic opportunity areas, would not limit the amount of potential development in Flood Zones designated by the Federal Emergency Management Agency, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan (Policy LU 3.3).

- The proposed initiative, except within economic opportunity areas, would not limit the amount of potential development on steep slopes identified as Hillside Management Areas, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan (Policy LU 3.4).

- The proposed initiative, except within economic opportunity areas, would not limit the amount of potential residential development in airport influence areas and near military lands, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan. (Policy LU 3.6).

- The proposed initiative would not encourage a land use pattern that promotes the efficient use of existing and/or planned Infrastructure and public facilities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan (Goal LU 4).

- The proposed initiative would not direct the majority of the unincorporated Antelope Valley's future growth to the economic opportunity and areas that are served by existing or planned infrastructure, public facilities, and public water systems, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan. (Policy LU 4.1).

- The proposed initiative would not encourage a land use pattern that decreases greenhouse gas emissions (Goal LU 5).

- The proposed initiative would not Ensure that development is consistent with the Sustainable Communities Strategy adopted in 2012, an element of the Regional Transportation Plan developed by the Southern California Association of Governments (Policy LU 5.1).

- The proposed initiative would not guide and growth and development based on water supply constraints (Goal COS 1).

- The proposed initiative would not require that all new development proposals demonstrate a sufficient and sustainable water supply prior to approval Policy (COS 1.1).

- The proposed initiative would not limit the amount of potential development in areas that are not or not expected to be served by existing and/or planned public water infrastructure through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan (Policy COS 1.2).

- The proposed initiative would not result in the protection of sensitive habitats and species to promote biodiversity (Goal COS 4).

- The proposed initiative would not direct the majority of the unincorporated Antelope Valley's future growth to rural town center areas, rural town areas and, where appropriate, economic opportunity areas, minimizing the potential for habitat loss and negative impacts in Significant Ecological Areas (Policy COS 4.1).

- The proposed initiative would not limit the amount of potential development in Significant Ecological Areas, including the Joshua Tree Woodlands, wildlife corridors, and other sensitive habitat areas, through appropriate land use designations with very low residential densities (Policy COS 4.2).

- The proposed initiative would not require new development in Significant Ecological Areas, to consider the following in design of the project, to the greatest extent feasible (Policy COS 4.4):
  - Preservation of biologically valuable habitats, species, wildlife corridors and linkages;
  - Protection of sensitive resources on the site within open space;
  - Protection of water sources from hydro modification in order to maintain the ecological function of riparian habitats;
  - Placement of development in the least biologically sensitive areas on the site, prioritizing the preservation or avoidance of the most sensitive biological resources onsite.

The proposed initiative would encourage development in all special management areas with the exception of mineral resources (Table 3.7.3-2). Parcels potentially eligible for hauled water as a result of the proposed initiative are located in the following special management areas: Agricultural Resource Areas, Flood Zones, Hillside Management Areas, Landslide Zones, Liquefaction Zones, Scenic Resource Areas, Seismic Zones, Significant Ecological Areas, and Very High Fire Hazard Severity Zones.

2012 Santa Clarita Valley Area Plan

Policy LU-1.1.2: On the Land Use Map, concentrate urban development within flatter portions of the Santa Clarita Valley floor in areas with limited environmental constraints and served with infrastructure.

Policy LU-1.1.4: Preserve community character by maintaining natural features that act as natural boundaries between developed areas, including significant ridgelines, canyons, rivers and drainage courses, riparian areas, topographical features, habitat preserves, or other similar features, where appropriate.

Approximately 1,574, or 70 percent of the 2,244 parcels located within the 2012 Santa Clarita Valley Area Plan contain some areas of slopes over 50 percent (26.6 degrees). Development on these parcels would conflict with Policy LU-1.2.2. The development of single-family residential development in areas not served by a water purveyor or well would conflict with the policy of concentrating urban development in areas with limited environmental constraints and served with infrastructure. The proposed initiative has the potential to allow single-family residential development in areas containing significant ridgelines, canyons, rivers and drainage courses, and riparian areas. An analysis of a small subset of parcels in each subarea was performed to determine potential impacts from hauled water infrastructure including a storage tank, a septic leach field, and access for hauled water delivery vehicles. Based on the analysis, it was determined that the average area of disturbance for each parcel was approximately 36 percent. The average size of lots analyzed was four acres.[42] Additionally, the proposed initiative would conflict with one of the guiding principles of the 2012 Santa Clarita Valley Area Plan, which states that growth shall occur within and on the periphery of previously developed areas, rather than as "leapfrog" development or in areas of critical environmental habitat or natural hazards, and taking into consideration accessibility to infrastructure and public services. Several of the subject parcels within the Santa Clarita/Castaic/Agua Dulce subarea are located in the vicinity of Castaic Lake, Lake Piru, Angeles National Forest, Pico Canyon, and Oat Mountain; are located at a distance from existing roads and infrastructure; and are not located within or on the periphery of previously developed areas that would qualify as "leapfrog" development. As described in Section 3.3, *Biological Resources*, the subject parcels at the southern portion of the Santa Clarita/Castaic/Agua Dulce subarea (Placerita Canyon and within the Santa Susana Mountains) are located in areas of critical environmental habitat.

Table 3.7.4-1, *Hauled Water Initiative Land Use Plan, Policy, or Agency Regulation Conflicts*, provides a summary of the Hauled Water Initiative's federal, State, regional, and County land use plan, policy, and regulation conflicts.

[42] Sapphos Environmental, Inc. 27 August 2014. MFR 2. Subject: Analysis of Residential Development and Existing Disturbance for Parcels within or near the Proposed Hauled Water Initiative Study Area. Prepared for: County of Los Angeles.

TABLE 3.7.4-1
HAULED WATER INITIATIVE LAND USE PLAN, POLICY, OR AGENCY REGULATION CONFLICTS

Jurisdiction/ Agency	Document/Regulation	Goal	Objective	Policy	Special Management Areas
Federal	Endangered Species Act				
State	State of California Department of Public Health (CDPH) Bulk Hauled Water Policy Advisory Notice				
Regional	Southern California Area of Governments (SCAG) 2012 RTP/SCS	RTP/SCS G6, RTP/SCS G7, RTP/SCS G8			
County	Letter -Los Angeles County Department of Public Health, Environmental Health, Bureau of Environmental Projection Drinking Water Program - Potable Water Availability Requirements for Residential and Commercial Development 1-1-2003				
	Los Angeles County General Plan 2035	S3		PS/F 1.1, C/NR 3.8, S-3.1	
	Los Angeles County General Plan Housing Element	2		2.1	
	Antelope Valley Area Plan – Town & Country	LU 1, LU 2, LU 3, LU 4, LU 5, COS 1, COS 4		LU 1.1, LU 2.1, LU 2.2, LU 2.3, LU 2.6, LU 3.1, LU 3.2, LU 3.3, LU 3.4, LU 3.6, LU 4.1, LU 5.1, COS 1.1, COS 1.2, COS 4.1, COS 4.2, COS 4.4	Agricultural Resource Areas, Flood Zones, Hillside Management Areas, Landslide Zones, Liquefaction Zones, Scenic Resource Areas, Seismic Zones, Significant Ecological Areas, Very High Fire Hazard Severity Zones
	Santa Clarita Valley Area Plan	LU-1	LU-1.1	LU-1.1.2	

The proposed initiative would conflict with federal, State, regional, and County land use plans, policies, and regulations. Therefore, the proposed initiative would result in impacts to land use and planning in relation to a conflict with adopted or proposed land use plans, policies, or regulations, and the consideration of mitigation measures is required.

IMPACT LU-2: Conflict with any applicable habitat conservation plan or natural community conservation plan?

The proposed initiative would not result in impacts to land use and planning in relation to a conflict with an applicable HCP or NCCP. Approximately 50 percent of the Acton subarea, 100 percent of the Antelope Valley North East subarea, and approximately 80 percent of the Lake Hughes/Gorman/West of Lancaster subarea are within the DRECP (Figure 3.10.2-1). The DRECP is a proposed multispecies HCP intended to conserve threatened and endangered species and natural communities in the Mojave and Colorado Desert regions of Southern California. However, the DRECP only applies to the development of renewable energy projects and acknowledges that development of single-family residences is an allowable land use for the up to 38,889 parcels in the proposed initiative study area that are located within the DRECP planning area.

Similarly, the same areas of the proposed initiative parcels are located within the West Mojave Plan HCP as the boundaries of both HCPs as they affect Los Angeles County are the same. Approximately 39,025 parcels potentially eligible for the use of hauled water are within or located within 1,000 feet of the boundary of the West Mojave Plan. Development of single-family residences is not compatible with the habitat conservation functions and values of lands conserved within the West Mojave Plan HCP. However, the West Mojave Plan HCP does not apply to the proposed initiative because potential hauled water parcels are not located on federal lands and the initiative would not trigger a federal nexus.[43,44] Therefore, the proposed initiative would not result in impacts to land use and planning in relation to a conflict with an applicable HCP or NCCP, and the consideration of mitigation measures is not required.

3.7.5 CUMULATIVE IMPACTS

The implementation of the proposed initiative through the incremental development of single-family residences, not part of a subdivision, over a 20-year time period would result in cumulative impacts to land use and planning. However, the proposed initiative would have no impact on dividing established communities. Therefore, it does not contribute to significant impacts with regard to the Centennial and High Desert Corridor–related projects.

IMPACT LU-1: Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

The construction of residences over time would add to the population and physical size of the communities in the study area and would have the potential to contribute to urban sprawl by

[43] California Department of Fish and Wildlife. Accessed 24 November 2014. Natural Community Conservation Planning (NCCP). Available online at http://www.dfg.ca.gov/habcon/nccp/.

[44] Renewable Energy Action Team. Accessed 24 November 2014. Desert Renewable Energy Conservation Plan. Available online at: http://www.drecp.org/

encouraging development in areas outside of the County's RHNA allocation area, and encourage the construction of new single-family housing in areas that are inadequately served by public services and in areas of low employment opportunities. Additionally, the proposed initiative contributes to a violation of land use policies for the West Mojave Plan and DRECP when taken into consideration with the Centennial and High Desert Corridor related projects. The incremental impact of the proposed initiative, when added to the related past, present, or reasonably foreseeable, probable future projects listed in Section 2, Project Description, would be expected to be significant.

The Centennial Specific Plan would be expected to result in the direct population growth of approximately 70,000 people through the development of 19,333 dwelling units (a maximum of 23,000 dwelling units) within the Antelope Valley Area Plan area.[45,46] A revised notice of preparation for the Centennial Project specific plan was published on October 1, 2015.[47] This project would increase the need for fire protection and police protection in the proposed initiative study area and thus would conflict with adopted land use polices in the Los Angeles County General Plan 2035 and the SCAG Regional Transportation Plan. The Newhall Ranch and Northlake Specific Plans would also contribute to population growth in the Initiative study area. However, these specific plans are included in the County's RHNA housing allocation. Similarly, the High Desert Corridor Project would be expected to indirectly contribute to a population increase in the Lake Los Angeles/Llano/Valyermo/Littlerock subarea, which would increase the need for fire protection and police protection in this subarea. However, it would also improve emergency response times within that subarea. Therefore, the proposed initiative would be expected to cause incremental impacts to land use and planning when considering related past, present, or foreseeable future projects, and mitigation measures are required to reduce cumulative impacts. The implementation of the proposed initiative is inconsistent with the policies, plans, regulations, and land use designations set forth by the County. Implementation of the proposed initiative would cumulatively affect or conflict with any adopted land use plans, policies, or regulations.

IMPACT LU-2: Conflict with any applicable habitat conservation plan or natural community conservation plan?

The proposed initiative is not subject to any HCPs or NCCPs and would not be expected to contribute incrementally with the High Desert Corridor Project, the Centennial Project, the Newhall Ranch Specific Plan, and the Northlake Specific Plan to conflicts with HCPs and NCCPs.

3.7.6 MITIGATION MEASURES

This analysis undertaken for this environmental compliance document determined that the proposed initiative would result in significant impacts related to land use and planning, requiring the consideration of mitigation measures.

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[45] CaliforniaCityNews.org. 18 April 2012. The Town of Centennial: New Master-Planned Community Slowly Moves Forward. Available online at: https://www.californiacitynews.org/2014/06/town-centennial-new-master-planned-community-slowly-moves-forward.html

[46] County of Los Angeles Department of Regional Planning. March 2004. Notice of Preparation: Centennial Specific Plan Project Description. Available online at: http://planning.lacounty.gov/assets/upl/case/sp_02-232_notice-of-preparation.pdf

[47] County of Los Angeles Department of Regional Planning. 1 October 2015. *Revised Notice of Preparation: Centennial Project*. Available at: http://planning.lacounty.gov/assets/upl/case/sp_02-232_nop-20151001.pdf Main project website: http://planning.lacounty.gov/centennial

IMPACT LU-1: Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

No feasible mitigation measures have been identified.

IMPACT LU-2: Conflict with any applicable habitat conservation plan or natural community conservation plan?

The consideration of mitigation measures is not required.

3.7.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

IMPACT LU-1: Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Implementation of the proposed initiative would result in significant and unavoidable impacts related to land use and planning with regard to conflicting with any applicable land use plan, policy, or regulation of an agency with jurisdiction of the project. No feasible mitigation measures have been identified; therefore, impacts would remain **significant and unavoidable**.

IMPACT LU-2: Conflict with any applicable habitat conservation plan or natural community conservation plan?

The proposed initiative would not result in significant impacts to biological resources relating to conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. The consideration of mitigation measures is not required, and impacts would be **less than significant**.

SECTION 3.8
NOISE

As a result of the Initial Study (Appendix F), the County of Los Angeles (County) determined that the proposed Single-Family Residential Hauled Water Initiative for New Development (proposed initiative) would have the potential to result in impacts from noise.[1] Therefore, this issue has been carried forward for detailed analysis in this Environmental Impact Report (EIR). This analysis was undertaken to identify opportunities to avoid, reduce, or otherwise mitigate potential significant impacts from noise.

The analysis of noise consists of a summary of the regulatory framework that guides the decision-making process, a description of the existing conditions in the proposed project area, thresholds for determining if the proposed project would result in significant impacts, anticipated impacts (direct, indirect, and cumulative), mitigation measures, and level of significance after mitigation.

The potential for impacts from noise was evaluated utilizing the findings of the Noise Technical Report (Appendix L, *Noise Technical Report*)[2] in accordance with the guidance provided by the federal government in the Noise Control Act of 1972,[3] the *Guidelines for the Preparation and Content of Noise Elements of the General Plan*,[4] Section 15063 of the California Environmental Quality Act Guidelines (State CEQA Guidelines),[5] the County General Plan,[6,7] the County Noise Control Ordinance,[8] the 2015 Antelope Valley Area Plan – Town & Country,[9] and the 2012 Santa Clarita Valley Area Plan[10]

The definitions for noise and ground-borne vibration are discussed in this section to provide context for the evaluation of noise as it relates to the proposed initiative.

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[1] County of Los Angeles. September 2014. County of Los Angeles Single-Family Residential Hauled Water Initiative for New Development Initial Study. Prepared by: Sapphos Environmental, Inc., Pasadena, CA.

[2] Sapphos Environmental, Inc. August 2015. Single-Family Residential Hauled Water Initiative for New Development Noise Technical Report. Pasadena, CA.

[3] 42 U.S.C., Noise Control Act of 1972, § 4901-4918.

[4] California Department of Health Services, Office of Noise Control. February 1976. Guidelines for the Preparation and Content of Noise Elements of the General Plan. Contact: P.O. Box 942732 Sacramento, CA 94234–7320.

[5] California Code of Regulations. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

[6] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 11: Noise Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch11.pdf

[7] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 11: Noise Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch11.pdf

[8] Los Angeles County Code, Title 12, Chapter 8, Noise Control.

[9] County of Los Angeles Department of Regional Planning. 16 June 2015. Antelope Valley Area Plan – Town & Country. Available online at: http://planning.lacounty.gov/tnc/documents/

[10] County of Los Angeles Department of Regional Planning. 27 November 2012. 2012 Santa Clarita Valley Area Plan. Chapter 6: Noise Element.

Definitions

A-weighting: This is the method commonly used to quantify environmental noise that involves evaluation of all frequencies of sound, with an adjustment to reflect the constraints of human hearing. Because the human ear is less sensitive to low and high frequencies than to midrange frequencies, noise measurements are weighted more heavily within those frequencies of maximum human sensitivity in a process called A-weighting (dBA).

Ambient: Ambient is the total noise in the environment, excluding noise from the source of interest.

Community noise equivalent level (CNEL): CNEL represents the average daytime noise level during a 24-hour day, adjusted to an equivalent level to account for people's lower tolerance of noise during the evening and nighttime hours. Because community receptors are more sensitive to unwanted noise intrusion during the evening and night, an artificial decibel increment is added to quiet-time noise levels. Sound levels are increased by 5 dBA during the evening, from 7:00 p.m. to 10:00 p.m. and by 10 dBA during the nighttime, from 10:00 p.m. to 7:00 a.m. during this quiet time period.

Day-night equivalent level (L_{dn}): L_{dn} is a measure of the 24-hour average noise level at a given location. It is based on a measure of the L_{eq} noise level over a given time period. The L_{dn} is calculated by averaging the L_{eq} for each hour of the day at a given location after penalizing the "sleeping hours" (defined as 10:00 p.m. to 7:00 a.m.), by 10 dBA to account for the increased sensitivity of people to noises that occur at night.

Decibel (dB): dB is a unitless measure of sound on a logarithmic scale that indicates the squared ratio of sound pressure amplitude to a reference sound pressure amplitude. The reference pressure is 20 micropascals.

Equivalent sound level (L_{eq}): L_{eq} is a term typically used to express time averages. It is a steady-state energy level that is equivalent to the energy content of a varying sound level over a stated period of time, which means that the L_{eq} represents the noise level experienced over a stated period of time averaged as a single noise level.

Frequency: Frequency is the number of cycles per unit of time (seconds), expressed in hertz (Hz).

Noise: Noise is any sound that annoys or disturbs humans or that causes or tends to cause an adverse psychological or physiological effect on humans. Any unwanted sound.

Noise level (L_N): Another measure used to characterize noise exposure, L_N is the variation in sound levels over time, measured by the percentage exceedance level. L_{10} is the A-weighted sound level that is exceeded for 10 percent of the measurement period, and L_{90} is the level that is exceeded for 90 percent of the measurement period. L_{50} is the median sound level. Additional statistical measures include L_{min} and L_{max}, the minimum and maximum sound levels, respectively, measured during a stated measurement period.

Peak Particle Velocity (PPV): Defined as the maximum instantaneous positive or negative peak of the vibration signal, usually measured in inches per second (in/sec).

Sound: A vibratory disturbance created by vibrating objects, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.

Vibration: The mechanical motion of earth or ground, building, or other type of structure, induced by the operation of any mechanical device or equipment located upon or affixed thereto. For purposes of this report, the magnitude of the vibration shall be stated as the acceleration in "g" units (1 g is equal to 32.2 feet/second^2, or 9.81 meters/second^2).

Noise Measurement

Noise is defined as unwanted sound. The human response to environmental noise is subjective and varies considerably from individual to individual. Sensitive receptors, such as residential areas, convalescent homes, schools, auditoriums, and other similar land uses, may be affected to a greater degree by increased noise levels than industrial, manufacturing, or commercial facilities. The effects of noise can range from interference with sleep, concentration, and communication, to the causation of physiological and psychological stress, and at the highest intensity levels, hearing loss.[11]

The method commonly used to quantify environmental noise involves evaluation of all frequencies of sound, with an adjustment to reflect the constraints of human hearing. Since the human ear is less sensitive to low and high frequencies than to midrange frequencies, noise measurements are weighted more heavily within those frequencies of maximum human sensitivity in a process called "A-weighting," written as dBA. In practice, environmental noise is measured using a sound level meter that includes an electronic filter corresponding to the A-weighted frequency spectrum. Table 3.8-1, *Common Noise Levels and Loudness*, provides examples of noise sources that correlate to measured A-weighted sound levels and the subjective loudness to a person.

[11] U.S. Environmental Protection Agency, Office of Noise Abatement and Control. August 1978. Noise: A Health Problem. Washington, DC.

TABLE 3.8-1
COMMON NOISE LEVELS AND LOUDNESS

Noise Source	A-weighted Sound Level (dBA)	Subjective Loudness
Near jet engine	130	Threshold of pain
	120	
Rock-n-roll band		Deafening
	110	
Jet flyover at 1,000 feet	100	
Loud auto horn at 10 feet Power Mower	90	
Motorcycle at 25 feet Food blender	80	Very loud
Garbage disposal	70	
Living room music Human voice at 3 feet	60	Loud
	50	
Residential air conditioner at 50 feet	40	Moderate
Bird calls	30	
Quiet living room	20	Faint
Average whisper	10	
Rustling leaves	0	Very faint Threshold of human audibility

SOURCE: Cowan, James P. 1993. Handbook of Environmental Acoustics. Hoboken, NJ: John Wiley and Sons.

Vibration Measurement

Vibration is an oscillatory motion in terms of displacement, velocity, or acceleration. Vibration is typically measured as peak particle velocity (PPV) in inches per second. In this context, vibration refers to the minimum ground- or structure-borne motion that causes a normal person to be aware of the vibration by means such as, but not limited to, sensation by touch or visual observation of moving objects. The effects of ground-borne vibration include movements of the building floors that can be felt, rattling of windows, and shaking of items on shelves or hangings on the walls. In extreme cases, vibration can cause damage to buildings. The noise radiated from the motion of the room surfaces is called ground-borne noise. Typical levels of ground-borne vibration are listed in Table 3.8-2, *Typical Levels of Ground-Borne Vibration*. The vibration motion normally does not provoke the same adverse human reactions as the noise unless there is an effect associated with the shaking of the building. In addition, the vibration noise can only occur inside buildings. Similar to the propagation of noise, vibration propagated from the source to the receptor depends on the receiving building (i.e., the weight of the building), soil conditions, layering of the soils, the depth of groundwater table, and so forth.

TABLE 3.8-2
TYPICAL LEVELS OF GROUND-BORNE VIBRATION

Response	Velocity Level [a]	Typical Sources (At 50 feet)
Minor cosmetic damage of fragile buildings	100	Blasting from construction projects
Difficulty with tasks such as reading a video display terminal (VDT) screen	90	Bulldozers and other heavy tracked construction equipment
Residential annoyance, infrequent events	80	Rapid transit, upper range
Residential annoyance, frequent events	70	High speed rail, typical
Approximate threshold for human perception	60	Bus or truck, typical
	50	Typical background vibration

NOTE:
a. Root mean square (RMS) Vibration Velocity Level in VdB relative to 10^{-6} inches/second
SOURCE: Nelson, J.T. and H.J. Saurenman. December 1983. State-of-the-Art Review: Prediction and Control of Ground-Borne Noise and Vibration from Rail Transit Trains. U.S. Department of Transportation, Urban Mass Transportation Administration, Report Number UMTA-MA-06-0049-83-4, DOT-TSC-UMTA-83-3.

3.8.1 REGULATORY FRAMEWORK

Federal

Noise Control Act

The adverse impacts of noise were officially recognized by the federal government in the Noise Control Act of 1972,[12] which serves three purposes:

- Promulgating noise emission standards for interstate commerce;
- Assisting state and local abatement efforts; and
- Promoting noise education and research.

The Office of Noise Abatement and Control (ONAC) was initially tasked with implementing the Noise Control Act. However, the ONAC has since been eliminated, leaving the development of federal noise policies and programs to other federal agencies and interagency committees. For example, the Occupational Safety and Health Administration agency prohibits exposure of workers to excessive sound levels. The U.S. Department of Transportation assumed a significant role in noise control through its various operating agencies. Surface transportation system noise is regulated by a host of agencies, including the Federal Transit Administration (FTA). Transit noise is regulated by the FTA, while freeways that are part of the interstate highway system are regulated by the Federal Highway Administration (FHWA). The federal government encourages local jurisdictions to use their land use regulatory authority to site new development to minimize potential noise impacts.

State

Senate Bill 860

In the State of California, State Senate Bill 860, which became effective January 1, 1976, directed the California Office of Noise Control within the State Department of Health Services to prepare the *Guidelines for the Preparation and Content of Noise Elements of the General Plan*.[13] One purpose of these guidelines was to provide sufficient information concerning the noise environment in the community so that noise could be considered in the land-use planning process. As part of this publication, Land Use Compatibility Standards were developed in four categories: Normally Acceptable, Conditionally Acceptable, Normally Unacceptable, and Clearly Unacceptable. These categories were based on earlier work done by the U.S. Department of Housing and Urban Development. The interpretation of these four categories is as follows:

[12] 42 U.S.C., Noise Control Act of 1972, § 4901-4918.

[13] California Department of Health Services, Office of Noise Control. February 1976. Guidelines for the Preparation and Content of Noise Elements of the General Plan. Contact: P.O. Box 942732 Sacramento, CA 94234–7320.

Normally Acceptable: Specified land use is satisfactory without special insulation.

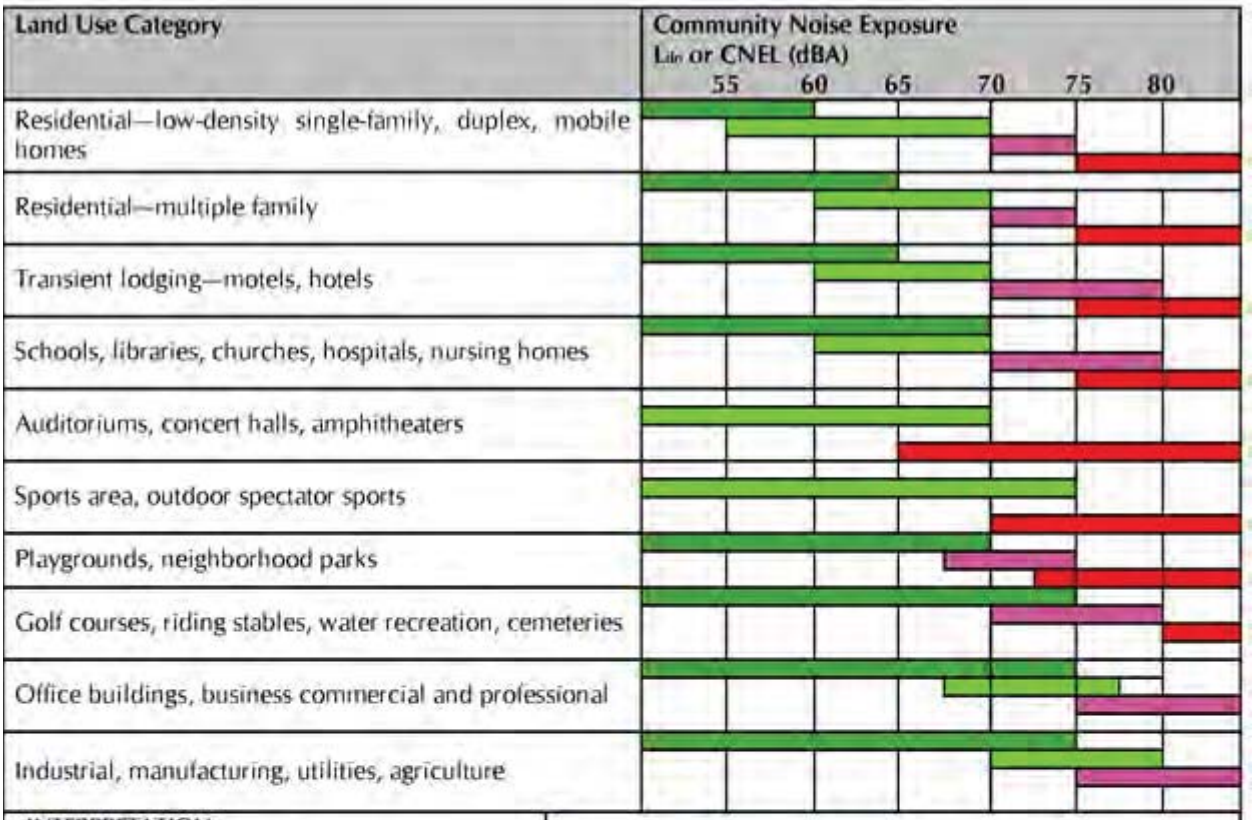
Conditionally Acceptable: New development requires detailed analysis of noise insulation requirements.

Normally Unacceptable: New development is discouraged and requires a detailed analysis of insulation features.

Clearly Unacceptable: New development should not be undertaken.

The state has developed a land-use compatibility matrix for community noise environments that further defines four categories of acceptance and assigns CNEL values to them. In addition, the State Building Code (Part 2, Title 24, California Code of Regulations) establishes uniform minimum noise insulation performance standards to protect persons within new hotels, motels, dormitories, long-term care facilities, apartment houses, and residential units other than detached single-family residences from the effects of excessive noise, including, but not limited to, hearing loss or impairment and interference with speech and sleep. Residential structures to be located where the CNEL or L_{dn} is 60 dBA or greater are required to provide sound insulation to limit the interior CNEL to a maximum of 45 dBA. An acoustic, or noise, analysis report prepared by an experienced acoustic engineer is required for the issuance of a building permit for these structures. Conversely, land use changes that result in increased noise levels at residences of 60 dBA or greater must be considered in the evaluation of impacts to ambient noise levels. Table 3.8.1-1, *Land Use Compatibility for Community Noise Environments*, graphically depicts the acceptability of noise levels for a variety of uses.

TABLE 3.8.1-1
LAND USE COMPATABILITY FOR COMMUNITY NOISE ENVIRONMENTS



INTERPRETATION:

Normally acceptable
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Normally unacceptable
New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Conditionally acceptable
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction with closed windows and fresh air supply systems or air conditioning will normally suffice.

Clearly unacceptable
New construction or development should not be undertaken.

NOTES:
L_{dn} = Day-Night Level
CNEL = Community Noise Equivalent Level
dBA = decibels in A-weighted sound levels

SOURCE:
California Department of Health Services, Office of Noise Control. February 1976. *Guidelines for the Preparation and Content of Noise Elements of the General Plan*. Sacramento, CA.

Regional

County of Los Angeles Codes

Noise

The County maintains the health and welfare of its residents with respect to noise through nuisance abatement ordinances and land use planning. The County Noise Control Ordinance, Title 12 of the County Code, was adopted by the Los Angeles County Board of Supervisors in 1977 "to control unnecessary, excessive, and annoying noise and vibration." It declares that the purpose of the County policy is to "maintain quiet in those areas which exhibit low noise levels and to implement programs aimed at reducing noise in those areas within the county where noise levels are above acceptable values."

On August 14, 2001, the Los Angeles County Board of Supervisors approved an ordinance amending Title 12 of the County Code to prohibit loud, unnecessary, and unusual noise that disturbs the peace and/or quiet of any neighborhood or that causes discomfort or annoyance to any reasonable person of normal sensitivity residing in the area. Regulations can include requirements for sound barriers, mitigation measures to reduce excessive noise, or the placement and orientation of buildings, and can specify the compatibility of different uses with varying noise levels, as shown in Table 3.8.1-2, *County of Los Angeles Community Noise Criteria*.

TABLE 3.8.1-2
COUNTY OF LOS ANGELES COMMUNITY NOISE CRITERIA

Noise Zone	Land Use of Receptor Property	Time	Noise Levels (dBA)				
			Std 1 L50 30 min/hr	Std 2 L25 15 min/hr	Std 3 L8.3 5 min/hr	Std 4 L1.7 1 min/hr	Std 5 L0 at No Time
I	Noise Sensitive	Anytime	45	50	55	60	65
II	Residential	10 p.m. – 7 a.m.	45	50	55	60	65
		7 a.m. – 10 p.m.	50	55	60	65	70
III	Commercial	10 p.m. – 7 a.m.	55	60	65	70	75
		7 a.m. – 10 p.m.	60	65	70	75	80
IV	Industrial	Anytime	70	75	80	85	90

SOURCE: County of Los Angeles. Title 12, Chapter 8, Noise Control.

In addition to the community noise criteria, the County codes establish interior noise standards for residential dwellings. According to Section 12.08.400 of the County Code, no person shall operate or cause to be operated within a dwelling unit, any source of sound, or allow the creation of any noise, which causes the noise level when measured inside a neighboring receiving dwelling to exceed the following standards:

- Standard No. 1: The applicable interior noise level for cumulative period of more than 5 minutes in any hour; or
- Standard No. 2: The applicable interior noise level plus 5 dB for a cumulative period or more than one minute in any hour; or
- Standard No. 3: The applicable interior noise level plus 10 dB or the maximum measured ambient noise level for any period of time.

Section 12.08.440 of the County codes states that operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work between weekday hours of 7:00 p.m. and 7:00 a.m., or at any time on Sundays or holidays, such that the sound therefrom creates a noise disturbance across a residential or commercial real property line, except for emergency work of public service utilities or by variance issued by the health office, is prohibited. If noise disturbance crosses a residential or commercial property line, the County has established maximum noise levels for both mobile and stationary equipment (Table 3.8.1-3, *County of Los Angeles Construction Noise Restrictions*).

TABLE 3.8.1-3
COUNTY OF LOS ANGELES CONSTRUCTION NOISE RESTRICTIONS

Time Frame	Single-Family Residential	Multifamily Residential	Semiresidential/ Commercial
Mobile equipment*			
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m. (daytime)	75 dBA	80 dBA	85 dBA
Daily, 8:00 p.m. to 7:00 a.m. (nighttime) and all day Sunday and legal holidays	60 dBA	64 dBA	70 dBA
Stationary equipment**			
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m. (daytime)	60 dBA	65 dBA	70 dBA
Daily, 8:00 p.m. to 7:00 a.m. (nighttime) and all day Sunday and legal holidays	50 dBA	55 dBA	60 dBA

SOURCE: County of Los Angeles. Title 12, Chapter 8, Noise Control.
NOTES:
* = Maximum noise levels for nonscheduled, intermittent, short-term operation (less than 10 days) of mobile equipment.
** = Maximum noise levels for repetitively scheduled and relatively long-term operation (periods of 10 days or more) of stationary equipment.

Vibration

Title 12, Section 12.08.560, of the County code provides criteria for construction-generated ground-borne vibration:

- Operating or permitting the operation of any device that creates vibration which is above the vibration perception threshold of any individual at or beyond the property boundary of the source if on private property, or at 150 feet (46 meters) from the source if on a public space or public right-of-way is prohibited. The perception threshold shall be a motion velocity of 0.01 in/sec over the range of 1 to 100 Hertz.

County of Los Angeles General Plan 2035, Noise Element

Of the 12 policies outlined in the Los Angeles County General Plan 2035 related to noise, seven are applicable to the proposed initiative:[14]

Goal N-1: The reduction of excessive noise impacts.

- **Policy N 1.1:** Utilize land uses to buffer noise-sensitive uses from adverse noise impacts.
- **Policy N 1.2:** Reduce exposure to noise impacts by promoting land use compatibility.
- **Policy N 1.3:** Minimize impacts to noise-sensitive land uses by ensuring adequate site design, acoustical construction, and use of barriers, berms, or additional engineering controls through Best Available Technologies (BAT).
- **Policy N 1.4:** Enhance and promote noise abatement programs in an effort to maintain acceptable levels of noise as defined by the Los Angeles County Exterior Noise Standards and other applicable noise standards.
- **Policy N 1.6:** Ensure cumulative impacts related to noise do not exceed health-based safety margins.
- **Policy N 1.7:** Utilize traffic management and noise suppression techniques to minimize noise from traffic and transportation systems.
- **Policy N 1.9:** Require construction of suitable noise attenuation barriers on noise sensitive uses that would be exposed to exterior noise levels of 65 dBA CNEL and above, when unavoidable impacts are identified.

There are no General Plan policies related to ground-borne vibration.

Antelope Valley Area Plan – Town & Country

The planning area of the Antelope Valley Area Plan – Town & Country, a component of the adopted Los Angeles County General Plan 2035, provides planning policies for 1,200 square miles of elevated desert terrain bounded by the San Gabriel Mountains on the south, Kern County to the north, and extending from Gorman on the west to San Bernardino County on the east, including approximately 95 percent of the area that would be potentially affected by the proposed initiative.

[14] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 11: Noise Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch11.pdf

Chapter V, *Policy Statements*, establishes the following relevant policy relevant to noise in consideration of the proposed initiative:[15]

Goal: Land Use and Development Controls

- **Policy 174:** Use "worst case," or highest potential noise exposure levels within the planning period as the basis of land use and development controls to prevent future noise-use incompatibilities.

Goal: Coordination, Support and Monitoring Activities

- **Policy 176:** Encourage the reduction of the present and future impact of excessive noise from all major sources by the judicious use of technology, planning, and regulatory measures.

There are no Antelope Valley Area Plan – Town & Country policies related to ground-borne vibration.

2012 Santa Clarita Valley Area Plan

The Castaic / Santa Clarita / Agua Dulce Subarea is located within the planning area of the Santa Clarita Valley Area Plan, which includes 5 percent of the area potentially affected by the proposed initiative. The Noise Element of the Santa Clarita Valley Area Plan is a comprehensive program for including noise management in the planning process, providing a tool for planners to use in achieving and maintaining land uses that are compatible with existing and future environmental noise levels. The Noise Element identifies current noise conditions within the planning area, and projects future noise impacts resulting from continued growth allowed by the Land Use Element. The following goals and policies are relevant to noise in consideration of the proposed initiative:[16]

Goal N-1: Noise Environment

- **Policy N-1.1.1:** Use the Noise and Land Use Compatibility Guidelines contained in Figure N-8, which are consistent with State guidelines, as a policy basis for decisions on land use and development proposals related to noise.
- **Policy N-1.1.2:** Continue to implement the adopted Noise Ordinance and other applicable code provisions, consistent with state and federal standards, which establish noise impact thresholds for noise abatement and attenuation, in order to reduce potential health hazards associated with high noise levels.
- **Policy N-1.1.3:** Include consideration of potential noise impacts in land use planning and development review decisions.
- **Policy N-1.1.4:** Control noise sources adjacent to residential, recreational, and community facilities, and those land uses classified as noise sensitive.

[15] County of Los Angeles Department of Regional Planning. 16 June 2015. Town & Country - Antelope Valley Plan. Available online at: http://planning.lacounty.gov/tnc/documents/

[16] County of Los Angeles Department of Regional Planning. 27 November 2012. Santa Clarita Valley Area Plan. Chapter 6: Noise Element.

Goal N-3: Residential Neighborhoods

- **Policy N-3.1.1:** Require that developers of new single-family and multi-family residential neighborhoods in areas where the ambient noise levels exceed 60 CNEL provide mitigation measures for new residences to reduce interior noise levels to 45 CNEL, based on future traffic and railroad noise levels.
- **Policy N-3.1.2:** Require that developers of new single-family and multi-family residential neighborhoods in areas where the projected noise levels exceed 65 CNEL provide mitigation measures for new residences to reduce outdoor noise levels to 65 CNEL. This requirement would apply to rear yard areas for single-family developments, and to private open space and common recreational and open space areas for multi-family developments.
- **Policy N.3.1.4:** Require that those responsible for construction activities develop techniques to mitigate or minimize the noise impacts on residences, and adopt standards that regulate noise from construction activities that occur in or near residential neighborhoods.
- **Policy N.3.1.6:** Ensure that new residential buildings shall not be located within 150 feet of the centerline for Interstate 5.

There are no Santa Clarita Valley Area Plan policies related to ground-borne vibration.

3.8.2 EXISTING CONDITIONS

Ambient Noise Levels

Presumed ambient noise levels for the proposed initiative subareas are referenced from the *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*, prepared by the U.S. Environmental Protection Agency (U.S. EPA) Office of Noise Abatement and Control in March 1974.[17] According to the published document, the range of outdoor day-night noise levels (L_{dn}) in the United States is very large, extending from 44 dB at a farm to over 87 dB at an apartment located adjacent to a freeway. Since the proposed initiative subareas are located in undeveloped, rural areas, it is assumed that the majority of the proposed initiative subareas will experience L_{dn} noise levels of 44–53 dB, consistent with the findings of the U.S. EPA. The potential range of outdoor L_{dn} noise levels mapped in Figure 3.8.2-1, *Outdoor Day-Night L_{dn} Noise Levels*, was determined by the findings of the U.S. EPA and by distance to major noise sources such as highways, major arterials, trains, airports, and industrial zones. Pursuant to SB 860, and California Government Code Section 65302(f), Tables 3.8.2-1 through 3.8.2-5 indicate the number of proposed initiative parcels that are located within 0.25 mile of an existing source of noise that may be incompatible for residential development.[18]

[17] U.S. Environmental Protection Agency. March 1974. Information on Levels of Environmental Noise Requisite to Protect Public Health with an Adequate Margin of Safety. Prepared by the U.S. Environmental Protection Agency Office of Noise Abatement and Control. Available online at: http://www.fican.org/pdf/EPA_Noise_Levels_Safety_1974.pdf

[18] Per the 2006 *FHWA Roadway Construction Noise Model User's Guide*, the noise level of a water truck is 82 dBA at 50 feet. Per the 1971 *Noise from Construction Equipment and Operation, Building Equipment and Home Appliances* from the U.S. Environmental Protection Agency, the loudest activities during construction (exaction/grading and finishing) is 89 dBA at 50 feet. At a distance of 0.25 mile (1,320 feet), the water truck would have a noise level of 54 dBA and the construction activities would have a noise level of 61 dBA, which is well within the normally acceptable range of community noise levels (Table 3.8.1-1).

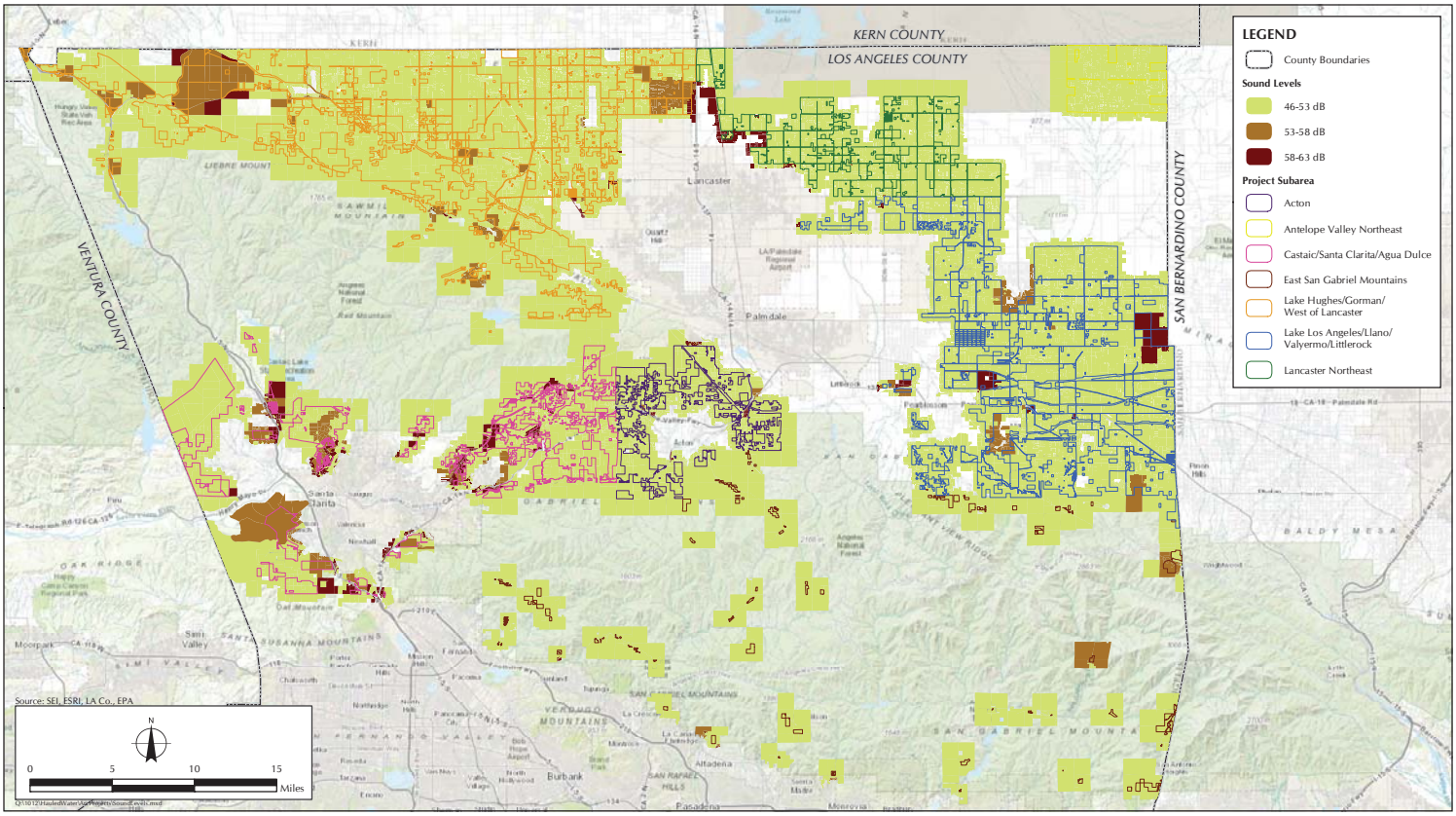


FIGURE 3.8.2-1
Outdoor Day-Night L_{dn} Noise Levels

TABLE 3.8.2-1
PROPOSED INITIATIVE PARCELS WITHIN 0.25 MILE OF A HIGHWAY OR FREEWAY

Subarea	Number of Parcels within 0.25 Mile
Acton	101
Castaic/Santa Clarita/Agua Dulce	136
Lake Los Angeles/Llano/Valyermo/Littlerock	689
Lake Hughes/Gorman/West of Lancaster	1,346
Lancaster Northeast	46
East San Gabriel Mountains	0
Antelope Valley Northeast	0
Total	**2,318**

TABLE 3.8.2-2
PROPOSED INITIATIVE PARCELS WITHIN 0.25 MILE OF A PRIMARY ARTERIAL OR MAJOR STREET

Subarea	Number of Parcels within 0.25 Mile
Acton	1,063
Castaic/Santa Clarita/Agua Dulce	1,930
Lake Los Angeles/Llano/Valyermo/Littlerock	11,306
Lake Hughes/Gorman/West of Lancaster	11,871
Lancaster Northeast	5,086
East San Gabriel Mountains	523
Antelope Valley Northeast	1,081
Total	**32,860**

TABLE 3.8.2-3
PROPOSED INITIATIVE PARCELS WITHIN 0.25 MILE OF A PASSENGER/FREIGHT RAILROAD OR GROUND RAPID TRANSIT SYSTEM

Subarea	Number of Parcels within 0.25 Mile
Acton	79
Castaic/Santa Clarita/Agua Dulce	82
Lake Los Angeles/Llano/Valyermo/Littlerock	456
Lake Hughes/Gorman/West of Lancaster	0
Lancaster Northeast	162
East San Gabriel Mountains	0
Antelope Valley Northeast	0
Total	**779**

TABLE 3.8.2-4
PROPOSED INITIATIVE PARCELS WITHIN 0.25 MILE OF AN AIRPORT/HELIPORT

Subarea	Number of Parcels within 0.25 Mile
Acton	1
Castaic/Santa Clarita/Agua Dulce	13
Lake Los Angeles/Llano/Valyermo/Littlerock	35
Lake Hughes/Gorman/West of Lancaster	65
Lancaster Northeast	5
East San Gabriel Mountains	0
Antelope Valley Northeast	0
Total	**114**

TABLE 3.8.2-5
PROPOSED INITIATIVE PARCELS WITHIN 0.25 MILE OF AN INDUSTRIAL ZONE

Subarea	Number of Parcels within 0.25 Mile
Acton	57
Castaic/Santa Clarita/Agua Dulce	272
Lake Los Angeles/Llano/Valyermo/Littlerock	246
Lake Hughes/Gorman/West of Lancaster	2,114
Lancaster Northeast	1,634
East San Gabriel Mountains	0
Antelope Valley Northeast	0
Total	**4,323**

Ground-Borne Vibration Levels

Due to the fact that the proposed initiative subareas are located in largely undeveloped, rural, or agricultural areas, it is assumed that the primary source of existing ground-borne vibration in the vicinity of the proposed initiative subareas is vehicular travel (e.g., standard cars, refuse trucks, and commercial trucks) on local roadways and freeways. According to the U.S. Department of Transportation, Federal Transit Administration (FTA) technical study, *Transit Noise and Vibration Impact Assessments*, typical road traffic–induced vibration levels are unlikely to be perceptible by people. In part, the FTA study states that "it is unusual for vibration from traffic including buses and trucks to be perceptible, even in locations close to major highways."[19] Additionally, there are no active mines in the vicinity of the proposed initiative subareas; therefore, there are no ground-borne vibration conditions in the area related to blasting or other activities associated with active mines.

[19] U.S. Department of Transportation, Federal Transit Administration. May 2006. Transit Noise and Vibration Impact Assessment. Washington, DC.

Sensitive Receptors

Residential Parcels

The area that would be subject to the proposed initiative consists of 42,867 parcels in the unincorporated area of Los Angeles County, all of which could potentially be developed into single-family residences. As these parcels are undeveloped, all 42,867 parcels shall be considered sensitive receptors.

Schools

There are 20 elementary schools, middle schools, and high schools located in the vicinity of the parcels within the proposed initiative subareas, with the exception of the Acton subarea and Antelope Valley Northeast subarea, which do not contain any elementary, middle, or high schools (Figure 3.8.2-2, *Schools within 0.25 Mile of Proposed Initiative Subareas*). Table 3.8.2-6, *Schools within 0.25 Mile of Proposed Initiative Subareas*, indicates which schools are located in the vicinity of the proposed initiative subareas.

TABLE 3.8.2-6
SCHOOLS WITHIN 0.25 MILE OF PROPOSED INITIATIVE SUBAREAS

Subarea	School	Public/Private
Acton	None	Not applicable
Castaic/Santa Clarita/Agua Dulce	Agua Dulce Elementary School	Public
	Desert Canyon Academy	Private
	Mint Canyon Elementary School	Public
	Castaic Elementary School	Public
	Castaic Middle School	Public
Lake Los Angeles/Llano/ Valyermo/Littlerock	Almondale Middle School	Public
	Lake Los Angeles Elementary School	Public
	Vista San Gabriel Elementary School	Public
Lake Hughes/Gorman/ West of Lancaster	Del Sur Elementary School	Public
	Del Sur Middle School	Public
	Gorman Elementary School	Public
	Gorman Middle School	Public
	Neenach Elementary School	Public
	Sommer Haven Church School	Private
	Hughes- Elizabeth Lakes Elementary School	Public
	Hughes- Elizabeth Lakes Middle School	Public
	Shema Christian	Private
Lancaster Northeast	Eastside Elementary School	Public
East San Gabriel Mountains	Hathaway- Sycamores NPS	Private
	Mount Baldy Elementary School	Public
Antelope Valley Northeast	None	Not applicable

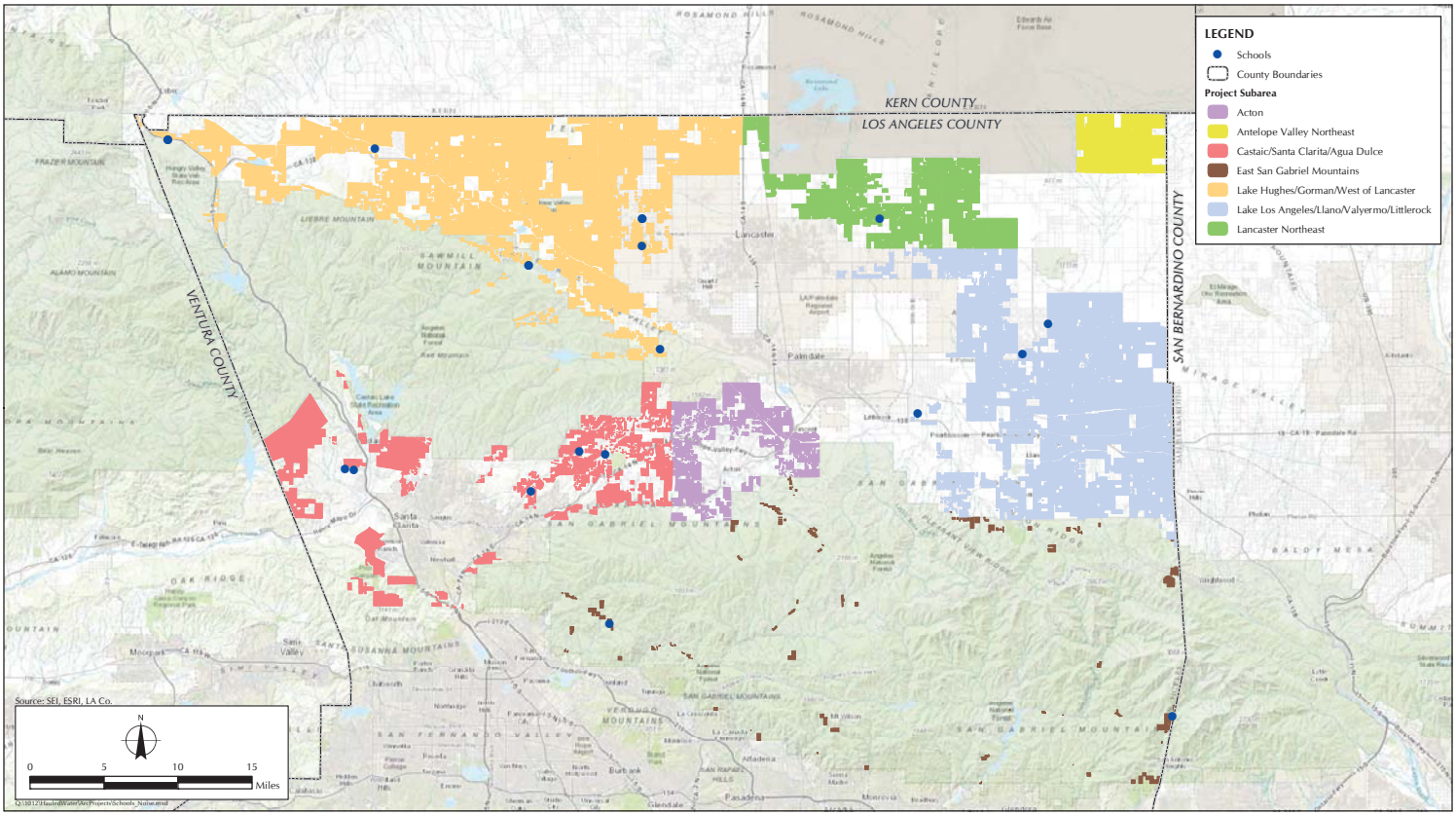


FIGURE 3.8.2-2

Schools within 0.25 Mile of Proposed Initiative Subareas

Medical Centers

There are no medical centers or hospitals located within 0.25 mile of the proposed initiative subareas.

Parks

In addition to residential parcels, schools, and hospitals, parks are also considered sensitive receptors. There are 30 parks located within a 0.25-mile radius of the proposed initiative subareas (see Figure 3.2.2-2, *Parks within 0.25 Mile of Proposed Initiative Subareas*). Of these, 27 are regional parks and three are local parks. Table 3.8.2-7, *Local Parks within 0.25 Mile of Proposed Initiative Subareas*, and Table 3.8.2-8, *Regional Parks within 0.25 Mile of Proposed Initiative Subareas*, indicate which parks are located adjoining or in the vicinity of the proposed initiative subareas.

TABLE 3.8.2-7
LOCAL PARKS WITHIN 0.25 MILE OF PROPOSED INITIATIVE SUBAREAS

Subarea	Park	Acreage within 0.25 Mile
Castaic/Santa Clarita/ Agua Dulce	Oak Spring Canyon Park	1
	West Creek Park	18
Lake Los Angeles/Llano/Valyermo/ Littlerock	Everett Martin Park	6
Total		**25**

TABLE 3.8.2-8
REGIONAL PARKS WITHIN 0.25 MILE OF PROPOSED INITIATIVE SUBAREAS

Subarea	Park	Acreage within 0.25 Mile
Acton	Angeles National Forest	34,116
Antelope Valley Northeast	Phacelia Wildflower Sanctuary	160
Castaic/Santa Clarita/Agua Dulce	Castaic Lake State Recreation Area	956
	Castaic Regional Sports Complex	24
	Los Padres National Forest	132
	Michael D Antonovich Open Space	6
	Michael D. Antonovich Regional Park at Joughin Ranch	1
	Placerita Canyon Natural Area and Nature Center	30
	Santa Clarita Woodlands Park	1,502
	Tesoro Adobe Historic Park	18
	Vasquez Rocks Natural Area and Nature Center	507
East San Gabriel Mountains	Arcadia Wilderness Park	3
	Claremont Hills Wilderness Park	211
	Dexter Park	38
	River Wilderness Park	11
	Winery Canyon Open Space	94
Lake Hughes/Gorman/ West of Lancaster	Arthur B. Ripley Desert Woodland State Park	434
	George R Bones Wildlife Sanctuary	99
	Hungry Valley State Vehicular Recreation Area	1,125
	Neenach Habitat Preserve	40
Lake Los Angeles/Llano/Valyermo/ Littlerock	Alpine Butte Wildlife Sanctuary	315
	Big Rock Wash Wildlife Sanctuary	80
	Blalock Wildlife Sanctuary	110
	Devil's Punchbowl Natural Area and Nature Center	235
	Jackrabbit Flats Wildlife Sanctuary	39
	Mescal Wildlife Sanctuary	99
	Theodore Payne Wildlife Sanctuary	157
Total		**40,542**

Public and Private Airports

There are three public use airports and eight private use airports located within a two-mile radius of the proposed initiative subareas (Figure 3.8.2-3, *Airports within 2 Miles of Proposed Initiative Subareas*). Table 3.8.2-9, *Airports within 2 Miles of Proposed Initiative Subareas*, indicates that there are a total of 5,549 parcels located within two miles of a public and/or private use airport.

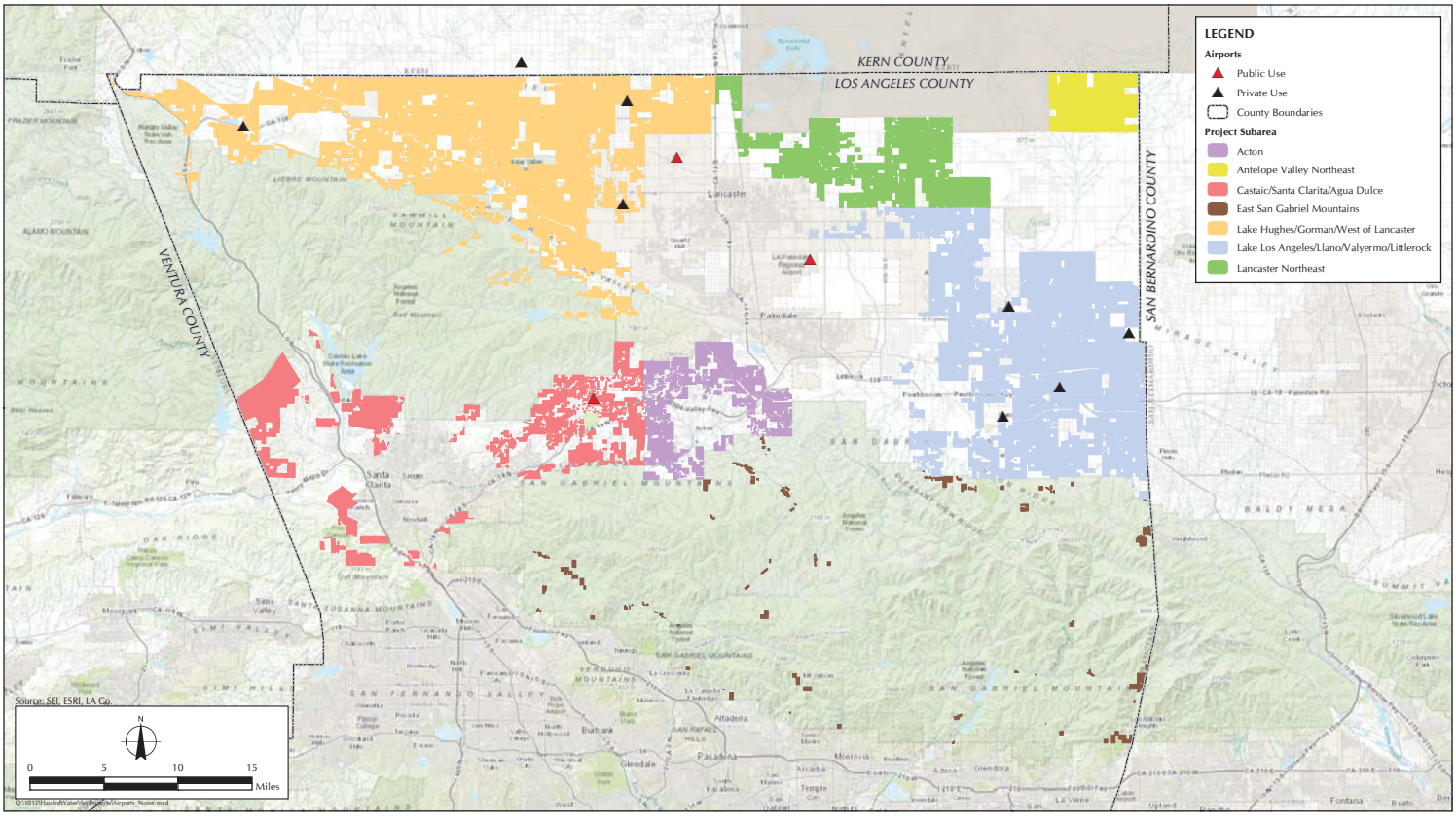


FIGURE 3.8.2-3

Airports Within 2 Miles of Proposed Initiative Subareas

TABLE 3.8.2-9
AIRPORTS WITHIN TWO MILES OF PROPOSED INITIATIVE SUBAREAS

Subarea	Airport	Private/Public	Number of Parcels within Two miles
Acton	None	Not applicable	0
Castaic/Santa Clarita/Agua Dulce	Agua Dulce Airport	Public	390
Lake Los Angeles/Llano/Valyermo/Littlerock	Palmdale Regional Airport	Public	19
	Brian Ranch Airport	Private	779
	Crystal Airport	Private	602
	Gray Butte Field	Private	369
	Nichols Farms Airport	Private	644
Lake Hughes/Gorman/West of Lancaster	General Williams J. Fox Airfield	Public	105
	Bohunk's Airport	Private	925
	Quail Lake Sky Park	Private	74
	Skyotee Ranch	Private	180
	Little Buttes Antique Airfield	Private	1,462
Lancaster Northeast	None	Not applicable	0
East San Gabriel Mountains	None	Not applicable	0
Antelope Valley Northeast	None	Not applicable	0

3.8.3 THRESHOLDS OF SIGNIFICANCE

The noise impacts associated with the proposed initiative can be separated into construction-related short-term impacts and operation-related long-term, permanent impacts. According to Appendix G of the California of the State CEQA Guidelines,[20] there are six questions that should be addressed to determine the potential impacts of the proposed initiative. Would the proposed initiative result in:

a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

b. Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?

c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the

[20] California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

project expose people residing or working in the proposed initiative area to excessive noise levels?

f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the proposed initiative area to excessive noise levels?

Vibration Thresholds

The FTA guidelines set forth in its technical manual, *Transit Noise and Vibration Impact Assessment*, will be utilized in determining the vibration impacts associated with the proposed initiative.[21] The FTA measures building vibration damage in PPV, which is measured in inches per second. Table 3.8.3-1, *FTA Construction Vibration Impact Criteria for Building Damage*, provides the FTA vibration criteria applicable to construction activities. According to the FTA guidelines, a vibration criterion of 0.2 inch per second should be considered as the significant impact level for non-engineered timber and masonry buildings. Furthermore, pursuant to the FTA guidelines, a vibration damage criterion of 0.50 inch per second has been designated for structures or buildings constructed of reinforced-concrete, steel, or timber.

TABLE 3.8.3-1
FTA CONSTRUCTION VIBRATION IMPACT CRITERIA FOR BUILDING DAMAGE

Building Category	PPV (inches per second)
I. Reinforced-concrete, steel or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

SOURCE: U.S. Department of Transportation, Federal Transit Administration. May 2006. Transit Noise and Vibration Impact Assessment. Washington, DC.

Construction activities can generate varying degrees of ground-borne vibration, depending on the construction procedures and the type of construction equipment used. The operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. Propagation of vibration from source to the receiver is dependent on soil type and on the receiving building. Vibration propagates more efficiently in stiff soils than in loose soils. The vibration levels inside a building depend on how the building foundation is coupled to the soil and the construction of the building. In general, heavier buildings have a lower response to vibration than smaller, lighter buildings.

Ground-borne vibration from construction rarely results in a negative response from people who are outdoors. Negative responses are typically associated with the shaking of the building where the person is located. Since construction vibration is transient, the Caltrans guidance manual can be used to categorize the potential human response to construction-induced vibration (Table 3.8.3-2, *Human Response to Transient Vibration*).[22]

[21] U.S. Department of Transportation, Federal Transit Administration. May 2006. Transit Noise and Vibration Impact Assessment. Washington, DC.

[22] California Department of Transportation. June 2004. Transportation- and Construction-Induced Vibration Guidance Manual. Sacramento, CA.

TABLE 3.8.3-2
HUMAN RESPONSE TO TRANSIENT VIBRATION

Average Human Response	PPV (in/sec)
Severe	2.000
Strongly perceptible	0.900
Distinctly perceptible	0.240
Barely perceptible	0.035

NOTE: PPV = peak particle velocity; in/sec = inches per second.

Ambient Noise Thresholds

One way of estimating a person's subjective reaction to a permanent increase in ambient noise levels is to examine the difference between the new noise level and the existing ambient noise level:

- Typically, a change of one dBA cannot be perceived outside of controlled laboratory conditions.
- A change of three dBA is considered a just-perceivable difference.
- A change of at least five dBA is required before any noticeable change in community response would be expected. A five-dBA increase is often considered a significant impact.
- A change of 10 dBA is subjectively heard as an approximate doubling of loudness and causes an adverse community response.

3.8.4 IMPACT ANALYSIS

IMPACT NOISE-1: Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

The proposed initiative would result in significant impacts related to the exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

During each phase of construction, there would be a different mix of equipment operating, and noise levels would vary based on the amount of equipment in operation and the location of the activity. The U.S. EPA has compiled data regarding the noise-generating characteristics of specific types of construction equipment during typical construction phases. These data are presented in Table 3.8.4-1, *Typical Outdoor Construction Noise Levels*, for a reference distance of 50 feet. These activities are generally point sources, which would attenuate with distance from the construction site at a rate of approximately 6.0 dB for every doubling of distance.

TABLE 3.8.4-1
TYPICAL OUTDOOR CONSTRUCTION NOISE LEVELS

Construction Phase	Noise Level (dBA Leq)	
	50 Feet	50 Feet with Mufflers
Ground clearing	84	82
Excavation/grading	89	86
Foundations	78	77
Structural/paving	85	83
Finishing	89	86

SOURCE: U.S. Environmental Protection Agency. 1971. Noise from Construction Equipment and Operation, Building Equipment and Home Appliances. PB 206717. Washington, DC.

As shown in Table 3.8.4-1, the excavation/grading phase and finishing phase of construction would generate the highest levels of noise (at 89 dBA). This is due in large part to the operation of heavy equipment, but it should be noted that only a limited amount of equipment will be operating near a given location at a particular time because not all affected parcels would initiate construction at the same time. Based on the information in Table 3.8.4-1, construction noise levels could periodically reach approximately 77 to 89 dBA at a distance of 50 feet from the proposed initiative area, depending on the use of muffler on construction equipment.

Based on these noise levels, and that noise from a point source attenuate by 6.0 dBA per doubling of distance from the source, the noise impacts on sensitive receptors can be determined by Equation 1:

(1) $$L_2 = L_1 - 20\, log_{10}\left(\frac{d_1}{d_2}\right),$$

where L_1 = known sound level at d_1, L_2 = desired sound level at d_2, d_1 = distance of known sound level from the noise source, and d_2 = distance of the sensitive receptor from the noise source.

By assigning the highest potential noise level during construction at 89 dBA (L_1) at a reference distance of 50 feet (d_1), the distance at which construction activities would reach a maximum of 75 dBA (L_2) and be below the maximum allowable noise level for construction activities near a single-family residence,[23] is approximately 251 feet (d_2). Similarly, Equation1 was used to calculate the distance at which the noise impacts from each construction phase would be below 75 dBA (Table 3.8.4-2, *Predicted Distance at Which Noise Impact Would Be below 75 dBA*).

[23] Los Angeles County Code, Title 12, Chapter 8, Noise Control.

TABLE 3.8.4-2
PREDICTED DISTANCE AT WHICH NOISE IMPACT WOULD BE BELOW 75 dBA

Construction Phase	Distance* (feet)
Ground clearing	141
Excavation/grading	251
Foundations	71
Structural/paving	158
Finishing	251

NOTE: * According to Section 12.08.440 of the Los Angeles County Code, construction activities may not exceed 75 dBA at a distance of 50 feet between the hours of 7:00 a.m. and 8:00 p.m. in any residential zone of the County or within 500 feet thereof.

The distance at which construction noise impacts will be below the threshold of significance for a residential zone for the different phases of construction ranges from 71 to 251 feet. As Table 3.8.4-2 indicates, construction of the proposed initiative would potentially have a significant impact on sensitive receptors during all phases of construction, depending on the distance to the sensitive receptor. Therefore, construction noise related to the development of single-family residences associated with the proposed initiative has the potential to exceed the 75-dBA limit imposed by Section 12.08.440 of the Los Angeles County Code.

The proposed initiative would result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies whenever construction takes place within 251 feet of a sensitive receptor.

IMPACT NOISE-2: Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?

The proposed initiative would not result in impacts related to the exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels.

Construction activities can generate varying degrees of ground-borne vibration, depending on the construction procedures and the type of construction equipment used. The operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. Propagation of vibration from source to the receiver is dependent on soil type and on the receiving building. Vibration propagates more efficiently in stiff soils than in loose soils. The vibration levels inside a building depend on how the building foundation is coupled to the soil and the construction of the building. In general, heavier buildings have a lower response to vibration than smaller, lighter buildings.

Ground-borne vibration from construction rarely results in a negative response from people who are outdoors. Negative responses are typically associated with the shaking of the building where the person is located. Since construction vibration is transient, the Caltrans guidance manual can be used to categorize the potential human response to construction-induced vibration (Table 3.8.4-3, *Human Response to Transient Vibration*).[24]

[24] California Department of Transportation. June 2004. Transportation- and Construction-Induced Vibration Guidance Manual. Sacramento, CA.

TABLE 3.8.4-3
HUMAN RESPONSE TO TRANSIENT VIBRATION

Average Human Response	PPV (in/sec)
Severe	2.000
Strongly perceptible	0.900
Distinctly perceptible	0.240
Barely perceptible	0.035

NOTE: PPV = peak particle velocity; in/sec = inches per second.

The proposed initiative would generate ground-borne construction vibration during excavation and grading activities where heavy construction equipment, such as large bulldozers, would be used. The FTA has published standard vibration velocities for various construction equipment operations. The typical vibration levels (in terms of inches per second PPV) at a reference distance of 25 feet, 50 feet, and 100 feet for construction equipment used during construction activities are listed in Table 3.8.4-4, *Vibration Source Levels for Construction Equipment*.

TABLE 3.8.4-4
VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	PPV at 25 Feet (in/sec)	PPV at 50 Feet (in/sec)	PPV at 100 Feet (in/sec)
Vibratory roller	0.210	0.074	0.026
Large bulldozer	0.089	0.031	0.011
Loaded trucks (haul truck)	0.076	0.027	0.010
Jackhammer	0.035	0.012	0.004
Small bulldozer	0.003	0.001	0.000

NOTE: PPV = peak particle velocity; in/sec = inches per second.
SOURCE: Federal Transit Administration. May 2006. Transit Noise and Vibration Impact Assessment. Washington, DC.

Construction of the homes associated with the issuance of building permits as a result of the proposed initiative would not include demolition or pile driving methods, and as such, impacts from these activities are not included in this construction vibration analysis. As indicated in Table 3.8.4-4, vibration velocities from most heavy construction operations that would be used during construction of homes associated with the proposed initiative would range from 0.000 to 0.026 inch per second PPV at a reference distance of 100 feet from the equipment. This estimated range of vibration velocity levels at a distance of 100 feet is well below the category of "barely perceptible," which is defined as 0.035 inch per second PPV, as indicated in Table 3.8.4-4. This estimated range is also below the vibration criterion that would be considered as the significant impact level for non-engineered timber and masonry buildings, which is defined as 0.2 inch per second PPV by the FTA guidelines set forth in its technical manual, *Transit Noise and Vibration Impact Assessment*,[25] and as indicated in Table 3.8.4-5, *FTA Construction Vibration Impact Criteria for Building Damage*.

[25] U.S. Department of Transportation, Federal Transit Administration. May 2006. Transit Noise and Vibration Impact Assessment. Washington, DC.

TABLE 3.8.4-5
FTA CONSTRUCTION VIBRATION IMPACT CRITERIA FOR BUILDING DAMAGE

Building Category	PPV (inches per second)
I. Reinforced-concrete, steel or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

NOTE: PPV = peak particle velocity.
SOURCE: U.S. Department of Transportation, Federal Transit Administration. May 2006. Transit Noise and Vibration Impact Assessment. Washington, DC.

The proposed initiative would not result in exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels. Therefore, mitigation measures would not be required.

IMPACT NOISE-3: A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

The proposed initiative would not result in impacts related to a substantial permanent increase in ambient noise levels in the proposed initiative vicinity above levels existing without the proposed initiative.

Noise

The proposed initiative is expected to generate traffic noise associated with water trucks traveling to and from the proposed initiative area. According to the Traffic Impact Study prepared by Fehr & Peers, the proposed initiative is expected to result in approximately 134 total water hauling truck trips per day. The typical noise level of a water truck at 50 feet is 82 dBA.[26] The noise level at other distances can be estimated using Equation 1 (Table 3.8.4-6, *Noise Level of Water Truck at Various Distances*).

[26] Federal Highway Administration. January 2006. FHWA Roadway Construction Noise Model User's Guide. Prepared by: U.S. Department of Transportation, Research and Innovative Technology Administration, John A. Volpe National Transportation Systems Center Acoustics Facility. Cambridge, MA.

TABLE 3.8.4-6
NOISE LEVEL OF WATER TRUCK AT VARIOUS DISTANCES

Distance (feet)	Noise Level (dBA)
50	82
100	76
150	72
200	70
250	68
300	66
350	65
400	64
450	63
500	62
550	61
600	60
650	60
700	59
750	58
800	58

Per the U.S. EPA, the proposed initiative area and immediate vicinity have a range of ambient noise levels, with small town and quiet suburban areas ranging from 46 to 53 dBA, suburban areas ranging from 53 to 58 dBA, and urban areas ranging from 58 to 63 dBA.[27]

One way of estimating a person's subjective reaction to a permanent increase in ambient noise levels is to examine the difference between the new noise level and the existing ambient noise level:

- Typically, a change of 1 dBA cannot be perceived outside of controlled laboratory conditions.
- A change of 3 dBA is considered a just-perceivable difference.
- A change of at least 5 dBA is required before any noticeable change in community response would be expected. A 5-dBA increase is often considered a significant impact.
- A change of 10 dBA is subjectively heard as an approximate doubling of loudness and causes an adverse community response.

The ambient noise levels in the proposed initiative area are low relative to those generated by water trucks. At a reference distance of 100 feet, a water truck would result in a noise level of 76 dBA, which is more than 10 dBA greater than the ambient noise levels of the loudest areas (urban: 58–63 dBA). Even in the loudest areas, the water truck would have to be driving on roads located at a minimum of 450 feet away from the receptor to not result in a significant impact. In the quietest areas (small town and quiet suburban: 46–53 dBA), the water truck would have to be driving on roads located at a minimum of 1,774 feet away from the receptor to not result in a significant impact.

[27] U.S. Environmental Protection Agency. March 1974. Information on Levels of Environmental Noise Requisite to Protect Public Health with an Adequate Margin of Safety. Prepared by the U.S. Environmental Protection Agency Office of Noise Abatement and Control. Available online at: http://www.fican.org/pdf/EPA_Noise_Levels_Safety_1974.pdf

Due to the generally quiet and rural nature of the area within and surrounding the proposed initiative parcels, the regular operation of the water trucks would result in a substantial periodic increases, but not a permanent steady state increase, in ambient noise levels above levels existing without the proposed initiative.

Vibration

Water trucks would also generate ground-borne vibration as they travel to and from the proposed initiative area. Thus, an analysis of potential vibration impacts associated with building damage from ground-borne vibration along the local access routes to the proposed initiative area was conducted. As indicated in Table 3.8.4-4, a loaded truck would generate a ground-borne vibration level of 0.010 inch per second PPV at a reference distance of 100 feet from the truck. This is well below the "barely perceptible" category, which is defined as 0.035 inch per second PPV. Therefore, potential impacts from vibration during operation would be less than significant.

The proposed initiative would not result in a substantial permanent increase in ambient noise levels in the proposed initiative vicinity above levels existing without the proposed initiative. Therefore, no mitigation measures would be required.

IMPACT NOISE-4: A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

The proposed initiative would result in significant impacts related to a substantial temporary or periodic increase in ambient noise levels in the proposed initiative vicinity above levels existing without the proposed initiative.

As discussed above, the ambient noise levels in the proposed initiative area are low relative to those generated by the water trucks, and the proposed initiative is expected to result in approximately 134 total water hauling truck trips per day. Due to the generally quiet and rural nature of the area within and surrounding the proposed initiative parcels, the regular operation of the water trucks would result in a substantial periodic increases, but not a permanent steady state increase, in ambient noise levels above levels existing without the proposed initiative. Therefore, the proposed initiative would result in a substantial temporary or periodic increase in ambient noise levels in the proposed initiative vicinity above levels existing without the proposed initiative.

IMPACT NOISE-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the proposed initiative area to excessive noise levels?

For a proposed initiative parcel located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, the proposed initiative would not result in impacts related to the exposure of people residing or working in the proposed initiative area to excessive noise levels.

There are no proposed initiative parcels located within the 60 CNEL noise contour of the three public airports that are within a two-mile radius of the proposed initiative area. Therefore, the proposed initiative would not result in impacts from exposing people residing or working in the proposed initiative area to excessive noise levels, and no mitigation measures are required.

IMPACT NOISE-6: For a project within the vicinity of a private airstrip, would the project expose people residing or working in the proposed initiative area to excessive noise levels?

For a proposed initiative parcel within the vicinity of a private airstrip, the proposed initiative would not result in impacts related to the exposure of people residing or working in the proposed initiative area to excessive noise levels.

There are no proposed initiative parcels located within the 60 CNEL noise contour of the eight private airstrips that are within a two-mile radius of the proposed initiative area. Therefore, the proposed initiative would not result in impacts from exposing people residing or working in the proposed initiative area to excessive noise levels, and no mitigation measure are required.

3.8.5 CUMULATIVE IMPACTS

The proposed initiative, together with related projects and future growth, could potentially contribute to cumulative noise impacts. The potential for cumulative noise impacts to occur is specific to the distance between each related initiative parcel and its stationary noise sources, including the cumulative traffic that these initiatives would add to the surrounding roadway network. There are four related projects in the vicinity of the proposed initiative area (Table 3.8.5-1, *Related Projects*; Figure 2.9-1, *Related Projects*).

TABLE 3.8.5-1
RELATED PROJECTS

Name	Project Type
Centennial Project	Residential
High Desert Corridor Project	Transportation
Newhall Ranch Specific Plan	Specific Plan
Northlake Specific Plan	Specific Plan

IMPACT NOISE-1: Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

The proposed initiative would result in significant cumulative impacts related to the exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Noise from construction as a result of the proposed initiative is typically localized and has the potential to affect areas in the immediate vicinity of the construction site. Were it to occur at the same time, construction noise from the proposed initiative would combine with the construction noise from the Centennial Project, which is located in the Lake Hughes/Gorman/West of Lancaster subarea, to result in cumulative construction noise impacts.

Noise from the water trucks as a result of the proposed initiative would combine with traffic noise from the Centennial Project, which is located in the Lake Hughes/Gorman/West of Lancaster subarea, and the High Desert Corridor Project, which is located in the Lake Los Angeles/Llano/Valyermo/Littlerock subarea, to result in cumulative operational noise impacts.

IMPACT NOISE-2: Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?

The proposed initiative would not result in significant cumulative impacts related to the exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels. Therefore, impacts from implementation of the proposed initiative are not expected to combine with related projects to result in cumulative impacts related to ground-borne vibration or ground-borne noise levels.

IMPACT NOISE-3: A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

The proposed initiative would not result in significant cumulative impacts related to a substantial permanent increase in ambient noise levels in the proposed initiative vicinity above levels existing without the proposed initiative. Therefore, impacts from implementation of the proposed initiative are not expected to combine with related projects to result in cumulative impacts related to a substantial increase in ambient noise levels.

IMPACT NOISE-4: A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

The proposed initiative would result in significant cumulative impacts related a substantial temporary or periodic increase in ambient noise levels in the vicinity of the proposed initiative parcels above levels existing without the proposed initiative.

Noise from the water trucks as a result of the proposed initiative would combine with traffic noise from the Centennial Project, which is located in the Lake Hughes/Gorman/West of Lancaster subarea, and the High Desert Corridor Project, which is located in the Lake Los Angeles/Llano/Valyermo/Littlerock subarea, to result in cumulative operational noise impacts.

IMPACT NOISE-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the proposed initiative area to excessive noise levels?

For a proposed initiative parcel located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, the proposed initiative would not result in impacts related to the exposure of people residing or working in the proposed initiative area to excessive noise levels. Therefore, impacts from implementation of the proposed initiative are not expected to combine with related projects to result in cumulative impacts related to proposed initiative parcels that are located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport.

IMPACT NOISE-6: For a project within the vicinity of a private airstrip, would the project expose people residing or working in the proposed initiative area to excessive noise levels?

For a proposed initiative parcel within the vicinity of a private airstrip, the proposed initiative would not result in impacts related to the exposure of people residing or working in the proposed initiative area to excessive noise levels. Therefore, impacts from implementation of the proposed

initiative are not expected to combine with related projects to result in cumulative impacts related to proposed initiative parcels that are within the vicinity of a private airstrip.

3.8.6 MITIGATION MEASURES

The proposed initiative would potentially result in significant impacts from noise, including contributions to cumulative impacts from construction noise and from substantial increases to ambient noise levels, requiring the consideration of mitigation measures.

IMPACT NOISE-1: Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

No feasible mitigation measures have been identified. However, as part of the County of Los Angeles Department of Public Works, Building and Safety Division plan check and agency referral process and the Department of Regional Planning Site Plan Review Application, property owners who have been determined to be eligible to develop properties using hauled water as the primary source of potable water would be notified of the requirement to comply with the County of Los Angeles Noise Ordinance (please see Appendix C, *Regulatory Measures*).

IMPACT NOISE-2: Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?

The consideration of mitigation measures is not required.

IMPACT NOISE-3: A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

The consideration of mitigation measures is not required.

IMPACT NOISE-4: A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

No feasible mitigation measures have been identified. However, as part of the County of Los Angeles Department of Public Works, Building and Safety Division plan check and agency referral process and the Department of Regional Planning Site Plan Review Application, property owners who have been determined to be eligible to develop properties using hauled water as the primary source of potable water would be notified of the requirement to comply with the County of Los Angeles Noise Ordinance (please see Appendix C, *Regulatory Measures*).

IMPACT NOISE-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the proposed initiative area to excessive noise levels?

The consideration of mitigation measures is not required.

IMPACT NOISE-6: For a project within the vicinity of a private airstrip, would the project expose people residing or working in the proposed initiative area to excessive noise levels?

The consideration of mitigation measures is not required.

3.8.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

IMPACT NOISE-1: Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

As part of the County of Los Angeles Department of Public Works, Building and Safety Division plan check and agency referral process and the Department of Regional Planning Site Plan Review Application, property owners who have been determined to be eligible to develop properties using hauled water as the primary source of potable water would be notified of the requirement to comply with the County of Los Angeles Noise Ordinance (please see Appendix C, *Regulatory Measures*). Compliance with the County of Los Angeles Noise Ordinance would be expected to reduce impacts to below the level of significance. Therefore, impacts would be **less than significant**.

IMPACT NOISE-2: Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?

Impacts from exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels are not anticipated. Therefore, the consideration of mitigation measures is not required, and impacts would be **less than significant**.

IMPACT NOISE-3: A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Impacts from a substantial permanent increase in ambient noise levels in the proposed initiative vicinity above levels existing without the proposed initiative are not anticipated. Therefore, the consideration of mitigation measures is not required, and impacts would be **less than significant**.

IMPACT NOISE-4: A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

As part of the County of Los Angeles Department of Public Works, Building and Safety Division plan check and agency referral process and the Department of Regional Planning Site Plan Review Application, property owners who have been determined to be eligible to develop properties using hauled water as the primary source of potable water would be notified of the requirement to comply with the County of Los Angeles Noise Ordinance (please see Appendix C, *Regulatory Measures*). Compliance with the County of Los Angeles Noise Ordinance would be expected to reduce impacts to below the level of significance. Therefore, impacts would be **less than significant**.

IMPACT NOISE-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the proposed initiative area to excessive noise levels?

For a proposed initiative parcel located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, the proposed initiative is not anticipated to expose people residing or working in the proposed initiative area to excessive

noise levels. Therefore, the consideration of mitigation measures is not required, and impacts would be **less than significant**.

IMPACT NOISE-6: For a project within the vicinity of a private airstrip, would the project expose people residing or working in the proposed initiative area to excessive noise levels?

For a proposed initiative parcel within the vicinity of a private airstrip, the proposed initiative is not anticipated to expose people residing or working in the proposed initiative area to excessive noise levels. Therefore, the consideration of mitigation measures is not required, and impacts would be **less than significant**.

SECTION 3.9
POPULATION AND HOUSING

As a result of the Initial Study (Appendix F), the County determined that the proposed initiative had the potential to result in significant impacts to population and housing related to induced population growth, thus requiring the consideration of mitigation measures and alternatives in an EIR. The proposed initiative would not result in impacts related to displacement of existing housing or people; therefore, these issues do not warrant further analysis.[1] Therefore, the potential for inducing growth has been carried forward for detailed analysis in this EIR. This analysis was undertaken to identify opportunities to avoid, reduce, or otherwise mitigate potential significant impacts to population and housing. The analysis of population and housing consists of a summary of the regulatory framework that guides the decision-making process, a description of the existing conditions at the proposed initiative study area, thresholds for determining if the proposed initiative would result in significant impacts, anticipated impacts (direct, indirect, and cumulative), mitigation measures, and level of significance after mitigation.

Population and housing were evaluated with regard to the State, regional, and local data and forecasts for population and housing in unincorporated Los Angeles County, consistent with the Los Angeles County General Plan 2015 - 2035. The Southern California Association of Governments' (SCAG's) 2015 Profile of Los Angeles County;[2] SCAG's 2015 Profile of the Unincorporated Area of Los Angeles County;[3] SCAG's 2012 Adopted Regional Transportation Plan (RTP) Growth Forecast;[4] SCAG's 2016 Draft RTP Growth Forecast;[5] SCAG's 5th Cycle Regional Housing Needs Assessment Final Allocation Plan, 1/1/2014-10/1/2021;[6] the 2014–2021 Housing Element[7] of the Los Angeles County General Plan; the 2015 Antelope Valley Area Plan – Town & Country;[8] the 2012 Santa Clarita Valley Area Plan;[9] and the Los Angeles County Code of Ordinances – Title 22 Planning and Zoning[10] were referenced in this analysis.

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[1] County of Los Angeles. September 2014. County of Los Angeles Single-Family Residential Hauled Water Initiative for New Development Initial Study. Prepared by: Sapphos Environmental, Inc.

[2] Southern California Association of Governments. May 2015. Profile of Los Angeles County. Available at: http://www.scag.ca.gov/Documents/LosAngelesCountyLP.pdf Main website: http://www.scag.ca.gov/Pages/default.aspx

[3] Southern California Association of Governments. May 2015. Profile of the Unincorporated Area of Los Angeles County. Available online at: http://www.scag.ca.gov/Documents/UnIncAreaLosAngelesCounty.pdf

[4] Southern California Association of Governments. 12 March 2012. 2012 Adopted RTP Growth Forecast. Available online at: http://www.scag.ca.gov/Documents/2012AdoptedGrowthForecastPDF.pdf

[5] Southern California Association of Governments. 17 November 2014. 2016 Draft RTP Growth Forecast. Available online at: http://www.scag.ca.gov/Documents/2016DraftGrowthForecastByJurisdiction.pdf

[6] Southern California Association of Governments. 29 August 2012. 5th Cycle Regional Housing Needs Assessment Final Allocation Plan, 1/1/2014-10/1/2021. Available at: http://www.scag.ca.gov/Documents/5thCyclePFinalRHNAplan.pdf

[7] Los Angeles County Department of Regional Planning. 30 April 2014. Los Angeles County Housing Element, 2014-2021. Available online at: http://planning.lacounty.gov/housing

[8] Los Angeles County Department of Regional Planning. 16 June 2015. Antelope Valley Area Plan – Town & Country. Available online at: http://planning.lacounty.gov/tnc/documents/

[9] Los Angeles County Department of Regional Planning. 2012. Santa Clarita Valley Area Plan. Available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf, Page 3-4, Section IV. Planning Area.

[10] Los Angeles County Department of Regional Planning. Accessed 18 May 2015. Los Angeles County, California, Code of Ordinances – Title 22 Planning and Zoning. Available online at: http://library.municode.com/HTML/16274/level1/TIT22PLZO.html

Definitions

Housing: As used in this analysis, housing is that data available from the U.S. Census for Los Angeles County for the period of 2000 through 2035.

Population: As used in this analysis, population is that data available from the U.S. Census for Los Angeles County for the period of 1900 through 2010, with population projections available from SCAG in 2012 for the projected population growth period of 2008 through 2035.

Regional Housing Needs Assessment (RHNA): The RHNA quantifies the need for housing within each jurisdiction during specified planning periods. The RHNA is mandated by State Housing Law as part of the periodic process of updating local housing elements of the General Plan.[11] State law requires SCAG to determine the existing and projected housing need for its region. SCAG's region encompasses Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. The intention of the RHNA process is to create a better balance of jobs and housing in communities, ensure the availability of decent affordable housing for all income groups, and achieve sustainability through long-term strategic land use planning.[12] The RHNA consists of two measurements:[13]

1) Existing need for housing: The existing need assessment examines key variables from Census data in order to measure ways in which the housing market is not meeting the needs of current residents. This includes the number of low-income households paying more than 30 percent of their income for housing, as well as how many people occupy overcrowded housing units.

2) Future need for housing: The future need assessment is determined by SCAG's growth forecast and public participation process. Each new household (created by a young adult moving out of a parent's home or a family moving into a community for employment) creates the need for more housing. The anticipated need is then adjusted to account for an ideal level of vacant units.

3.9.1 REGULATORY FRAMEWORK

The proposed initiative would allow hauled water as the primary source of potable water for eligible new single-family residential construction in selected areas of unincorporated areas of the Los Angeles County that are zoned for single-family residences at the time of consideration of the proposed initiative and not served by private or public water purveyor, or groundwater. The regulatory framework for population and housing has been limited to the combined study area, which consists of 42,867 parcels in unincorporated Los Angeles County with an area totaling approximately 340,461 acres, or approximately 532 square miles.

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[11] Southern California Association of Governments. n.d. RHNA & Housing. Available online at: http://www.scag.ca.gov/programs/Pages/Housing.aspx

[12] Southern California Association of Governments. n.d. Regional Housing Needs Assessment (RHNA). Available online at: http://www.scag.ca.gov/Documents/scagRHNA2012.pdf

[13] Southern California Association of Governments. n.d. Regional Housing Needs Assessment (RHNA). Available online at: http://www.scag.ca.gov/Documents/scagRHNA2012.pdf

The proposed initiative is limited to the use of undeveloped parcels whose zone permits single-family residential construction.

Federal

There are no applicable federal plans or policies for this issue area.

State

California Housing Element Law

According to California Government Code §65300, each governing body of a local government in California is required to adopt a comprehensive, long-term General Plan for the physical development of the city, city and county, or county.[14] The California Housing Element Law, enacted in 1969, mandates that local governments adequately plan to meet the existing and projected housing needs of all economic segments of the community as part of the Housing Element, one of the seven mandated elements of the local General Plan. The California Housing Element Law is implemented by the California Department of Housing and Community Development (HCD), who is responsible for reviewing local government housing elements for compliance with State law and providing written comments to the local government. Using the information provided by local governments in its Housing Element, the HCD determines the regional housing need for each county and allocates funding to meet this need to the council of governments for distribution to its jurisdictions. The HCD also oversees distribution of funding related to the regional housing need by the council of governments to the local governments to ensure that funds are appropriately allocated. The requirements for the Housing Element are delineated in California State Government Code Section 65580 – 65589.9.

The California State Housing Element Law requires SCAG and other regional councils of government in California to determine the existing and projected regional housing needs for persons at all income levels. SCAG is also required by law to determine each jurisdiction's share of the regional housing need in the six-county Southern California region through preparation of an RHNA.[15] The RHNA contains two measurements of housing need: (1) existing need and (2) future need for very-low income, low-income, moderate, and above-moderate income categories. The existing need assessment is based on the most recent U.S. Census data to measure ways in which the housing market is not meeting the needs of current residents, including the number of low-income households paying more than 30 percent of their income for housing and the level of severe overcrowding. The future need for housing is determined primarily by the forecasted growth in households in a community, which is based on historical growth patterns, job creation, household formation rates, and other factors, to estimate how many households will be added to each community over the projection period. The housing need for new households is then adjusted to account for an ideal level of vacancy needed to promote housing choice, maintain price competition and encourage acceptable levels of housing upkeep and repair. The RHNA also accounts for units expected to be lost due to demolition, natural disaster, or conversion to non-housing uses. The sum of these factors (household growth, vacancy need and replacement need)

[14] California Department of Housing and Community Development. Accessed 18 May 2015. Housing Elements and Regional Housing Need Allocation. Available online at: http://www.hcd.ca.gov/hpd/hrc/plan/he/

[15] Southern California Association of Governments. n.d. Regional Housing Needs Assessment (RHNA). Available online at: http://www.scag.ca.gov/Documents/scagRHNA2012.pdf

determines the "construction need" that is assigned to each community. Additionally, the RHNA considers how each jurisdiction might grow in ways that will decrease the concentration of low-income households in certain communities. The need for new housing is distributed among income groups so that each community moves closer to the regional average income distribution.

Regional

Southern California Association of Governments

Regional Comprehensive Plan

SCAG's *Regional Comprehensive Plan* is a problem-solving guidance document that develops a holistic, strategic plan for defining and solving interrelated housing, traffic, water, air quality, and other regional challenges specific to Southern California. The Land Use and Housing Chapter of the *Regional Comprehensive Plan* establishes seven goals and one Best Practices policy that are related to the consideration of the proposed initiative:[16]

- **Goals:**
  1. Focusing growth in existing and emerging centers and along major transportation corridors
  2. Creating significant areas of mixed-use development and walkable, "people-scaled" communities
  3. Providing new housing opportunities, with building types and locations that respond to the region's changing demographics
  4. Targeting growth in housing, employment and commercial development within walking distance of existing and planned transit stations
  5. Injecting new life into under-used areas by creating vibrant new business districts, redeveloping old buildings and building new businesses and housing on vacant lots
  6. Preserving existing, stable, single-family neighborhoods
  7. Protecting important open space, environmentally sensitive areas and agricultural lands from development

- **Policy LU-4.1:** Local governments should adopt and implement General Plan Housing Elements that accommodate housing needs identified through the Regional Housing Needs Assessment (RHNA) process. Affordable housing should be provided consistent with RHNA income category distributions adopted for each jurisdiction.

[16] Southern California Association of Governments. Adopted 9 February 2009. 2008 Regional Comprehensive Plan, Land Use & Housing Chapter. Available at: http://www.scag.ca.gov/Documents/f2008RCP_LandUseHousing.pdf Main website: http://www.scag.ca.gov/NewsAndMedia/Pages/RegionalComprehensivePlan.aspx

Local

Los Angeles County General Plan

2014–2021 Housing Element of the Los Angeles County General Plan

The County's consideration of development of single-family residences in unincorporated areas is guided by the Housing Element of the Los Angeles County General Plan. The 2014–2021 Housing Element was adopted by the County Board of Supervisors on February 4, 2014, and received State certification on April 30, 2014.[17]

The 2014 Housing Element of the Los Angeles County General Plan establishes the following goals and polices relevant to population and housing in consideration of the proposed initiative:[18]

- **Goal 1:** A wide range of housing types in sufficient supply to meet the needs of current and future residents, particularly persons with special needs, including, but not limited to, low-income households, seniors, persons with disabilities, single-parent households, the homeless and at-risk homeless, and farmworkers

- **Goal 5:** Neighborhoods that protect the health, safety, and welfare of the community, and enhance public and private efforts to maintain, reinvest in, and upgrade the existing housing supply
    - **Policy 5.2**: Maintain adequate neighborhood infrastructure, community facilities, and services as a means of sustaining the overall livability of neighborhoods

2015 Antelope Valley Area Plan – Town & Country

The Antelope Valley Area Plan – Town & Country (Antelope Valley Area Plan) was adopted by the County Board of Supervisors on June 16, 2015.[19] The Antelope Valley Area Plan, a component of the Los Angeles County General Plan, provides planning policies for approximately 1,800 square miles of elevated desert terrain bounded by the southern foothills of the San Gabriel Mountains on the south, Kern County to the north, and extending from the eastern border of the community of Agua Dulce and the Ventura County line on the west to the San Bernardino County line on the east, including 89.6 percent of the area that would be potentially affected by the proposed initiative.[20] The Land Use Element of the Antelope Valley Area Plan establishes the following goals and policies relevant to population and housing in consideration of the proposed initiative:[21]

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[17] Los Angeles County Department of Regional Planning. Accessed 18 May 2015. Los Angeles County Housing Element, 2014-2021. Available online at: http://planning.lacounty.gov/housing

[18] Los Angeles County Department of Regional Planning. Accessed 18 May 2015. Los Angeles County Housing Element, 2014-2021. Available online at: http://planning.lacounty.gov/housing

[19] Los Angeles County Department of Regional Planning. 16 June 2015. Antelope Valley Area Plan – Town & Country. Available online at: http://planning.lacounty.gov/tnc/documents/

[20] Los Angeles County Department of Regional Planning. 16 June 2015. Antelope Valley Area Plan – Town & Country. Available online at: http://planning.lacounty.gov/tnc/documents/

[21] Los Angeles County Department of Regional Planning. 16 June 2015. Antelope Valley Area Plan – Town & Country. "Chapter 2: Land Use Element." Available online at: http://planning.lacounty.gov/tnc/documents/

- **Goal LU 1:** A land use pattern that maintains and enhances the rural character of the unincorporated Antelope Valley.
  - **Policy LU 1.1:** Direct the majority of unincorporated Antelope Valley's future growth to rural town center areas and identified economic opportunity areas, through appropriate land use designations, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.
  - **Policy LU 1.2:** Limit the amount of potential development in rural preserve areas, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.
  - **Policy LU 1.3:** Maintain the majority of the unincorporated Antelope Valley as Rural Land, allowing for agriculture, equestrian and animal-keeping uses, and single-family homes on large lots.
  - **Policy LU 1.5:** Provide varied lands for residential uses sufficient to meet the needs of all segments of the population, and allow for agriculture, equestrian uses and animal-keeping uses in these areas where appropriate.

- **Goal LU 2:** A land use pattern that protects environmental resources.
  - **Policy LU 2.1:** Limit the amount of potential development in Significant Ecological Areas, including Joshua Tree Woodlands, wildlife corridors, and other sensitive habitat areas, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.
  - **Policy LU 2.2:** Except within economic opportunity areas, limit the amount of potential development near and within Scenic Resource Areas, including water features, significant ridgelines, and Hillside Management Areas, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.
  - **Policy LU 2.3:** Except within economic opportunity areas, limit the amount of potential development in Agricultural Resource Areas, including important farmlands designated by the State of California and historical farmland areas, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.
  - **Policy LU 2.4:** Except within economic opportunity areas, limit the amount of potential development in Mineral Resource Areas, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.
  - **Policy LU 2.5:** Except within economic opportunity areas, limit the amount of potential development in riparian areas and groundwater recharge basins, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.
  - **Policy LU 2.6:** Except within economic opportunity areas, limit the amount of potential development near the National Forests and on private lands within the National Forests, through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.

The Land Use Element of the Antelope Valley Area Plan identifies the following 11 rural town center areas as the focal points of rural communities that provide local employment opportunities

and support the daily needs of residents within the planning area where the majority of future growth should be directed:

- **Acton** – Along Crown Valley Road between Gillespie Avenue and Soledad Canyon Road.
- **Antelope Acres** – Along 90th Street West between Avenue E-4 and Avenue E-12.
- **Gorman** – Along the Golden State Freeway surrounding the Gorman School Road interchanges.
- **Lake Hughes** – Along Elizabeth Lake Road between Trail I and Mountain View Road.
- **Lake Los Angeles** – Along Avenue O between 167th Street East and 172nd Street East, and along 170th Street East between Avenue O and Glenfall Avenue.
- **Leona Valley** – Intersection of Elizabeth Lake Road and 90th Street West.
- **Littlerock** – Along Pearblossom Highway between Little Rock Wash and 89th Street East.
- **Pearblossom** – Along Pearblossom Highway between 121st Street East and 133rd Street East.
- **Quartz Hill** – Along 50th Street West between Avenue L-6 and Avenue M-2.
- **Roosevelt** – Intersection of 90th Street East and Avenue J.
- **Sun Village** – Along Palmdale Boulevard between Little Rock Wash and 110th Street East, and along 90th Street East between Palmdale Boulevard and Avenue Q-14.

2012 Santa Clarita Valley Area Plan

The Castaic/Santa Clarita/Agua Dulce subarea (10.4 percent of the area potentially affected by the proposed initiative) is located within the planning area of the Santa Clarita Valley Area Plan, which comprises the entire Santa Clarita Valley and provides goals, policies, and maps to establish zoning regulations and guide new development proposals.[22] The Santa Clarita Valley Area Plan states that residential growth in the Santa Clarita Valley, initiated in the 1960s, has been primarily catalyzed by the need for affordable housing in proximity to job centers in the Los Angeles basin and San Fernando Valley after the designation of Interstate 5 as a federal highway. Relevant guiding principles stated in the Santa Clarita Valley Area Plan include:

- **Management of Growth**
  1. Growth in the Santa Clarita Valley shall account for the visions and objectives for each community and must be consistent with principles, as subsequently defined in this document, for the protection of the Valley's significant environmental resources. It must also be based on the availability or ability to provide adequate infrastructure, schools, and public services, and must be carefully planned to benefit the community's economy, lifestyles, and needs.

  2. Growth shall occur within and on the periphery of previously developed areas, rather than as "leapfrog" development or in areas of critical

[22] Los Angeles County Department of Regional Planning. 2012. Santa Clarita Valley Area Plan. Available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf

environmental habitat or natural hazards, and taking into consideration accessibility to infrastructure and public services.

3.9.2 EXISTING CONDITIONS

For the 2014-2021 planning period, SCAG has assigned a RHNA allocation of 30,145 housing units for unincorporated Los Angeles County (Table 3.9.2-1, *SCAG Final RHNA Allocation, 2014–2021*). The Housing Element of the Los Angeles County General Plan has assigned an RHNA allocation of 30,145 housing units for the 2014–2021 Housing Element planning period (Table 3.9.2-2, *Unincorporated Los Angeles County RHNA Allocation, 2014–2021*). None of the subject parcels considered under the proposed initiative have been identified by the Adequate Sites Inventory as vacant and underutilized sites that need to be developed in order to meet the County's RHNA allocation.[23] The nearest RHNA allocation sites to the proposed initiative study area are the Newhall Ranch Specific Plan Area and the Northlake Specific Plan Area, both of which are located in the vicinity of the Castaic/Santa Clarita/Agua Dulce subarea (see Figure 2.3-4, *Regional Housing Needs Assessment Allocation Sites*).

TABLE 3.9.2-1
SCAG FINAL RHNA ALLOCATION, 2014–2021

Location	Number of Very Low Income Households	Number of Low Income Households	Number of Moderate Income Households	Number of Above Moderate Income Households	Total
Unincorporated Los Angeles County	7,854	4,650	5,060	12,581	30,145
Los Angeles County (overall)	45,672	27,469	30,043	76,697	179,881

SOURCE: Southern California Association of Governments. 29 August 2012. 5th Cycle Regional Housing Needs Assessment Final Allocation Plan, 1/1/2014-10/1/2021. Available online at: http://www.scag.ca.gov/Documents/5thCyclePFinalRHNAplan.pdf

TABLE 3.9.2-2
UNINCORPORATED LOS ANGELES COUNTY RHNA ALLOCATION, 2014–2021

Source of Residential Sites	Affordability				Total
	Very Low	Lower	Moderate	Above Moderate	
RHNA	7,854	4,650	5,060	12,581	30,145
Newhall Ranch Specific Plan	440	550	1,210	19,108	21,308
Marina Del Rey Specific Plan	51	94	82	1,484	1,711
Northlake Specific Plan	—	—	—	3,623	3,623
2013 Vacant and Underutilized Sites	5,445		2,295		7,740
2008 Vacant and Underutilized Sites	10,587		3,574		14,161
Total Adequate Sites	17,167		7,161	24,215	48,543

SOURCE: Los Angeles County Department of Regional Planning. Accessed 18 May 2015. Los Angeles County Housing Element, 2014-2021. Available at: http://planning.lacounty.gov/assets/upl/project/housing_element_appendix.pdf

[23] Ms. Connie Chung of the Los Angeles County Department of Regional Planning verified via phone call on April 29, 2014, with Mr. Eric Charlton that there were no RHNA parcels within the proposed initiative study area.

In the past 18 years, an average of 184 building permits have been issued annually for new single-family residences in the unincorporated Santa Clarita Valley and unincorporated Antelope Valley, with a peak of 456 building permits granted per year in 2005 and a sharp decline starting in 2008 after the beginning of an economic recession that greatly impacted construction of new single-family residences (Table 3.9.2-3, *Annual Number of Building Permits Granted for New Single-Family Residences in Unincorporated Antelope Valley and Santa Clarita Valley, January 1997 to End of June 2014*).[24] In comparison, the overall peak number of building permits granted in unincorporated Los Angeles County within the 2000 to 2014 period occurred two years earlier, in 2003, with the same sharp decline in 2008 as a result of the recession.

Based on these data, the proposed initiative study area has accounted for approximately 12.6 percent of countywide growth of single-family residences not associated with planned development over the past 15 years.

[24] County Building and Safety Division building permit records have been digitally tracked since 1997; records were not readily available from before 1997.

TABLE 3.9.2-3
ANNUAL NUMBER OF BUILDING PERMITS GRANTED FOR NEW SINGLE-FAMILY RESIDENCES IN UNINCORPORATED ANTELOPE VALLEY AND SANTA CLARITA VALLEY, JANUARY 1997 TO END OF JUNE 2014

Year	Total Annual Building Permits for New Single-Family Permits Issued in Entire Unincorporated Los Angeles County[1]	Santa Clarita Valley Building Permits	Antelope Valley Building Permits	Total Annual Building Permits for New Single-Family Residences* in Unincorporated Santa Clarita and Antelope Valleys[2]
1997	—	16	44	60
1998	—	17	48	65
1999	—	22	72	94
2000	2,289	28	77	105
2001	1,737	39	82	121
2002	2,085	33	92	125
2003	3,159	48	232	280
2004	2,225	51	294	345
2005	1,921	53	403	456
2006	1,574	34	408	442
2007	1,217	29	261	290
2008	451	19	80	99
2009	294	5	29	34
2010	292	7	23	30
2011	352	9	8	17
2012	758	1	10	11
2013	596	51	7	58
2014**	297	1	5	6
Total permits	Over 19,247	463	2,175	2,638
Projected rest of 2014	—	1	5	6
Annual average	1,412	26	121	147
With 25 percent population growth factor	1,765	32	151	184
Anticipated building permits over 20-year planning period (2015–2035)				3,680

NOTES:
*January 1–June 30, 2014.
** Including mobile homes.

SOURCES:
[1] Southern California Association of Governments. May 2015. Profile of the Unincorporated Area of Los Angeles County. Available online at: http://www.scag.ca.gov/Documents/UnIncAreaLosAngelesCounty.pdf
[2] Smith, David, IT Project Manager, Los Angeles County Department of Public Works, Building and Safety Division. Electronic Building Permit Data from January 1, 1997 to June 30, 2014.

Population Growth

The population in Los Angeles County has increased significantly in the last century from 170,290 people in 1900 to approximately 10,116,705 people in 2014 based on U.S. Census estimate (Table 3.9.2-4, *Population in Los Angeles County, 1900–2010*).[25] The population growth rate in Los Angeles County was highest at the beginning of the twentieth century, high during the post–World War II years, and has decreased since the 1950s (Table 3.9.2-5, *Population Growth Rate in Los Angeles County, 1900–2010*).

According to SCAG's 2015 Profile of Los Angeles County, the population of Los Angeles County increased by 522,467 people between 2000 and 2014 to a population of 10,041,797.[26] During this 14-year period, Los Angeles County's population growth rate of 5.5 percent was lower than the SCAG Region rate of 12.3 percent. For unincorporated Los Angeles County, SCAG calculated a population increase by 60,507 people to 1,046,557 between 2000 and 2014, during which the unincorporated area's population growth rate of 6.1 percent was higher than the overall growth rate in Los Angeles County.[27] According to the SCAG 2012 Adopted RTP Growth Forecast, SCAG estimates that the population of Los Angeles County will grow from 9,778,000 people in 2008 to 10,404,000 people in 2020 and 11,353,000 people in 2035; in unincorporated areas of Los Angeles County, SCAG estimates that the population will grow from 1,052,800 people in 2008 to 1,159,100 people in 2020 and 1,399,500 people in 2035.[28] The SCAG's 2016 Draft RTP Growth Forecast, which is subject to change as the agency is currently gathering local input, estimates that the population of Los Angeles County will only grow from 9,922,731 people in 2012, to 10,325,102 people in 2020, to 11,148,679 people in 2035, and to 11,517,421 people in 2040; in unincorporated areas of Los Angeles County, SCAG estimates that the population will grow from 1,040,732 people in 2012 to 1,106,585 people in 2020, to 1,216,068 people in 2035, and to 1,273,660 people in 2040.[29]

[25] U.S. Census Bureau. 1 July 2014. Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2014. Available online at: http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml

[26] Southern California Association of Governments. May 2015. Profile of Los Angeles County. Available online at: http://www.scag.ca.gov/Documents/LosAngelesCountyLP.pdf

[27] Southern California Association of Governments. May 2015. Profile of the Unincorporated Area of Los Angeles County. Available online at: http://www.scag.ca.gov/Documents/UnIncAreaLosAngelesCounty.pdf

[28] Southern California Association of Governments. 12 March 2012. 2012 Adopted RTP Growth Forecast. Available online at: http://www.scag.ca.gov/Documents/2012AdoptedGrowthForecastPDF.pdf

[29] Southern California Association of Governments. 17 November 2014. 2016 Draft RTP Growth Forecast. Available online at: http://www.scag.ca.gov/Documents/2016DraftGrowthForecastByJurisdiction.pdf

TABLE 3.9.2-4
POPULATION IN LOS ANGELES COUNTY, 1900–2010

County	1900 Population[1]	1910 Population[1]	1920 Population[1]	1930 Population[1]	1940 Population[1]	1950 Population[1]	1960 Population[1]	1970 Population[1]	1980 Population[1]	1990 Population[1]	2000 Population	2010 Population
Los Angeles County	170,298	504,131	936,455	2,208,492	2,785,643	4,151,687	6,038,771	7,032,075	7,477,503	8,863,164	9,519,338[4]	9,818,605[2]
State of California	1,485,053	2,377,549	3,426,861	5,677,251	6,907,387	10,586,223	15,717,204	19,953,134	23,667,902	29,760,021	33,871,648[3]	37,253,956[2]

SOURCES:
[1] Forstall, Richard L., U.S. Census Bureau. 27 March 1995. CALIFORNIA Population of Counties by Decennial Census: 1900 to 1990. Available online at: http://www.census.gov/population/cencounts/ca190090.txt
[2] U.S. Census Bureau. 27 March 2014. State & County Quickfacts. Los Angeles County, California. Population, 2010. Available online at: http://quickfacts.census.gov/qfd/states/06/06037.html
[3] U.S. Census Bureau. n.d. American FactFinder. DP-1: Profile of General Demographic Characteristics: 2000. Census 2000 Summary File 1 (SF 1) 100-Percent Data. Search for State of California. Available online at: http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk Main website: http://factfinder2.census.gov/
[4] U.S. Census Bureau. n.d. American FactFinder. DP-1: Profile of General Demographic Characteristics: 2000 Census 2000 Summary File 1 (SF 1) 100-Percent Data. Search for Los Angeles County. Available online at: http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_00_SF1_DP1&prodType=table Main website: http://factfinder2.census.gov/

TABLE 3.9.2-5
POPULATION GROWTH RATE IN LOS ANGELES COUNTY, 1900–2010

Date Range	1900–1910[1]	1910–1920[1]	1920–1930[1]	1930–1940[1]	1940–1950[1]	1950–1960[1]	1960–1970[1]	1970–1980[1]	1980–1990[1]	1990–2000[1]	2000–2010[2,3]
County Population Growth Rate	196.0%	85.8%	135.8%	26.1%	49.0%	45.5%	16.5%	6.3%	18.5%	7.4%	3.1% (or 5.5% from 2000 to 2014)[4]

SOURCES:
[1] Forstall, Richard L., U.S. Census Bureau. 27 March 1995. CALIFORNIA Population of Counties by Decennial Census: 1900 to 1990. Available online at: http://www.census.gov/population/cencounts/ca190090.txt
[2] U.S. Census Bureau. 27 March 2014. State & County Quickfacts. Los Angeles County, California. Population, 2010. Available online at: http://quickfacts.census.gov/qfd/states/06/06037.html
[3] U.S. Census Bureau. n.d. American FactFinder. DP-1: Profile of General Demographic Characteristics: 2000. Census 2000 Summary File 1 (SF 1) 100-Percent Data. Search for State of California. Available online at: http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk Main website: http://factfinder2.census.gov/
[4] Southern California Association of Governments. May 2015. Profile of Los Angeles County. Available online at: http://www.scag.ca.gov/Documents/LosAngelesCountyLP.pdf

3.9.3 THRESHOLDS OF SIGNIFICANCE

The potential for the proposed initiative to result in impacts related to population and housing was analyzed in relation to the questions contained in Appendix G of the State CEQA Guidelines. The proposed initiative would normally be considered to have a significant impact to population and housing when the potential for the following thresholds occur. Would the proposed initiative:

a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

b. Displace substantial amounts of existing housing, necessitating the construction of replacement housing elsewhere?

c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

As a result of the Initial Study (Appendix F), the County determined that the proposed initiative would not result in impacts related to displacement of existing housing or people; therefore, these issues do not warrant further analysis.[30]

3.9.4 IMPACT ANALYSIS

IMPACT POP-1: Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The proposed initiative would not result in direct impacts to population and housing in relation to inducing substantial direct population growth. Since January 2003, building permits have not been issued for single-family residences on properties that are not served by a public or private water purveyor or groundwater.[31] Although the subject vacant[32] parcels have been designated with land use zones and General Plan land use designations that permit the construction of new single-family residences pursuant to the Los Angeles County, California, Code of Ordinances – Title 22 Planning and Zoning, they would not be able to be developed in the absence of the proposed initiative or comparable action.[33] The proposed initiative would not result in significant direct impacts as a result of substantial population growth in the unincorporated areas of northern Los Angeles County. Although the proposed initiative would result in population, housing, and employment growth inconsistent with the regional level of growth projected under SCAG's RTP Growth Forecast, the guiding principles of the Santa Clarita Valley Area Plan, and the land use policies of

[30] County of Los Angeles. September 2014. County of Los Angeles Single-Family Residential Hauled Water Initiative for New Development Initial Study. Prepared by: Sapphos Environmental, Inc.

[31] Potable Water Availability Requirements for Residential and Commercial Development. 1 January 2003. Los Angeles County Department of Public Health Bureau of Environmental Protection Drinking Water Program. 5050 Commerce Drive, Baldwin Park, CA 91706-1423

[32] The term vacant refers to parcels identified as such by the County Assessor.

[33] Los Angeles County Department of Regional Planning. Accessed 22 March 2014. Los Angeles County, California, Code of Ordinances – Title 22 Planning and Zoning. Available online at: http://library.municode.com/HTML/16274/level1/TIT22PLZO.html

the Antelope Valley Area Plan – Town & Country, it would not directly propose new homes or businesses or indirectly permit the construction of new homes or businesses on parcels where the zoning designation on a parcel does not allow development of a single-family residence.

The proposed initiative would not result in indirect impacts to population and housing in relation to inducing substantial indirect population growth because it would not involve the extension of roads or other infrastructure. The proposed initiative would allow for the construction of new homes on parcels where single-family residences would currently be permitted if adequate groundwater is proven available, and does not propose the extension of roads or other infrastructure.

Implementation of the proposed initiative would not result in significant impacts to population growth related to the direct development of new homes or businesses or indirectly through the extension of roads and infrastructure; therefore, no mitigation measures are required.

3.9.5 CUMULATIVE IMPACTS

IMPACT POP-1: Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The incremental impact of the proposed initiative to population, when added to the related past, present, or reasonably foreseeable, probable future projects listed in Section 2, *Project Description*, would be less than significant.

The Centennial project would be expected to result in a direct population growth of approximately 70,000 people through the proposed development of approximately 19,333 new homes (a maximum of 23,000 dwelling units) within the Antelope Valley Area Plan area (including subject parcels within the Lake Hughes/Gorman/West of Lancaster subarea) at the Los Angeles County single-family home average of 3.5 persons per home. A specific plan (Los Angeles County Regional Planning Specific Plan No. 02-232) is currently proposed to implement the Centennial Project within the Antelope Valley Area Plan.[34] The project would require entitlements such as a Significant Ecological Area Conditional Use Permit, and result in significant population growth beyond the projected growth for the area.[35,36] The population increase from the proposed initiative would be approximately 12,880 persons (a total of 184 building permits per year from 2015 through 2035 based on 3.5 persons per dwelling unit). Although the population increase as a result of the proposed initiative of approximately 12,880 persons within the proposed initiative study area within the 2015 to 2035 20-year planning horizon would be expected to incrementally contribute to population growth in combination with the Centennial project, incremental cumulative impacts would be less than significant because the proposed initiative would allow for

[34] Los Angeles County Department of Regional Planning. 1 October 2015. Revised Notice of Preparation: Centennial Project. Available at: http://planning.lacounty.gov/assets/upl/case/sp_02-232_nop-20151001.pdf

[35] CaliforniaCityNews.org. 18 April 2012. The Town of Centennial: New Master-Planned Community Slowly Moves Forward. Available at: https://www.californiacitynews.org/2014/06/town-centennial-new-master-planned-community-slowly-moves-forward.html

[36] Los Angeles County Department of Regional Planning. March 2004. Notice of Preparation: Centennial Specific Plan Project Description. Available at: http://planning.lacounty.gov/assets/upl/case/sp_02-232_notice-of-preparation.pdf

the construction of new homes on parcels where single-family residences would currently otherwise be permitted if adequate groundwater is proven available.

The High Desert Corridor Project, which would involve construction of the 63-mile High Desert Corridor as a new transportation facility in the High Desert region of Los Angeles and San Bernardino counties between State Route 14 in Los Angeles County and State Route 18 and Interstate 15 in San Bernardino County, would be expected to result in indirect population growth as a result of extension of roads through the Lake Los Angeles/Llano/Valyermo/Littlerock subarea to the City of Palmdale.[37] This project would be expected to facilitate indirect urbanization of open space and the rural communities of Pearblossom, Lake Los Angeles, Littlerock, Valyermo, and Llano as a result of increased transportation access within the subarea. Although the population increase as a result of the proposed initiative of approximately 12,880 persons within the proposed initiative study area within the 2015 to 2035 20-year planning horizon would be expected to incrementally contribute to population growth, in combination with the High Desert Corridor Project, incremental cumulative impacts would be less than significant because the proposed initiative would allow for the construction of new homes on parcels where single-family residences would currently otherwise be permitted if adequate groundwater is proven available, and the proposed initiative would not be expected to contribute to the extension of roads or other infrastructure.

As the County's RHNA housing allocation includes the Newhall Ranch Specific Plan and the Northlake Specific Plan, the population growth associated with these two related projects has already been planned, and the proposed initiative would not combine with cumulative impacts associated with population growth in regard to these two Specific Plans.

3.9.6 MITIGATION MEASURES

IMPACT POP-1: Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The consideration of mitigation measures is not required.

3.9.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

IMPACT POP-1: Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

As there would be no significant impacts to population and housing related to induced substantial population growth, the consideration of mitigation measures is not required, and impacts would be **less than significant**.

[37] California Department of Transportation. Accessed 20 May 2015. High Desert Corridor Draft EIR-EIS. Available at: http://www.dot.ca.gov/dist07/HDC/HDC_Draft_EIR-EIS/

As a result of the Initial Study (Appendix F), the County of Los Angeles (County) determined that the Single-Family Residential Hauled Water Initiative for New Development (proposed initiative) has the potential to cause impacts related to public services resulting from the provision of, or need for, new or physically altered governmental facilities in regard to fire protection, police protection, schools, parks, and other public facilities.[1] Therefore, this issue has been carried forward for detailed analysis in this Environmental Impact Report (EIR). This analysis was undertaken to identify opportunities to avoid, reduce, or otherwise mitigate potential significant impacts to public services and identify potential alternatives.

The analysis of public services consists of a summary of the regulatory framework that guides the decision-making process, a description of the existing conditions at the proposed initiative study area, thresholds for determining if the proposed initiative would result in significant impacts, anticipated impacts (direct, indirect, and cumulative), mitigation measures, and level of significance after mitigation. Public Services were evaluated with regard to the Safety Element,[2] Public Services and Facilities Element,[3] and Parks and Recreation Element of the Los Angeles County General Plan 2035;[4] the 2015 Antelope Valley Area Plan – Town & Country;[5] the Santa Clarita Valley Area Plan;[6] and the Los Angeles County Fire Code.[7]

3.10.1 REGULATORY FRAMEWORK

The proposed initiative would allow hauled water as the primary source of potable water for eligible new single-family residential construction in unincorporated areas of Los Angeles County. The regulatory framework for recreation has been limited to the combined study area, which consists of 42,867 parcels in unincorporated Los Angeles County with an area totaling approximately 340,461 acres, or approximately 532 square miles.

The proposed initiative is limited to eligible undeveloped vacant parcels where the zoning allows for development of a single-family residence.

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[1] County of Los Angeles. September 2014. County of Los Angeles Single-Family Residential Hauled Water Initiative for New Development Initial Study. Prepared by: Sapphos Environmental, Inc., Pasadena, CA.

[2] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 12: Safety Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch12.pdf

[3] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 13: Public Services and Facilities Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch13.pdf

[4] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 10: Parks and Recreation Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch10.pdf

[5] County of Los Angeles Department of Regional Planning. 16 June 2015. Antelope Valley Area Plan – Town & Country. Available online at: http://planning.lacounty.gov/tnc/documents/

[6] County of Los Angeles Department of Regional Planning. 2012. Santa Clarita Valley Area Plan. Available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf

[7] County of Los Angeles. n.d. Los Angeles County, California, Code of Ordinances: Title 32 FIRE CODE. Available online at: http://library.municode.com/HTML/16274/level1/TIT32FICO.html

Federal

Approximately 1.3 percent of the subject parcels are located within Federal Responsibility Areas (FRA), or areas for which the U.S. Forest Service (USFS) is responsible for non-structure fire protection instead of the California Department of Forestry and Fire Protection (CAL FIRE) or the local Los Angeles County Fire Department.

There are no applicable federal plans or policies for this issue area.

State

Public Resources Code 4290, 4291 and SRA Fire Safe Regulations

Approximately 25.7 percent of the subject parcels are located within State Responsibility Areas (SRA), or areas for which CAL FIRE is responsible for fire protection instead of the local Los Angeles County Fire Department. As specified in Title 32, Section 4907.1, of the County of Los Angeles Municipal Code, all buildings and structures in SRAs are required to maintain defensible space around the structures as required in Public Resources Code (PRC) 4290 and "SRA Fire Safe Regulations" California Code of Regulations, Title 14, Division 1.5, Chapter 7, Subchapter 2, Section 1270 (Ord. 2014-0014 § 197, 2014).[8] PRC Section 4291 requires an increased defensible space clearance from 30 feet to 100 feet around structures. The SRA Fire Safe Regulations have established the following requirements relevant to the development of the proposed parcels within SRA jurisdiction in accordance with PRC Sections 4290 and 4921:[9]

- **1275.00:** Emergency water for wildfire protection shall be available and accessible in quantities and locations specified in order to attack a wildfire or defend property from a wildfire.
- **1275.01:** When new parcels are approved by a local jurisdiction, the emergency water system shall be available on-site prior to the completion of road construction, where a community water system is approved, or prior to the completion of building construction, where an individual system is approved.

Mello-Roos Community District Act of 1982

The Mello-Roos Community District Act enables certain public agencies to designate a Mello-Roos Community Facilities District, which allows for the financing of public improvements and services. These include basic infrastructure, police protection, fire protection, ambulance services, schools, parks, libraries, museums, and other cultural facilities. Mello-Roos Community Facilities Districts are usually created to finance improvements and services when no other funding sources are available and require a two-thirds majority vote of residents living within the proposed boundaries. They are used especially often (but not exclusively) in new development areas. Upon approval, a special tax lien is placed against each property in the district, and residents pay a special tax each year. This tax is not based on property value, but on formulas that take into account physical

[8] County of Los Angeles. Los Angeles County, California, Code of Ordinances: Title 32 FIRE CODE. Available online at: http://library.municode.com/HTML/16274/level1/TIT32FICO.html

[9] California Board of Forestry and Fire Protection. Title 14, Division 1.5, Chapter 7, Subchapter 2: SRA Fire Safe Regulations. Available online at: http://www.fire.ca.gov/fire_prevention/downloads/Title_14.pdf

characteristics such as square footage and structure size.[10] However, this Act does not apply to the construction of individual single-family residences; it only applies to residential or business development projects and is therefore not applicable to the proposed initiative.

The Leroy F. Greene School Facilities Act of 1998 (Senate Bill 50)

The Leroy F. Greene School Facilities Act of 1998, Senate Bill 50 (SB 50), signed into law in August 1998, became fully effective with the approval of Proposition 1A on November 3, 1998. SB 50 describes three levels of fees that can be statutorily levied against a project for mitigation of school facilities. SB 50 declares that payment of the specified development fees, where necessary, is full and complete mitigation for impacts to school facilities, and prohibits a public agency from denying a legislative or adjudicative act on the basis of refusal to provide school facilities mitigation that exceeds the amounts authorized by SB 50. SB 50 also forbids requiring the use of the Mello-Roos Communities District Act of 1982 as a condition of approval of any legislative or adjudicative act.[11] SB 50 would apply to the proposed initiative if impacts from school facilities were identified.

1975 Quimby Act (California Government Code Section 66477)

Pursuant to the 1975 Quimby Act (California Government Code Section 66477), "the legislative body of a city or county may, by ordinance, require dedication of land or impose a requirement of the payment of fees in lieu thereof, or a combination of both, for park or recreational purposes as a condition to the approval of a tentative map or parcel map," subject to certain conditions.[12] In response to the Quimby Act, the Los Angeles County Board of Supervisors has adopted the Los Angeles County Subdivision Ordinance (Title 21, Subdivisions) to regulate the local park space obligations for residential subdivisions.[13] However, this ordinance only applies to residential subdivisions and does not apply to the construction of individual single-family residences. The proposed initiative applies only to single-family residences, not to subdivisions; therefore, the County's Quimby Act requirements do not apply.

Local

Los Angeles County General Plan

The County's consideration of development of single-family residences in the unincorporated areas of Los Angeles County is guided by the Los Angeles County General Plan. Information contained in the Parks and Recreation Element[14] of the Los Angeles County General Plan 2035, the 2015

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[10] California Tax Data. Accessed 1 July 2015. What is Mello-Roos? Available online at www.californiataxdata.com.

[11] CASH Facility Resource Center. Accessed 1 July 2015. Senate Bill 50 and School Facility Fees. Available online at: www.cashnet.org.

[12] State of California. n.d. Government Code Section 66475 – 66478. Available online at: http://www.leginfo.ca.gov/cgi-bin/displaycode?section=gov&group=66001-67000&file=66475-66478

[13] Municode. n.d. Los Angeles County, California, Code of Ordinances: Title 21 Subdivisions. Available online at: https://library.municode.com/index.aspx?clientId=16274

[14] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 10: Parks and Recreation Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch10.pdf

Antelope Valley Area Plan – Town & Country,[15] and the 2012 Santa Clarita Valley Area Plan[16] of the County General Plan have been referenced.

Safety Element

The Safety Element of the Los Angeles County General Plan 2035 incorporates the County of Los Angeles Strategic Fire Plan by reference and as amended annually, and lists the following goals and policies for fire hazards relevant to fire protection services and police protection services in consideration of the proposed initiative:[17]

- **Goal S 3:** An effective regulatory system that prevents or minimizes personal injury, loss of life, and property damage due to fire hazards.
  - **Policy S 3.1:** Discourage development in Very High Fire Hazard Severity Zones (VHFHSZs), particularly in areas with significant biological resources.
  - **Policy S 3.6:** Ensure adequate infrastructure, including ingress, egress, and peak load water supply availability for all projects located in VHFHSZs.
- **Goal S 4:** Effective County emergency response management capabilities.
  - **Policy S 4.3:** Coordinate with other County and public agencies, such as transportation agencies, and health care providers on emergency planning and response activities, and evacuation planning.

The Safety Element establishes that the Los Angeles County Sheriff's Department (LASD) requires a staff level of one deputy sheriff per each 1,000 population to effectively and efficiently fulfill all of its functions.

Public Services and Facilities Element

The Public Services and Facilities Element of the Los Angeles County General Plan 2035 promotes the orderly and efficient planning of public facilities and infrastructure in conjunction with land use development and growth regarding the relevant topics of early care and education and libraries.[18] The County guideline for library facility space is a minimum of 0.5 gross square feet per capita. The Public Services and Facilities Element has established the following goals and policies relevant to utilities in consideration of the proposed initiative:

- **Goal PS/F 7:** A County with adequate educational facilities.
  - **Policy PS/F 7.1:** Encourage the joint-use of school sites for community activities and other appropriate uses.

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[15] County of Los Angeles Department of Regional Planning. 16 June 2015. Antelope Valley Area Plan – Town & Country: A Component of the Los Angeles County General Plan. Available online at: http://planning.lacounty.gov/tnc/documents/

[16] County of Los Angeles Department of Regional Planning. 2012. Santa Clarita Valley Area Plan. Available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf, Page 3-4, Section IV. Planning Area.

[17] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 12: Safety Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch12.pdf

[18] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 13: Public Services and Facilities Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch13.pdf

- **Policy PS/F 7.2:** Proactively work with school facilities and education providers to coordinate land use and facilities planning.
- **Policy PS/F 7.3:** Encourage adequate facilities for early care and education.

- **Goal PS/F 8:** A comprehensive public library system.
  - **Policy PS/F 8.1:** Ensure a desired level of library service through coordinated land use and facilities planning.
  - **Policy PS/F 8.2:** Support library mitigation fees that adequately address the impacts of new development.

Parks and Recreation Element

As established by the Recreation Element of the Los Angeles County General Plan 2035, the standard for parklands is four acres of local parkland and six acres of regional parkland per 1,000 County residents in unincorporated areas.[19]

2015 Antelope Valley Area Plan – Town & Country

The Antelope Valley Area Plan – Town & Country (Antelope Valley Area Plan) was adopted by the County Board of Supervisors on June 16, 2015.[20] The Antelope Valley Area Plan, a component of the Los Angeles County General Plan, provides planning policies for approximately 1,800 square miles of elevated desert terrain bounded by the southern foothills of the San Gabriel Mountains on the south, Kern County to the north, and extending from the eastern border of the community of Agua Dulce and the Ventura County line on the west to the San Bernardino County line on the east, including 89.6 percent of the area that would be potentially affected by the proposed initiative.[21] The Land Use Element of the Antelope Valley Area Plan establishes the following goal and policy relevant to public services in consideration of the proposed initiative:[22]

- **Goal LU 4:** A land use pattern that promotes the efficient use of existing and/or planned infrastructure and public facilities.
  - **Policy LU 4.1:** Direct the majority of the unincorporated Antelope Valley's future growth to the economic opportunity areas and areas that are served by existing or planned infrastructure, public facilities, and public water systems, as indicated in the Land Use designations shown on the Land Use Policy Map (Map 2.1) of this Area Plan.

The Public Safety, Services and Facilities Element of the Antelope Valley Area Plan establishes the following goals and polices relevant to public services in consideration of the proposed initiative:[23]

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[19] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 10: Parks and Recreation Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch10.pdf

[20] County of Los Angeles Department of Regional Planning. 16 June 2015. Antelope Valley Area Plan – Town & Country. Available online at: http://planning.lacounty.gov/tnc/documents/

[21] County of Los Angeles Department of Regional Planning. 16 June 2015. Antelope Valley Area Plan – Town & Country. Available online at: http://planning.lacounty.gov/tnc/documents/

[22] County of Los Angeles Department of Regional Planning. 16 June 2015. Antelope Valley Area Plan – Town & Country. Chapter 2: Land Use Element. Available online at: http://planning.lacounty.gov/tnc/documents/

[23] County of Los Angeles Department of Regional Planning. 16 June 2015. Antelope Valley Area Plan – Town & Country. Chapter 5: Public Safety, Services and Facilities Element. Available online at: http://planning.lacounty.gov/tnc/documents/

- **Goal PS 1:** Protection of the public through fire hazard planning and mitigation.
  - **Policy PS 1.3:** Promote fire prevention measures, such as brush clearance and the creation of defensible space, to reduce fire protection costs.
  - **Policy PS 1.4:** Provide strict enforcement of the Fire Code and all Fire Department policies and regulations.

- **Goal PS 4:** Protection of public safety through law enforcement and crime prevention strategies.
  - **Policy PS 4.1:** Support an increased law enforcement presence in every Antelope Valley community and explore new funding mechanisms to expand law enforcement services.
  - **Policy PS 4.3:** Promote and support neighborhood watches to create more eyes and ears in the community.

- **Goal PS 7:** Emergency services that respond in a timely manner.
  - **Policy PS 7.2:** Ensure that Fire Stations are adequately staffed.
  - **Policy PS 7.3:** Strive for a timely response to every call for service.

- **Goal PS 8:** Antelope Valley residents enjoy access to parks and recreational facilities.
  - **Policy PS 8.1:** Maintain existing parks to ensure attractiveness and safety and make improvements as necessary. Ensure adequate funding on an ongoing basis.
  - **Policy PS 8.2:** Provide recreational activities at parks that serve all segments of the population.
  - **Policy 8.3:** Provide new parks as additional development occurs or as the population grows, with a goal of four acres of parkland for every 1,000 residents.
  - **Policy PS 8.4:** Prioritize new parks for existing park deficient communities.
  - **Policy PS 8.5:** Encourage the use of school playgrounds and sporting fields for community recreation ("joint use") when school is not in session.

- **Goal PS 10:** A wide range of educational opportunities for Antelope Valley residents.
  - **Policy PS 10.1:** Coordinate with all Antelope Valley school districts to ensure that new schools are provided as additional development occurs or as the population grows.

- **Goal PS 11:** Antelope Valley residents enjoy easy access to public library services.
  - **Policy PS 11.1:** Maintain existing public libraries and make improvements as necessary. Ensure adequate funding on an ongoing basis.
  - **Policy PS 11.2:** Expand public library collections and services to meet community needs.
  - **Policy PS 11.3:** Provide new public libraries as additional development occurs or as the population grows.
  - **Policy PS 11.5:** Provide bookmobile services in areas that are not served by permanent public libraries.

- **Goal PS 12:** A range of facilities and service that maintain the health and well-being of Antelope Valley residents at all ages and income levels.
    - **Policy PS 12.1:** Provide preventative health services to reduce the need for emergency medical care.
    - **Policy PS 12.2:** Support the development of regional health care facilities in Lancaster and Palmdale.
    - **Policy PS 12.3:** Support existing community health care clinics in rural areas by preventing the encroachment of incompatible land uses. Allow expansion when required to meet community needs.
    - **Policy PS 12.5:** Pursue funding to support daily operations at community health care clinics.

2012 Santa Clarita Valley Area Plan

The Castaic/Santa Clarita/Agua Dulce subarea (10.4 percent of the area potentially affected by the proposed initiative) is located within the planning area of the 2012 Santa Clarita Valley Area Plan, which comprises the entire Santa Clarita Valley and provides goals, policies, and maps to establish zoning regulations and guide new development proposals.[24] Relevant guiding principles stated in the 2012 Santa Clarita Valley Area Plan include:

- **Management of Growth**
    - **1.** Growth in the Santa Clarita Valley shall account for the visions and objectives for each community and must be consistent with principles, as subsequently defined in this document, for the protection of the Valley's significant environmental resources. It must also be based on the availability or ability to provide adequate infrastructure, schools, and public services, and must be carefully planned to benefit the community's economy, lifestyles, and needs.
    - **2.** Growth shall occur within and on the periphery of previously developed areas, rather than as "leapfrog" development or in areas of critical environmental habitat or natural hazards, and taking into consideration accessibility to infrastructure and public services.
- **Schools and Public Services**
    - **33.** Public services (e.g. police, fire, health care, youth, seniors, homeless, etc.) shall be expanded to support community needs and population growth.
- **Recreation**
    - **36.** New parklands will be developed throughout the Santa Clarita Valley, with priority on locations that are not now adequately served. These shall encompass a diversity of park types and functions, including passive and active areas, in consideration of the recreational needs of the residents to be served.
        - **b.** A range of parkland types, sizes and uses shall be provided to accommodate recreational and leisure activities.

[24] County of Los Angeles Department of Regional Planning. 2012. Santa Clarita Valley Area Plan. Available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf

The Land Use Element of the 2012 Santa Clarita Valley Area Plan has established the following goals, objectives, and policies relevant to public services in consideration of the proposed initiative:

- **Goal LU-3:** Healthy Neighborhoods – Healthy and safe neighborhoods for all residents
  - **Objective LU-3.3:** Ensure that the design of residential neighborhoods considers and includes measures to reduce impacts from natural or manmade hazards.
    - **Policy LU-3.3.4:** Evaluate service levels for law enforcement and fire protection as needed to ensure that adequate response times are maintained as new residential development is occupied.
    - **Policy LU-3.3.5:** Through the development review process, ensure that all new residential development is provided with adequate emergency access and that subdivision and site designs permit ready access by public safety personnel.
- **Goal LU-9:** Public Facilities - Adequate public facilities and services, provided in a timely manner and in appropriate locations to serve existing and future residents and businesses.
  - **Objective LU-9.1:** Coordinate land use planning with provision of adequate public services and facilities to support development.
    - **Policy LU-9.1.5:** Work with the Los Angeles County Sheriff's Department to expand law enforcement facilities to meet the needs of the Santa Clarita Valley's growing population.

The Conservation Element of the 2012 Santa Clarita Valley Area Plan has established the following goals, objectives, and policies relevant to public services in consideration of the proposed initiative:

- **Goal CO-9:** Park, Recreation, and Trail Facilities - Equitable distribution of park, recreational, and trail facilities to serve all areas and demographic needs of existing and future residents.
  - **Objective CO-9.1:** Develop new parklands throughout the Santa Clarita Valley, with priority given to locations that are not now adequately served, and encompassing a diversity of park types and functions (including passive and active areas) in consideration of the recreational needs of residents to be served by each park, based on the following guidelines: (Guiding Principle #36)
    - **Policy CO-9.1.1:** Common park standards shall be developed and applied throughout the Santa Clarita Valley, consistent with community character objectives, with a goal of five acres of parkland per 1,000 population. (Guiding Principle #36.a.)

According to the Safety Element of the 2012 Santa Clarita Valley Area Plan, the Los Angeles County Fire Department (LACFD) has adopted a goal of responding to calls in urban areas within five minutes, in suburban areas within eight minutes, and in rural areas within 12 minutes. However, actual response times vary due to distances and road conditions.

The LACFD has adopted the State Fire Code standards for new development in hazardous fire areas. Fire prevention requirements include provision of access roads, adequate road width, and

clearance of brush around structures located in hillside areas. In addition, proof of adequate water supply for fire flow is required within a designated distance for new construction in fire hazard areas. The Safety Element states that, under a mutual aid agreement covering federal forest lands, responsibility for non-structure fires within the National Forest belongs to the USFS, while the LACFD has the responsibility for suppressing structure fires. In practice, each agency cooperates in fighting both wildland and structural fires during actual fire emergencies.

The Safety Element establishes that the Santa Clarita Valley planning area (the Castaic/Santa Clarita/Agua Dulce subarea) is served by the Los Angeles County Sheriff's Department. Although there is no adopted law enforcement staffing level standard published by the Sheriff's Department, the goal stated in both the adopted 2012 Santa Clarita Valley Area Plan and the Safety Element of the Los Angeles County General Plan 2035 and police employee data from the Federal Bureau of Investigation describe a service level of one officer per 1,000 people.[25] In the Santa Clarita Valley, the current (2015) service level is one deputy per 1,395 residents (0.717 deputy per 1,000 residents).

The Safety Element of the 2012 Santa Clarita Valley Area Plan has established the following goals, objectives, and policies relevant to public services in consideration of the proposed initiative:

- **Goal S-3:** Fire Hazards - Protection of public safety and property from fires.
  - **Objective S-3.1:** Provide adequate fire protection infrastructure to maintain acceptable service levels as established by the Los Angeles County Fire Department.
    - **Policy S-3.1.1:** Coordinate on planning for new fire stations to meet current and projected needs.
  - **Objective S-3.3:** Maintain acceptable emergency response times throughout the planning area.
    - **Policy S-3.3.1:** Plan for fire response times of five minutes in urban areas, eight minutes in suburban areas, and 12 minutes in rural areas.
- **Goal S-5:** Law Enforcement - Protection of public safety through the provision of law enforcement services and crime prevention strategies.
  - **Objective S-5.1:** Cooperate with the Los Angeles County Sheriff's Department's plans for expansion of facility space to meet current and future law enforcement needs in the Santa Clarita Valley.

Los Angeles County Fire Code

Title 32, Fire, Section 4907.1 of the County Code, establishes the fuel modification requirements for buildings.[26] According to Title 32 Section 4907.1, buildings and structures within the Very High Fire Hazard Severity Zones of a Local Responsibility Area (LRA) shall maintain defensible space as outlined in Government Code 51175 – 51189, Chapter 3 of the code and any local ordinance of

[25] Federal Bureau of Investigation. Accessed 13 May 2016. Full-Time Law Enforcement Employees by Metropolitan and Nonmetropolitan Counties, 2014. Available online at: https://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2014/crime-in-the-u.s.-2014

[26] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 12: Safety Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch12.pdf

the authority having jurisdiction.[27] Section 325.2.1 of the County Code establishes the 30-foot and 100-foot fire clearance requirements for all structures "upon or adjoining any mountainous, or forest or brush-covered land or land covered with flammable growth" (Ord. 2010-0060 § 45, 2010). Title 20, Utilities, Section 20.16.060, establishes the fire flow and fire hydrant requirements, including in Very High Fire Hazard Severity Zones (VHFHSZs).[28]

3.10.2 EXISTING CONDITIONS

Fire Protection

Based on the review of fire severity hazard zone maps developed by CAL FIRE,[29,30] the majority of parcels located within the Acton subarea, East San Gabriel Mountains subarea, and the Castaic/Santa Clarita/Agua Dulce subarea are located in VHFHSZs (Table 3.10.2-1, *High or Very High Fire Hazards Severity Zones Located within or in the Vicinity of Proposed Initiative Subareas*, and Figure 3.10.2-1, *Fire Hazard Severity Zones*). None of the parcels in the Antelope Valley Northeast subarea (1,938 parcels) or the Lancaster Northeast subarea (6,794 parcels) are located within a VHFHSZ.

[27] County of Los Angeles. n.d. Los Angeles County, California, Code of Ordinances: Title 32 FIRE CODE. Available online at: http://library.municode.com/HTML/16274/level1/TIT32FICO.html

[28] County of Los Angeles. n.d. Los Angeles County, California, Code of Ordinances: Title 20 – Utilities: Division 1 – Water: Chapter 20.16 – Design and Construction: Part 2 DESIGN. Available online at: https://library.municode.com/HTML/16274/level4/TIT20UT_DIV1WA_CH20.16DECO_PT2DE.html#TIT20UT_DIV1WA_CH20.16DECO_PT2DE_20.16.060MIFIFLFIHYRE

[29] California Department of Forestry and Fire Protection (CALFIRE). September 2011. Very High Fire Hazard Severity Zones in LRA Map, Los Angeles County, CA.

[30] California Department of Forestry and Fire Protection (CALFIRE). 6 November 2007. Very High Fire Hazard Severity Zones in SRA Map, Los Angeles County, CA.

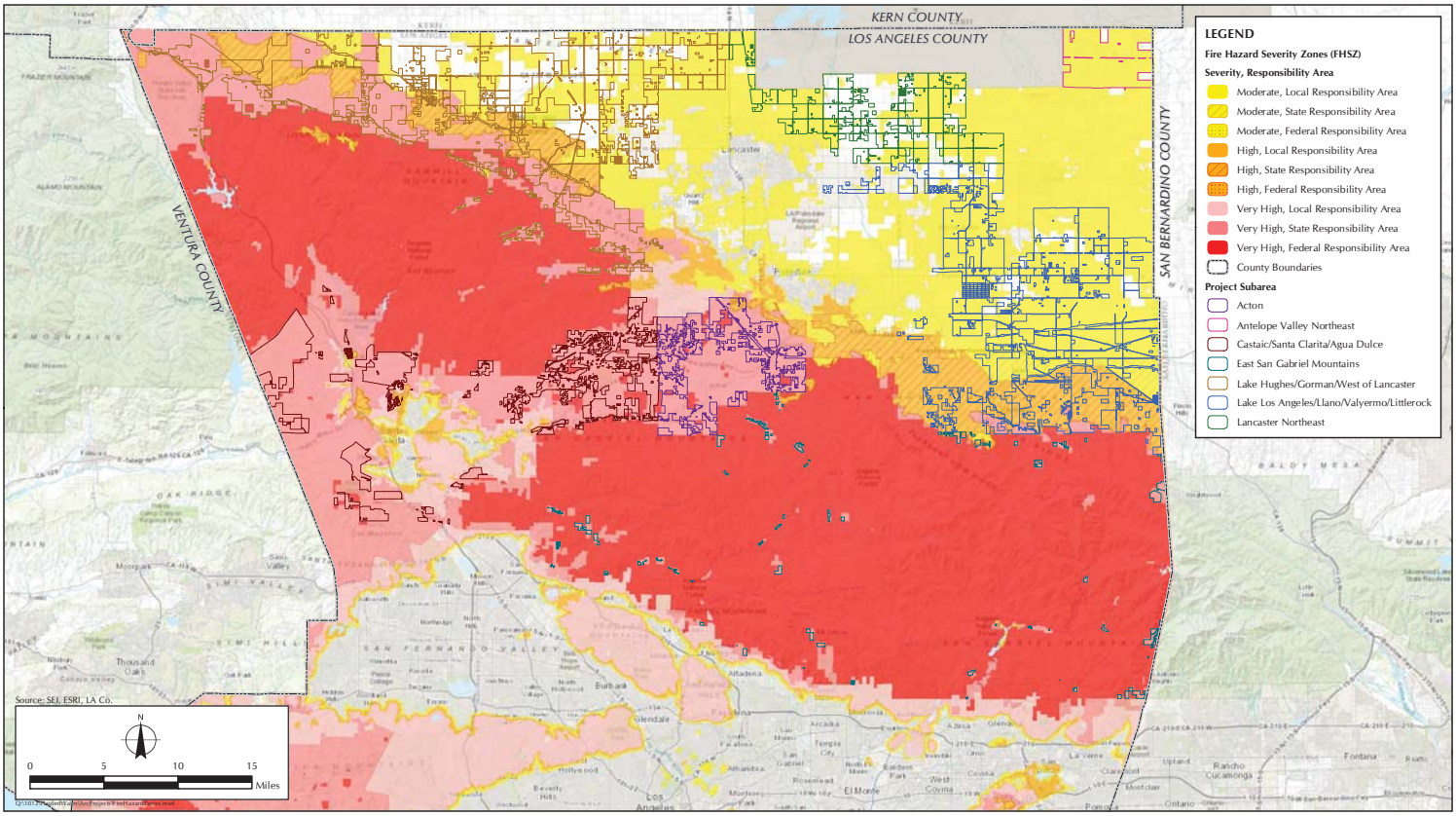

FIGURE 3.10.2-1
Fire Hazard Severity Zones

TABLE 3.10.2-1
HIGH OR VERY HIGH FIRE HAZARD SEVERITY ZONES LOCATED WITHIN OR IN THE VICINITY OF INITIATIVE SUBAREAS

Subarea (Number of Parcels)	Severity	Local, State or Federal Responsibility Area	Parcel Count within Responsibility Area
Acton (1,246)	High	LRA	2
		SRA	82
	High Total		**84**
	Very High	LRA	11
		SRA	1,203
		FRA	61
	Very High Total		**1,275**
Castaic/Santa Clarita/Agua Dulce (2,243)	High	LRA	25
		SRA	8
	High Total		**32**
	Very High	LRA	68
		SRA	2,176
		FRA	130
	Very High Total		**2,374**
East San Gabriel Mountains (658)	High	SRA	29
		FRA	5
	High Total		**34**
	Very High	LRA	3
		SRA	620
		FRA	168
	Very High Total		**791**
Lake Hughes/Gorman/West of Lancaster (15,166)	High	LRA	51
		SRA	1,324
	High Total		**1,375**
	Very High	LRA	12
		SRA	1,315
		FRA	146
	Very High Total		**1,473**
Lake Los Angeles/Llano/Valyermo/ Littlerock (14,822)	High	LRA	20
		SRA	2,327
		FRA	48
	High Total		**2,395**
	Very High	SRA	526
		FRA	17
	Very High Total		**543**
Grand Total			**10,377**

NOTE: LRA = Local Responsibility Area; SRA = State Responsibility Area; FRA = Federal Responsibility Area.

A total of 6,456 of the subject parcels are located within a designated VHFHSZ, 3,921 of the parcels are located within a high fire hazard severity zone, and 24,292 of the parcels are located within a moderate fire hazard severity zone. Fire protection service responsibilities for the subject parcels within each fire hazard severity zone are as follows (Table 3.10.2-2, *Fire Protection Responsibility Areas*):

TABLE 3.10.2-2
FIRE PROTECTION RESPONSIBILITY AREAS*

	Number of Parcels in Very High Fire Hazard Severity Zone	Number of Parcels in High Fire Hazard Severity Zone	Number of Parcels in Moderate Fire Hazard Severity Zone	Number of Parcels Not in Fire Hazard Severity Zone[1]
Number of Parcels located in Federal Responsibility Area (FRA - USDA Forest Service)	522	53	3	0
Number of Parcels located in State Responsibility Area (SRA - CALFIRE)	5,840	3,770	1,375	0
Number of Parcels located in Local Responsibility Area (LRA - Los Angeles County Fire Department)	94	98	22,914	10,646

NOTE:
* As some of the parcels overlap with multiple severity zones, partial parcels were counted for each severity zone, resulting in a larger sum of parcels than the 42,867 parcels subject to the analysis in this EIR.
[1] Urban Unzoned or Non-Wildland/Non-Urban classification.
SOURCE:
CAL FIRE. September 2011. Very High Fire Hazard Severity Zones in LRA Map. Los Angeles County, CA.
CALFIRE. 6 November 2007. Very High Fire Hazard Severity Zones in SRA Map. Los Angeles County, CA.

Within the LRAs, 34 LACFD Stations provide fire protection services for the subject parcels (Figure 3.10.2-2, *Los Angeles County Fire Department Fire Station Service Areas* and Table 3.10.2-3, *Fire Station Service Areas and Estimated Maximum Response Time*).[31] Based on travel time on dirt and paved roads and highways to the farthest subarea parcel within each fire station service area, the estimated fire response time ranges from three minutes in the fire station service areas for Station No. 157 within the Lake Hughes/Gorman/West of Lancaster subarea to 62 minutes from Station No. 124 within the Castaic/Santa Clarita/Agua Dulce subarea.

[31] Los Angeles Times. n.d. Mapping LA Boundaries API. LA County Fire Department Station Areas. Provides spatial data for fire station service areas. Available online at: http://boundaries.latimes.com/sets/

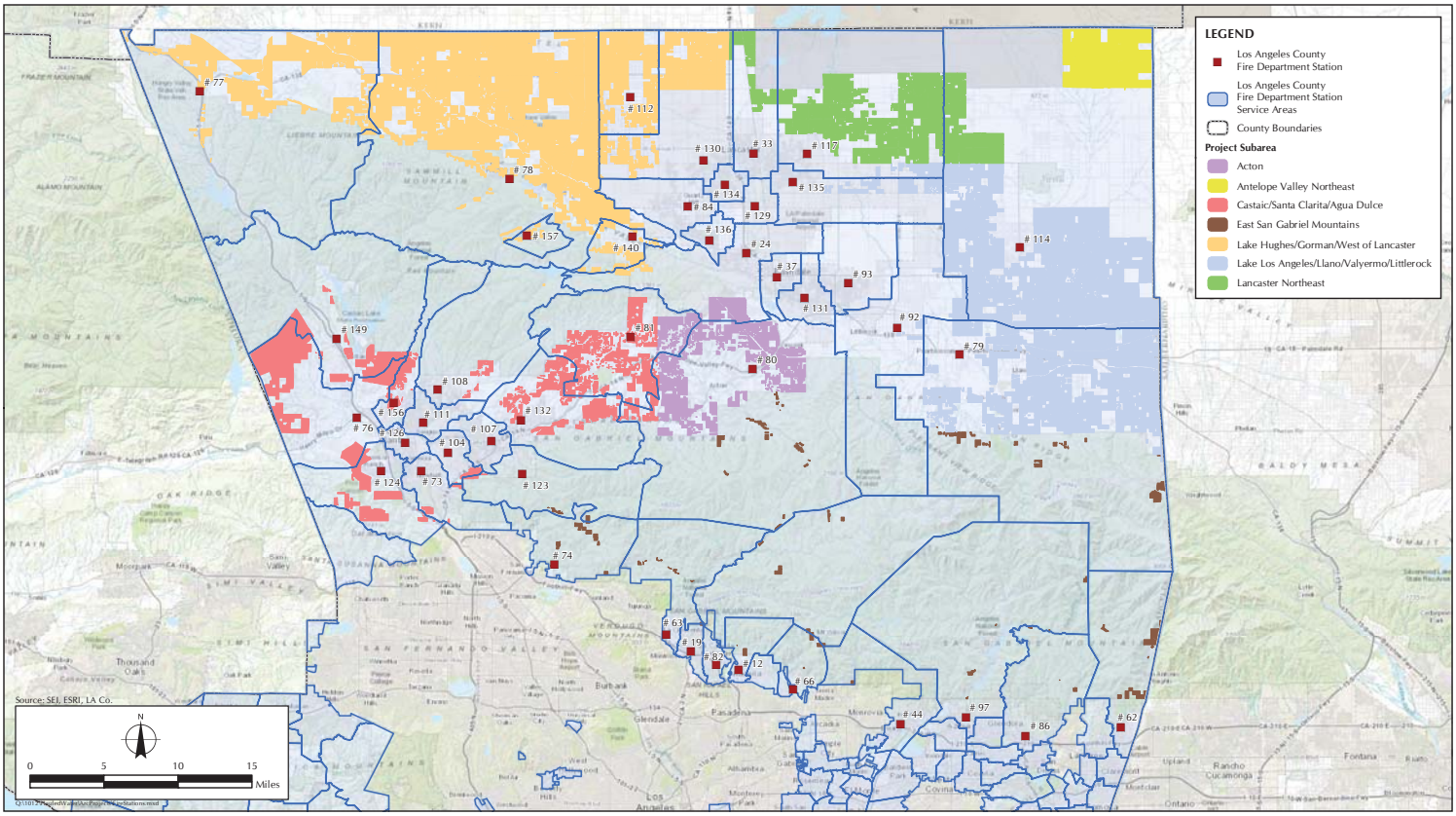

FIGURE 3.10.2-2

Los Angeles County Fire Department Fire Station Service Areas

TABLE 3.10.2-3
FIRE STATION SERVICE AREAS AND ESTIMATED MAXIMUM RESPONSE TIME (IN MINUTES)*

Fire Station Service Area	Acton Subarea	Castaic/ Santa Clarita/ Agua Dulce Subarea	Antelope Valley Northeast Subarea	East San Gabriel Mountains Subarea	Lake Hughes/ Gorman/ West of Lancaster Subarea	Lake Los Angeles/ Llano/ Valyermo/ Littlerock Subarea	Lancaster Northeast Subarea
#12	—	—	—	7 min	—	—	—
#19	—	—	—	20 min	—	—	—
#24	21 min	—	—	—	18 min	—	—
#33	—	—	—	—	—	—	12 min
#44	—	—	—	17 min	—	—	—
#62	—	—	—	29 min	—	—	—
#63	—	—	—	19 min	—	—	—
#66	—	—	—	48 min	—	—	—
#73	—	13 min	—	—	—	—	—
#74	—	—	—	15 min	—	—	—
#76	—	34 min	—	—	—	—	—
#77	—	—	—	—	26 min	—	—
#78	—	—	—	—	34 min	—	—
#79	—	—	—	34 min	—	28 min	—
#80	14 min	14 min	—	22 min	—	—	—
#81	15 min	31 min	—	—	—	—	—
#82	—	—	—	54 min	—	—	—
#84	—	—	—	—	13 min	—	—
#86	—	—	—	18 min	—	—	—
#92	—	—	—	—	—	13 min	—
#97	—	—	—	41 min	—	—	—
#104	—	9 min	—	—	—	—	—
#108	—	9 min	—	—	22 min	—	—
#112	—	—	—	—	9 min	—	—
#114	—	—	49 min	—	—	29 min	20 min
#117	—	—	—	—	—	15 min	18 min
#123	—	6 min	—	23 min	—	—	—
#124	—	62 min	—	—	—	—	—
#130	—	—	—	—	16 min	—	12 min
#132	—	21 min	—	—	—	—	—
#135	—	—	—	—	—	18 min	—
#136	—	—	—	—	6 min	—	—
#140	—	—	—	—	9 min	—	—
#149	—	31 min	—	—	—	—	—
#156	—	10 min	—	—	—	—	—
#157	—	—	—	—	3 min	—	—

* Based on Google Map Directions to the farthest parcel from the station within each service area, with the assumptions that fire trucks would not travel more than 10 miles per hour above the speed limit, slow down at intersections, and the extra speed in comparison to the directions is accounted for in on-site response preparation time.

There are five USFS fire stations responsible for non-structure fires located within the Santa Clarita Valley planning area in Bouquet Canyon, Oak Flat, Sand Canyon, and Agua Dulce. In 2006, LACFD retained a consulting firm to analyze service levels and needs within its service area, which determined that there were insufficient fire stations in the Santa Clarita Valley to maintain desired service levels, and that the coverage areas were too large for the existing stations to meet target response times.[32] Based on projected needs, the LACFD has planned construction of approximately 15 new stations in the Santa Clarita Valley by 2016, including the new Stations #108 on Rock Canyon Drive and #132 on Sand Canyon Drive, as well as Station #104 on Golden Valley Road, which is under construction.

Police Protection

Police protection services in unincorporated Los Angeles County are provided by the Los Angeles County Sheriff's Department. In 2012, the Los Angeles County Sheriff's Department's personnel of 9,249 sworn personnel, 7,746 civilian personnel, over 4,300 civilian volunteers, over 830 reserve Sheriff's deputies, and over 420 youth explorers protected 2,914,717 residents across a 3,159-square-mile patrol area, which includes 2,628 square miles of unincorporated Los Angeles County.[33] The approximately 532-square-mile proposed initiative study area is served by the Altadena, Crescenta Valley, Lancaster, Palmdale, San Dimas, Santa Clarita Valley, and Temple Sheriff's Department service areas. There are seven Sheriff Stations that serve the subject parcels (Table 3.10.2-4, *Sheriff Stations Serving the Proposed Initiative Study Area*, and Figure 3.10.2-3, *Sheriff Station Service Areas*).[34]

According to the 2012 Santa Clarita Valley Area Plan, the Santa Clarita Valley Station of the Los Angeles County Sheriff's Department oversees general law and traffic enforcement within the City of Santa Clarita, while the California Highway Patrol (CHP) has jurisdiction over traffic on State highways and in unincorporated County areas. The Santa Clarita Sheriff's Station has insufficient space to meet current staffing and future needs.[35] The Sheriff's Department also operates two storefront substations, one in Newhall and the other in Canyon Country. The Department provides helicopter air support, search and rescue coordination, and the Career Offenders Burglary Robbery (COBRA) unit, which handles juvenile and gang-related crimes. The Sheriff's Department is planning for expansion of the main station, and is also planning to expand staffing levels to meet the needs of the Santa Clarita Valley's growing population.

[32] County of Los Angeles Department of Regional Planning. 2012. Santa Clarita Valley Area Plan. Available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf

[33] Los Angeles County Sheriff's Department. 2013. Year in Review 2012. Available online at: http://file.lacounty.gov/lasd/cms1_207718.pdf

[34] Los Angeles Times. n.d. Mapping LA Boundaries API. LA County Sheriff Station Areas. Provides spatial data for sheriff station service areas. Available online at: http://boundaries.latimes.com/sets/

[35] County of Los Angeles Department of Regional Planning. 2012. Santa Clarita Valley Area Plan. Available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf

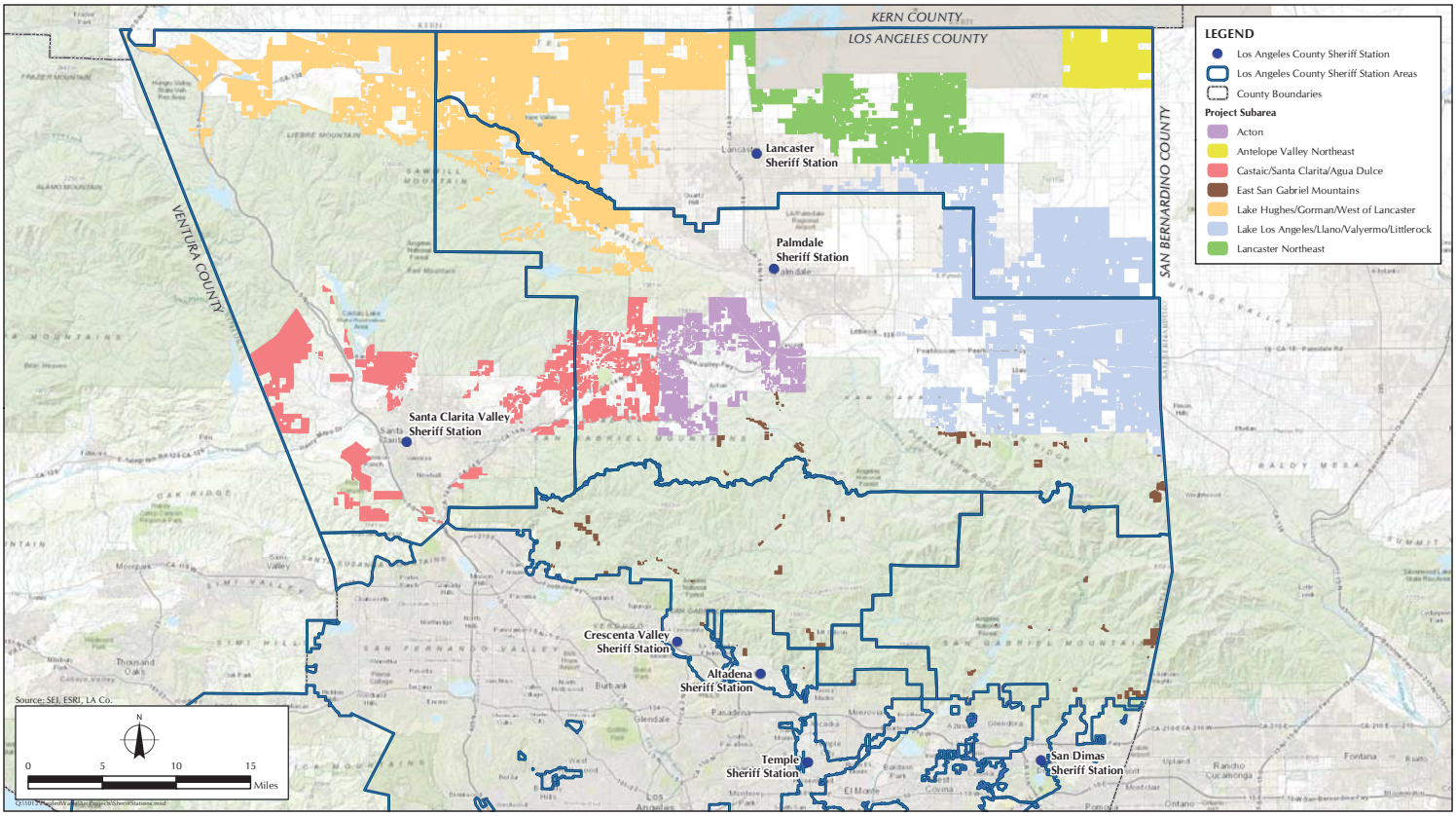

FIGURE 3.10.2-3
Sheriff Station Service Areas

TABLE 3.10.2-4
SHERIFF'S STATIONS SERVING THE PROPOSED INITIATIVE STUDY AREA

Sheriff's Station	Santa Clarita Valley Sheriff's Station	Palmdale Sheriff's Station	Lancaster Sheriff's Station	Crescenta Valley Sheriff's Station	Altadena Sheriff's Station	Temple Sheriff's Station	San Dimas Sheriff's Station
Sheriff's Station Address	23740 Magic Mountain Parkway Santa Clarita, CA 91355	750 E Avenue Q Palmdale, CA 93550	501 W Lancaster Blvd. Lancaster, CA 93534	4554 Briggs Avenue La Crescenta, CA 91214	780 E Altadena Dr. Altadena, CA 91001	8838 Las Tunas Dr. Temple City, CA 91780	270 S Walnut Ave. San Dimas, CA 91773
Service Area	648 square miles, including portions of the Angeles National Forest	770 square miles, including portions of the Angeles National Forest	602 square miles	250 square miles, including portions of the Angeles National Forest	25 square miles, including portions of the Angeles National Forest	48 square miles, including a small portion of the Angeles National Forest	237 square miles, including portions of the Angeles National Forest
Number of Subject Parcels in Service Area	3,155	10,871	28,312	421	5	1	102
Distance from Acton subarea	n/a	2.8 miles northeast of the nearest parcel	n/a	n/a	n/a	n/a	n/a
Distance from Castaic/Santa Clarita/Agua Dulce subarea	2.4 miles southeast of the nearest parcel within the service area	8.8 miles northwest of the nearest parcel within the service area	n/a	n/a	n/a	n/a	n/a
Distance from Antelope Valley Northeast subarea	n/a	n/a	21.2 miles southwest of the nearest parcel within the service area	n/a	n/a	n/a	n/a
Distance from East San Gabriel Mountains subarea	n/a	n/a	n/a	2.2 miles southwest of the nearest parcel within the service area	1.6 miles southeast of the nearest parcel within the service area	6.1 miles southwest of the nearest parcel within the service area	5.2 miles southwest of the nearest parcel within the service area
Distance from Lake Hughes/Gorman/ West of Lancaster subarea	20.3 miles south of the nearest parcel within the service area	7.7 miles east of the nearest parcel within the service area	4.9 miles southeast of the nearest parcel within the service area	n/a	n/a	n/a	n/a
Distance from Lake Los Angeles/Llano/ Valyermo/Littlerock subarea	n/a	9.3 miles northwest of the nearest parcel within the service area	5.0 miles northwest of the nearest parcel within the service area	n/a	n/a	n/a	n/a
Distance from Lancaster Northeast subarea	n/a	n/a	2.4 miles south of the nearest parcel within the service area	n/a	n/a	n/a	n/a

Schools

There are 20 K–12 schools located within one-quarter mile of the parcels within all the proposed initiative subareas, with the exception of the Antelope Valley Northeast subarea and the Acton subarea (Table 3.10.2-5, *K–12 Schools within One-Quarter Mile of Proposed Initiative Study Area Parcels*; see Figure 3.2.2-1, *Schools within One-Quarter Mile of Proposed Initiative Subarea Parcels*).

TABLE 3.10.2-5
K–12 SCHOOLS WITHIN ONE-QUARTER MILE OF PROPOSED INITIATIVE STUDY AREA PARCELS

Subarea	School	Public/Private
Castaic/Santa Clarita/Agua Dulce	Agua Dulce Elementary School	Public elementary schools
	Castaic Elementary School	Public elementary schools
	Castaic Middle School	Public middle schools
	Desert Canyon Academy	Private and charter schools
	Mint Canyon Elementary School	Public elementary schools
East San Gabriel Mountains	Hathaway-Sycamores NPS	Private and charter schools (K–12)
	Mount Baldy Elementary School	Public elementary schools
Lake Hughes/Gorman/West of Lancaster	Del Sur Elementary School	Public elementary schools
	Del Sur Middle School	Public middle schools
	Gorman Elementary School	Public elementary schools
	Gorman Middle School	Public middle schools
	Hughes-Elizabeth Lakes Elementary School	Public elementary schools
	Hughes-Elizabeth Lakes Middle School	Public middle schools
	Neenach Elementary School	Public elementary schools
	Sommer Haven Church School	Private and charter schools
	Shema Christian	Private and charter schools
Lake Los Angeles/Llano/Valyermo/ Littlerock	Almondale Middle School	Public middle schools
	Lake Los Angeles Elementary School	Public elementary schools
	Vista San Gabriel Elementary School	Public elementary schools
Lancaster Northeast	Eastside Elementary School	Public elementary schools

The proposed initiative study area is served by the following school districts:[36,37,38]

- **Lake Hughes/Gorman/West of Lancaster:** Served by the Gorman Elementary School District, Hughes-Elizabeth Lakes Union Elementary School District, Westside Union Elementary School District, Saugus Union Elementary School District, the William S. Hart Union High School District, and the Antelope Valley Union Joint High School District. There are six public elementary schools, three public middle

[36] Los Angeles Times. n.d. Mapping LA Boundaries API. Elementary School Districts (2012). Provides spatial data for school district service areas. Available online at: http://boundaries.latimes.com/sets/

[37] Los Angeles Times. n.d. Mapping LA Boundaries API. Secondary School Districts (2012). Provides spatial data for school district service areas. Available online at: http://boundaries.latimes.com/sets/

[38] Los Angeles Times. n.d. Mapping LA Boundaries API. Unified School Districts (2012). Provides spatial data for school district service areas. Available online at: http://boundaries.latimes.com/sets/

schools, zero public high schools, and two private schools within a mile of this subarea. The nearest public high schools are located in the City of Lancaster.

- **Lancaster Northeast:** Served by the Westside Union Elementary School District, Lancaster Elementary School District, and the Eastside Union Elementary School District, and the Antelope Valley Union Joint High School District. There are one public elementary school, one public middle school, one private school, and zero public high schools within a mile of this subarea. The nearest public high schools are located in the City of Lancaster.

- **Antelope Valley Northeast:** Served by the Eastside Union Elementary School District and the Antelope Valley Union Joint High School District. There are no schools located within a mile of this subarea. The nearest public elementary school and public middle school are located approximately 9.1 miles south of the subarea; the nearest public high school is located approximately 16.1 miles southwest of the subarea; and the nearest private school is located approximately 10.6 miles south of the subarea.

- **Lake Los Angeles/Llano/Valyermo/Littlerock:** Served by the Keppel Union Elementary School District, Eastside Union Elementary School District, and Wilsona Elementary School District, and the Antelope Valley Union Joint High School District. There are five public elementary schools, two public middle schools, one public high school, and three private schools within a mile of this subarea.

- **Acton:** Served by the Palmdale Elementary School District, Keppel Union Elementary School District, Antelope Valley Union Joint High School District, and the Acton-Agua Dulce Unified School District. There are two public elementary schools, one public middle school, one public high school, and zero private schools within a mile of this subarea. The nearest private school is located approximately 1.2 miles away from this subarea.

- **Castaic/Santa Clarita/Agua Dulce:** Served by the Castaic Union Elementary School District, Saugus Union Elementary School District, Newhall Elementary School District, Sulphur Springs Union Elementary School District, the William S. Hard Union High School District, and the Acton-Agua Dulce Unified School District. There are 20 public elementary schools, two public middle schools, one public high school, and seven private schools within one mile of this subarea.

- **East San Gabriel Mountains:** Served by the Keppel Union Elementary School District, Sulphur Springs Union Elementary School District, the William S. Hard Union High School District, Los Angeles Unified School District, La Cañada School District, Acton-Agua Dulce Unified School District, Pasadena Unified School District, Arcadia Unified School District, Azusa Unified School District, Bonita Unified School District, Claremont Unified School District, and Snowline Joint Unified School District. There are three public elementary schools, zero public middle schools, one public high school, and one private school within one mile of this subarea. The nearest public middle school is located approximately 1.4 miles southeast of this subarea.

Parks

As established by the Parks and Recreation Element of the Los Angeles County General Plan 2035, the standard for parklands is four acres of local parkland and six acres of regional parkland per 1,000 County residents in unincorporated areas.[39] Based on the standards established by the County General Plan, the Parks and Recreation Element of the Los Angeles County General Plan 2035 determined that the demand for local parkland (neighborhood and community parks) in unincorporated Los Angeles County exceeds the supply throughout the proposed initiative study area. There are no park nodes within a quarter-mile radius, one pocket park located within a quarter-mile radius (approximately 0.2 acres), three neighborhood parks (approximately 14.9 acres) located within a half-mile radius, and 21 community parks (approximately 297.6 acres) located within a two-mile radius of the 42,867 subject parcels (Figure 3.10.2-4, *Local Park System*).[40]

The Parks and Recreation Element of the Los Angeles County General Plan 2035 also determined that there is a surplus of regional parkland and open space throughout the proposed initiative study area. There are 83 County-managed special use facilities (approximately 21,886.0 acres) located within a 25-mile radius, 145 community regional parks (approximately 6,529.9 acres) located within a 20-mile radius, and 79 regional parks (approximately 751,328.1 acres) located within 25 miles of the 42,867 subject parcels (Figure 3.10.2-5, *Regional Park System*).

Other Public Facilities

Other public facilities include libraries and hospitals.

Libraries

The Los Angeles County Public Library (County Library) provides library services to over 3.5 million residents living in unincorporated Los Angeles County and within 50 of the 88 incorporated cities of Los Angeles County within a service area of 3,032 square miles.[41,42] In June 2015, the County Library had 85 regional and communities libraries, one institutional library, and three bookmobiles that served 2,933,967 registered borrowers (approximately 87.4 percent of the residents) at a budgeted expenditure rate of $46.70 per capita for fiscal year 2014/2015.[43] There are 46 County libraries and 16 bookmobile stops within a five-mile radius of the subject parcels (Figure 3.10.2-6, *Public Libraries and Bookmobile Stops*). The subject parcels are located approximately zero miles (adjacent) to 29.3 miles away from the nearest County library or bookmobile stop (Table 3.10.2-6, *Public Libraries and Bookmobile Stops by Subarea*).

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[39] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 10: Parks and Recreation Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch10.pdf

[40] Male, Laura, Sapphos Environmental, Inc. 16 November 2015. Email communication with John Diaz, Los Angeles County Department of Parks and Recreation.

[41] County of Los Angeles Public Library. 2015. County of Los Angeles Public Library: About Us. Available online at: http://www.colapublib.org/aboutus/

[42] County of Los Angeles Public Library. 30 June 2015. County of Los Angeles Public Library: Statistics. Available online at: http://www.colapublib.org/aboutus/info.html

[43] County of Los Angeles Public Library. 30 June 2015. County of Los Angeles Public Library: Statistics. Available online at: http://www.colapublib.org/aboutus/info.html

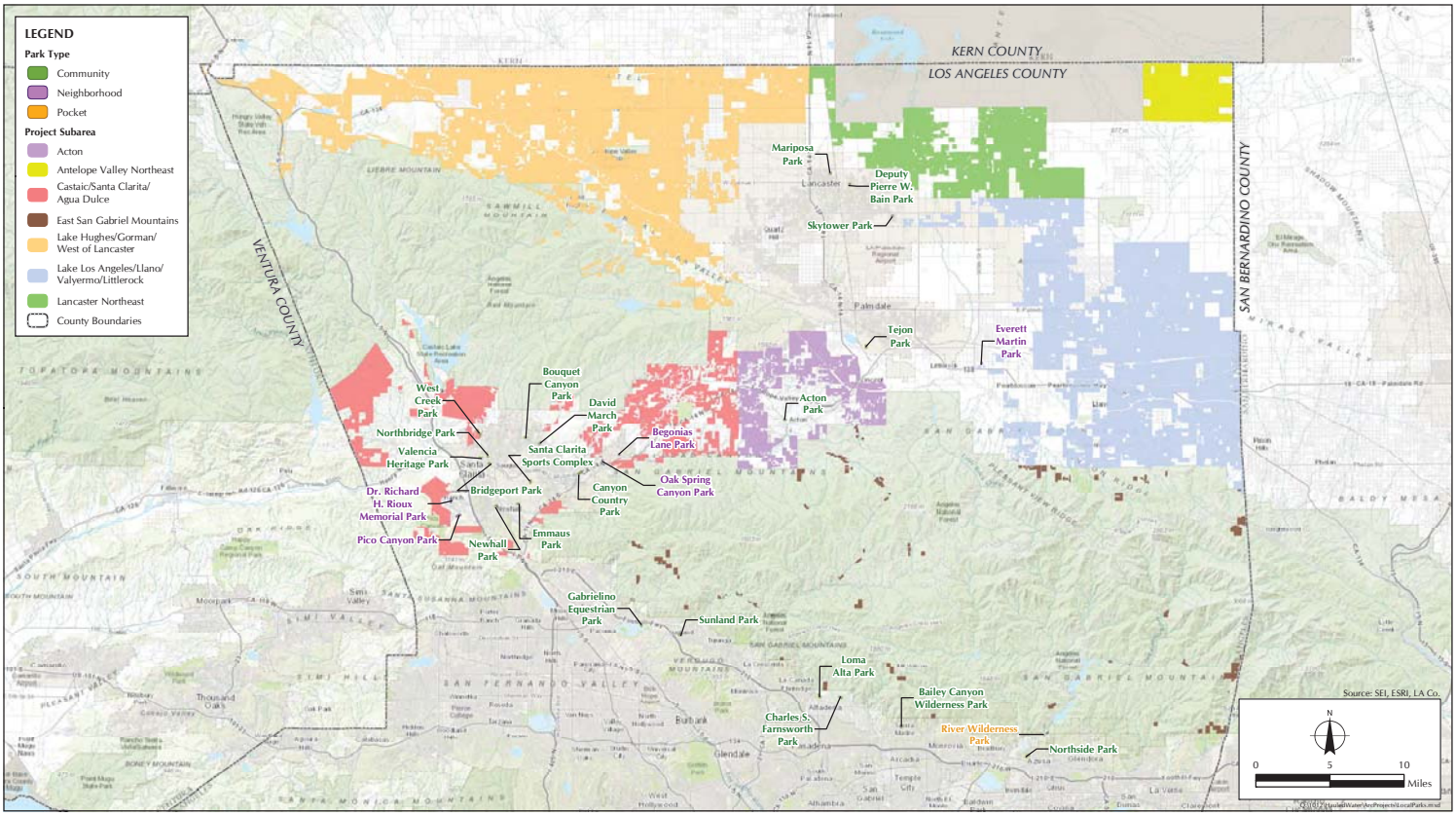

FIGURE 3.10.2-4
Local Park System

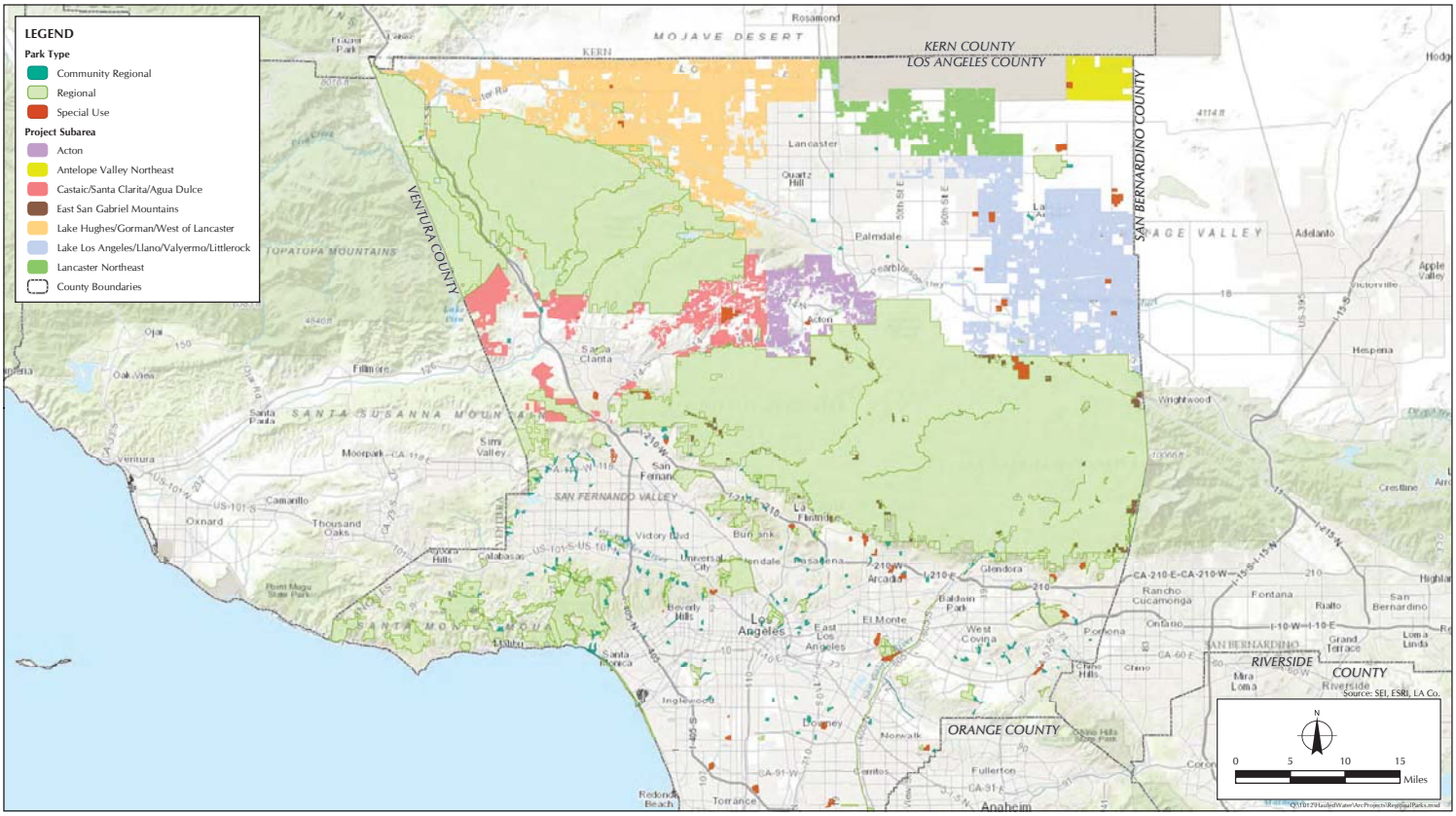

FIGURE 3.10.2-5
Regional Park System

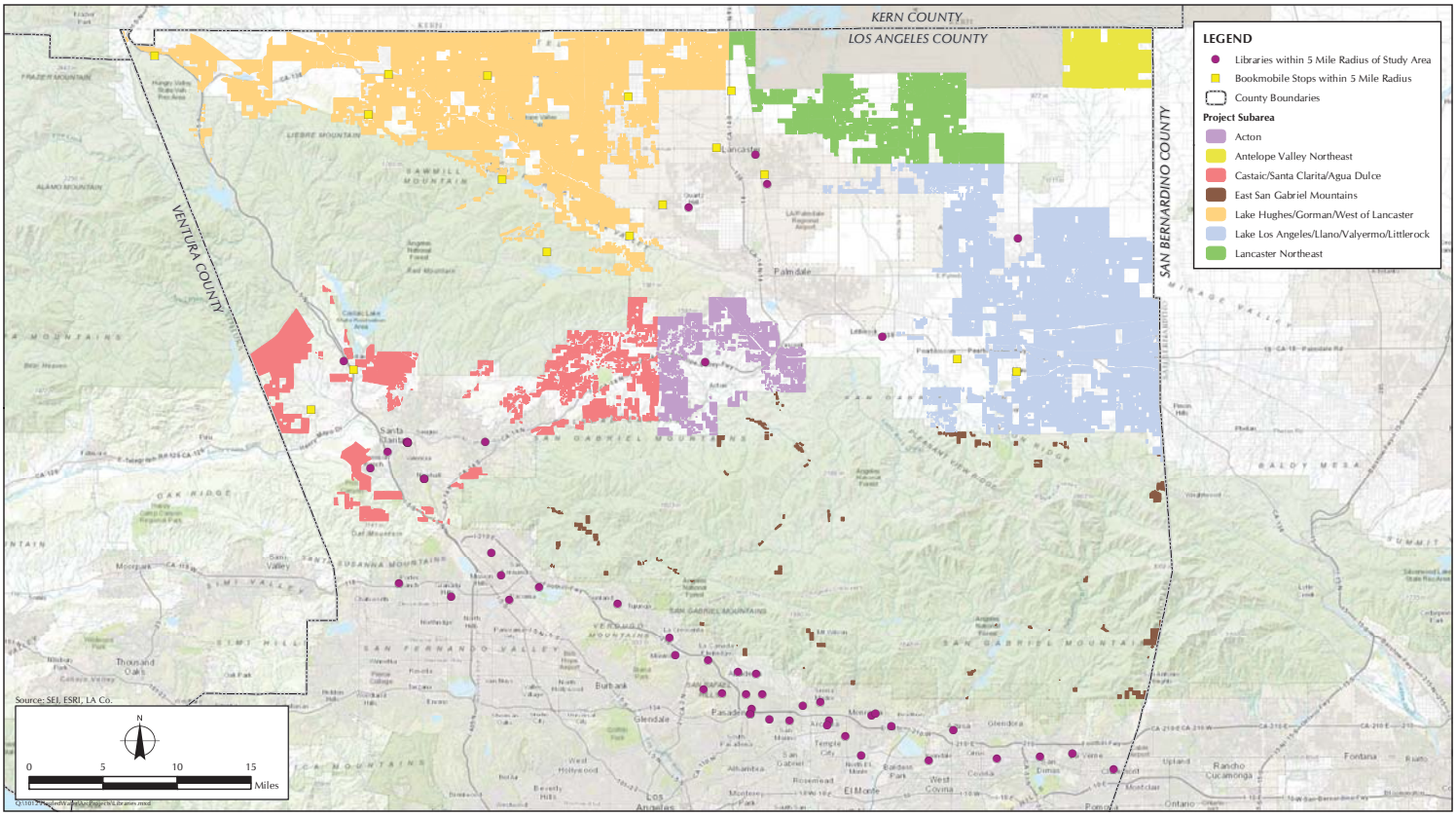

FIGURE 3.10.2-6
Public Libraries and Bookmobile Stops

TABLE 3.10.2-6
PUBLIC LIBRARIES AND BOOKMOBILE STOPS BY SUBAREA*

Subarea	Number of Libraries in Vicinity of Subject Parcels (5-Mile Radius)	Number of Bookmobile Stops in Vicinity of Subject Parcels (5-Mile Radius)	Approximate Distance to Nearest Library and/or Bookmobile Stop
Acton	1	0	0.5 to 5 miles
Castaic/Santa Clarita/Agua Dulce	15	3	0.1 to 6 miles
Antelope Valley Northeast	0	0	11 to 17 miles
East San Gabriel Mountains	35	2	1 to 29 miles
Lake Hughes/Gorman/ West of Lancaster	2	11	0.0 to 8 miles
Lake Los Angeles/Llano/ Valyermo/Littlerock	3	3	1 to 18 miles
Lancaster Northeast	2	3	2 to 12 miles

*Table includes both County and city libraries.

Hospitals

There are nine hospitals within a five-mile radius of the subject parcels (Table 3.10.2-7, *Hospitals in the Vicinity of Proposed Initiative Subareas*, and Figure 3.10.2-7, *Hospitals in Vicinity of Proposed Initiative Subareas*). The Safety Element of the 2012 Santa Clarita Valley Area Plan establishes that Henry Mayo Newhall Memorial Hospital (HMNMH) is one of the 13 designated Disaster Resource Centers (DRCs) in Los Angeles County.[44] As the designated DRC site, HMNMH is the lead for 11 other hospitals. DRCs are hospitals that address surge capacity in a disaster through procurement, storage, maintenance, and security of extra medical equipment, supplies, and pharmaceuticals.

[44] County of Los Angeles Department of Regional Planning. 2012. Santa Clarita Valley Area Plan. Available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf

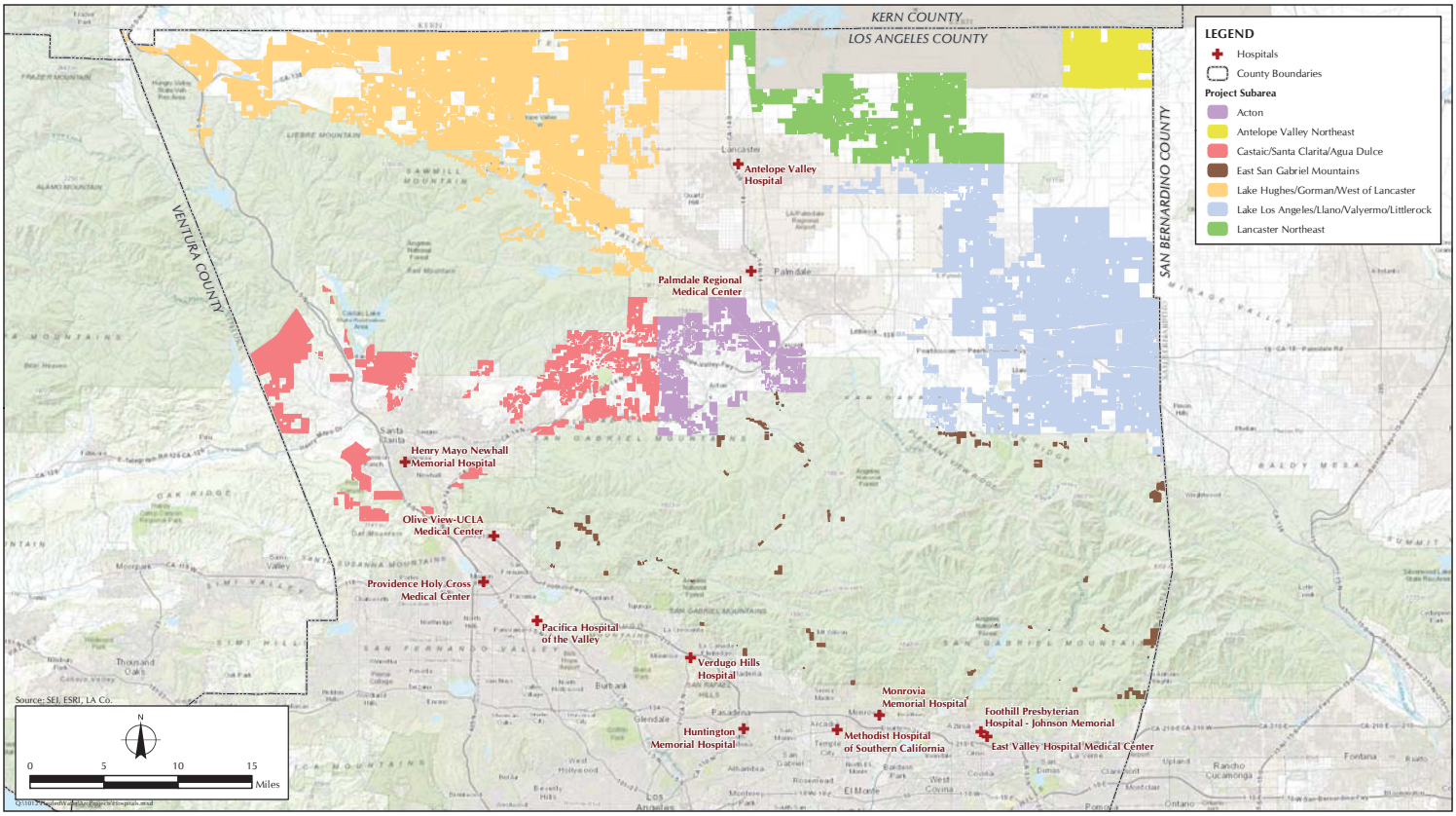

FIGURE 3.10.2-7

Hospitals in Vicinity of Proposed Initiative Subareas

TABLE 3.10.2-7
HOSPITALS IN THE VICINITY OF PROPOSED INITIATIVE SUBAREAS

Hospital Name	Antelope Valley Hospital	Palmdale Regional Medical Center	Henry Mayo Newhall Memorial Hospital	Olive View – UCLA Medical Center	Providence Holy Cross Medical Center	Pacifica Hospital of the Valley	Verdugo Hills Hospital	Huntington Memorial Hospital	Methodist Hospital of Southern California	Monrovia Memorial Hospital	Foothill Presbyterian Hospital – Johnston Memorial	East Valley Hospital Medical Center
Hospital address	1600 W Avenue J, Lancaster, CA 93534	38600 Medical Center Drive, Palmdale, CA 93551	23845 McBean Parkway, Valencia, CA 91355	14445 Olive View Drive, Sylmar, CA 91342	15031 Rinaldi Street, Mission Hills, CA 91345	9449 San Fernando Road, Sun Valley, CA 91352	1812 Verdugo Blvd., Glendale, CA 91208	100 West California Blvd., Pasadena, CA 91105	300 West Huntington Drive, Arcadia, CA 91007	323 South Heliotrope Avenue, Monrovia, CA 91016	250 South Grand Avenue, Glendora, CA 91741	150 West Route 66, Glendora, CA 91740
Capacity	420-bed acute care hospital; Antelope Valley's only full-service hospital[1]	157 licensed acute care beds; intended expansion with up to 82 new beds[2]	238-bed acute care hospital; in need of expansion, with long-term plan for up to 120 new beds[3]	377-bed acute care hospital	377 licensed acute care beds; average daily census of 216 people[4]	231 licensed acute care beds[5]	158 licensed acute care beds[5]	625 licensed acute care beds[6]	460 licensed acute care beds[5]	49 licensed acute care beds[5]	105 licensed acute care beds[5]	118 licensed acute care beds[5]
Distance from Acton subarea	9.1 miles north	**2.0 miles north (nearest hospital)**	17.2 miles southwest	13.0 miles southwest	15.4 miles southwest	14.9 miles southwest	15.1 miles south	20.5 miles southeast	22.3 miles southeast	23.5 miles southeast	26.8 miles southeast	27.3 miles southeast
Distance from Castaic/Santa Clarita/ Agua Dulce subarea	10.9 miles northeast	7.1 miles northeast	**2.0 miles north (nearest hospital)**	3.1 miles east	4.6 miles southeast	8.9 miles southeast	18.6 miles southeast	24.3 miles southeast	29.7 miles southeast	31.8 miles southeast	38.6 miles southeast	39.1 miles southeast
Distance from Antelope Valley Northeast subarea	**22.6 miles southwest (nearest hospital)**	24.5 miles southwest	51.2 miles southwest	49.0 miles southwest	51.7 miles southwest	50.6 miles southwest	46.2 miles southwest	48.4 miles southwest	46.0 miles southwest	44.3 miles southwest	43.9 miles south	44.1 miles south
Distance from East San Gabriel Mountains subarea	15.7 miles northeast	8.4 miles northeast	10.2 miles northwest	4.3 miles west	4.7 miles southwest	3.8 miles southwest	**2.4 miles southwest (nearest hospital)**	5.0 miles south	3.3 miles southwest	2.7 miles southeast	2.5 miles southeast	2.8 miles southeast
Distance from Lake Hughes/Gorman/ West of Lancaster subarea	**5.4 miles east (nearest hospital)**	6.2 miles east	15.1 miles southwest	17.3 miles south	21.9 miles southwest	22.8 miles south	26.2 miles south	31.8 miles southeast	33.4 miles southeast	33.7 miles southeast	38.2 miles southeast	38.7 miles southeast
Distance from Lake Los Angeles/Llano/ Valyermo/ Littlerock subarea	**5.9 miles west (nearest hospital)**	7.2 miles southwest	34.4 miles southwest	30.6 miles southwest	32.0 miles southwest	29.8 miles southwest	22.9 miles southwest	24.2 miles southwest	21.5 miles southwest	19.6 miles southwest	20.1 miles south	20.4 miles south
Distance from Lancaster Northeast subarea	**3.8 miles south (nearest hospital)**	9.6 miles southwest	33.9 miles southwest	34.2 miles southwest	36.5 miles southwest	36.9 miles southwest	35.3 miles south	38.9 miles south	38.3 miles south	37.4 miles south	38.4 miles south	38.7 miles south

SOURCES:
[1] Antelope Valley Hospital. 2013. About Us. Available online at: http://avhospital.org/About/Pages/default.aspx
[2] Palmdale Regional Medical Center. 2014. About the Hospital. Available online at: http://www.palmdaleregional.com/patients-and-visitors/about-the-hospital
[3] Henry Mayo Newhall Memorial Hospital. 2013. Community Health Needs Assessment 2013. PDF available online at: http://henrymayo.com/sites/henrymayo.com/files/uploaded_files/community-health-needs-assessment-and-plan-fy-14-16.pdf
[4] Providence Health & Services Southern California. April 2014. Fact Sheet. Available online at: http://california.providence.org/~/media/Files/Providence%20CA/California%20and%20Foundation/phsSoCalFactSheetApril2014.pdf
[5] Los Angeles County GIS Data Portal. 12 April 2013. Los Angeles County Hospitals 2011 [GIS shapefile]. Available online at: http://egis3.lacounty.gov/dataportal/2013/04/12/los-angeles-county-hospitals-2011/
[6] Huntington Hospital. Accessed 29 May 2015. About Huntington Hospital. Available online at: http://www.huntingtonhospital.com/Main/AboutUs.aspx

3.10.3 THRESHOLDS OF SIGNIFICANCE

The potential for the proposed initiative to result in impacts related to public services was analyzed in relation to the questions contained in Appendix G of the State CEQA Guidelines. Would the proposed initiative:

(a) Cause substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

Fire protection
Police protection
Schools
Parks
Other public services

Significant environmental impacts would result when the site of the new or physically altered facility is unknown, or where the site is known but has not been analyzed pursuant to CEQA.

3.10.4 IMPACT ANALYSIS

IMPACT PS-1: Cause substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for: Fire Protection.

The proposed initiative is expected to result in significant direct and indirect impacts associated with the provision of new or expanded fire protection services in order to maintain acceptable service response times for fire protection. Based on the 2012 Santa Clarita Valley Area Plan fire response time goal of five minutes in an urban area, eight minutes in a suburban area, and 12 minutes in a rural area and the longer response time for several of these parcels from the nearest LACFD stations shown in Table 3.10.2-3.[45] However, actual response times vary due to distances and road conditions. The existing fire protection services in the vicinity of the proposed initiative study area would not adequately serve the additional development of up to 42,867 single-family residential parcels, several of which are located in VHFHSZs. Based on the reasonable worst-case scenario issuance of 184 building permits per year, the proposed initiative would be expected to result in the single-family residential development of approximately 3,680 subject parcels during the 2015–2035 planning period. As shown in Table 3.10.2-3, fire response times from the farthest parcels of each subarea from the fire stations within each service area would be above 12 minutes for every subarea due to distance and road access challenges. The ability to reduce response times would require the construction, operation, and maintenance of additional fire protection services and facilities beyond the 34 existing LACFD fire stations. Therefore, the proposed initiative would be result in significant impacts to the environment due to the need for new or physically altered

[45] County of Los Angeles Department of Regional Planning. Adopted November 27, 2012. Santa Clarita Valley Area Plan: One Valley One Vision. Available online at: http://planning.lacounty.gov/ovov

governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services, consistent with the provisions of the adopted general plans.

IMPACT PS-2: Cause substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for: Police Protection.

The proposed initiative would result in significant impacts associated with the provision of new or expanded police protection services in order to maintain acceptable service ratios for police protection. Based on the goal stated in both the adopted 2012 Santa Clarita Valley Area Plan and the Safety Element of the Los Angeles County General Plan 2035 and police employee data from the Federal Bureau of Investigation of one officer per 1,000 residents, an additional approximately 13 County Sheriff officers would need to be deployed during the 2015–2035 planning horizon to provide adequate police protection services for the parcels that would be eligible for development with hauled water pursuant to the proposed initiative. The Los Angeles County Sherriff's Department anticipates the need for additional law enforcement resources to support both the current population and the anticipated population growth and anticipated increase in demands for patrol, enforcement, and investigative services. The increased demand for services will require additional resources, including patrol deputies, other sworn personnel, support personnel, and attendant assets (patrol vehicles, support vehicles, communications equipment, weaponry, office furnishings/equipment, etc.).[46] The existing Sheriff stations and substations are at or near capacity; therefore, it is anticipated that additional law enforcement resources including patrol deputies, other sworn personnel, support personnel, and attendant assets will be required to patrol in outlying areas in order to maintain acceptable service ratios, response times or other performance objectives which could potentially require the expansion of existing stations and/or construction of new substations.

The 2000–2014 average single-family residence household size is 3.5 people in unincorporated Los Angeles County. The reasonable worst-case scenario suggests that the proposed initiative could result in approximately 184 building permits per year in northern unincorporated Los Angeles County. The issuance of 184 building permits with the proposed initiative area, at an average of 3.5 people per household, would likely result in an annual population increase of 644 per year, or up to 12,880 additional people from the single-family residential development of the 3,680 subject parcels that would be expected to be developed during the 2015–2035 planning period. Based on a target service level range of one officer per 1,000 residents to 2.7 officers to 1,000 residents, as stated in the adopted 2012 Santa Clarita Valley Area Plan, the Safety Element of the Los Angeles County General Plan 2035, and population data form the Federal Bureau of Investigation the proposed initiative would likely result in the need for 13 to 35 additional officers to service the seven subareas during the course of the 2015–2035 planning period. This would require additional law enforcement resources including patrol deputies, other sworn personnel, support personnel, and attendant assets to patrol in outlying areas in order to maintain acceptable service ratios, response times or other performance objectives within the seven existing County Sheriff's stations serving the subject parcels. Existing Sheriff Department facilities are currently operating at or near

[46] Los Angeles Sheriff's Department. 30 March 2016. Comments regarding the Single-Family Residential Hauled Water Initiative for New Development.

capacity; therefore, the proposed initiative could require the expansion of existing facilities, and/or construction of new facilities to accommodate such additional resources and attendant assets. Therefore, the proposed initiative would be expected to result in significant impacts to the environment in regard to the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services.

IMPACT PS-3: Cause substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for: Schools.

The proposed initiative is expected to result in significant impacts associated with the provision of new or physically altered schools in order to maintain acceptable service ratios for schools. Based on the 2000–2014 average single-family residence household size of 3.5 people in unincorporated Los Angeles County and a reasonable worst-case scenario of 184 building permits per year, the proposed initiative would likely result in 644 additional people per year during the 2015–2035 planning period from the single-family residential development of the 42,867 subject parcels. The Southern California Association of Governments estimates that the 2014 population in unincorporated Los Angeles County was comprised of 23 percent children to young adults between the age of five and 20 years old; of the 149,571 students enrolled in public schools in 2014 within unincorporated Los Angeles County, approximately 59 percent were enrolled in elementary schools, 23 percent in middle schools, and 18 percent in high schools.[47] Based on these enrollment percentages and the projected population increase, the proposed initiative may generate the need to provide school services for approximately 1,748 elementary school students, 682 middle school students, and 534 high schools students between 2015 and 2035. This would require additional school services and facilities beyond the existing schools in the vicinity of the subject parcels. As schools in California school districts are funded per student by a percentage of the property tax revenue generated by real property located within a district, it is expected that the school districts would expand facilities to meet demand based on property taxes. However, the provision of new or physically altered schools would be required, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios. Therefore, the proposed initiative would be expected to result in significant impacts in regard to the potential for new or expanded schools in order to maintain acceptable service ratios, requiring the consideration of mitigation measures.

IMPACT PS-4: Cause substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for: Parks.

The proposed initiative is expected to result in significant impacts associated with the provision of new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios for parks. The County General Plan has established a park service standard of six acres of regional parkland and four acres of local parkland

[47] Southern California Association of Governments. May 2015. Profile of the Unincorporated Area of Los Angeles County. Available online at: http://www.scag.ca.gov/Documents/UnIncAreaLosAngelesCounty.pdf

per 1,000 residents.[48] The parcels that could be developed as a result of the proposed initiative are adequately served by regional parks, of which there is a surplus in the vicinity of the affected parcels. However, the parcels that would be eligible for use of hauled water, pursuant to the proposed initiative, are located in unincorporated territory in northern Los Angeles County, an area that was determined to be deficient for local parks in 2010.[49] As building permits have not been issued since January 2003 for single-family residences on properties that are not served by groundwater or a public or private water purveyor, the subject vacant parcels would not be able to be developed in the absence of the proposed initiative or comparable action. The proposed initiative applies to development of single family residences on legal lots, where such development is a by-right land use that is not subject to Quimby Act requirements. The proposed initiative would facilitate the development of single-family homes by allowing development to be approved through the use of hauled water as the source of potable water. This type of development of single-family homes does not require the payment of a development fee to provide funding for parks and recreational facilities. As described in Section 3.11.3 (Recreation), the proposed initiative would require 2.6 additional acres of local parkland per year, or an estimated 51.5 acres of local parks during the 2015–2035 planning horizon. Local parks are normally developed with playgrounds, organized sports, special programs, and classes from swimming lessons to aerobics to Teen Clubs. Park improvements are normally funded by Quimby fees in conjunction with development projects. Since the subject parcels would all be individually developed, there would be no Quimby fees to support the acquisition or development of local parklands. The demand for up to 51.5 acres of local parkland that would likely result from the proposed initiative during the 2015–2035 planning horizon would be expected to result in significant impacts to the environment due to the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts.

IMPACT PS-5: Cause substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for: Other Public Facilities.

The proposed initiative is expected to result in significant impacts associated with the provision of new or expanded library or hospital services in order to maintain acceptable service ratios for libraries and hospitals. Approximately 87.4 percent of County residents use library or bookmobile services.[50] One of the subareas (see Table 3.10.2-4)—Antelope Valley Northeast—has parcels with more than a 10-mile travel distance to the nearest library. Therefore, it is anticipated that new libraries or bookmobiles would need to be constructed. In addition, it is estimated that the County operational cost for library patrons would increase from an additional $26,292.10 in the first year to up to an additional $525,701.90 per year at end of the 2015–2035 planning horizon. The 2000–2014 average single-family residence household size is 3.5 people in unincorporated Los Angeles County. There would be an estimated 184 building permits issued per year in the

[48] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 10: Parks and Recreation Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch10.pdf

[49] Based on 2000–2014 average household size of 3.5 persons per household in unincorporated Los Angeles County, the development of 42,867 parcels, and the County standard for local parkland of four acres per 1,000 residents.

[50] County of Los Angeles Public Library. 2014. County of Los Angeles Public Library: Statistics. Available online at: http://www.colapublib.org/aboutus/info.html

reasonable worst-case scenario. Therefore, the proposed initiative would likely result in 644 additional people per year, or an estimated 12,880 additional people, during the 2015–2035 planning horizon. Based on the County data, approximately 87.4 percent of the additional people (up to 11,257 during the 2015–2035 planning horizon) would be expected to become registered borrowers. The expected per capita expenditure in 2014/2015 dollars would be expected to be approximately $46.70 on library services.[51] Similarly, a population increase of up to 12,880 people during the 2015–2035 planning horizon would increase the need for hospital services. This would require additional library services and hospital services beyond the existing facilities in the vicinity of the subject parcels. As the County Library is financed primarily by a dedicated share of property tax from the service area, with other revenues including a general fund contribution, a parcel tax, grants, fees, and funds raised by the Los Angeles County Public Library Foundation, financial impacts to libraries are expected to be less than significant. Similarly, hospitals are funded by donations, federal and state funding, and medical payments. However, the provision of new or physically altered library facilities and hospitals would be required, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios. Therefore, the proposed initiative would be expected to result in significant impacts in regard to the potential for new or expanded libraries or hospitals in order to maintain acceptable service ratios, requiring the consideration of mitigation measures.

3.10.5 CUMULATIVE IMPACTS

The incremental impact of the proposed initiative to public services, when added to the four related past, present, or reasonably foreseeable, probable future projects listed in Section 2, *Project Description*, would be expected to be significant (see Figure 2.9-1, *Related Projects*):

IMPACT PS-1: Cause substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for: Fire Protection.

The proposed initiative would be expected to contribute incrementally with the Town of Centennial project, which has not yet begun the environmental review process, in regard to adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services because the Centennial project would result in the direct population growth of approximately 70,000 people through the development of 23,000 homes within the Antelope Valley Area Plan area, including subject parcels within the Lake Hughes/Gorman/West of Lancaster subarea, which would increase the need for fire protection services in the proposed initiative study area.[52,53] The proposed initiative would considerably contribute to the need for new or physically altered governmental facilities.

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[51] County of Los Angeles Public Library. Accessed 20 November 2015. Statistical Information: Fiscal Year Ending June 30, 2015. Available online at: http://www.colapublib.org/aboutus/info.html

[52] CaliforniaCityNews.org. 18 April 2012. The Town of Centennial: New Master-Planned Community Slowly Moves Forward. Available online at: https://www.californiacitynews.org/2014/06/town-centennial-new-master-planned-community-slowly-moves-forward.html

The proposed initiative would be expected to contribute incrementally with the High Desert Corridor Project in regard to adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services because the High Desert Corridor Project would be expected to indirectly contribute to a population increase in the Lake Los Angeles/Llano/Valyermo/Littlerock subarea, which would increase the need for fire protection services in this subarea; however, it would also improve emergency response times within that subarea. The proposed initiative would considerably contribute to the need for new or physically altered governmental facilities.

The proposed initiative would not be expected to contribute incrementally with the Newhall Ranch Specific Plan, which has been included in the County's RHNA housing allocation, in regard to adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services because the specific plan includes service facilities to provide adequate service ratios in support of the residential development. The Newhall Ranch Specific Plan includes two new fire stations in association with the development of 20,885 residential units over a 25-year planning period. As the population growth associated with this project has already been planned and the appropriate service ratio is anticipated to be provided for fire services, the proposed initiative would not be expected to combine with cumulative impacts to fire protection services in regard to the Newhall Ranch Specific Plan.

The proposed initiative would not be expected to contribute incrementally with the Northlake Specific Plan, which has also been included in the County's RHNA housing allocation, in regard to adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services because the specific plan includes service facilities to provide adequate service ratios in support of the residential development. The Northlake Specific Plan includes a fire station to accommodate the population growth associated with 2,337 single-family dwellings and 1,286 multi-family units in Northlake. As the population growth associated with this project has already been planned and the appropriate service ratio is anticipated to be provided for fire services, the proposed initiative would not be expected to combine with cumulative impacts to fire protection services in regard to the Newhall Ranch Specific Plan.

[53] County of Los Angeles Department of Regional Planning. March 2004. Notice of Preparation: Centennial Specific Plan Project Description. Available online at: http://planning.lacounty.gov/assets/upl/case/sp_02-232_notice-of-preparation.pdf

IMPACT PS-2: Cause substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for: Police Protection.

The proposed initiative would be expected to contribute incrementally with the Town of Centennial project in regard to adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection services because the Centennial project would result in the direct population growth of approximately 70,000 people through the development of 23,000 homes within the Antelope Valley Area Plan area, including subject parcels within the Lake Hughes/Gorman/West of Lancaster subarea, which would increase the need for police protection services in the proposed initiative study area.[54,55] The proposed initiative would considerably contribute to the need for new or physically altered governmental facilities.

The proposed initiative would be expected to contribute incrementally with the High Desert Corridor Project in regard to adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection services because the High Desert Corridor Project would be expected to indirectly contribute to a population increase in the Lake Los Angeles/Llano/Valyermo/Littlerock subarea, which would increase the need for police protection services in this subarea; however, it would also improve emergency response times within that subarea. The proposed initiative would considerably contribute to the need for new or physically altered governmental facilities.

The proposed initiative would be expected to contribute incrementally with the Newhall Ranch Specific Plan, which has been included in the County's RHNA housing allocation, in regard to adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection services because the specific plan does not include police service facilities to provide adequate service ratios in support of the residential development. The proposed initiative would considerably contribute to the need for new or physically altered governmental facilities.

The proposed initiative would be expected to contribute incrementally with the Northlake Specific Plan, which has also been included in the County's RHNA housing allocation, in regard to adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could

[54] CaliforniaCityNews.org. 18 April 2012. The Town of Centennial: New Master-Planned Community Slowly Moves Forward. Available online at: https://www.californiacitynews.org/2014/06/town-centennial-new-master-planned-community-slowly-moves-forward.html

[55] County of Los Angeles Department of Regional Planning. March 2004. Notice of Preparation: Centennial Specific Plan Project Description. Available online at: http://planning.lacounty.gov/assets/upl/case/sp_02-232_notice-of-preparation.pdf

cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection services because the specific plan does not include police service facilities to provide adequate service ratios in support of the residential development. The proposed initiative would considerably contribute to the need for new or physically altered governmental facilities.

IMPACT PS-3: Cause substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for: Schools.

The proposed initiative would be expected to contribute incrementally with the Town of Centennial project in regard to adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for school services because the Centennial project would result in the direct population growth of approximately 70,000 people through the development of 23,000 homes within the Antelope Valley Area Plan area, including subject parcels within the Lake Hughes/Gorman/West of Lancaster subarea, which would increase the need for school services in the proposed initiative study area.[56,57] The proposed initiative would considerably contribute to the need for new or physically altered governmental facilities.

The proposed initiative would be expected to contribute incrementally with the High Desert Corridor Project in regard to adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for school services because the High Desert Corridor Project would be expected to indirectly contribute to a population increase in the Lake Los Angeles/Llano/Valyermo/Littlerock subarea, which would increase the need for school services in this subarea; however, it would also improve emergency response times within that subarea. The proposed initiative would considerably contribute to the need for new or physically altered governmental facilities.

The proposed initiative would not be expected to contribute incrementally with the Newhall Ranch Specific Plan, which has been included in the County's RHNA housing allocation, in regard to adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for school services because the specific plan includes service facilities to provide adequate service ratios in support of the residential development. The Newhall Ranch Specific Plan includes the reservation of five elementary school sites, one junior high school site, and one high school site in association with the development of 20,885 residential units over a 25-year planning period. As the population growth associated with

[56] CaliforniaCityNews.org. 18 April 2012. The Town of Centennial: New Master-Planned Community Slowly Moves Forward. Available online at: https://www.californiacitynews.org/2014/06/town-centennial-new-master-planned-community-slowly-moves-forward.html

[57] County of Los Angeles Department of Regional Planning. March 2004. Notice of Preparation: Centennial Specific Plan Project Description. Available online at: http://planning.lacounty.gov/assets/upl/case/sp_02-232_notice-of-preparation.pdf

this project has already been planned and the appropriate service ratio is anticipated to be provided for school services, the proposed initiative would not be expected to combine with cumulative impacts to school services in regard to the Newhall Ranch Specific Plan.

The proposed initiative would not be expected to contribute incrementally with the Northlake Specific Plan, which has also been included in the County's RHNA housing allocation, in regard to adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for school services because the specific plan includes service facilities to provide adequate service ratios in support of the residential development. The Northlake Specific Plan includes two school/park sites to accommodate the population growth associated with 2,337 single-family dwellings and 1,286 multi-family units in Northlake. As the population growth associated with this project has already been planned and the appropriate service ratio is anticipated to be provided for school services, the proposed initiative would not be expected to combine with cumulative impacts to school services in regard to the Newhall Ranch Specific Plan.

IMPACT PS-4: Cause substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for: Parks.

The proposed initiative would not be expected to contribute incrementally with the Town of Centennial project in regard to adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for parks because the Centennial project would involve designation of approximately 5,850 acres of open space, and, as a development project would require the development of 280 acres of local parkland or payment of Quimby fees at the same value to accommodate the direct population growth of approximately 70,000 people through the development of 23,000 homes within the Antelope Valley Area Plan area, including subject parcels within the Lake Hughes/Gorman/West of Lancaster subarea.[58,59] Therefore, the population increase as a result of the proposed initiative of approximately 12,880 persons within the proposed initiative study area within the 2015 to 2035 20-year planning horizon would not be expected to combine with impacts to recreation of the Centennial project.

The proposed initiative would be expected to contribute incrementally with the High Desert Corridor Project in regard to adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for parks because the High Desert Corridor Project would be expected to indirectly contribute to a population increase in the

[58] CaliforniaCityNews.org. 18 April 2012. The Town of Centennial: New Master-Planned Community Slowly Moves Forward. Available online at: https://www.californiacitynews.org/2014/06/town-centennial-new-master-planned-community-slowly-moves-forward.html

[59] County of Los Angeles Department of Regional Planning. March 2004. Notice of Preparation: Centennial Specific Plan Project Description. Available online at: http://planning.lacounty.gov/assets/upl/case/sp_02-232_notice-of-preparation.pdf

Lake Los Angeles/Llano/Valyermo/Littlerock subarea, which would increase the need for local parkland in this subarea. A 244-acre deficit in local parkland service ratios currently exists in the Antelope Valley Planning Area that would be exacerbated by this project and the proposed initiative.[60] The proposed initiative would considerably contribute to the need for new or physically altered governmental facilities.

The proposed initiative would not be expected to contribute incrementally with the Newhall Ranch Specific Plan, which has been included in the County's RHNA housing allocation, in regard to adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for parks because the specific plan includes service facilities to provide adequate service ratios in support of the residential development. As a condition of approval for the project, the Newhall Ranch Specific Plan includes a public trail system, 55 acres of neighborhood parkland, 1,106 acres of open space including 186 acres of community parks, a High Country Special Management Are of 4,214 acres, a River Corridor Special Management Area of 819 acres, a 15-acre Lake, and an 18-hole Golf Course, in association with the development of 20,885 residential units over a 25-year planning period.[61] As the population growth associated with this project has already been planned and the appropriate service ratio is anticipated to be provided for park services, the proposed initiative would not be expected to combine with cumulative impacts to park services in regard to the Newhall Ranch Specific Plan.

The proposed initiative would not be expected to contribute incrementally with the Northlake Specific Plan, which has also been included in the County's RHNA housing allocation, in regard to adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for parks because the specific plan includes service facilities to provide adequate service ratios in support of the residential development. The Northlake Specific Plan includes two school/park sites, and 476.4 acres of open space to accommodate the population growth associated with 2,337 single-family dwellings and 1,286 multi-family units in Northlake. As the population growth associated with this project has already been planned and the appropriate service ratio is anticipated to be provided for park services, the proposed initiative would not be expected to combine with cumulative impacts to park services in regard to the Newhall Ranch Specific Plan.

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[60] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 10: Parks and Recreation Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch10.pdf

[61] California Department of Fish and Wildlife. May 2003. Newhall Ranch MMRP Appendices. Appendix A: Newhall Ranch Specific Plan EIR and Water Reclamation Plant Mitigation Monitoring and Reporting Plans. Available online at: https://nrm.dfg.ca.gov/documents/ContextDocs.aspx?cat=NewhallRanchFinal

IMPACT PS-5: Cause substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for: Other Public Facilities.

The proposed initiative would be expected to contribute incrementally with the Town of Centennial project in regard to adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other public facilities because the Centennial project would result in the direct population growth of approximately 70,000 people through the development of 23,000 homes within the Antelope Valley Area Plan area, including subject parcels within the Lake Hughes/Gorman/West of Lancaster subarea, which would increase the need for library and hospital services in the proposed initiative study area.[62,63] The proposed initiative would considerably contribute to the need for new or physically altered governmental facilities.

The proposed initiative would be expected to contribute incrementally with the High Desert Corridor Project in regard to adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other public facilities because the High Desert Corridor Project would be expected to indirectly contribute to a population increase in the Lake Los Angeles/Llano/Valyermo/Littlerock subarea, which would increase the need for library and hospital services in this subarea; however, it would also improve emergency response times within that subarea. The proposed initiative would considerably contribute to the need for new or physically altered governmental facilities.

The proposed initiative would not be expected to contribute incrementally with the Newhall Ranch Specific Plan, which has been included in the County's RHNA housing allocation, in regard to adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other public facilities because the specific plan includes service facilities to provide adequate service ratios in support of the residential development. The Newhall Ranch Specific Plan includes a public library in association with the development of 20,885 residential units over a 25-year planning period. As the population growth associated with this project has already been planned and the appropriate service ratio is anticipated to be provided for other public facilities, the proposed initiative would not be expected to combine with cumulative impacts to other public facilities in regard to the Newhall Ranch Specific Plan.

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[62] CaliforniaCityNews.org. 18 April 2012. The Town of Centennial: New Master-Planned Community Slowly Moves Forward. Available online at: https://www.californiacitynews.org/2014/06/town-centennial-new-master-planned-community-slowly-moves-forward.html

[63] County of Los Angeles Department of Regional Planning. March 2004. Notice of Preparation: Centennial Specific Plan Project Description. Available online at: http://planning.lacounty.gov/assets/upl/case/sp_02-232_notice-of-preparation.pdf

The proposed initiative would not be expected to contribute incrementally with the Northlake Specific Plan, which has also been included in the County's RHNA housing allocation, in regard to adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other public facilities because the specific plan includes service facilities to provide adequate service ratios in support of the residential development. The Northlake Specific Plan includes a dedicated public library site to accommodate the population growth associated with 2,337 single-family dwellings and 1,286 multi-family units in Northlake. As the population growth associated with this project has already been planned and the appropriate service ratio is anticipated to be provided for other public facilities, the proposed initiative would not be expected to combine with cumulative impacts to other public facilities in regard to the Newhall Ranch Specific Plan.

3.10.6 MITIGATION MEASURES

The proposed initiative would result in significant impacts to public services, including contribution to cumulative impacts, as a result of generating demand for fire protection, police protection, schools, local parks, libraries, and hospitals in excess of the available supply of such public facilities that would be expected to exacerbate existing public service deficiencies and generate a demand for expansion or construction of fire protection, police protection, schools, local parks, libraries, and hospitals, thus requiring the consideration of mitigation measures.

IMPACT PS-1: Cause substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for: Fire Protection.

No feasible mitigation measures have been identified.

IMPACT PS-2: Cause substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for: Police Protection.

No feasible mitigation measures have been identified.

IMPACT PS-3: Cause substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for: Schools.

No feasible mitigation measures have been identified.

IMPACT PS-4: Cause substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for: Parks.

MM-REC-1.

IMPACT PS-5: Cause substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for: Other Public Facilities.

No feasible mitigation measures have been identified.

3.10.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

IMPACT PS-1: Cause substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for: Fire Protection.

The County has been unable to identify feasible mitigation measures to avoid or reduce significant impacts related to new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service response times or other performance objectives for fire protection, due to the lack of authority to impose requirements on ministerial building permits. Measures to avoid or reduce impacts in regard to fire prevention are specified pursuant to County of Los Angeles Building and Safety Building Grading Guidelines, including the requirement that applicants located within Very Fire Hazard Severity Zones (commonly referred to as "Fire Zone 4") must obtain a Fire Department Permit prior to issuance of the grading permit. However, impacts would remain **significant and unavoidable**.

IMPACT PS-2: Cause substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for: Police Protection.

The County has been unable to identify feasible mitigation measures to avoid or reduce significant impacts related to new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for police protection, due to the lack of authority to impose requirements on ministerial building permits. Therefore, impacts would remain **significant and unavoidable**.

IMPACT PS-3: Cause substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for: Schools.

The proposed initiative would result in significant impacts to public services related to induced substantial population growth and construction of new single-family residences outside areas designated for growth. Given that all the parcels are located outside areas designated for growth and construction would occur for one single-family residence at a time instead of as part of development projects, there are no feasible measures available to mitigate for the induced population growth in regard to schools, due to the lack of authority to impose requirements on ministerial building permits. Therefore, impacts would remain **significant and unavoidable**.

IMPACT PS-4: Cause substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for: Parks.

Implementation of **MM-REC-1** would not reduce significant impacts related to the provision of new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios for parks to below the level of significance. As a Lead Agency under CEQA, the County would need to consider the environmental consequences of the construction of additional local and neighborhood parks. While the County strives to avoid and reduce impacts from park construction, to the maximum extent feasible and practicable, it is not always feasible to reduce impacts to below the level of significance. Therefore, impacts would remain **significant and unavoidable**.

IMPACT PS-5: Cause substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for: Other Public Facilities.

The County has been unable to identify feasible mitigation measures to avoid or reduce significant impacts related to new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for other public facilities, including libraries and hospitals, due to the lack of authority to impose requirements on ministerial building permits. Therefore, impacts would remain **significant and unavoidable**.

SECTION 3.11
RECREATION

As a result of the Initial Study (Appendix F), the County of Los Angeles (County) determined that the Single-Family Residential Hauled Water Initiative for New Development (proposed initiative) would have the potential to result in impacts related to increased use of existing neighborhood and regional parks and the indirect required construction or expansion of recreational facilities.[1] Therefore, this issue has been carried forward for detailed analysis in this Environmental Impact Report (EIR). This analysis was undertaken to identify opportunities to avoid, reduce, or otherwise mitigate potential significant impacts to recreation and to identify potential alternatives. The analysis of recreation consists of a summary of the regulatory framework that guides the decision-making process, a description of the existing conditions at the proposed project area, thresholds for determining if the proposed project would result in significant impacts, anticipated impacts (direct, indirect, and cumulative), mitigation measures, and level of significance after mitigation.

Recreation was evaluated with regard to the Parks and Recreation Element[2] of the Los Angeles County General Plan 2035; the 2015 Antelope Valley Area Plan – Town & Country;[3] the 2012 Santa Clarita Valley Area Plan;[4] and recreation information available on the County of Los Angeles Department of Parks and Recreation website.[5]

Definitions

As the proposed initiative involves parcels located in unincorporated Los Angeles County, this analysis uses the park terminology for neighborhood, community, and regional parks pursuant to the Parks and Recreation Element of the Los Angeles County General Plan 2035 (Table 3.11-1, *Los Angeles County Park Service Area Definitions*).[6] Los Angeles County also treats trails as linear parks that provide community access to increased health and fitness activities in the increasingly urbanized region.

[1] County of Los Angeles. September 2014. County of Los Angeles Single-Family Residential Hauled Water Initiative for New Development Initial Study. Prepared by: Sapphos Environmental, Inc., Pasadena, CA.

[2] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County General Plan 2035: Chapter 10: Parks and Recreation Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch10.pdf

[3] County of Los Angeles Department of Regional Planning. 16 June 2015. Antelope Valley Area Plan – Town & Country. Available online at: http://planning.lacounty.gov/tnc/documents/

[4] County of Los Angeles Department of Regional Planning. 2012. Santa Clarita Valley Area Plan. Available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf

[5] County of Los Angeles Department of Parks and Recreation. Accessed 19 May 2015. Find Parks, Amenities, and Things to Do in Los Angeles County. Available online at: http://parks.lacounty.gov/wps/portal/dpr/parkslocator/

[6] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County General Plan 2035: Chapter 10: Parks and Recreation Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch10.pdf

TABLE 3.11-1
LOS ANGELES COUNTY PARK SERVICE AREA DEFINITIONS

Recreational Facility	Local/Regional	Service Standards	Suggested Park Size	Service Area
Park Node	Local	4 acres per 1,000 County residents	0 to 1/4 acre	None
Pocket Park	Local	4 acres per 1,000 County residents	1/4 to 3 acres	1/4 mile
Neighborhood Park	Local	4 acres per 1,000 County residents	3 to 10 acres	1/2 mile
Community Park	Local	4 acres per 1,000 County residents	10 to 20 acres	1 to 2 miles
Special Use Facility	Regional	6 acres per 1,000 County residents	No size criteria	None
Community Regional Park	Regional	6 acres per 1,000 County residents	20 to 100 acres	Up to 20 miles
Regional Park	Regional	6 acres per 1,000 County residents	Greater than 100 acres	25+ miles

SOURCE: County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 10: Parks and Recreation Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch10.pdf

3.11.1 REGULATORY FRAMEWORK

The proposed initiative would allow hauled water as the primary source of potable water for eligible new single-family residential construction in unincorporated areas of Los Angeles County. The regulatory framework for recreation has been limited to the combined study area, which consists of 42,867 parcels in unincorporated Los Angeles County with an area totaling approximately 340,461 acres, or approximately 532 square miles.

The proposed initiative is limited to the use of undeveloped parcels whose zone permits single-family residential construction.

Federal

There are no applicable federal plans or policies for this issue area.

State

1975 Quimby Act (California Government Code Section 66477)

Pursuant to the 1975 Quimby Act (California Government Code Section 66477), "the legislative body of a city or county may, by ordinance, require dedication of land or impose a requirement of the payment of fees in lieu thereof, or a combination of both, for park or recreational purposes as a condition to the approval of a tentative map or parcel map," subject to certain conditions. In response to the Quimby Act, the County of Los Angeles Board of Supervisors has adopted the Los Angeles County Subdivision Ordinance (Title 21, Subdivisions) to regulate the local park space obligations for residential subdivisions. However, this ordinance only applies to residential subdivisions and does not apply to the construction of individual single-family residences. The proposed initiative applies only to single-family residences, not to subdivisions; therefore, the County's Quimby Act requirements do not apply.

Regional

Southern California Association of Governments

Regional Comprehensive Plan

The Southern California Association of Government's (SCAG's) *Regional Comprehensive Plan* is a problem-solving guidance document that develops a holistic, strategic plan for defining and solving interrelated housing, traffic, water, air quality, and other regional challenges specific to Southern California. The Open Space and Habitat Chapter of the *Regional Comprehensive Plan* states that SCAG is encouraging communities to utilize a new paradigm such as Levels of Service (LOS) to measure park needs for their communities beyond the existing standards of acres per 1,000 people using rankings of "A" for excellent through "E" for failing, taking into account the following factors:[7]

- Existing open space plans and policies (general plan open space element, parks and recreation plan, watershed management plan)
- Community preference as ascertained by survey, questionnaire, and public workshop
- Accessibility by underrepresented groups and under-served populations, including low income or below poverty level communities, underrepresented ethnic groups, children, seniors, disabled individuals and those who are transit dependent
- Multi-modal transportation access within ½ mile
- Multi-purpose, multi-function open space, such as river parks
- Multi-agency initiatives that cover broad geographic areas
- Compass Blueprint areas

The plan emphasizes one goal and two Best Practices policies that are related to the consideration of the proposed initiative:

- **Goal:** Enhance the region's parks, trails and community open space infrastructure to support the aesthetic, recreational, and quality-of-life needs, providing the highest level of service to our growing region by:
  - Creating new community open space that is interconnected, accessible, equitably distributed, provides public health benefits, and meets the changing and diverse needs of communities;
  - Improving existing community open space through urban forestry and other programs that provide environmental benefits.
- **Policy OSC-4:** SCAG should support local jurisdictions and other service providers in their efforts to develop sustainable communities and provide, equally to all members of society, accessible and effective services such as: public education, housing, health care, social services, recreational facilities, law enforcement, and fire protection.
- **Policy OSC-6:** SCAG should encourage member jurisdictions that have trails and trail segments determined to be regionally significant to work together to support regional trail networks. SCAG should encourage joint use of utility, transportation, and other rights-of-way, greenbelts, and biodiversity areas.

[7] Southern California Association of Governments. Adopted 9 February 2009. 2008 Regional Comprehensive Plan, Open Space & Habitat Chapter. Available at: http://www.scag.ca.gov/Documents/f2008RCP_OpenSpaceHabitat.pdf

Local

Los Angeles County General Plan

The County's consideration of development of single-family residences in the unincorporated areas of Los Angeles County is guided by the Los Angeles County General Plan. Information contained in the Parks and Recreation Element[8] of the Los Angeles County General Plan 2035, the 2014 Antelope Valley Area Plan,[9] and the 2012 Santa Clarita Valley Area Plan[10] of the County General Plan have been referenced. The Los Angeles County General Plan 2035 was approved by the County Board of Supervisors on March 24, 2015.[11]

Los Angeles County General Plan 2035

The Parks and Recreation Element of the Los Angeles County General Plan 2035 established the following goals and policies relevant to recreation:[12]

- **Goal P/R 2:** Enhanced multi-agency collaboration to leverage resources.
  - **Policy P/R 2.5:** Support the development of multi-benefit parks and open spaces through collaborative efforts among entities such as cities, the County, state, and federal agencies, private groups, schools, private landowners, and other organizations.

- **Goal P/R 3:** Acquisition and development of additional parkland.
  - **Policy P/R 3.1:** Acquire and develop local and regional parkland to meet the following County goal: 4 acres of local parkland per 1,000 residents in the unincorporated areas and 6 acres of regional parkland per 1,000 residents of the total population of Los Angeles County.
  - **Policy P/R 3.2:** For projects that require zone change approvals, general plan amendments, specific plans, or development agreements, work with developers to provide for local and regional parkland above and beyond their Quimby obligations.
  - **Policy P/R 3.3:** Provide additional parks in communities with insufficient local parkland as identified through the gap analysis.
  - **Policy P/R 3.6:** Pursue a variety of opportunities to secure property for parks and recreational facilities, including purchase, grant funding, private donation,

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[8] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County General Plan 2035: Chapter 10: Parks and Recreation Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch10.pdf

[9] County of Los Angeles Department of Regional Planning. 16 June 2015. Antelope Valley Area Plan – Town & Country: A Component of the Los Angeles County General Plan. Available online at: http://planning.lacounty.gov/tnc/documents/

[10] County of Los Angeles Department of Regional Planning. 2012. Santa Clarita Valley Area Plan. Available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf, Page 3-4, Section IV. Planning Area.

[11] Los Angeles County Department of Regional Planning. Adopted 6 October 2015. Los Angeles General Plan 2035. Available online at: http://planning.lacounty.gov/generalplan/generalplan

[12] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County General Plan 2035: Chapter 10: Parks and Recreation Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch10.pdf

easements, surplus public lands for park use, and dedication of private land as part of the development review process.

- **Goal P/R 4:** Improved accessibility and connectivity to a comprehensive trail system including rivers, greenways, and community linkages.
  - **Policy P/R 4.5:** Collaborate with other public, non-profit, and private organizations in the development of a comprehensive trail system.

The Parks and Recreation Element emphasizes the benefits of improved trail systems. Trails are linear parks that provide communities with access to increased health and fitness activities, promote increased activity with smaller amounts of land than large parks, and can often use leftover or unwanted land. Trails can also showcase the County's diverse scenery and provide connectivity to parks, open spaces, cultural resources, and wilderness areas. The County strives to make all trails multi-use and accessible to all non-motorized users including pedestrians, equestrians, and mountain bicyclists, where appropriate. In May 2011, the Board of Supervisors adopted the County of Los Angeles Trails Manual to provide guidelines and standards for trail planning, design, development, and maintenance of County trails while addressing physical and social constraints and opportunities associated with the diverse topographic and social conditions that occur in the unincorporated areas.[13]

County Parkland dedication and funding is provided under the Quimby Act, which applies only to residential subdivision development projects (not single-family residences) and establishes a standard of dedicating three acres of parkland per 1,000 residences for subdivisions or dedicating an equivalent Quimby Fee based on the Representative Land Value (RLV) per acre; Proposition A funds from 1992 and 1996, which funded the acquisition, restoration, or rehabilitation of real property for parks and park safety, senior recreation facilities, gang prevention, beaches, recreation, community or cultural facilities, trails, wildlife habitats, or natural lands, and maintenance of these projects; the California Landscaping and Lighting Act of 1972, which authorizes local legislative bodies to establish benefit related assessment districts (Landscaping and Lighting Districts to maintain local public parks; and the California Mello-Roos District Community Facilities Act of 1982, which allows a developer to apply to the County to form a Mello-Roos District to develop and maintain park improvements for regional parks.

2015 Antelope Valley Area Plan – Town & Country

The Antelope Valley Area Plan - Town & Country (Antelope Valley Area Plan) was adopted by the County Board of Supervisors on June 16, 2015.[14] The Antelope Valley Area Plan, a component of the Los Angeles County General Plan, provides planning policies for approximately 1,800 square miles of elevated desert terrain bounded by the southern foothills of the San Gabriel Mountains on the south, Kern County to the north, and extending from the eastern border of the community of Agua Dulce and the Ventura County line on the west to the San Bernardino County line on the east, including 89.6 percent of the area that would be potentially affected by the proposed initiative.[15] The Public Safety,

[13] County of Los Angeles Department of Parks and Recreation. Revised 20 June 2013. County of Los Angeles Trails Manual. Available online at: https://trails.lacounty.gov/Files/Documents/69/LA%20County%20Trails%20Manual%20%28Revised%2006-20-13%29.compressed.pdf

[14] County of Los Angeles Department of Regional Planning. 16 June 2015. Antelope Valley Area Plan - Town & Country. Available online at: http://planning.lacounty.gov/tnc/documents/

[15] County of Los Angeles Department of Regional Planning. 16 June 2015. Antelope Valley Area Plan – Town & Country. Available online at: http://planning.lacounty.gov/tnc/documents/

Services, and Facilities Element of the Antelope Valley Area Plan establishes the following goal and policies relevant to parks and recreation in consideration of the proposed initiative:[16]

- **Goal PS 8:** Antelope Valley residents enjoy access to parks and recreational facilities.
  - **Policy PS 8.1:** Maintain existing parks to ensure attractiveness and safety and make improvements as necessary. Ensure adequate funding on an ongoing basis.
  - **Policy PS 8.2:** Provide recreational activities at parks that serve all segments of the population.
  - **Policy PS 8.3:** Provide new parks as additional development occurs or as the population grows, with a goal of four acres of parkland for every 1,000 residents.
  - **Policy PS 8.4:** Prioritize new parks for existing park deficient communities.
  - **Policy PS 8.5:** Encourage the use of school playgrounds and sporting fields for community recreation ("joint use") when school is not in session.
  - **Policy PS 8.6:** Within rural town center areas, promote the inclusion of parks, recreational facilities, and other gathering places that allow neighbors to meet and socialize.
  - **Policy PS 8.7:** Provide trails, bikeways, and bicycle routes for recreational purposes, as directed in the policies of the Mobility Element.
  - **Policy PS 8.8:** Maintain existing facilities for public water recreation to ensure attractiveness and safety and make improvements as necessary. Ensure adequate funding on an ongoing basis.
  - **Policy PS 8.9:** Provide new facilities for public water recreation in appropriate areas.

The Mobility Element of the Antelope Valley Area Plan establishes the following goal and policies relevant to parks and recreation in consideration of the proposed initiative:[17]

- **Goal M 10:** A unified and well-maintained multi-use (equestrian, hiking, and mountain bicycling) trail system that links destinations such as rural town centers and recreation areas throughout the Antelope Valley.
  - **Policy M 10.1:** Implement the adopted Trails Plan for the Antelope Valley in cooperation with the cities of Lancaster and Palmdale. Ensure adequate funding on an ongoing basis.
  - **Policy M 10.2:** Connect new development to existing population centers with trails, requiring trail dedication and construction through the development review and permitting process.
  - **Policy M 10.3:** Maximize fair and reasonable opportunities to secure additional trail routes (dedicated multi-use trail easements) from willing property owners.
  - **Policy M 10.4:** Ensure trail access by establishing trailheads with adequate parking and access to public transit, where appropriate and feasible.

[16] County of Los Angeles Department of Regional Planning. 16 June 2015. Antelope Valley Area Plan – Town & Country. Chapter 5: Public Safety, Services, and Facilities Element. Available online at: http://planning.lacounty.gov/tnc/documents/

[17] County of Los Angeles Department of Regional Planning. 16 June 2015. Antelope Valley Area Plan – Town & Country. Chapter 3: Mobility Element. Available at: http://planning.lacounty.gov/tnc/documents

- **Policy M 10.5:** Locate and design trail routes to minimize impacts to sensitive environmental resources and ecosystems.
- **Policy M 10.6:** Where trail connections are not fully implemented, collaboratively work to establish safe interim connections.
- **Policy M 10.7:** Ensure that existing trails and trailheads are properly maintained by the relevant agencies.
- **Policy M 10.8:** Solicit community input to ensure that trails are compatible with local needs and character.

2012 Santa Clarita Valley Area Plan

The Castaic/Santa Clarita/Agua Dulce subarea (10.4 percent of the area potentially affected by the proposed initiative) is located within the planning area of the Santa Clarita Valley Area Plan, which comprises the entire Santa Clarita Valley and provides goals, policies, and maps to establish zoning regulations and guide new development proposals.[18] Relevant guiding principles stated in the Santa Clarita Valley Area Plan include:

- **Environmental Resources**
  - **5.** The natural buffer area surrounding the entire Valley, which includes the Angeles National Forest, Santa Susana, San Gabriel, Sierra Pelona, and Del Sur mountains, shall be preserved as a regional recreational, ecological, and aesthetic resource.

- **Recreation**
  - **36.** New parklands will be developed throughout the Santa Clarita Valley, with priority on locations that are not now adequately served. These shall encompass a diversity of park types and functions, including passive and active areas, in consideration of the recreational needs of the residents to be served.
    - a. Common park standards shall be developed and applied throughout the Valley, consistent with community character objectives.
    - b. A range of parkland types, sizes and uses shall be provided to accommodate recreational and leisure activities.

The Conservation Element of the Santa Clarita Valley Area Plan provides goals, objectives, and policies relevant to recreation in consideration of the proposed initiative:

- **Goal CO-9:** Park, Recreation, and Trail Facilities - Equitable distribution of park, recreational, and trail facilities to serve all areas and demographic needs of existing and future residents.
  - **Objective CO-9.1:** Develop new parklands throughout the Santa Clarita Valley, with priority given to locations that are not now adequately served, and encompassing a diversity of park types and functions (including passive and active areas) in consideration of the recreational needs of residents to be served by each park, based on the following guidelines: (Guiding Principle #36)
    - **Policy CO-9.1.1:** Common park standards shall be developed and applied throughout the Santa Clarita Valley, consistent with community

[18] County of Los Angeles Department of Regional Planning. 2012. Santa Clarita Valley Area Plan. Available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf

character objectives, with a goal of five acres of parkland per 1,000 population. (Guiding Principle #36.a.)

- **Policy CO-9.1.2:** A range of parkland types, sizes, and uses shall be provided to accommodate recreational and leisure activities. (Guiding Principle #36.b)
- **Policy CO-9.1.3:** Provide local and community parks within a reasonable distance of residential neighborhoods.
- **Policy CO-9.1.6:** Continue to upgrade and expand existing facilities to enhance service to residents, including extension of hours through lighted facilities, where appropriate.
- **Policy CO-9.1.8:** Make available easily accessible park and recreation facilities throughout the Santa Clarita Valley.

- **Goal CO-10:** Open Space - Preservation of open space to meet the community's multiple objectives for resource preservation.
  - **Objective CO-10.1:** Identify areas throughout the Santa Clarita Valley which should be preserved as open space in order to conserve significant resources for long-term community benefit.
    - **Policy CO-10.1.1:** Provide and protect a natural greenbelt buffer area surrounding the entire Santa Clarita Valley, which includes the Angeles National Forest, Santa Susana, San Gabriel, and Sierra Pelona Mountains, as a regional recreational, ecological, and aesthetic resource. (Guiding Principle #5)
    - **Policy CO-10.1.7:** Acquire adequate open space for recreational uses, coordinating location and type of open space with master plans for trails and parks.

3.11.2 EXISTING CONDITIONS

The Parks and Recreation Element of the Los Angeles County General Plan 2035 has identified 50 existing acres of local parkland and 3,870 existing acres of regional parkland in the Antelope Valley Planning Area, 71 existing acres of local parkland and 14,425 existing acres of regional parkland in the Santa Clarita Valley planning area, one existing acre of local parkland and 565 existing acres of regional parkland in the San Fernando Planning Area, and 56 existing acres of local parkland and 3,465 existing acres of regional parkland in the West San Gabriel Valley Planning Area (Table 3.11.2-1, *County Local and Regional Parkland Gap Analysis Study Results for Initiative Study Area*). Based on the 2035 population for unincorporated Los Angeles County and the parkland acreage in these planning areas, the Parks and Recreation Element has determined that the unincorporated areas of Los Angeles County would have deficits of 5,987 acres in local parkland and 5,046 acres in regional parkland by the year 2035 if no new parks are created.[19]

[19] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 10: Parks and Recreation Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch10.pdf

TABLE 3.11.2-1
COUNTY LOCAL AND REGIONAL PARK ANALYSIS STUDY RESULTS FOR INITIATIVE STUDY AREA

	Antelope Valley Planning Area	Santa Clarita Valley Planning Area	San Fernando Valley Planning Area[1]	West San Gabriel Valley Planning Area[1]	TOTAL
Unincorporated population 2010	73,488	94,907	5,137	122,834	296,366
Local parkland acreage	50	71	1	56	178 acres of local parkland
Local parkland surplus/deficit acreage	244-acre deficit	308-acre deficit	20-acre deficit	435-acre deficit	**1,007-acre local parkland deficit (2010)**
Countywide population 2010	382,868	271,227	1,749,325	915,196	3,318,616
Regional parkland acreage	3,870	14,425	565	3,465	22,325 acres of regional parkland
Regional parkland surplus/deficit acreage	1,573-acre surplus	12,798-acre surplus	9,931-acre deficit	2,026-acre deficit	**2,414-acre regional parkland surplus (2010)**

NOTE: [1] Parcels within the East San Gabriel Mountains subarea are located in this planning area.
SOURCE: County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 10: Parks and Recreation Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch10.pdf

As established by the Parks and Recreation Element of the Los Angeles County General Plan 2035, the standard for parklands is four acres of local parkland per 1,000 residents of the population in the unincorporated areas, and six acres of regional parkland per 1,000 residents of the total population of Los Angeles County.[20] A good community parks and recreation system is based on the quality of facilities and services provided, as well as the ability to anticipate and respond to changing trends. According to the report, Park and Recreation Trends in California 2005, changes in the size and composition of State's population will drive the impacts on the delivery of parks and recreation services in the futures. A more in-depth gap analysis will be conducted as part of the County's future Parks and Recreation Master Plan. This analysis will involve a detailed review of topics such as demographic, geographic, land use, and transportation data for each Planning Area to determine its park deficiencies in terms of acreage, accessibility, and suitability. The 42,867 subject parcels are located within the Santa Clarita Valley Planning Area, the Antelope Valley Planning Area, the San Fernando Valley Planning Area, and the West San Gabriel Planning Area (see Figure 2.3-1, *Los Angeles County General Plan Planning Areas*).

[20] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 10: Parks and Recreation Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch10.pdf

Existing Local Parks

There are approximately 312.7 acres of local parkland within the park service areas of subject parcels within the initiative study area (Table 3.11.2-2, *Federal, State, County, and City Park Facilities within Service Area of Subject Parcels within Proposed Initiative Study Area*).

There are no existing park nodes are located within a quarter-mile walkable radius of the 42,867 subject parcels (see Figure 3.10.2-4, *Local Park System*).[21] The nearest park node is Monument Park, located approximately 1.6 miles southeast of the nearest subject parcel within the East San Gabriel Mountains subarea.

There is one existing pocket park (approximately 0.2 acres) located within a quarter-mile radius of the 42,867 subject parcels. There are five existing neighborhood parks (approximately 52.9 acres) located within a half-mile radius of the 42,867 subject parcels. There are 21 existing community parks (approximately 302.8 acres) located within a two-mile radius of the 42,867 subject parcels.

Existing Regional Parks

There are over 806,298.4 acres of regional parkland within the park service areas of subject parcels within the initiative study area (see Table 3.11.2-2). There are 68 existing County-managed special use facilities (approximately 50,204.0 acres) located in Los Angeles County, which include wilderness parks, nature preserves, botanical gardens, nature centers, performing arts centers, water parks, golf driving ranges, and golf courses (see Figure 3.10.2-5, *Regional Park System*). There are 137 community regional parks (approximately 6,154.7 acres) located within a 20-mile radius of the 42,867 subject parcels. There are 80 regional parks (approximately 749,939.8 acres) located within 25 miles of the 42,867 subject parcels, including the Angeles National Forest.

[21] Male, Laura, Sapphos Environmental, Inc. 16 November 2015. Email communication with John Diaz, County of Los Angeles Department of Parks and Recreation.

TABLE 3.11.2-2
FEDERAL, STATE, COUNTY, AND CITY PARK FACILITIES WITHIN SERVICE AREA OF SUBJECT PARCELS WITHIN PROPOSED INITIATIVE STUDY AREA

Park Facility	Acreage	Park Classification	Managed By	Nearest Subarea
River Wilderness Park[1]	0.2	Pocket Park	City of Azusa	East San Gabriel Mountains
Subtotal – Pocket Park Acreage	**0.2 acres within a 1/4-mile pocket park service area radius of study area parcels**			
Begonia Lanes Park[2]	4.2	Neighborhood Park	City of Santa Clarita	Castaic/Santa Clarita/Agua Dulce
Oak Spring Canyon Park[2]	4.9	Neighborhood Park	City of Santa Clarita	Castaic/Santa Clarita/Agua Dulce
Dr. Richard H Rioux Memorial Park[1]	16.7[3]	Neighborhood Park[3]	County of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Pico Canyon Park[1]	21.3[3]	Neighborhood Park[3]	County of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Everett Martin Park[1]	5.8	Neighborhood Park	County of Los Angeles	Lake Los Angeles/Llano/Valyermo/Littlerock
Subtotal – Neighborhood Park Acreage	**52.9 acres within a 1/2-mile neighborhood park service area radius of study area parcels**			
Acton Park[1]	14.0[3]	Community Park	County of Los Angeles	Acton
Tejon Park[2]	19.8	Community Park	City of Palmdale	Acton
Bouquet Canyon Park[2]	10.6	Community Park	City of Santa Clarita	Castaic/Santa Clarita/Agua Dulce
Emmaus Park[2]	10.7	Community Park	City of Santa Clarita	Castaic/Santa Clarita/Agua Dulce
David March Park[2]	12.3	Community Park	County of Los Angeles[2] (City of Santa Clarita park)	Castaic/Santa Clarita/Agua Dulce
Northbridge Park[2]	13.6	Community Park	City of Santa Clarita	Castaic/Santa Clarita/Agua Dulce
Newhall Park[2]	14.3	Community Park	City of Santa Clarita	Castaic/Santa Clarita/Agua Dulce
Bridgeport Park[2]	14.7	Community Park	City of Santa Clarita	Castaic/Santa Clarita/Agua Dulce
Valencia Heritage Park[2]	15.6	Community Park	City of Santa Clarita	Castaic/Santa Clarita/Agua Dulce
West Creek Park[1]	16.9[3]	Community Park	County of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Canyon Country Park[2]	18.0	Community Park	City of Santa Clarita	Castaic/Santa Clarita/Agua Dulce
Santa Clarita Sports Complex[1]	19.4	Community Park	County of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Bailey Canyon Wilderness Park[2]	10.1	Community Park	Los Angeles County Flood Control District	East San Gabriel Mountains
Gabrielino Equestrian Park[2]	11.7	Community Park	City of Los Angeles	East San Gabriel Mountains
Sunland Park[2]	14.3	Community Park	City of Los Angeles	East San Gabriel Mountains
Charles S. Farnsworth Park[1]	14.7	Community Park	County of Los Angeles	East San Gabriel Mountains
Northside Park[2]	14.9	Community Park	City of Azusa	East San Gabriel Mountains
Loma Alta Park[1]	21.1[3]	Community Park	County of Los Angeles	East San Gabriel Mountains
Skytower Park[2]	12.9	Community Park	City of Lancaster	Lake Los Angeles/Llano/Valyermo/Littlerock
Deputy Pierre W. Bain Park[2]	11.5	Community Park	City of Lancaster	Lancaster Northeast
Mariposa Park[2]	11.7	Community Park	City of Lancaster	Lancaster Northeast
Subtotal – Community Park Acreage	**302.8 acres within a 2-mile community park service area radius of study area parcels**			
Palmdale Oasis Park[2]	28.9	Community Regional Park	City of Palmdale	Acton
Marie Kerr Park[2]	57.3	Community Regional Park	City of Palmdale	Acton
Pelona Vista Park[2]	57.5	Community Regional Park	City of Palmdale	Acton
Sylmar Park[2]	20.0	Community Regional Park	City of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Carey Ranch Park[2]	21.7	Community Regional Park	City of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Bee Canyon Park[2]	22.2	Community Regional Park	City of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Chatsworth Park North[2]	24.0	Community Regional Park	City of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Northridge Recreation Center[2]	24.1	Community Regional Park	City of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Orcutt Ranch Horticultural Center Park[2]	24.1	Community Regional Park	City of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Moonshine Canyon Park[2]	25.9	Community Regional Park	City of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Wild Walnut Park[2]	26.5	Community Regional Park	City of Calabasas	Castaic/Santa Clarita/Agua Dulce
Stetson Ranch Park[2]	27.6	Community Regional Park	City of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Stoney Point Park[2]	28.7	Community Regional Park	City of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Mulholland Gateway Park of Los Angeles[2]	28.8	Community Regional Park	City of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Reseda Park and Rec Center[2]	29.8	Community Regional Park	City of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Serrania Avenue Park[2]	35.4	Community Regional Park	City of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Piuma Ridge Park[2]	36.8	Community Regional Park	MRCA	Castaic/Santa Clarita/Agua Dulce
Corbin Canyon Park[2]	40.5	Community Regional Park	City of Los Angeles	Castaic/Santa Clarita/Agua Dulce

TABLE 3.11.2-2
FEDERAL, STATE, COUNTY, AND CITY PARK FACILITIES WITHIN SERVICE AREA OF SUBJECT PARCELS WITHIN PROPOSED INITIATIVE STUDY AREA, *Continued*

Park Facility	Acreage	Park Classification	Managed By	Nearest Subarea
Porter Ranch Park[2]	48.3	Community Regional Park	City of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Serrania Park[2]	48.6	Community Regional Park	SMMC	Castaic/Santa Clarita/Agua Dulce
Brown's Creek Park[2]	51.6	Community Regional Park	City of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Chatsworth Oaks Park[2]	52.9	Community Regional Park	City of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Roscoe-Valley Circle Park[2]	53.5	Community Regional Park	City of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Castaic Regional Sports Complex[1]	53.7[3]	Community Regional Park	County of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Garden of the Gods Park[2]	55.0	Community Regional Park	MRCA	Castaic/Santa Clarita/Agua Dulce
Wild Walnut Park[2]	56.3	Community Regional Park	City of Calabasas/MRCA[2]	Castaic/Santa Clarita/Agua Dulce
Val Verde Community Regional Park[1]	57.9	Community Regional Park	County of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Aliso Canyon Park[2]	60.4	Community Regional Park	City of Los Angeles	Castaic/Santa Clarita/Agua Dulce
21000 Mulholland[2]	63.7	Community Regional Park	MRCA	Castaic/Santa Clarita/Agua Dulce
Knapp Ranch Park[2]	69.3	Community Regional Park	City of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Piuma Ridge Park[2]	19.1	Community Regional Park	SMMC	Castaic/Santa Clarita/Agua Dulce
Chatsworth Park South[2]	73.5	Community Regional Park	City of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Limekiln Canyon Park[2]	92.6	Community Regional Park	City of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Eagle Rock Recreation Center[2]	20.1	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
Sun Valley Park & Recreation Center[2]	20.1	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
Westridge-Canyonback Wilderness Park of LA[2]	20.4	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
Hollenbeck Park[2]	20.5	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
Rose Hill Park[2]	20.5	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
Washington Park[2]	20.5	Community Regional Park	City of Pomona	East San Gabriel Mountains
Rancho Cienega Sports Center Park[2]	20.7	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
Area H Park[2]	20.7	Community Regional Park	City of Pasadena	East San Gabriel Mountains
Brace Canyon Park[2]	21.1	Community Regional Park	City of Burbank	East San Gabriel Mountains
Sullivan Canyon Park[2]	21.9	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
La Verne Sports Park[2]	21.9	Community Regional Park	City of La Verne	East San Gabriel Mountains
Almansor Park[2]	22.1	Community Regional Park	City of Alhambra	East San Gabriel Mountains
La Puente Park[2]	22.2	Community Regional Park	City of La Puente	East San Gabriel Mountains
Hancock Park[2]	23.1	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
Laurel Canyon Park[2]	23.4	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
Pantera Park[2]	23.8	Community Regional Park	City of Diamond Bar	East San Gabriel Mountains
Libbit Park[2]	24.0	Community Regional Park	U.S. Army Corps of Engineers	East San Gabriel Mountains
Hazard Park[2]	24.1	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
Franklin D. Roosevelt Park[1]	24.3	Community Regional Park	County of Los Angeles	East San Gabriel Mountains
Grant Rea Park[2]	24.9	Community Regional Park	City of Montebello	East San Gabriel Mountains
Arroyo Park[2]	25.8	Community Regional Park	City of South Pasadena	East San Gabriel Mountains
Tournament Park[2]	25.9	Community Regional Park	City of Pasadena	East San Gabriel Mountains
Pan Pacific Park[2]	26.2	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
Shadow Oak Park[2]	26.2	Community Regional Park	City of West Covina	East San Gabriel Mountains
Lacy Park[2]	26.6	Community Regional Park	City of San Marino	East San Gabriel Mountains
Westwood Park[2]	26.7	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
Behringer Park[2]	26.7	Community Regional Park	City of La Mirada	East San Gabriel Mountains
Sportsplex[2]	27.6	Community Regional Park	City of San Dimas	East San Gabriel Mountains
Ted Watkins Memorial Park[1]	29.9[3]	Community Regional Park	County of Los Angeles	East San Gabriel Mountains
Country Crossing Park[2]	28.4	Community Regional Park	City of Pomona	East San Gabriel Mountains
Powder Canyon Open Space[2]	28.4	Community Regional Park	Puente Hills Habitat Preservation Authority[4]	East San Gabriel Mountains
Pathfinder Community Regional Park[1]	28.2[3]	Community Regional Park	County of Los Angeles	East San Gabriel Mountains
Snow Creek Park[2]	29.6	Community Regional Park	City of Walnut	East San Gabriel Mountains
Viña Vieja Park[2]	29.9	Community Regional Park	City of Pasadena	East San Gabriel Mountains
Salt Lake Park[2]	30.1	Community Regional Park	City of Huntington Park	East San Gabriel Mountains
Belvedere Community Regional Park[1]	30.7	Community Regional Park	County of Los Angeles	East San Gabriel Mountains

TABLE 3.11.2-2
FEDERAL, STATE, COUNTY, AND CITY PARK FACILITIES WITHIN SERVICE AREA OF SUBJECT PARCELS WITHIN PROPOSED INITIATIVE STUDY AREA, *Continued*

Park Facility	Acreage	Park Classification	Managed By	Nearest Subarea
Country Hollow Park[2]	31.7	Community Regional Park	City of Walnut	East San Gabriel Mountains
MacArthur Park[2]	31.7	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
Lynwood Park[2]	32.7	Community Regional Park	City of Lynwood	East San Gabriel Mountains
Los Angeles State Historic Park[2]	33.1	Community Regional Park	California Department of Parks and Recreation	East San Gabriel Mountains
Fryman Canyon Park[2]	33.5	Community Regional Park	SMMC	East San Gabriel Mountains
Cheviot Hills Park and Recreation Center[2]	34.2	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
Palisades Park[2]	34.8	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
Whittier Greenway Trail[2]	35.6	Community Regional Trail	City of Whittier	East San Gabriel Mountains
Echo Park[2]	36.0	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
Sierra Vista Park[2]	36.3	Community Regional Park	City of Sierra Madre	East San Gabriel Mountains
Elyria Canyon Park[2]	36.3	Community Regional Park	MRCA	East San Gabriel Mountains
Woodgrove Park and Open Space[2]	38.3	Community Regional Park	City of West Covina	East San Gabriel Mountains
Verdugo Park[2]	37.4	Community Regional Park	City of Glendale	East San Gabriel Mountains
Temescal Canyon Park[2]	37.6	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
Crescenta Valley Community Regional Park[1]	38.3[3]	Community Regional Park	County of Los Angeles	East San Gabriel Mountains
Culver City Park[2]	38.6	Community Regional Park	City of Culver City	East San Gabriel Mountains
Dexter Park[1]	39.6	Community Regional Park	County of Los Angeles	East San Gabriel Mountains
Haines Canyon Park[2]	39.9	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
Palisades Park[2]	40.4	Community Regional Park	City of Santa Monica	East San Gabriel Mountains
Galster Wilderness Park[2]	40.8	Community Regional Park	City of West Covina	East San Gabriel Mountains
Coldwater Canyon Park[2]	41.7	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
Lincoln Park[2]	43.3	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
Rustic Canyon Park[2]	44.7	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
Potrero Canyon Park[2]	47.2	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
Wattles Garden Park[2]	47.6	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
Hollydale Park[2]	48.0	Community Regional Park	City of South Gate	East San Gabriel Mountains
Lakeview Park[2]	49.4	Community Regional Park	City of Santa Fe Springs	East San Gabriel Mountains
Live Oak Memorial Park[2]	49.9	Community Regional Park	City of Monrovia	East San Gabriel Mountains
Sycamore Canyon Park[2]	50.1	Community Regional Park	City of Diamond Bar	East San Gabriel Mountains
Beverly Gardens Park[2]	50.4	Community Regional Park	City of Beverly Hills	East San Gabriel Mountains
Vincent Park[2]	50.7	Community Regional Park	City of Inglewood	East San Gabriel Mountains
Arcadia Community Regional Park[1]	52.6	Community Regional Park	County of Los Angeles	East San Gabriel Mountains
John Anson Ford Park[2]	53.1	Community Regional Park	City of Bell Gardens	East San Gabriel Mountains
Longridge Canyon Park[2]	54.3	Community Regional Park	SMMC	East San Gabriel Mountains
Rio de Los Angeles State Park[2]	54.8	Community Regional Park	California DPR	East San Gabriel Mountains
Fossil Ridge Park[2]	57.4	Community Regional Park	SMMC	East San Gabriel Mountains
Brookside Park[2]	59.4	Community Regional Park	City of Pasadena	East San Gabriel Mountains
North Hollywood Park[2]	59.5	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
Ganesha Park[2]	60.7	Community Regional Park	City of Pomona	East San Gabriel Mountains
Oak Grove Park[2]	61.4	Community Regional Park	City of Pasadena	East San Gabriel Mountains
Walnut Ranch Park[2]	63.3	Community Regional Park	City of Walnut	East San Gabriel Mountains
Temescal Gateway Park[2]	63.6	Community Regional Park	MRCA	East San Gabriel Mountains
Fryman Canyon Park[2]	64.8	Community Regional Park	U.S. National Park Service	East San Gabriel Mountains
Van Nuys-Sherman Oaks War Memorial Park[2]	65.5	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
Creekside Park[2]	67.9	Community Regional Park	City of Walnut	East San Gabriel Mountains
River Wilderness Park[2]	70.5	Community Regional Park	Watershed Conservation Authority	East San Gabriel Mountains
Bailey Canyon Wilderness Park[2]	71.5	Community Regional Park	City of Sierra Madre	East San Gabriel Mountains
San Gabriel River and Bike Trail[2]	72.2	Community Regional Park	U.S. Army Corps of Engineers	East San Gabriel Mountains
Lower Scholl Canyon Park[2]	75.8	Community Regional Park	City of Glendale	East San Gabriel Mountains
Mandeville Canyon Park[2]	77.7	Community Regional Park	SMMC	East San Gabriel Mountains
El Cariso Community Regional Park[1]	79.7[3]	Community Regional Park	County of Los Angeles	East San Gabriel Mountains

TABLE 3.11.2-2
FEDERAL, STATE, COUNTY, AND CITY PARK FACILITIES WITHIN SERVICE AREA OF SUBJECT PARCELS WITHIN PROPOSED INITIATIVE STUDY AREA, *Continued*

Park Facility	Acreage	Park Classification	Managed By	Nearest Subarea
Valley Plaza Park[2]	81.1	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
Balboa Sports Center[2]	81.4	Community Regional Park	U.S. Army Corps of Engineers	East San Gabriel Mountains
South Gate Park[2]	83.2	Community Regional Park	City of South Gate	East San Gabriel Mountains
Rivas Canyon Park[2]	85.5	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
Will Rogers State Beach[2]	86.0	Community Regional Park	California DPR	East San Gabriel Mountains
Beverly Glen Park[2]	86.8	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
Arroyo Seco Park[2]	88.1	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
Ascot Hills Park[2]	88.2	Community Regional Park	City of Los Angeles	East San Gabriel Mountains
Woodley Avenue Park[2]	89.2	Community Regional Park	U.S. Army Corps of Engineers	East San Gabriel Mountains
Industry Hills Rec Center[2]	92.0	Community Regional Park	City of Industry	East San Gabriel Mountains
Veterans Memorial Community Regional Park[1]	79.7[3]	Community Regional Park	County of Los Angeles	East San Gabriel Mountains
Apollo Community Regional Park[1]	54.5	Community Regional Park	County of Los Angeles	Lake Hughes/Gorman/West of Lancaster
Domenic Massari Park[2]	37.4	Community Regional Park	City of Palmdale	Lake Los Angeles/Llano/Valyermo/Littlerock
Sattleback Butte State Park[2]	82.5	Community Regional Park	California DPR	Lake Los Angeles/Llano/Valyermo/Littlerock
Stephen Sorensen Park[1]	108.0[3]	Community Regional Park	County of Los Angeles	Lake Los Angeles/Llano/Valyermo/Littlerock
Tierra Bonita Park[2]	28.6	Community Regional Park	City of Lancaster	Lancaster Northeast
Lancaster Park[2]	63.6	Community Regional Park	City of Lancaster	Lancaster Northeast
Subtotal – Community Regional Park Acreage	**6,154.7 acres within a 20-mile community regional park service area radius of study area parcels**			
Acton Wash Wildlife Sanctuary[1]	75.4[3]	County Special Use Facility	County of Los Angeles	Acton
Phacelia Wildflower Sanctuary[1]	160.5	County Special Use Facility	County of Los Angeles	Antelope Valley Northeast
Tesoro Adobe Historic Park[1]	2.3[3]	County Special Use Facility	County of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Knollwood Pool[1]	0.1[3]	County Special Use Facility	County of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Knollwood Golf Course[1]	204.2[3]	County Special Use Facility	County of Los Angeles	Castaic/Santa Clarita/Agua Dulce
William S. Hart Regional Park[1]	156.0[3]	County Special Use Facility	County of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Placerita Canyon Natural Area and Nature Center[1]	517.9[3]	County Special Use Facility	County of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Vasquez Rocks Natural Area and Nature Center[1]	912.9[3]	County Special Use Facility	County of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Frank G. Bonelli Equestrian Center[3]	0.0[3]	County Special Use Facility[3]	County of Los Angeles[3]	East San Gabriel Mountains
Peter F. Schabarum Equestrian Center[3]	0.0[3]	County Special Use Facility[3]	County of Los Angeles[3]	East San Gabriel Mountains
San Dimas Staging Area[3]	0.1[3]	County Special Use Facility[3]	County of Los Angeles[3]	East San Gabriel Mountains
Eastside Eddie Heredia Boxing Club[1]	0.2	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
Valley Center Staging Area[3]	1.1	County Special Use Facility[3]	County of Los Angeles[3]	East San Gabriel Mountains
Lyman Staging Area[3]	1.3[3]	County Special Use Facility[3]	County of Los Angeles[3]	East San Gabriel Mountains
Workman Mill Staging Area[3]	1.5[3]	County Special Use Facility[3]	County of Los Angeles[3]	East San Gabriel Mountains
Marshall Canyon Staging Area[3]	1.9[3]	County Special Use Facility[3]	County of Los Angeles[3]	East San Gabriel Mountains
Lincoln SPS Staging Area[3]	2.7[3]	County Special Use Facility[3]	County of Los Angeles[3]	East San Gabriel Mountains
Los Pinetos Staging Area[3]	2.7[3]	County Special Use Facility[3]	County of Los Angeles[3]	East San Gabriel Mountains
72nd Street Staging Area[3]	3.0[3]	County Special Use Facility[3]	County of Los Angeles[3]	East San Gabriel Mountains
Walnut Nature Park[1]	4.5[3]	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
San Jose Creek Park[1]	2.9[3]	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
Eaton Canyon Staging Area[3]	5.8[3]	County Special Use Facility[3]	County of Los Angeles[3]	East San Gabriel Mountains
Marshall Canyon Equestrian Center[3]	5.8[3]	County Special Use Facility[3]	County of Los Angeles[3]	East San Gabriel Mountains
Virginia Robinson Gardens[1]	6.6[3]	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
Maggie Hathaway Golf Course[1]	12.7[3]	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
Tujunga Ponds Wildlife Sanctuary[1]	12.9	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
Whittier Narrows Equestrian Center[3]	18.1[3]	County Special Use Facility[3]	County of Los Angeles[3]	East San Gabriel Mountains
John Anson Ford Amphitheatre[1]	31.4	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
Santa Catalina Island Nature Center at Avalon Canyon[2]	0.6[3]	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
Lario Staging Area[3]	42.5[3]	County Special Use Facility[3]	County of Los Angeles[3]	East San Gabriel Mountains
Hasley Canyon Equestrian Center[3]	67.0[3]	County Special Use Facility[3]	County of Los Angeles[3]	East San Gabriel Mountains
Altadena Golf Course[1]	69.1[3]	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
Eaton Canyon Golf Course[1]	101.5[3]	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains

TABLE 3.11.2-2
FEDERAL, STATE, COUNTY, AND CITY PARK FACILITIES WITHIN SERVICE AREA OF SUBJECT PARCELS WITHIN PROPOSED INITIATIVE STUDY AREA, *Continued*

Park Facility	Acreage	Park Classification	Managed By	Nearest Subarea
Hollywood Bowl[1]	69.0[3]	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
South Coast Botanic Garden[1]	81.8	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
El Cariso Golf Course[1]	128.8[3]	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
San Dimas Canyon Natural Area and Nature Center[1]	110.0[3]	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
Marshall Canyon Regional Park & Nursery[1]	118.7[3]	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
Arboretum and Botanic Garden[1]	119.4	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
Chester Washington Golf Course[2]	124.9[3]	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
La Mirada Golf Course[1]	133.8[3]	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
Santa Anita Golf Course[1]	130.1[3]	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
Deane Dana Friendship Natural Area and Nature Center[1]	131.1[3]	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
Los Amigos Golf Course[1]	147.7[3]	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
Descanso Gardens[1]	148.6[3]	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
Alondra Golf Course[1]	164.0[3]	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
Marshall Canyon Golf Course[1]	186.2[3]	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
Los Verdes Golf Course[1]	162.7	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
Mountain Meadows Golf Course[1]	178.4[3]	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
Victoria Golf Course[1]	161.7[3]	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
Diamond Bar Golf Course[1]	188.3[3]	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
Lakewood Golf Course[1]	195.8[3]	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
Eaton Canyon Natural Area and Nature Center[1]	214.5[3]	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
Whittier Narrows Golf Course[1]	277.8[3]	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
Whittier Narrows Natural Area and Nature Center[1]	133.0[3]	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
Santa Catalina Island Regional Park[1]	41,000.0[3]	County Special Use Facility	County of Los Angeles	East San Gabriel Mountains
Neenach Habitat Preserve[1]	40.1	County Special Use Facility	County of Los Angeles	Lake Hughes/Gorman/West of Lancaster
George R Bones Wildlife Sanctuary[1]	99.6[3]	County Special Use Facility	County of Los Angeles	Lake Hughes/Gorman/West of Lancaster
Mescal Wildlife Sanctuary[1]	99.4	County Special Use Facility	County of Los Angeles	Lake Los Angeles/Llano/Valyermo/Littlerock
Jackrabbit Flats Wildlife Sanctuary[1]	114.5[3]	County Special Use Facility	County of Los Angeles	Lake Los Angeles/Llano/Valyermo/Littlerock
Longview Wildlife Sanctuary[1]	139.3[3]	County Special Use Facility	County of Los Angeles	Lake Los Angeles/Llano/Valyermo/Littlerock
Blalock Wildlife Sanctuary[1]	140.4	County Special Use Facility	County of Los Angeles	Lake Los Angeles/Llano/Valyermo/Littlerock
Theodore Payne Wildlife Sanctuary[1]	156.9	County Special Use Facility	County of Los Angeles	Lake Los Angeles/Llano/Valyermo/Littlerock
Big Rock Wash Wildlife Sanctuary[1]	160.8	County Special Use Facility	County of Los Angeles	Lake Los Angeles/Llano/Valyermo/Littlerock
Alpine Butte Wildlife Sanctuary[1]	323.2	County Special Use Facility	County of Los Angeles	Lake Los Angeles/Llano/Valyermo/Littlerock
Carl O. Gerhardy Wildlife Sanctuary[1]	546.9[3]	County Special Use Facility	County of Los Angeles	Lake Los Angeles/Llano/Valyermo/Littlerock
Devil's Punchbowl Natural Area and Nature Center[1]	1,299.9[3]	County Special Use Facility	County of Los Angeles	Lake Los Angeles/Llano/Valyermo/Littlerock
Butte Valley Wildflower Sanctuary[1]	350.5	County Special Use Facility	County of Los Angeles	Lancaster Northeast
Subtotal – County-Managed Special Use Facility Acreage	**50,204.0 acres managed by County of Los Angeles within a 25-mile radius of study area parcels**			
Angeles National Forest[2]	642,216	Regional Park	County of Los Angeles, USFS, MRCA, City of Los Angeles	Acton
Palisades Park[2]	113.6	Regional Park	City of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Bell Canyon Park[2]	112.8	Regional Park	City of Los Angeles[5]	Castaic/Santa Clarita/Agua Dulce
Tapia Park[2]	138.5	Regional Park	County of Los Angeles (a portion of Malibu Creek State Park)[6]	Castaic/Santa Clarita/Agua Dulce
Elsmere Canyon Park[2]	154.9	Regional Park	MRCA	Castaic/Santa Clarita/Agua Dulce
William S. Hart Regional Park[2]	156.0[3]	Regional Park	County of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Zev Yaroslavsky Las Virgenes Highlands Park[2]	192.2	Regional Park	MRCA	Castaic/Santa Clarita/Agua Dulce
Red Rock Canyon Park[2]	236.5	Regional Park	SMMC	Castaic/Santa Clarita/Agua Dulce
Central Park[2]	255.8	Regional Park	City of Santa Clarita	Castaic/Santa Clarita/Agua Dulce
Wilson Canyon Park[2]	296.3	Regional Park	MRCA	Castaic/Santa Clarita/Agua Dulce
Santa Ynez Canyon Park[2]	338.4	Regional Park	City of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Placerita Canyon State Park[2]	354.6	Regional Park	California DPR	Castaic/Santa Clarita/Agua Dulce
Corral Canyon Park[2]	359.7	Regional Park	MRCA	Castaic/Santa Clarita/Agua Dulce

TABLE 3.11.2-2
FEDERAL, STATE, COUNTY, AND CITY PARK FACILITIES WITHIN SERVICE AREA OF SUBJECT PARCELS WITHIN PROPOSED INITIATIVE STUDY AREA, *Continued*

Park Facility	Acreage	Park Classification	Managed By	Nearest Subarea
Truinfo Creek Park[2]	379.0	Regional Park	MRCA	Castaic/Santa Clarita/Agua Dulce
Mulholland Gateway Park[2]	415.0	Regional Park	SMMC	Castaic/Santa Clarita/Agua Dulce
Summit Valley Edmund D. Edelman Park[2]	417.5	Regional Park	MRCA	Castaic/Santa Clarita/Agua Dulce
Mulholland Gateway Park[2]	461.1	Regional Park	MRCA	Castaic/Santa Clarita/Agua Dulce
Charmlee County Park[2]	533.7	Regional Park	MRCA	Castaic/Santa Clarita/Agua Dulce
Santa Susana Pass State Historic Park[2]	681.9	Regional Park	California DPR	Castaic/Santa Clarita/Agua Dulce
O'Melveny Park[2]	695.7	Regional Park	City of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Rocky Peak Park[2]	1,268.9	Regional Park	MRCA	Castaic/Santa Clarita/Agua Dulce
Tuna Canyon Park[2]	1,533.7	Regional Park	MRCA	Castaic/Santa Clarita/Agua Dulce
Michael D. Antonovich Regional Park at Joughin Ranch[2]	2,096.7	Regional Park	MRCA	Castaic/Santa Clarita/Agua Dulce
Leo Carrillo State Park[2]	2,195.1	Regional Park	California DPR	Castaic/Santa Clarita/Agua Dulce
Santa Clarita Woodlands Park[2]	3,497.3	Regional Park	MRCA	Castaic/Santa Clarita/Agua Dulce
Malibu Creek State Park[2]	7,103.7	Regional Park	California DPR	Castaic/Santa Clarita/Agua Dulce
Topanga State Park[2]	12,276.4	Regional Park	California DPR	Castaic/Santa Clarita/Agua Dulce
Castaic Lake State Recreation Area[1]	12,657.8[3]	Regional Park	County of Los Angeles	Castaic/Santa Clarita/Agua Dulce
Los Padres National Forest[2]	12,939.5	Regional Park	USFS	Castaic/Santa Clarita/Agua Dulce
La Mirada Community Regional Park[1]	75.7[3]	Regional Park[3]	County of Los Angeles	East San Gabriel Mountains
Temescal Gateway Park[2]	101.4	Regional Park	SMMC	East San Gabriel Mountains
Earvin 'Magic' Johnson Recreation Area[2]	103.9[3]	Regional Park	County of Los Angeles	East San Gabriel Mountains
Sepulveda Basin Recreation Area[2]	106.7	Regional Park	U.S. Army Corps of Engineers	East San Gabriel Mountains
Horsethief Canyon Park[2]	110.9	Regional Park	City of San Dimas	East San Gabriel Mountains
Heartwell Park[2]	114.1	Regional Park	City of Long Beach	East San Gabriel Mountains
Arcadia Wilderness Park[2]	115.8	Regional Park	City of Arcadia	East San Gabriel Mountains
Walnut Creek Community Regional Park[1]	117.0[3]	Regional Park[3]	County of Los Angeles	East San Gabriel Mountains
Wilacre Park[2]	125.2	Regional Park	SMMC	East San Gabriel Mountains
San Dimas Canyon Community Regional Park[3]	129.1[3]	Regional Park	County of Los Angeles	East San Gabriel Mountains
Venice City Beach[2]	133.0	Regional Park	City of Los Angeles	East San Gabriel Mountains
Runyon Canyon Park[2]	133.1	Regional Park	City of Los Angeles	East San Gabriel Mountains
Cherry Canyon Park[2]	136.8	Regional Park	La Cañada Flintridge	East San Gabriel Mountains
Peck Road Water Conservation Park[1]	150.1[3]	Regional Park[3]	County of Los Angeles	East San Gabriel Mountains
Country Park[2]	151.4	Regional Park	City of Diamond Bar	East San Gabriel Mountains
Sycamore Canyon Park[2]	152.2	Regional Park	City of Claremont	East San Gabriel Mountains
Lake Balboa Park[2]	162.2	Regional Park	U.S. Army Corps of Engineers	East San Gabriel Mountains
Monrovia Canyon Park[2]	165.6	Regional Park	City of Monrovia	East San Gabriel Mountains
Stough Park and Nature Center[2]	175.9	Regional Park	City of Burbank	East San Gabriel Mountains
Getty View Park & Trailhead[2]	180.1	Regional Park	SMMC	East San Gabriel Mountains
Will Rogers State Historic Park[2]	187.8	Regional Park	California DPR	East San Gabriel Mountains
Santa Monica State Beach[2]	192.8	Regional Park	City of Santa Monica	East San Gabriel Mountains
San Gabriel River & Bike Trail[2]	201.6	Regional Park	Los Angeles County Flood Control District	East San Gabriel Mountains
Hahamongna Watershed Park[2]	247.5	Regional Park	City of Pasadena	East San Gabriel Mountains
Verdugo Mountains Park Property[2]	252.5	Regional Park	California DPR	East San Gabriel Mountains
Dockweiler State Beach[2]	292.4	Regional Park	California DPR	East San Gabriel Mountains
South Hills Wilderness Park[2]	292.4	Regional Park	City of Glendora	East San Gabriel Mountains
Hellman Park[2]	317.6	Regional Park	City of Whittier	East San Gabriel Mountains
Ernest E Debs Regional Park[2]	338.7	Regional Park	City of Los Angeles	East San Gabriel Mountains
El Dorado East Regional Park[2]	264.7	Regional Park	City of Long Beach	East San Gabriel Mountains
Kenneth Hahn State Recreation Area[1]	338.0[3]	Regional Park	County of Los Angeles	East San Gabriel Mountains
Peter F. Schabarum Regional Park[1]	574.7[3]	Regional Park	County of Los Angeles	East San Gabriel Mountains
Franklin Canyon Park[2]	593.9	Regional Park	MRCA	East San Gabriel Mountains
Elysian Park[2]	595.2	Regional Park	City of Los Angeles	East San Gabriel Mountains
Verdugo Mountain Park[2]	633.0	Regional Park	City of Los Angeles	East San Gabriel Mountains

TABLE 3.11.2-2
FEDERAL, STATE, COUNTY, AND CITY PARK FACILITIES WITHIN SERVICE AREA OF SUBJECT PARCELS WITHIN PROPOSED INITIATIVE STUDY AREA, *Continued*

Park Facility	Acreage	Park Classification	Managed By	Nearest Subarea
Brand Park[2]	649.0	Regional Park	City of Glendale	East San Gabriel Mountains
Wildwood Canyon Park[2]	680.5	Regional Park	City of Burbank	East San Gabriel Mountains
Deukmejian Wilderness Park[2]	731.3	Regional Park	City of Glendale	East San Gabriel Mountains
Whittier Narrows Recreation Area[1]	972.7[3]	Regional Park	County of Los Angeles	East San Gabriel Mountains
Glendora Wilderness Park[2]	909.7	Regional Park	City of Glendora	East San Gabriel Mountains
La Tuna Canyon Park[2]	1,015.0	Regional Park	MRCA	East San Gabriel Mountains
Claremont Hills Wilderness Park[2]	1,547.0	Regional Park	City of Claremont	East San Gabriel Mountains
Westridge-Canyonback Wilderness Park[2]	1,629.7	Regional Park	MRCA	East San Gabriel Mountains
Frank G. Bonelli Regional Park[1]	1,797.3[3]	Regional Park	County of Los Angeles	East San Gabriel Mountains
Santa Fe Dam Recreation Area[2]	989.0[3]	Regional Park	County of Los Angeles; Army Corps of Engineers	East San Gabriel Mountains
Hansen Dam Recreation Center[2]	1,858.8	Regional Park	City of Los Angeles	East San Gabriel Mountains
Griffith Park[2]	4,086.7	Regional Park	City of Los Angeles	East San Gabriel Mountains
Santa Monica Mountains National Recreation Area[2]	5,198.4	Regional Park	County of Los Angeles, U.S. National Park Service, MRCA, City of Calabasas	Castaic/Santa Clarita/Agua Dulce
Arthur B. Ripley Desert Woodland State Park[2]	568.1	Regional Park	California DPR	Lake Hughes/Gorman/West of Lancaster
Hungry Valley State Vehicular Recreation Area[2]	12,312.0	Regional Park	California DPR	Lake Hughes/Gorman/West of Lancaster
Saddleback Butte State Park[2]	2,952.9	Regional Park	California DPR	Lake Los Angeles/Llano/Valyermo/Littlerock
Subtotal – Regional Park Acreage	**749,939.8 acres within a 25-mile radius of study area parcels**			
TOTAL ACREAGE – LOCAL PARKLAND	**355.9 acres within service area radii of study area parcels**			
TOTAL ACREAGE – REGIONAL PARKLAND	**806,298.4 acres**			

NOTE: California DPR – California Department of Parks and Recreation. MRCA – Mountains Recreation and Conservation Authority. SMMC – Santa Monica Mountains Conservancy. USFS – U.S. Forest Service.
SOURCES:
[1] County of Los Angeles Parks (DPR) 2015 Spatial Data.
[2] CPAD 2015 Spatial Data.
[3] County of Los Angeles Parks (DPR) Facilities List provided March 29, 2016.
[4] Santa Monica Mountains Conservancy. Accessed 8 April 2016. *Powder Canyon*. Available at: http://www.lamountains.com/parks.asp?parkid=45
[5] City of Los Angeles Department of Recreation & Parks. Accessed 8 April 2016. *Facility Locator*. Available at: http://www.laparks.org/index.htm
[6] Malibu Hiking. Accessed 8 April 2016. *Tapia Park – Malibu Creek State Park*. Available at: http://www.malibuhiking.com/tapia_park.html#all

Trails

The County offers unique trail user opportunities that showcase its diverse scenery and provide connectivity to parks, open spaces, cultural resources, and wilderness areas. Los Angeles County has an ideal climate for trail user activities on most days of the year. Typical trail uses range from hiking and walking, to mountain biking and horseback riding, with many users participating in more than one activity. The quality of the trail experience is directly proportional to the state of the visual, natural, and educational environment through which the trail passes. The wide variety of experiences, include but are not limited to: exercise, solitude, spiritual practices, physical and mental well-being, building social networks, testing athletic skills, and experiencing nature. The County strives to make all trails multi-use and accessible to all non-motorized users including pedestrians, equestrians, and mountain bicyclists, where appropriate. In May 2011, the Board of Supervisors adopted the County of Los Angeles Trails Manual, which provides County staff and developers with guidelines and standards for trail planning, design, development, and maintenance of County trails.[22] The purpose of the Trails Manual is to provide guidance to County departments that interface with trail planning, design, development, and maintenance of hiking, equestrian, and mountain biking recreational trails, while addressing physical and social constraints and opportunities associated with the diverse topographic and social conditions that occur in the unincorporated areas. The County manages over 194 miles of existing trails, including 25 trails (approximately 37.6 miles of trails) within a two-mile radius of the subject parcels within the proposed initiative study area (Figure 3.11.2-1, *Regional Trail System*):

- Altadena Crest Trail
- Canyon Trail
- Chaney Trail
- Cliffie Stone Trail
- Cobalt Canyon Trail
- Darrell Readmond Trail
- Eaton Canyon Trail
- Fair Oaks Trail
- Gould Canyon Trail
- Hasley Canyon Trail
- Hastings Debris Basin Trail
- Hillside Trail
- Horse Lane Trail
- La Cañada Open Space Trail
- Los Pinetos Trail
- Manzanita Mountain Trail
- Marshall Canyon Trail
- Miller Lateral Trail
- North Park Trail
- Palmdale Hills Trail
- Pico Canyon Trail
- Santa Ana Wash Trail
- Stephens Ranch Spur Trail
- Vasquez Loop Trail
- Waterfall Trail

The Pacific Crest National Scenic Trail (also known as Pacific Crest Trail, or PCT), a trail of approximately 2,650 miles (2,350 miles in 1967) extending from the Mexican-California border northward along the mountain ranges of the West Coast states to the Canadian-Washington border, passes through easements between subject parcels and adjacent to subject parcels within the Lake Hughes/Gorman/West of Lancaster subarea, the East San Gabriel Mountains subarea, and the Castaic/Santa Clarita/Agua Dulce subarea (see Figure 3.1.2-1, *Lake Hughes/Gorman/West of Lancaster Subarea Scenic Resources*, and Figure 3.1.2-4, *Lancaster Northeast Subarea, Antelope Valley Northeast Subarea, and Lake Los Angeles/Llano/Valyermo/Littlerock Subarea Scenic Resources*). PCT is located approximately 0.5 mile southwest of the nearest parcels within the Acton subarea, approximately 3.1 miles south of the nearest parcels within the Lake Los

[22] County of Los Angeles Department of Parks and Recreation. June 2013. County of Los Angeles Trails Manual. Available at: https://trails.lacounty.gov/Files/Documents/69/LA%20County%20Trails%20Manual%20%28Revised%2006-20-13%29.compressed.pdf

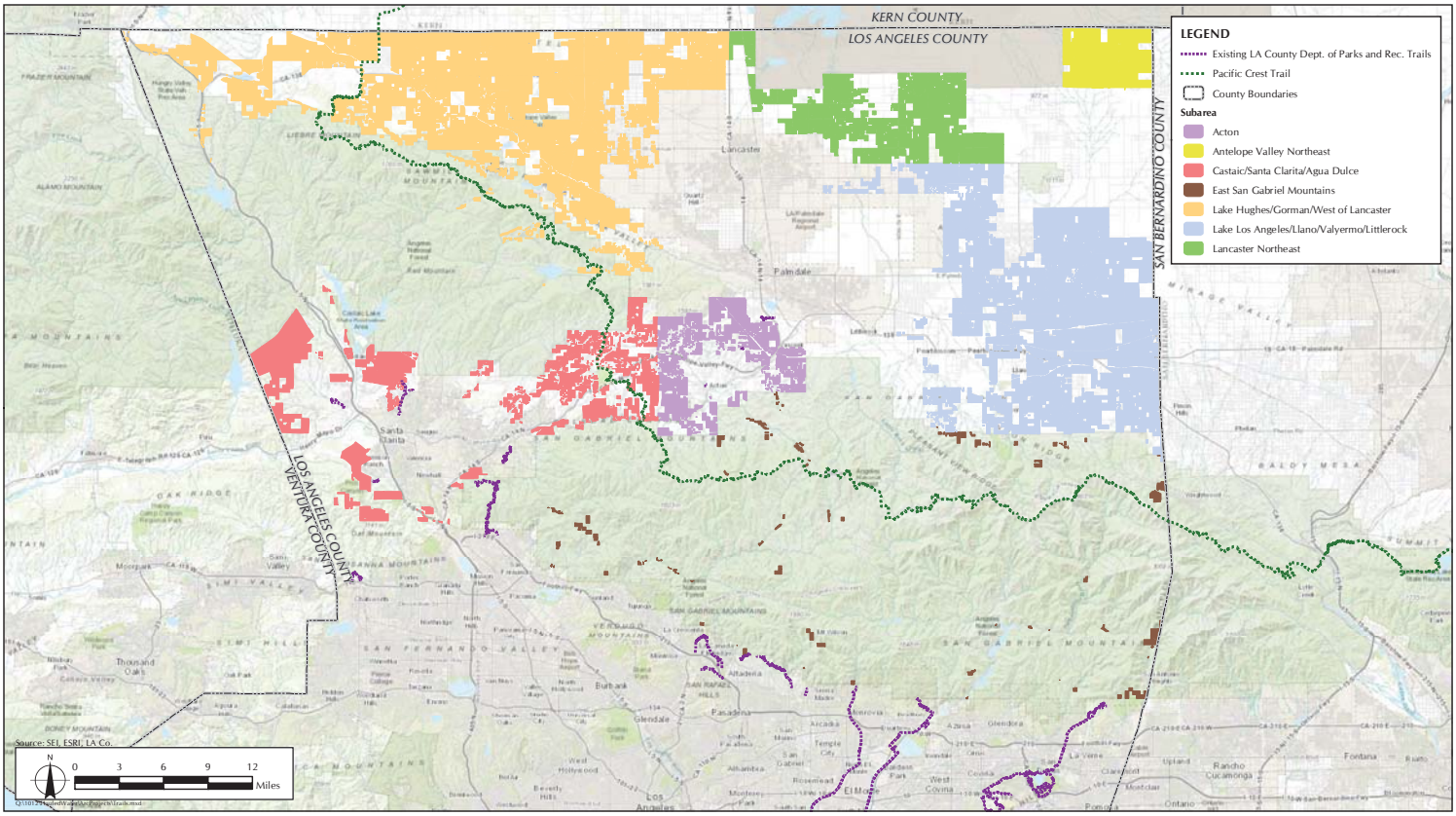

FIGURE 3.11.2-1
Regional Trail System

Angeles/Llano/Valyermo/Littlerock subarea, approximately 20.7 miles south of the Lancaster Northeast subarea, and approximately 26.3 miles south of the Antelope Valley Northeast subarea. PCT provides both regional and local/neighborhood recreation opportunities, from trail users seeking to hike the entire route to local residents who may hike a small portion of the route.

3.11.3 THRESHOLDS OF SIGNIFICANCE

The potential for the proposed initiative to result in impacts related to recreation was analyzed in relation to the questions contained in Appendix G of the State CEQA Guidelines.

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

3.11.4 IMPACT ANALYSIS

IMPACT REC-1: Would the Project Increase the Use of Existing Neighborhood and Regional Parks or Other Recreational Facilities Such That Substantial Physical Deterioration of the Facility Would Occur or Be Accelerated?

The proposed initiative would result in significant impacts to recreation in relation to increased use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated that may not be able to be reduced to below the level of significance through the incorporation of mitigation measures, therefore requiring the consideration of alternatives.

As building permits have not been issued since January 2003 for single-family residences on properties that are not served by groundwater or a public or private water purveyor, the subject vacant parcels would not be able to be developed in the absence of the proposed initiative or comparable action. The proposed initiative would induce population growth in northern Los Angeles County in areas that were deficient for local parks in 2000, and that are projected to experience increased deficiencies in 2020 that would be further exacerbated by the proposed initiative. Based on the 2000–2014 average single-family residence household size of 3.5 people in unincorporated Los Angeles County,[23] and a reasonable worst-case scenario of 184 building permits per year, the proposed initiative would likely result in 644 additional people per year, or 12,880 persons over an estimated 20-year period of time. The County estimates the need for four acres of local parkland per 1,000 people. Therefore, the proposed initiative would require 51.5 additional acres of local parkland over an estimated 20-year planning period to accommodate the increased use of existing neighborhood parks as a result of the overall population growth that would occur if the proposed initiative were adopted.

The induced population growth would not significantly impact the regional parkland in the Antelope Valley and Santa Clarita Valley Planning Areas, where there is a surplus of regional parkland.

[23] Southern California Association of Governments. May 2013. Profile of the Unincorporated Area of Los Angeles County. Available online at: http://www.scag.ca.gov/Documents/UnIncAreaLosAngelesCounty.pdf

However, it would impact the regional parkland in the San Fernando Valley and West San Gabriel Valley Planning Area, where there is an existing regional parkland deficiency of 11,957 acres.

The proposed initiative would exacerbate the deficiency of local parkland in all four Planning Areas within the study area (Antelope Valley, Santa Clarita, San Fernando, and West San Gabriel Planning Areas) and regional parkland in the San Fernando Planning Area and West San Gabriel Planning Area. This induced population growth is expected to contribute to the physical deterioration of existing neighborhood and regional parks or other recreational facilities because the individual construction of single-family residences is not subject to the local parkland construction or required Quimby fees as described in Title 21 of the Los Angeles County Code of Ordinances[24] that can be used to develop parkland for every additional 1,000 residents introduced as a result of residential subdivision projects. Implementation of the proposed initiative has the potential to result in significant impacts to recreation related to increased use of existing neighborhood and regional parks or other recreational facilities that would contribute to their physical deterioration.

IMPACT REC-2: Does the Project Include Recreational Facilities or Require the Construction or Expansion of Recreational Facilities Which Might Have an Adverse Physical Effect on The Environment?

The proposed initiative would result in indirect significant impacts to recreation in regard to requiring the construction or expansion of recreational facilities which might have an adverse physical effect on the environment in order to meet County goals for local parkland.

The proposed initiative would not result in direct impacts to the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. The proposed initiative would allow hauled water as the primary source of potable water for new single-family residences that do not have access to private or public water distribution systems or groundwater. Implementation of the proposed initiative would ultimately result in the approval of building permits for construction of new single-family residences by property owners on privately owned property. As the proposed initiative does not apply to residential subdivision development projects, which would require provision of local park space or payment of fees for recreational purposes pursuant to the Quimby Act for each 1,000 persons that would reside within the proposed subdivision, the proposed initiative would not directly require the construction or expansion of recreational facilities.

In order to maintain the County's standard levels of service for recreational facilities, as approximately 3,680 single-family homes could be expected to be constructed during the 2015 to 2035 20-year planning horizon, for a population increase of approximately 12,880 persons within the proposed initiative study area, the proposed initiative would require the construction or expansion of an estimated 51.5 acres of local parks, over an approximately 20-year period of time that would have the potential to have an adverse physical effect on the environment.[25] The goals and policies of the Parks and Recreation Element of the Los Angeles County General Plan 2035, the Santa Clarita Valley Area Plan, and the Antelope Valley Area Plan recommend the provision of four acres of local parkland per 1,000 residents. Given the existing deficiency of local parkland in RPA 1, 2, and 3, the development of

[24] Municode. n.d. Los Angeles County, California, Code of Ordinances: Title 21 Subdivisions. Available online at: https://library.municode.com/index.aspx?clientId=16274

[25] Based on (1) a Los Angeles County building permit data indicating 184 permits per year for the issuance of building permits, (2) the 2000-2014 average household size of 3.5 persons per household in unincorporated Los Angeles County, (3) the development of 42,867 parcels, and (4) the County standard for local parkland of four acres per 1,000 residents.

single-family residences that would result from the proposed initiative would generate demand for 180.3 additional acres of local parkland.[26] Therefore, there would be indirect impacts to recreation related to potential adverse physical effects on the environment as a result of proposed construction or expansion of recreational facilities to meet the anticipated demand for local parks.

3.11.5 CUMULATIVE IMPACTS

The incremental impact of the proposed initiative to recreation, when added to the four related projects listed in Section 2, *Project Description*, would be expected to be significant in regard to local parkland because the proposed initiative study area is already deficient in meeting County local parkland goals, the construction of individual single-family residences does not require the construction of new parkland or payment of Quimby fees for every 1,000 population because they are not development projects under the Quimby Act, and the proposed initiative would be expected to incrementally contribute to indirect population growth as a result of the related projects.

IMPACT REC-1: Would the Project Increase the Use of Existing Neighborhood and Regional Parks or Other Recreational Facilities Such That Substantial Physical Deterioration of the Facility Would Occur or Be Accelerated?

The proposed initiative would not be expected to contribute incrementally with the Centennial project, which has begun the environmental review process, in regard to the increased use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated, because the Centennial project would involve designation of approximately 163 acres of public parks and approximately 75 acres of private recreation facilities because, as a development project, it would require the development of a minimum of 3 acres of local parkland per 1,000 planned residents or payment of Quimby fees at the same value to accommodate the direct population growth as a result of the development of approximately 19,333 homes (a maximum of 23,000 dwelling units) within the Antelope Valley Area Plan area, including subject parcels within the Lake Hughes/Gorman/West of Lancaster subarea.[27,28,29] Therefore, the population increase as a result of the proposed initiative of approximately 12,880 persons within the proposed initiative study area within the 2015 to 2035 20-year planning horizon would not be expected to combine with impacts to recreation of the Centennial project.

The proposed initiative would be expected to contribute incrementally with the High Desert Corridor Project in regard to the increased use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated, because the proposed initiative study area is already deficient in meeting County local parkland goals, the construction of individual single-family residences does not require the construction of new parkland or payment of Quimby fees for every 1,000 population because they are not development

[26] Municode. n.d. Los Angeles County, California, Code of Ordinances: Title 21 Subdivisions. Available online at: https://library.municode.com/index.aspx?clientId=16274

[27] CaliforniaCityNews.org. 18 April 2012. The Town of Centennial: New Master-Planned Community Slowly Moves Forward. Available online at: https://www.californiacitynews.org/2014/06/town-centennial-new-master-planned-community-slowly-moves-forward.html

[28] County of Los Angeles Department of Regional Planning. March 2004. Notice of Preparation: Centennial Specific Plan Project Description. Available online at: http://planning.lacounty.gov/assets/upl/case/sp_02-232_notice-of-preparation.pdf

[29] County of Los Angeles Department of Regional Planning. 1 October 2015. *Revised Notice of Preparation: Centennial Project*. Available at: http://planning.lacounty.gov/assets/upl/case/sp_02-232_nop-20151001.pdf Main project website: http://planning.lacounty.gov/centennial

projects under the Quimby Act, and the proposed initiative would be expected to incrementally contribute to indirect population growth as a result of the High Desert Corridor Project from the Lake Los Angeles/Llano/Valyermo/Littlerock subarea west to the City of Palmdale. A 244-acre deficit in local parkland service ratios currently exists in the Antelope Valley Planning Area that would be exacerbated by this project and the proposed initiative.[30] The High Desert Corridor Project, which would involve construction of the 63-mile High Desert Corridor as a new transportation facility in the High Desert region of Los Angeles and San Bernardino Counties to provide route continuity and relieve traffic congestion between State Route 14 in Los Angeles County and State Route 18 and Interstate 15 in San Bernardino County, would be expected to result in indirect population growth as a result of extension of roads through the Lake Los Angeles/Llano/Valyermo/Littlerock subarea to the City of Palmdale and therefore would be expected to indirectly increase the need for local parkland within the rural communities of Pearblossom, Lake Los Angeles, Littlerock, Valyermo, and Llano as a result of increased transportation access within the subarea. The population increase as a result of the proposed initiative of approximately 12,880 persons within the proposed initiative study area within the 2015 to 2035 20-year planning horizon that would increase the local parkland deficit if no additional local parkland were constructed would be expected to incrementally contribute to indirect cumulative impacts, in combination with the High Desert Corridor project.

The proposed initiative would not be expected to contribute incrementally with the Newhall Ranch Specific Plan, which has been included in the County's RHNA housing allocation, in regard to the increased use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated, because the specific plan includes service facilities to provide adequate service ratios in support of the residential development. As approved, the Newhall Ranch Specific Plan includes a public trail system, 55 acres of neighborhood parkland, 1,106 acres of open space including 186 acres of community parks, a High Country Special Management Are of 4,214 acres, a River Corridor Special Management Area of 819 acres, a 15-acre Lake, and an 18-hole Golf Course, in association with the development of 20,885 residential units over a 25-year planning period.[31] As the population growth associated with this project has already been planned and the appropriate service ratio is anticipated to be provided for park services, the proposed initiative would not be expected to combine with cumulative impacts associated with use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated in regard to the Newhall Ranch Specific Plan.

The proposed initiative would not be expected to contribute incrementally with the Northlake Specific Plan, which has also been included in the County's RHNA housing allocation, in regard to the increased use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated, because the specific plan includes service facilities to provide adequate service ratios in support of the residential development. The Northlake Specific Plan includes two school/park sites, and 476.4 acres of open space to accommodate the population growth associated with 2,337 single-family dwellings and 1,286 multi-family units in Northlake. As the population growth associated with this project has already been

[30] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 10: Parks and Recreation Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch10.pdf

[31] California Department of Fish and Wildlife. May 2003. Newhall Ranch MMRP Appendices. Appendix A: Newhall Ranch Specific Plan EIR and Water Reclamation Plant Mitigation Monitoring and Reporting Plans. Available online at: https://nrm.dfg.ca.gov/documents/ContextDocs.aspx?cat=NewhallRanchFinal

planned and the appropriate service ratio is anticipated to be provided for park services, the proposed initiative would not be expected to combine with cumulative impacts associated with use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated in regard to the Northlake Specific Plan.

IMPACT REC-2: Does the Project Include Recreational Facilities or Require the Construction or Expansion of Recreational Facilities Which Might Have an Adverse Physical Effect on The Environment?

The proposed initiative would be expected to contribute incrementally with the Centennial project, which has begun the environmental review process, in regard to the included or required construction or expansion of recreational facilities which might have an adverse effect on the environment because, although the Centennial project would involve designation of approximately 163 acres of public parks and approximately 75 acres of private recreation facilities, as a development project it would require the development of a minimum of 3 acres of local parkland per 1,000 planned residents or payment of Quimby fees at the same value to accommodate the direct population growth as a result of the development of approximately 19,333 homes (a maximum of 23,000 dwelling units) within the Antelope Valley Area Plan area, including subject parcels within the Lake Hughes/Gorman/West of Lancaster subarea.[32,33,34] The construction of 161 acres of local parkland that would be required as a result of the Centennial project would be expected to have an adverse physical effect on the environment.[35] Therefore, the population increase as a result of the proposed initiative of approximately 12,880 persons within the proposed initiative study area within the 2015 to 2035 20-year planning horizon would be expected to combine with impacts to recreation of the Centennial project.

The proposed initiative would be expected to contribute incrementally with the High Desert Corridor Project in regard to the included or required construction or expansion of recreational facilities which might have an adverse effect on the environment because the proposed initiative study area is already deficient in meeting County local parkland goals, the construction of individual single-family residences does not require the construction of new parkland or payment of Quimby fees for every 1,000 population because they are not development projects under the Quimby Act, and the proposed initiative would be expected to incrementally contribute to indirect population growth as a result of the High Desert Corridor Project from the Lake Los Angeles/Llano/Valyermo/Littlerock subarea west to the City of Palmdale. A 244-acre deficit in local parkland service ratios currently exists in the Antelope Valley Planning Area that would be exacerbated by this project and the proposed initiative, and require the construction or expansion of recreational facilities in the area which might have an adverse

[32] CaliforniaCityNews.org. 18 April 2012. The Town of Centennial: New Master-Planned Community Slowly Moves Forward. Available online at: https://www.californiacitynews.org/2014/06/town-centennial-new-master-planned-community-slowly-moves-forward.html

[33] County of Los Angeles Department of Regional Planning. March 2004. Notice of Preparation: Centennial Specific Plan Project Description. Available online at: http://planning.lacounty.gov/assets/upl/case/sp_02-232_notice-of-preparation.pdf

[34] County of Los Angeles Department of Regional Planning. 1 October 2015. *Revised Notice of Preparation: Centennial Project*. Available at: http://planning.lacounty.gov/assets/upl/case/sp_02-232_nop-20151001.pdf Main project website: http://planning.lacounty.gov/centennial

[35] County of Los Angeles Department of Regional Planning. 1 October 2015. *Revised Notice of Preparation: Centennial Project*. Available at: http://planning.lacounty.gov/assets/upl/case/sp_02-232_nop-20151001.pdf Main project website: http://planning.lacounty.gov/centennial

physical effect on the environment.[36] The High Desert Corridor Project, which would involve construction of the 63-mile High Desert Corridor as a new transportation facility in the High Desert region of Los Angeles and San Bernardino Counties to provide route continuity and relieve traffic congestion between State Route 14 in Los Angeles County and State Route 18 and Interstate 15 in San Bernardino County, would be expected to result in indirect population growth as a result of extension of roads through the Lake Los Angeles/Llano/Valyermo/Littlerock subarea to the City of Palmdale and therefore would be expected to indirectly increase the need for local parkland within the rural communities of Pearblossom, Lake Los Angeles, Littlerock, Valyermo, and Llano as a result of increased transportation access within the subarea. The population increase as a result of the proposed initiative of approximately 12,880 persons within the proposed initiative study area within the 2015 to 2035 20-year planning horizon that would increase the required construction of additional local parkland which might have an adverse physical effect on the environment would be expected to incrementally contribute to indirect cumulative impacts, in combination with the High Desert Corridor project.

The proposed initiative would be expected to contribute incrementally with the Newhall Ranch Specific Plan, which has been included in the County's RHNA housing allocation, in regard to the included or required construction or expansion of recreational facilities which might have an adverse effect on the environment. Implementation of the recreation-related mitigation measures specified in the Newhall Ranch Specific Plan EIR would be expected to avoid or reduce recreation-related impacts to below the level of significance.[37] As approved, the Newhall Ranch Specific Plan includes a public trail system, 55 acres of neighborhood parkland, 1,106 acres of open space including 186 acres of community parks, a High Country Special Management Are of 4,214 acres, a River Corridor Special Management Area of 819 acres, a 15-acre Lake, and an 18-hole Golf Course, in association with the development of 20,885 residential units over a 25-year planning period.[38] In accordance with the Mitigation Monitoring Plan, trail alignments would be finalized with the County of Los Angeles Department of Parks and Recreation before construction, and trail construction would be in in accordance with the County of Los Angeles Department of Parks and Recreation trail system and standards.

The proposed initiative would be expected to contribute incrementally with the Northlake Specific Plan, which has also been included in the County's RHNA housing allocation, in regard to the included or required construction or expansion of recreational facilities which might have an adverse effect on the environment because the specific plan includes service facilities to provide adequate service ratios in support of the residential development. The Northlake Specific Plan includes two school/park sites, and 476.4 acres of open space to accommodate the population growth associated with 2,337 single-family dwellings and 1,286 multi-family units in Northlake. As the Northlake Specific Plan project includes the construction of recreational facilities to provide the appropriate service ratio for park services, the proposed initiative would be expected to combine with cumulative impacts associated with included or required construction or expansion of recreational facilities which might have an adverse effect on the environment in regard to the Northlake Specific Plan.

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[36] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 10: Parks and Recreation Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch10.pdf

[37] California Department of Fish and Wildlife. 17 December 2010. Newhall Ranch Mitigation Monitoring and Reporting Program. Available online at: https://nrm.dfg.ca.gov/documents/ContextDocs.aspx?cat=NewhallRanchFinal

[38] California Department of Fish and Wildlife. May 2003. Newhall Ranch MMRP Appendices. Appendix A: Newhall Ranch Specific Plan EIR and Water Reclamation Plant Mitigation Monitoring and Reporting Plans. Available online at: https://nrm.dfg.ca.gov/documents/ContextDocs.aspx?cat=NewhallRanchFinal

3.11.6 MITIGATION MEASURES

The proposed initiative would result in significant impacts to recreation, including contribution to cumulative impacts, as a result of generating demand for local parks in excess of the available supply of such facilities that would be expected to exacerbate existing parkland deficiencies and generate a demand for expansion or construction of local parks, requiring the consideration of mitigation measures.

IMPACT REC-1: Would the Project Increase the Use of Existing Neighborhood and Regional Parks or Other Recreational Facilities Such That Substantial Physical Deterioration of the Facility Would Occur or Be Accelerated?

MM-REC-1: To mitigate potential impacts to recreational trails, the County Department of Regional Planning shall notify the County of Los Angeles Department of Parks and Recreation's (DPR) Trail Planning Section when a proposed single- family development will impact a County trail alignment during the plot plan review process, prior to issuance of building permits. In coordination with DPR's Trail Planning Section, the review process shall include review of proposed development's assessor map for existing County trail easements and/or checking GIS data to identify if adopted-proposed County trail alignments are planned to traverse the proposed development. Upon notification from DPW Building and Safety Division, DPR's Trail Planning Section will analyze potential trail impacts from the development proposal reroute or realign the trail to maintain the integrity of the County's Trails Master Plan within the General Plan.

IMPACT REC-2: Does the Project Include Recreational Facilities or Require the Construction or Expansion of Recreational Facilities Which Might Have an Adverse Physical Effect on The Environment?

No feasible mitigation measures have been identified.

3.11.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

IMPACT REC-1: Would the Project Increase the Use of Existing Neighborhood and Regional Parks or Other Recreational Facilities Such That Substantial Physical Deterioration of the Facility Would Occur or Be Accelerated?

Implementation of **MM-REC-1** would reduce significant impacts related to increased use of existing neighborhood parks or other recreational facilities. However, due to the lack of authority to impose requirements on ministerial building permits, impacts could not be required to be reduced to below the level of significance, as they are for residential subdivisions pursuant to the Quimby Act. Therefore, impacts would remain **significant and unavoidable**.

IMPACT REC-2: Does the Project Include Recreational Facilities or Require the Construction or Expansion of Recreational Facilities Which Might Have an Adverse Physical Effect on The Environment?

The County has been unable to identify feasible mitigation measures to avoid or reduce significant impacts related to recreation in regard to the construction or expansion of recreational facilities which might have an adverse effect on the environment, due to the lack of authority to impose requirements on ministerial building permits. Therefore, impacts would remain **significant and unavoidable**.

SECTION 3.12
TRANSPORTATION AND TRAFFIC

As a result of the Initial Study,[1] the County of Los Angeles (County) determined that the Single-Family Residential Hauled Water Initiative for New Development (proposed initiative) had the potential to result in impacts to transportation and traffic. Therefore, this issue has been carried forward for detailed analysis in the Environmental Impact Report (EIR). This analysis was undertaken to identify opportunities to avoid, reduce, or otherwise mitigate potential significant impacts and to identify potential alternatives to address traffic and transportation issues.

The analysis of transportation and traffic consists of a summary of the regulatory framework that guides the decision-making process, a description of the existing conditions at the proposed project area, thresholds for determining if the proposed project would result in significant impacts, anticipated impacts (direct, indirect, and cumulative), mitigation measures, and level of significance after mitigation. Transportation and traffic was evaluated with regard to the Mobility Element[2] and Safety Element[3] of the Los Angeles County General Plan 2035; the 2015 Antelope Valley Area Plan – Town & Country;[4] the 2012 Santa Clarita Valley Area Plan;[5] the Southern California Association of Governments Regional Transportation Plan for 2012–2035;[6] and recreation information available on the Los Angeles County Metropolitan Transportation Authority Congestion Management Program (CMP).[7] Consistent with the Los Angeles County CMP guidelines, a Traffic Study / Traffic Impact Assessment (TIA) has been prepared to assess the potential impacts on traffic and transportation from the proposed initiative (Appendix M to the EIR).[8]

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[1] County of Los Angeles. September 2014. County of Los Angeles Single-Family Residential Hauled Water Initiative for New Development Initial Study. Prepared by: Sapphos Environmental, Inc., Pasadena, CA.

[2] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 7: Mobility Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch7.pdf

[3] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 12: Safety Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch12.pdf

[4] County of Los Angeles Department of Regional Planning. June 2015. Antelope Valley Area Plan – Town & Country. Available online at: http://planning.lacounty.gov/assets/upl/project/tnc_draft-20150601.pdf

[5] County of Los Angeles Department of Regional Planning. 2012. Santa Clarita Valley Area Plan. Available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf

[6] Southern California Association of Governments (SCAG). April 2012. SCAG Regional Transportation Plan/Sustainable Communities Strategy 2012-2035. Available online at: http://rtpscs.scag.ca.gov/

[7] Los Angeles County Metropolitan Transportation Authority (LACMTA). 2010. Congestion Management Program. Available online at: http://media.metro.net/docs/cmp_final_2010.pdf

[8] Fehr & Peers. 2015. Draft Single-Family Residential Hauled Water Initiative: Traffic Analysis.

3.12.1 REGULATORY FRAMEWORK

Federal

49 CFR Part 77, Safe, Efficient Use and Preservation of the Navigable Airspace

The Federal Aviation Administration (FAA) issued a final rule on July 21, 2010 (75 Federal Register 42296) to 49 CFR Part 77 for the "Safe, Efficient Use and Preservation of the Navigable Airspace." Any person/organization who intends to sponsor any of the following construction or alterations must notify the Administrator of the FAA:

- Any construction or alteration exceeding 200 ft above ground level
- Any construction or alteration
  - within 20,000 ft of a public use or military airport which exceeds a 100:1 surface from any point on the runway of each airport with at least one runway more than 3,200 ft.
  - within 10,000 ft of a public use or military airport which exceeds a 50:1 surface from any point on the runway of each airport with its longest runway no more than 3,200 ft.
  - within 5,000 ft of a public use heliport which exceeds a 25:1 surface
- Any highway, railroad or other traverse way whose prescribed adjusted height would exceed that above noted standards
- When requested by the FAA
- Any construction or alteration located on a public use airport or heliport regardless of height or location

Persons failing to comply with the provisions of FAR Part 77 are subject to civil penalty under Section 902 of the Federal Aviation Act of 1958, as amended and pursuant to 49 U.S.C. Section 46301(a).

State

California Water Code

The proposed initiative is subject to the State of California Water Code, Division 12, Part 5, Chapter 1, Article 4, Section 31060, titled "Construction of Rights of Way."[9] Any mitigation measure required to be implemented in a state right-of-way would require a Caltrans Encroachment Permit. Caltrans recommends that large-sized trucks transporting construction materials and equipment be limited to off-peak commute periods and any heavy construction equipment that requires the use of oversize transport vehicles on state roadways or facilities would require a Caltrans transportation permit.

[9] West's Annotated California Codes. 1984. Water Code Sections 30000 to 38999. Official California Water Code Classification. Vol. 69. St. Paul, Minnesota: West Publishing Company.

Regional

Southern California Association of Governments Regional Transportation Plan

The proposed project lies within the planning area for the Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP). The 2012 RTP presents the transportation vision for the six-county region through the year 2035. The focus of the RTP is to maintain and improve the existing transportation system that considers system preservation, system operation and management; improved coordination between land-use decisions and transportation investments; and strategic expansion of the system to accommodate future growth.[10] The RTP consists of two sections: a financially constrained plan and a strategic plan. Together, these two plans have seven goals:

- Maximize mobility and accessibility for all people and goods in the region
- Ensure travel safety and reliability for all people and goods in the region
- Preserve and ensure a sustainable regional transportation system
- Maximize the productivity of our transportation system
- Protect the environment, improve air quality and promote energy efficiency
- Encourage land use and growth patterns that complement our transportation investments and improve the cost-effectiveness of expenditures
- Maximize the security of our transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.[11]

Local

Metropolitan Transportation Authority Congestion Management Plan

The CMP is a State-mandated program passed in 1990 in the form of Proposition 111. The Los Angeles County Metropolitan Transportation Authority (LACMTA) has implemented the CMP locally. The CMP system consists of a specific system of arterial roadways in addition to all freeways. The Los Angeles County CMP requires individual development projects of regional significance to be analyzed for traffic impacts.[12]

County of Los Angeles General Plan

The Mobility element of the County of Los Angeles General Plan provides a summary of the existing conditions in the planning area, major issues, goals, and policies, as well as pertinent action programs related to traffic and circulation related to a variety of transportation systems (highway and local road networks, bus, rail, high speed rail, aviation network, harbors, bicycles, pedestrians, and rideshare). The Transportation element describes the major locations and corridors for existing and future travel based on land use patterns in order to develop a comprehensive,

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[10] Southern California Association of Governments. May 2008. Regional Transportation Plan. Available online at: http://www.scag.ca.gov/rtp2008/pdfs/finalrtp/f2008RTP_Complete.pdf

[11] Southern California Association of Governments. May 2008. Regional Transportation Plan. Available online at: http://www.scag.ca.gov/rtp2008/pdfs/finalrtp/f2008RTP_Complete.pdf

[12] Fehr & Peers. 2015. Draft Single-Family Residential Hauled Water Initiative: Traffic Analysis.

coordinated, and continuing transportation system for the County of Los Angeles. This document sets forth County policy on the transportation system by identifying a series of seven goals and 60 policies. The following policies may be applicable to the proposed project:[13]

- Policy M 2.1: Provide transportation corridors/networks that accommodate pedestrians, equestrians and bicyclists, and reduce motor vehicle accidents through a context-sensitive process that addresses the unique characteristics of urban, suburban, and rural communities whenever appropriate and feasible.
- Policy M 4.3. Maintain transit services within the unincorporated areas that are affordable, timely, cost-effective, and responsive to growth patterns and community input.
- Policy M 4.7. Maintain a minimum LOS D, where feasible; however, allow LOS below D on a case by case basis in order to further other General Plan goals and policies, such as those related to environmental protection, infill development, and active transportation.
- Policy M 4.13. Coordinate with adjacent jurisdictions in the review of land development projects near jurisdictional borders to ensure appropriate roadway transitions and multimodal connectivity.
- Policy M 7.5. In rural areas, require rural highway and street standards that minimize the width of paving and the placement of curbs, gutters, sidewalks, street lighting, and traffic signals, except where necessary for public safety.

Mobility Element

The Mobility element of the Los Angeles County General Plan 2035 provides a summary of the existing conditions in the planning area, major issues, goals, and policies, as well as pertinent action programs related to traffic and circulation related to a variety of transportation systems (highway and local.

Los Angeles County Emergency Survival Guide

The County has published the *County of Los Angeles Emergency Survival Guide*[14] that discloses to residents of the unincorporated area of the County the potential for human and natural disasters to overwhelm the capability of emergency responders and encouraging each family to have a plan for surviving emergencies.

Los Angeles County Code, Title 22 (Planning and Zoning)

Section 22.20.110 of the Los Angeles County Code (Planning and Zoning) establishes a maximum height limit of 35 feet from existing or excavated grate for single-family residential construction, unless modified by a special standards district, such as a community standards district.

[13] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan. Available online at: http://planning.lacounty.gov/generalplan

[14] County of Los Angeles Chief Executive Office, Emergency Survival Program. 2012. Available online at: http://lacoa.org/PDF/EmergencySurvivalGuide-LowRes.pdf

3.12.2 EXISTING CONDITIONS

A broad data collection effort was undertaken to develop a description of existing conditions in the proposed initiative study area. The assessment of conditions relevant to this study include a description of the roadway facilities within the proposed initiative study area, a review of traffic volumes on these facilities and current operating conditions, and an assessment of existing transit service and pedestrian and bicycle facilities in the study area.

Regional Roadway System

A large portion of northern Los Angeles County is unincorporated. Incorporated cities are Lancaster, Palmdale, and Santa Clarita. The Antelope Valley and Santa Clarita Valley, including the proposed initiative study area, are served by the state highway system and a network of locally controlled roadways ranging from local and collector streets to expressways and major highways.

The proposed initiative study area is served by portions of the Interstate 5 (I-5) freeway as well as State Routes 14 and 138 (SR-14 and SR-138). I-5 is generally an eight-lane facility in the study area and serves north-south regional travel between Los Angeles and Kern Counties in the project vicinity as well as regional travel throughout the state. SR-14 is a six-lane facility with directional high occupancy vehicle (HOV) lanes in the Santa Clarita Valley that operate only during weekday peak periods, and narrows to a four-lane facility in the northern portion of the Antelope Valley. SR-138 is a key east-west connection between I-5 and SR-14 and is generally a two-lane undivided highway. East of SR-14, SR-138 is a four-lane undivided major highway that narrows to two lanes after 87th Street E.

The County is responsible for the design, construction, operation, maintenance, and repair of roads in the unincorporated areas, as well as in a number of local jurisdictions that contract with the County for these services. Functional classifications of roadways within the County's Highway Plan are:

- Major Highway – This classification includes urban and rural highways that are of countywide importance and are, or are projected to be, the most highly traveled routes. These roads generally require four or more lanes of moving traffic, channelized medians, and, to the extent possible, access control and limits on intersecting streets. The typical right-of-way width of a rural major highway is 108 feet.
- Secondary Highway – This classification includes urban and rural routes that serve or are planned to serve an area or countywide function, but are less heavily traveled than major highways. Secondary highways also frequently act as oversized collector roads that feed the countywide system. The typical right-of-way width of rural secondary highways is 86 feet.
- Limited Secondary Highway – This classification includes urban and rural routes that provide access to low-density areas. The typical right-of-way width of rural limited secondary highways is 64 feet.
- Expressway – This classification includes urban and rural controlled-access highways connecting communities. Expressways can generally accommodate six to 10 traffic lanes and are intended for through traffic, featuring full or partial control of access. The right-of-way required varies as necessary to incorporate these features, but is typically 180 feet.

Street System

Collector streets and local streets are not defined in the County's Highway Plan, but these facilities are typically designed to feed local traffic onto major highways and secondary highways and carry lower volumes of traffic at lower travel speeds than the major facilities listed above.

Levels of Service

Level of service (LOS) is a qualitative measure used by the County of Los Angeles CMP to describe conditions of traffic flow with a letter grade ranging from LOS A, indicating excellent conditions, to LOS F, indicating overloaded conditions. The minimum acceptable LOS in the County of Los Angeles is LOS D in urban areas. The LOS definitions for signalized intersections are provided in Table 3.12.2-1, *Level of Service Definition for Signalized Intersections*. All of the analyzed intersections are controlled by traffic signals.

TABLE 3.12.2-1
LEVEL OF SERVICE DEFINITION FOR SIGNALIZED INTERSECTIONS

Level of Service	Volume/ Capacity Ratio	Definition
A	0.000–0.600	FREE FLOW. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at intersections is minimal. The travel speed exceeds 85 percent of the base free-flow speed.
B	>0.600–0.700	FREE FLOW. The ability to maneuver within the traffic stream is only slightly restricted and control delay at intersections is no significant. The travel speed is between 67 percent and 85 percent of the base free-flow speed.
C	>0.700–0.800	STABLE FLOW. The ability to maneuver and change lanes at mid-segment locations may be more restricted than at LOS B. Longer queues at intersections may contribute to lower travel speeds. The travel speed is between 50 percent and 67 percent of the base free-flow speed.
D	>0.800–0.900	APPROACHING UNSTABLE FLOW. Small increases in flow may cause substantial increases in delay and decreases in travel speed. The travel speed is between 40 percent and 50 percent of the base free-flow speed.
E	>0.900–1.000	UNSTABLE FLOW. Significant delay is commonly experienced. The travel speed is between 30 percent and 40 percent of the base free-flow speed.
F	> 1.000	FORCED FLOW. Congestion is likely occurring at intersections, as indicated by high delay and extensive queuing. The travel speed is 30 percent or less of the base free-flow speed.

SOURCE: Los Angeles County Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 7: Mobility Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch7.pdf, Table 7.2.

The Intersection Capacity Utilization (ICU) method of intersection analysis, per the County of Los Angeles traffic impact study guidelines for analyzing intersection conditions, was used to determine the intersection volume to capacity (V/C) ratio and corresponding level of service at each study intersection. A capacity of 1,600 vehicles per lane per hour and 2,880 for dual left-turn lanes was assumed in the capacity calculations in accordance with the guidelines.[15]

[15] Fehr & Peers. 2015. Draft Single-Family Residential Hauled Water Initiative: Traffic Analysis.

Existing Traffic Volumes

Fifty roadway segments were selected for evaluation based on coordination with the Los Angeles County Department of Public Works, Traffic and Lighting Division. Current and future traffic analyses were examined at these 50 roadway segments, which are located within the unincorporated areas of the County as a part of this evaluation.[16] At these locations, traffic operations were compared prior to and after implementation of the proposed initiative, and deficiencies and impacts were identified. The intersections and roadways that were evaluated within the roughly 532-square-mile proposed initiative study area and surrounding area are located in communities of Lake Hughes/Gorman and Littlerock, Santa Clarita, Kagel Canyon, and Antelope Valley, in the unincorporated territory of the County, and operated and maintained by Caltrans, or the County DPW.[17]

The County has established daily capacity thresholds for roadways within the study area based on the roadways' functional classification and number of travel lanes. Table 3.12.2-2, *Roadway Functional Classification Capacities*, presents the County's roadway classifications, allowable number of travel lanes, and the maximum average daily traffic volume representing LOS F conditions.

TABLE 3.12.2-2
ROADWAY FUNCTIONAL CLASSIFICATION CAPACITIES

Classification	Number of Lanes	Design Maximum 2-Way ADT	Design Maximum ADT Per Lane
Major Highway	4 Lanes 6 Lanes 8 Lanes	36,000 54,000 72,000	9,000
Secondary Highway	4 Lanes	36,000	9,000
Limited Secondary Highway	2 Lanes 4 Lanes	18,000 36,000	9,000
Collector Street	2 Lanes	15,000	7,500
Local Street	2 Lanes	2,500	1,250
Expressway	4 Lanes 6 Lanes 8 Lanes	44,000 66,000 88,000	11,000

SOURCE: Los Angeles County Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan. Available online at: http://planning.lacounty.gov/generalplan

Existing Roadway Operations

The study roadway segments were analyzed by comparing the existing average daily traffic volumes to the roadway capacity based on traffic counts and field observations collected by the project team in January 2015. The existing roadway operations are summarized in Table 3.12.2-3, *Roadway Segment LOS—Existing Conditions*. Under existing conditions, only one location

[16] Fehr & Peers. 2015. Draft Single-Family Residential Hauled Water Initiative: Traffic Analysis.

[17] For the purposes of the traffic analysis prepared for the proposed project, the ongoing campus improvements were evaluated as an existing baseline condition of the campus rather than a related project. Additionally, the related projects that were assessed at the intersections/streets, mostly appear within an approximately 532 square miles area.

currently exceeds the LOS E capacity threshold: State Route 138 west of 87th Street E (Study Location 18).

TABLE 3.12.2-3
ROADWAY SEGMENT LOS—EXISTING CONDITIONS

Study ID	Location	Functional Class	Lanes	ADT	V/C	LOS
1	W Avenue A e/o 60th St W	Major Highway	2	1,795	0.100	A
2	E Avenue E w/o 30th St E	Major Highway	2	2,396	0.133	A
3	E Avenue E w/o 90th St E	Major Highway	2	2,485	0.138	A
4	W Avenue G e/o 110th St W	Major Highway	2	180	0.010	A
5	E Avenue G w/o 30th St E	Major Highway	2	457	0.025	A
6	E Avenue G w/o 90th St E	Major Highway	2	125	0.007	A
7	W Avenue I e/o 110th St W	Major Highway	2	1,054	0.059	A
8	E Avenue J w/o 90th St E	Major Highway	2	2,492	0.138	A
9	W Avenue K e/o 110th St W	Major Highway	2	2,162	0.120	A
10	E Avenue O w/o 170th St E	Major Highway	2	5,570	0.309	A
11	E Avenue O w/o 240th St E	Secondary Highway	2	1,578	0.088	A
12	E Palmdale Blvd w/o 90th St E	Major Highway	2	915	0.051	A
13	E Palmdale Blvd w/o Longview Rd	Major Highway	2	4,628	0.257	A
14	E Palmdale Blvd w/o 170th St E	Major Highway	2	3,092	0.172	A
15	E Avenue T w/o 87th St E	Major Highway	2	8,041	0.447	A
16	E Avenue T w/o 116th St E	Major Highway	2	1,786	0.099	A
17	E Avenue T w/o 165th St E	Local / Collector	2	1,233	0.082	A
18	SR-138 w/o 87th St E	Major Highway	2	17,219	0.957	E
19	SR-138 w/o 106th St E	Major Highway	4	10,753	0.299	A
20	SR-138 w/o 165th St E	Major Highway	4	10,325	0.287	A
21	SR-138 w/o 263rd St E	Major Highway	2	8,230	0.457	A
22	SR-18 w/o 263rd St E	Major Highway	2	3,557	0.198	A
23	Fort Tejon Rd w/o 106th St E	Secondary Highway	2	1,589	0.088	A
24	110th St W s/o W Avenue G	Major Highway	2	599	0.033	A
25	110th St W s/o E Avenue K	Major Highway	2	3,281	0.182	A
26	60th St W s/o W Avenue A	Major Highway	2	1,054	0.059	A
27	60th St W s/o SR-138	Major Highway	2	1,375	0.076	A
28	Sierra Hwy s/o W Avenue D	Major Highway	2	3,892	0.216	A
29	Sierra Hwy s/o W Avenue G	Major Highway	2	2,951	0.164	A
30	90th St E s/o E Avenue J	Major Highway	2	1,695	0.094	A
31	90th St E s/o E Palmdale Blvd	Major Highway	2	7,550	0.419	A
32	87th St E s/o SR-138	Secondary Highway	2	520	0.029	A
33	106th St E s/o SR-138	Secondary Highway	2	239	0.013	A
34	106th St E s/o Fort Tejon Rd	Limited Secondary Highway	2	703	0.039	A
35	140th St E s/o E Avenue J	Major Highway	2	1,275	0.071	A
36	Longview Rd s/o SR-138	Secondary Highway	2	1,503	0.084	A
37	170th St E s/o E Palmdale Blvd	Major Highway	2	2,429	0.135	A
38	165th St E s/o SR-138	Secondary Highway	2	810	0.045	A
39	Sierra Hwy s/o Angeles Forest Hwy	Major Highway	2	9,796	0.544	A
40	Sierra Hwy w/o Ward Rd	Major Highway	2	6,993	0.389	A
41	Sierra Hwy n/o Davenport Rd	Major Highway	2	7,048	0.392	A
42	Sierra Hwy n/o Vasquez Canyon Rd	Major Highway	2	9,275	0.515	A

TABLE 3.12.2-3
ROADWAY SEGMENT LOS—EXISTING CONDITIONS, *Continued*

Study ID	Location	Functional Class	Lanes	ADT	V/C	LOS
43	Angeles Forest Highway s/o E Carson Mesa Rd	Major Highway	2	3,522	0.196	A
44	Crown Valley Rd n/o Sierra Hwy	Limited Secondary Highway	2	1,619	0.090	A
45	Aqua Dulce Canyon Rd n/o SR-14 WB Ramps	Limited Secondary Highway	2	2,930	0.163	A
46	Davenport Rd e/o Sierra Hwy	Limited Secondary Highway	2	1,798	0.100	A
47	Shadow Pines Blvd n/o Soledad Canyon Rd	Secondary Highway	2	7,581	0.421	A
48	Copper Hill Dr e/o Copperstone Dr	Major Highway	6	31,291	0.579	A
49	The Old Rd n/o I-5 SB Ramps	Secondary Highway	4	14,198	0.394	A
50	Hasley Canyon Rd w/o Commerce Center Dr	Secondary Highway	4	7,334	0.204	A

SOURCE: Fehr & Peers. 2015. Draft Single-Family Residential Hauled Water Initiative: Traffic Analysis. (Appendix M).

While majority of the roadways in the proposed initiative areas are paved, there are approximately 170 miles of dirt roads in the Antelope Valley, particularly in the vicinity of the communities of Acton and Agua Dulce. These unpaved roads are susceptible to erosion and differential settlement. During the wet season, dirt roads may require supplemental maintenance to serve as reliable routes of access and egress for passenger vehicles and trucks.

Transit Network

The study area is served primarily by Antelope Valley Transit Authority (AVTA) and Santa Clarita Transit (SCT) for bus service. Los Angeles County DPW operates shuttle service in Acton and Agua Dulce to Santa Clarita three days a week. In addition to the bus network, the study area is served by the Antelope Valley Metrolink commuter rail line, which runs nine commuter trains daily in each direction Monday through Friday to/from Lancaster and Union Station, at six stations:

- Newhall Station
- Santa Clarita Station
- Princessa Station
- Vincent Grade/Acton Station
- Palmdale Station
- Lancaster Station

AVTA provides 11 local routes and one local express route in the Antelope Valley. In addition, AVTA operates supplemental and deviated routes to accommodate increased student ridership on routes that serve Eastside High School, and Antelope Valley High School in Lancaster, and Pete Knight High School in Palmdale. The AVTA also provides three commuter bus services:

- AVTA Line 785 – Line 785 connects Antelope Valley with Downtown Los Angeles and has an average headway of 10 to 20 minutes during weekday peak periods.
- AVTA Line 786 – Line 786 connects Antelope Valley with Century City/West Los Angeles and has an average headway of 60 minutes during weekday peak periods.

- AVTA Line 787 – Line 787 connects Antelope Valley with West San Fernando Valley and has an average headway of 20 to 30 minutes during weekday peak periods.

Antelope Valley is serviced by two regional transportation centers: the Lancaster City Park and the Palmdale Transportation Center. These centers offer free parking, and connect the study area with AVTA service, Santa Clarita Transit, AMTRAK throughway bus service, Greyhound, Metrolink, and the County of LA Beach Bus.

SCT operates nine local routes as well as two station link routes that provide service from the Santa Clarita Metrolink Station. In addition, SCT operates 20 supplemental school day service routes to alleviate overcrowding on the City's regularly scheduled local bus routes. SCT also provides four commuter bus routes:

- SCT Route 757 – Route 757 connects Santa Clarita with North Hollywood and has an average headway of 30 minutes during weekday peak periods.
- SCT Routes 796/791 – Routes 796/791 connect Santa Clarita with Chatsworth, Canoga Park, Warner Center, and Woodland Hills and has an average headway of 20 to 30 minutes during weekday peak periods.
- SCT Routes 797/792 – Routes 797/792 connect Santa Clarita with UCLA, Westwood, and Century City and has an average headway of 15 to 30 minutes during weekday peak periods.
- SCT Routes 799/794 – Routes 799/794 connect Santa Clarita with Union Station and Downtown Los Angeles and has an average headway of 15 minutes during weekday peak periods.

Both AVTA and SCT provide a dial-a-ride service to seniors over the age of 65 and disabled residents of the Antelope Valley and Santa Clarita Valley.

Air Traffic

There are two public airports located within two miles of parcels located in two of the subareas being evaluated in relation to the proposed initiative: Castaic/Santa Clarita/Agua Dulce and Lake Hughes/Gorman/West of Lancaster (Table 3.12.2-4, *Public/Private Airports within Two Miles of Proposed Initiative Subarea Parcels*, and Figure 3.8.2-2, *Public or Private Airports within Two Miles of Proposed Initiative Subarea Parcels*).[18] There are 390 parcels located within two miles of a public airport in the Castaic/Santa Clarita/Agua Dulce subarea. There are 105 parcels located within two miles of a public airport in the Lake Hughes/Gorman/West of Lancaster subarea.

[18] County of Los Angeles. n.d. Location Management System. Available online at: http://egis3.lacounty.gov/lms/

TABLE 3.12.2-4
PUBLIC/PRIVATE AIRPORTS WITHIN TWO MILES OF PROPOSED INITIATIVE SUBAREA PARCELS

Subarea	Public Airport	Private Airport	Number of Parcels within Two Miles
Castaic/Santa Clarita/ Agua Dulce	Agua Dulce Airport	—	390
		Subtotal	**390**
Lake Hughes/Gorman/ West of Lancaster	—	Bohunk's Airpark	924
	General William J. Fox Airfield	—	105
	—	Little Buttes Antique Airfield	1462
	—	Quail Lake Sky Park	74
	—	Skyotee Ranch	179
		Subtotal	**2,744**
Lake Los Angeles/ Llano/Valyermo/ Littlerock	—	Brian Ranch Airport	779
	—	Crystal Airport	602
	—	Gray Butte Field	369
	—	Nichols Farms Airport	643
		Subtotal	**2,393**
		Total	**5,527**

SOURCE: Los Angeles County GIS data, 2015.

Two public and eight private airports are located within two miles of parcels located in three of the subareas: Castaic/Santa Clarita/Agua Dulce, Lake Hughes/Gorman/West of Lancaster, and Lake Los Angeles/Llano/Valyermo/Littlerock (Table 3.12.2-4).[19] A total of 390 parcels are located within two miles of the Agua Dulce Airport in Castaic/Santa Clarita/Agua Dulce subarea. A total of 2,744 parcels are located within two miles of a private airport in the Lake Hughes/Gorman/West of Lancaster subarea. A total of 2,393 parcels are located within two miles of a private airport in the Lake Los Angeles/Llano/Valyermo/Littlerock subarea. A total of 5,527 parcels are located within two miles of private or public airports of the proposed initiative area.

Policies and Plans Related to Alternative Transportation

Public Transit and Active Transportation

The study area is primarily a rural environment. Due to the nature of the built environment and surrounding land uses, most of the roadways in the area are serviced by community-based fixed route transit and paratransit services that provide local transportation to the proposed initiative area. The Framework for Los Angeles County Community Pedestrian and Active Transportation Planning proposes a vision to guide the planning and implementation of active transportation improvements through a collaboration of County departments on the implementation of the General Plan, the Healthy Design Phase II Working Group, and the Department of Public Work's transportation infrastructure construction programs. As identified in Goal 4, Section 4.1 of the *Los Angeles County Department of Public Works Community Pedestrian and Active Transportation Planning Framework,* the County supports walking, bicycling, and transit use as viable

[19] County of Los Angeles. n.d. Location Management System. Available online at: http://egis3.lacounty.gov/lms/

transportation modes and components of healthy living and promotes intermodal transportation connectivity within the proposed initiative area.[20]

Bicycle and Pedestrian Facilities

The study area is primarily a rural environment. Due to the nature of the built environment and surrounding land uses, most of the roadways in the area lack sidewalks, and bicycle facilities are limited. However, most of the major roadways in the developed areas, including the Cities of Lancaster, Palmdale, and Santa Clarita have sidewalks along with several bicycle facilities. In addition, a Trails Plan was adopted into the Antelope Valley General Plan by the Board of Supervisors in 2007. The study area includes a trail network that is used by hikers, bicyclists, and equestrians. This network is comprised of the Adopted County Backbone Trail System, Pacific Crest National Trail, Federal/National Forest Trails, and Incorporated City Trails.

Bicycle facilities are generally categorized into three types of facilities: Class I – bicycle paths, Class II – bicycle lanes, and Class III – bicycle routes. A description of the facility types along with existing facilities in the study area is provided below.

- Class I bike paths, also called shared-use paths or multi-use paths, are paved rights-of-way for exclusive use by bicyclists, pedestrians, and other nonmotorized modes of travel. They are physically separated from vehicular traffic and can be constructed in roadway right-of-way or exclusive right-of-way. The Sierra Highway Bike path is a Class I facility that connects cities of Lancaster and Palmdale along the Metrolink tracks and Sierra Highway. The path helps commuters access the Metrolink stations and provides a recreational use for residents and visitors.
- Class II bicycle lanes are defined by pavement striping and signage used to allocate a portion of a roadway for exclusive bicycle travel. Bike lanes are one-way facilities on either side of a roadway. The study area does not currently have Class II bicycle lanes. The County of Los Angeles Bicycle Master Plan[21] (Bicycle Plan) has proposed Class II facilities near Elizabeth Lake along Elizabeth Lake Road.
- Class III bike routes provide shared use with motor vehicle traffic within the same travel lane. Designated by signs and roadway markings, bike routes provide continuity to other bike facilities or designated preferred routes through corridors with high demand. The study area does not currently have Class III bicycle routes. The County Bicycle Plan has proposed Class III facilities along Pine Canyon Road, as well as Lake Hughes Road, San Francisquito Canyon Road, and Bouquet Canyon Road, which would provide the connection to the Santa Clarita Valley Area.

The County Bicycle Plan has also proposed additional Class II and III bicycle facilities located primarily northwest of City of Lancaster. The Cities of Lancaster and Palmdale also have planned bicycle facilities that would connect with the County bicycle network.

[20] County of Los Angeles Department of Public Works. n.d. Community Pedestrian and Active Transportation Planning. Available online at: http://dpw.lacounty.gov/tnl/docs/Comm%20Ped%20Plng%20Web%20Version.pdf

[21] County of Los Angeles. 2012. 2012 Bicycle Master Plan. Available online at: http://dpw.lacounty.gov/pdd/bike/masterplan.cfm

3.12.3 THRESHOLDS OF SIGNIFICANCE

The potential for the proposed initiative to result in impacts related to transportation and traffic was analyzed in relation to the questions contained in Appendix G of the State CEQA Guidelines, and guidelines provide by the County of Los Angeles CMP. The project would normally be considered to have a significant impact to traffic and transportation systems when the potential for any one of the following thresholds occurs:

- Conflict with applicable plan, ordinance, or policy establishing measures of effectiveness for performance of circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit

  - The L.A. County CMP standard is a measurement of traffic operation condition whereby a letter grade, A through F, corresponding to progressively worsening operation conditions, is assigned to an intersection or roadway segment. According to the criteria provided by the County of Los Angeles, a project impact is considered significant if the following conditions are met:

Pre-Project Conditions		Project-Related Increase in V/C Ratio
LOS	V/C Ratio	
C	0.71 – 0.80	equal to or greater than 0.040
D	0.81 – 0.90	equal to or greater than 0.020
E, F	> 0.91	equal to or greater than 0.010

    Using these criteria, a project would not have a significant impact at an intersection if it is operating at LOS D after the addition of project traffic and the incremental change in the V/C ratio is less than 0.020. However, if the intersection is operating at a LOS E or F conditions (V/C > 0.900) after the addition of project traffic and the incremental change in the V/C ratio is 0.010 or greater, the project would be considered to have a significant impact.[22]

- Conflict with applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways

- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks

  The FAA has established buildings and structures in excess of 200 feet above ground surface as a threshold for review by FAA for potential effects on air traffic patterns.

[22] Fehr & Peers. 2015. Draft Single-Family Residential Hauled Water Initiative: Traffic Analysis.

- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)

- Result in inadequate emergency access

- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities

3.12.4 IMPACT ANALYSIS

The traffic impact analysis was completed according to impact analysis methodologies in CEQA and other relevant methodologies from state and local governments: the Caltrans methodology was used to evaluate highway segments and ramps that are within Caltrans' jurisdiction; the County of Los Angeles, North County Subarea Travel Demand Forecasting Model, was used to analyze the potential impacts of the proposed project for roads and intersections located within the County of Los Angeles' jurisdiction.

This section analyzes the potential for significant impacts on transportation and traffic that would occur from implementation of the proposed initiative. A project's transportation and traffic impacts can be separated into three components: (1) short-term impacts due to construction, (2) long-term permanent impacts from project operation, and (3) cumulative impacts when taken into consideration with related projects.

Consistent with the traffic study that was completed for the proposed initiative, the impacts analysis includes an assessment of existing conditions (2015), evaluation of future horizon year (2035) conditions without and with project components, determination of the proposed project's trip generation, distribution and assignment on the roadway network, an analysis of future conditions with the proposed project, identification of significant impacts, and identification of mitigation measures as applicable.[23]

IMPACT TRA-1: Roadways and Circulation Systems

Construction Impacts

Although the proposed initiative does not involve direct authorization of construction, the ability to obtain a building permit, using hauled water as the primary source of potable water, would be expected to result in a "reasonable worst case" of up to 184 building permits for single-family residences per year, or a total of 3,680 over the 20-year planning horizon. Based on an evaluation of the "reasonable worst-case" increase in building permits, as a result of the proposed initiative, construction-related traffic activities would be expected to result in less than significant impacts related to established transportation plans or policies. During the construction period for each new single-family residence, temporary construction impacts could include temporary closure of travel and/or parking lanes, temporary closure of bicycle lanes and sidewalks, temporary relocation of bus stops, and limitations on local access where these facilities are present. In areas near the Acton, Agua Dulce, and Antelope Valley regions where portions of the roadway remain unpaved, additional

[23] Fehr & Peers. 2015. Draft Single-Family Residential Hauled Water Initiative: Traffic Analysis.

impacts may be experienced since dirt roads would deteriorate in an accelerated manner, especially in the wet season. In addition to the construction activity associated with building a new home, these new developments could require grading of the parcel or access to the parcel and new roadway construction.

Because the precise location of the planned residences and the nature of each parcel are not known at this time, the specific location of these potential impacts cannot be determined. The construction would result in the temporary addition of worker trips and truck trips (material delivery and removal of excavated soil) to the surrounding regional and local transportation system. However, the limited number of homes to be developed per year at 3,680 between 2015 to 2035, and the significant area over which the development would occur, limit the potential for concentrated impacts to a single roadway facility for an extended period of time. Also, the construction on these parcels would likely occur one at a time rather than occurring as multiple parcels at once, as development projects and subdivisions are not contemplated to be eligible for the use of hauled water. The construction activity on each site would be expected to occur mostly within the parcel property area, so the potential for facility closures within the public right-of-way is minimal. Therefore, the indirect impacts from construction-related traffic impacts, due to the construction of single-family homes, made possible through the use of hauled water, are anticipated to be less than significant.

Operational Impacts

Although the proposed initiative does not involve direct construction and occupancy of single-family residences, the ability to obtain a building permit, using hauled water as the primary source of potable would be expected to result in a "reasonable worst case" of up to 184 single-family residences per year, or a total of 3,680 over the 20-year planning horizon. In addition, the need for hauled water to be delivered would be expected to result in 41,923 of trips from water delivery trucks per year, or a total estimated 838,457 of trips per day at build-out assuming deliveries, six days per week Monday through Saturday. Based on an evaluation of the "reasonable worst-case" increase in building permits, as a result of the proposed initiative, operations-related traffic activities would be expected to result in less than significant impact in relation to established transportation plans or policies. Under the guidelines used in the Los Angeles County General Plan EIR, a roadway segment would be significantly impacted if the project-related change in volume-to-capacity (V/C) ratio is greater than 0.02 and causes or worsens to LOS E or F conditions (V/C > 0.900). For those roadways operating with a V/C ratio less than 0.900 (i.e., better than LOS E), it was determined that the planned roadway capacity is adequate to handle the future volumes within acceptable operating conditions.

For simplicity of analysis, it was assumed that there would be one distribution center located near the edge of individual water districts to serve each subarea. As described in the traffic report (p. 29), "it does not produce substantially different results from what they would be if 50 or 60 water delivery services were assumed instead."[24] Therefore, the distance generated in the traffic model from using one distribution center per subarea is a reasonable scenario for providing water haul truck trip distances as long as development continues to grow over the 20 year time period. If development occurs much slower than anticipated (substantially less than the 184 building permits per year), it is possible that substantially less water hauling businesses would pop up, resulting in much longer haul distances than assumed.

[24] Ibid.

The existing and future year roadway segment LOS with and without the anticipated traffic that would be expected as a reasonable worst-case scenario with the proposed initiative are given in Table 3.12.4-1, *Roadway Segment LOS—Existing and Existing with Project Traffic Conditions (2015)*; and Table 3.12.4-2 *Roadway Segment LOS—Future and Future with Project Traffic Conditions*). Two roadway segments exceed the LOS E capacity threshold under cumulative conditions:

- 18 State Route 138 west of 87th Street E
- 36 Longview Road south of State Route 138

Under the guidelines established, there are no identified significant impacts related to the existing or future conditions, when taking into consideration the indirect and cumulative effects of the project.

TABLE 3.12.4-1
ROADWAY SEGMENT LOS—EXISTING AND EXISTING WITH PROJECT TRAFFIC CONDITIONS (2015)

				Existing			Existing plus Project			
Study ID	Location	Functional Class	Lanes	Count	V/C	LOS	Forecast	V/C	LOS	V/C Change
1	W Avenue A e/o 60th St W	Major Highway	2	1,795	0.100	A	1,850	0.103	A	0.003
2	E Avenue E w/o 30th St E	Major Highway	2	2,396	0.133	A	2,470	0.137	A	0.004
3	E Avenue E w/o 90th St E	Major Highway	2	2,485	0.138	A	2,540	0.141	A	0.003
4	W Avenue G e/o 110th St W	Major Highway	2	180	0.010	A	260	0.014	A	0.004
5	E Avenue G w/o 30th St E	Major Highway	2	457	0.025	A	640	0.036	A	0.011
6	E Avenue G w/o 90th St E	Major Highway	2	125	0.007	A	280	0.016	A	0.009
7	W Avenue I e/o 110th St W	Major Highway	2	1,054	0.059	A	1,890	0.105	A	0.046
8	E Avenue J w/o 90th St E	Major Highway	2	2,492	0.138	A	2,560	0.142	A	0.004
9	W Avenue K e/o 110th St W	Major Highway	2	2,162	0.120	A	2,250	0.125	A	0.005
10	E Avenue O w/o 170th St E	Major Highway	2	5,570	0.309	A	5,820	0.323	A	0.014
11	E Avenue O w/o 240th St E	Secondary Highway	2	1,578	0.088	A	1,830	0.102	A	0.014
12	E Palmdale Blvd w/o 90th St E	Major Highway	2	915	0.051	A	1,440	0.080	A	0.029
13	E Palmdale Blvd w/o Longview Rd	Major Highway	2	4,628	0.257	A	5,040	0.280	A	0.023
14	E Palmdale Blvd w/o 170th St E	Major Highway	2	3,092	0.172	A	3,170	0.176	A	0.004
15	E Avenue T w/o 87th St E	Major Highway	2	8,041	0.447	A	8,460	0.470	A	0.023
16	E Avenue T w/o 116th St E	Major Highway	2	1,786	0.099	A	2,080	0.116	A	0.017
17	E Avenue T w/o 165th St E	Local / Collector	2	1,233	0.082	A	1,350	0.090	A	0.008
18	SR-138 w/o 87th St E	Major Highway	2	17,219	0.957	E	17,480	0.971	E	0.014
19	SR-138 w/o 106th St E	Major Highway	4	10,753	0.299	A	10,860	0.302	A	0.003
20	SR-138 w/o 165th St E	Major Highway	4	10,325	0.287	A	10,520	0.292	A	0.005
21	SR-138 w/o 263rd St E	Major Highway	2	8,230	0.457	A	8,620	0.479	A	0.022
22	SR-18 w/o 263rd St E	Major Highway	2	3,557	0.198	A	3,690	0.205	A	0.007
23	Fort Tejon Rd w/o 106th St E	Secondary Highway	2	1,589	0.088	A	2,080	0.116	A	0.028
24	110th St W s/o W Avenue G	Major Highway	2	599	0.033	A	710	0.039	A	0.006
25	110th St W s/o E Avenue K	Major Highway	2	3,281	0.182	A	3,420	0.190	A	0.008
26	60th St W s/o W Avenue A	Major Highway	2	1,054	0.059	A	1,110	0.062	A	0.003
27	60th St W s/o SR-138	Major Highway	2	1,375	0.076	A	1,460	0.081	A	0.005
28	Sierra Hwy s/o W Avenue D	Major Highway	2	3,892	0.216	A	4,030	0.224	A	0.008
29	Sierra Hwy s/o W Avenue G	Major Highway	2	2,951	0.164	A	3,040	0.169	A	0.005
30	90th St E s/o E Avenue J	Major Highway	2	1,695	0.094	A	1,850	0.103	A	0.009
31	90th St E s/o E Palmdale Blvd	Major Highway	2	7,550	0.419	A	8,090	0.449	A	0.030
32	87th St E s/o SR-138	Secondary Highway	2	520	0.029	A	580	0.032	A	0.003
33	106th St E s/o SR-138	Secondary Highway	2	239	0.013	A	310	0.017	A	0.004
34	106th St E s/o Fort Tejon Rd	Limited Secondary Highway	2	703	0.039	A	960	0.053	A	0.014
35	140th St E s/o E Avenue J	Major Highway	2	1,275	0.071	A	1,400	0.078	A	0.007
36	Longview Rd s/o SR-138	Secondary Highway	2	1,503	0.084	A	1,730	0.096	A	0.012
37	170th St E s/o E Palmdale Blvd	Major Highway	2	2,429	0.135	A	2,680	0.149	A	0.014
38	165th St E s/o SR-138	Secondary Highway	2	810	0.045	A	1,020	0.057	A	0.012
39	Sierra Hwy s/o Angeles Forest Hwy	Major Highway	2	9,796	0.544	A	9,860	0.548	A	0.004
40	Sierra Hwy w/o Ward Rd	Major Highway	2	6,993	0.389	A	7,150	0.397	A	0.008
41	Sierra Hwy n/o Davenport Rd	Major Highway	2	7,048	0.392	A	7,270	0.404	A	0.012
42	Sierra Hwy n/o Vasquez Canyon Rd	Major Highway	2	9,275	0.515	A	9,830	0.546	A	0.031
43	Angeles Forest Highway s/o E Carson Mesa Rd	Major Highway	2	3,522	0.196	A	3,810	0.212	A	0.016
44	Crown Valley Rd n/o Sierra Hwy	Limited Secondary Highway	2	1,619	0.090	A	2,480	0.138	A	0.048

TABLE 3.12.4-1
ROADWAY SEGMENT LOS—EXISTING AND EXISTING WITH PROJECT TRAFFIC CONDITIONS (2015), *Continued*

Study ID	Location	Functional Class	Lanes	Existing			Existing plus Project			
				Count	V/C	LOS	Forecast	V/C	LOS	V/C Change
45	Aqua Dulce Canyon Rd n/o SR-14 WB Ramps	Limited Secondary Highway	2	2,930	0.163	A	4,220	0.234	A	0.071
46	Davenport Rd e/o Sierra Hwy	Limited Secondary Highway	2	1,798	0.100	A	1,990	0.111	A	0.011
47	Shadow Pines Blvd n/o Soledad Canyon Rd	Secondary Highway	2	7,581	0.421	A	8,120	0.451	A	0.030
48	Copper Hill Dr e/o Copperstone Dr	Major Highway	6	31,291	0.579	A	31,550	0.584	A	0.005
49	The Old Rd n/o I-5 SB Ramps	Secondary Highway	4	14,198	0.394	A	14,230	0.395	A	0.001
50	Hasley Canyon Rd w/o Commerce Center Dr	Secondary Highway	4	7,334	0.204	A	7,380	0.205	A	0.001

SOURCE: Fehr & Peers. 2015. Draft Single-Family Residential Hauled Water Initiative: Traffic Analysis. (Appendix M).

TABLE 3.12.4-2
ROADWAY SEGMENT LOS—FUTURE AND FUTURE WITH PROJECT TRAFFIC CONDITIONS

				Cumulative Year			Cumulative Year plus Project			
Study ID	Location	Functional Class	Lanes	Forecast	V/C	LOS	Forecast	V/C	LOS	V/C Change
1	W Avenue A e/o 60th St W	Major Highway	2	10,300	0.572	A	10,350	0.575	A	0.003
2	E Avenue E w/o 30th St E	Expressway	4	7,900	0.180	A	7,980	0.181	A	0.001
3	E Avenue E w/o 90th St E	Expressway	4	7,200	0.164	A	7,260	0.165	A	0.001
4	W Avenue G e/o 110th St W	Major Highway	2	5,700	0.317	A	5,780	0.321	A	0.004
5	E Avenue G w/o 30th St E	Major Highway	2	4,900	0.272	A	5,070	0.282	A	0.010
6	E Avenue G w/o 90th St E	Major Highway	2	200	0.011	A	350	0.019	A	0.008
7	W Avenue I e/o 110th St W	Major Highway	2	3,700	0.206	A	4,480	0.249	A	0.043
8	E Avenue J w/o 90th St E	Major Highway	2	3,100	0.172	A	3,160	0.176	A	0.004
9	W Avenue K e/o 110th St W	Major Highway	2	6,900	0.383	A	6,990	0.388	A	0.005
10	E Avenue O w/o 170th St E	Major Highway	2	8,700	0.483	A	8,940	0.497	A	0.014
11	E Avenue O w/o 240th St E	Secondary Highway	2	1,600	0.089	A	1,830	0.102	A	0.013
12	E Palmdale Blvd w/o 90th St E	Major Highway	2	7,700	0.428	A	8,180	0.454	A	0.026
13	E Palmdale Blvd w/o Longview Rd	Major Highway	2	6,100	0.339	A	6,480	0.360	A	0.021
14	E Palmdale Blvd w/o 170th St E	Major Highway	2	7,100	0.394	A	7,180	0.399	A	0.005
15	E Avenue T w/o 87th St E	Major Highway	2	13,100	0.728	C	13,490	0.749	C	0.021
16	E Avenue T w/o 116th St E	Major Highway	2	6,200	0.344	A	6,470	0.359	A	0.015
17	E Avenue T w/o 165th St E	Local / Collector	2	3,800	0.253	A	3,910	0.261	A	0.008
18	SR-138 w/o 87th St E	Expressway	2	28,500	1.295	F(1)	28,750	1.307	F(1)	0.012
19	SR-138 w/o 106th St E	Expressway	4	23,500	0.534	A	23,600	0.536	A	0.002
20	SR-138 w/o 165th St E	Expressway	4	12,200	0.277	A	12,390	0.282	A	0.005
21	SR-138 w/o 263rd St E	Expressway	2	13,200	0.600	A	13,570	0.617	B	0.017
22	SR-18 w/o 263rd St E	Major Highway	2	3,600	0.200	A	3,730	0.207	A	0.007
23	Fort Tejon Rd w/o 106th St E	Secondary Highway	2	4,800	0.267	A	5,260	0.292	A	0.025
24	110th St W s/o W Avenue G	Major Highway	2	4,000	0.222	A	4,110	0.228	A	0.006
25	110th St W s/o E Avenue K	Major Highway	2	8,300	0.461	A	8,430	0.468	A	0.007
26	60th St W s/o W Avenue A	Major Highway	2	7,900	0.439	A	7,960	0.442	A	0.003
27	60th St W s/o SR-138	Major Highway	2	12,600	0.700	B	12,680	0.704	C	0.004
28	Sierra Hwy s/o W Avenue D	Expressway	4	16,200	0.368	A	16,330	0.371	A	0.003
29	Sierra Hwy s/o W Avenue G	Major Highway	2	12,400	0.689	B	12,490	0.694	B	0.005
30	90th St E s/o E Avenue J	Expressway	4	10,200	0.232	A	10,350	0.235	A	0.003
31	90th St E s/o E Palmdale Blvd	Major Highway	4	19,500	0.542	A	20,000	0.556	A	0.014
32	87th St E s/o SR-138	Secondary Highway	2	2,500	0.139	A	2,560	0.142	A	0.003
33	106th St E s/o SR-138	Secondary Highway	2	7,000	0.389	A	7,070	0.393	A	0.004
34	106th St E s/o Fort Tejon Rd	Limited Secondary Highway	2	15,100	0.839	D	15,340	0.852	D	0.013
35	140th St E s/o E Avenue J	Major Highway	2	2,400	0.133	A	2,520	0.140	A	0.007
36	Longview Rd s/o SR-138	Secondary Highway	2	17,200	0.956	E	17,410	0.967	E	0.011
37	170th St E s/o E Palmdale Blvd	Major Highway	2	11,300	0.628	B	11,540	0.641	B	0.013
38	165th St E s/o SR-138	Secondary Highway	2	5,100	0.283	A	5,300	0.294	A	0.011
39	Sierra Hwy s/o Angeles Forest Hwy	Major Highway	2	16,200	0.900	D	16,270	0.904	E	0.004
40	Sierra Hwy w/o Ward Rd	Major Highway	2	7,300	0.406	A	7,450	0.414	A	0.008
41	Sierra Hwy n/o Davenport Rd	Major Highway	2	7,100	0.394	A	7,310	0.406	A	0.012
42	Sierra Hwy n/o Vasquez Canyon Rd	Major Highway	2	12,900	0.717	C	13,410	0.745	C	0.028
43	Angeles Forest Highway s/o E Carson Mesa Rd	Major Highway	2	7,500	0.417	A	7,770	0.432	A	0.015
44	Crown Valley Rd n/o Sierra Hwy	Limited Secondary Highway	2	8,300	0.461	A	9,090	0.505	A	0.044

TABLE 3.12.4-2
ROADWAY SEGMENT LOS—FUTURE AND FUTURE WITH PROJECT TRAFFIC CONDITIONS (2015), *Continued*

				Cumulative Year			Cumulative Year plus Project			
Study ID	Location	Functional Class	Lanes	Forecast	V/C	LOS	Forecast	V/C	LOS	V/C Change
45	Aqua Dulce Canyon Rd n/o SR-14 WB Ramps	Limited Secondary Highway	2	3,000	0.167	A	4,200	0.233	A	0.066
46	Davenport Rd e/o Sierra Hwy	Limited Secondary Highway	2	3,700	0.206	A	3,880	0.216	A	0.010
47	Shadow Pines Blvd n/o Soledad Canyon Rd	Secondary Highway	2	13,600	0.756	C	14,100	0.783	C	0.027
48	Copper Hill Dr e/o Copperstone Dr	Major Highway	6	33,700	0.624	B	33,940	0.629	B	0.005
49	The Old Rd n/o I-5 SB Ramps	Secondary Highway	4	14,200	0.394	A	14,230	0.395	A	0.001
50	Hasley Canyon Rd w/o Commerce Center Dr	Secondary Highway	4	13,800	0.383	A	13,850	0.385	A	0.002

SOURCE: Fehr & Peers. 2015. Draft Single-Family Residential Hauled Water Initiative: Traffic Analysis. (Appendix M).

IMPACT TRA-2: Hazardous Roadway Design

Implementation of the proposed initiative would result in less than significant impacts from hazards due to a design feature. Although the proposed initiative does not involve direct construction and occupancy of single-family residences, the ability to obtain a building permit using hauled water as the primary source of potable would be expected to result in a "reasonable worst case" of up to 184 single-family residences per year, or a total of 3,680 over the 20-year planning horizon. However, development of single-family homes distributed throughout the 42,867-square-mile proposed initiative study area would not be expected to result in the alteration of existing roadways or construction of new roadways in a manner that would result in hazardous roadway design. The majority of the parcels in the proposed initiative study are accessible via a network of well-defined and preexisting paved or dirt roads, although a small portion of the roads up to 170 miles would remain unpaved and would require additional maintenance. Single-family homes, constructed as a result of the proposed initiative, would be expected to rely primarily on the existing roadway network. Therefore, the impacts related to an increase in hazards due to a design feature would be less than significant.

IMPACT TRA-3: Emergency Access

Although the proposed initiative would result in increased trips by passenger vehicles and trucks used to haul water, the proposed initiative would not alter any existing emergency access routes or change existing patterns of emergency access; therefore, impact would be less than significant. However, the proposed initiative may result in increase of travel on roadways that are unpaved, that are not as easily accessible, and that are off highways and roadway systems designated for access. The proposed initiative may require the identification of multiple alternate ingress/egress access points for the circulation of traffic and emergency response vehicles. The proposed initiative involves the transport of potable water to designated vacant parcels in unincorporated areas of Los Angeles County that have been zoned for single-family residential use. Development of the parcels for residential use would include the construction of private roadways that could accommodate water delivery trucks, to allow access of the individual residences to the public roadway infrastructure. Pursuant to the Mobility Element of the General Plan 2035,[25] Los Angeles County will review land development projects to ensure appropriate roadway transitions and multimodal connectivity that would allow the most efficient movement of traffic during an emergency or evacuation.

Although there would be additional traffic generated by implementation of the proposed initiative, the proposed initiative would not result in traffic levels that significantly surpass the amount of traffic entitled in such a manner that it would result in inadequate emergency access. It is anticipated that existing roadways would be able to provide adequate emergency access, and no additional access roads would need to be constructed to assist in the provision of adequate emergency access. Therefore, the proposed initiative would result in less than significant impacts with regard to inadequate emergency access.

[25] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 7: Mobility Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch7.pdf

Vehicle Miles Generated and Vehicle Miles Traveled

The proposed initiative would result in less than significant impact from vehicle miles generated and traveled. The SCAG RTP model was used to calculate the trip generation and trip distribution for the vehicle trips associated with implementation of the proposed initiative. The trip generation and trip distribution for the trucks hauling water to the new developments were calculated separately.

Through research on residences that do not have a potable water supply, it was determined that the average home requires 5,000 gallons of potable water per week plus an extra 5,000 gallons for fire protection that must be refilled once each year. A single water delivery truck carries approximately 5,000 gallons of water, so each home would have 53 water deliveries per year. The potable water supply for these developments would be provided through an agreement with a water hauling company and the nearest water district so that the water could be drawn from the closest hydrant. The average distance between the developable parcels and the nearest hydrant is just under a mile and a single truck can fill up and deliver 5,000 gallons of water in less than two hours. The project team assumed that water deliveries would be made seven days a week and that a single truck would deliver to four homes in a single day. The forecast growth in households would require a total of 134 water delivery trucks providing service each day.

There are a limited number of water haulers currently operating in Santa Clarita Valley and Antelope Valley. Under the potential growth scenario, it is likely that more water delivery businesses would operate in the project area. For the trip distribution analysis, the project team assumed that a single distribution center would serve each subarea and that it would be located in industrial areas near the edges of the water districts to minimize haul distances. While this simplifies the analysis, it does not produce substantially different results from what they would be if 50 or 60 water delivery services were assumed instead. The average distance between the water delivery trucks distribution center and the nearest hydrant is 12.4 miles. Therefore, each day a truck would drive 12.4 miles to hydrant, 7 miles making eight trips between the hydrant and four homes to deliver water, and 12.4 miles back to its distribution center for a total of 31.8 miles.

Once the trip distribution for the truck trips was determined, these trips were manually added to the North County Subarea Model to be assigned along with all other vehicle trips. Table 3.12.4-3, *Existing (2015) Average Vehicle Trips and Vehicle Miles Traveled*, and Table 3.12.4-4, *Cumulative Year (2035) Average Vehicle Trips and Vehicle Miles Traveled* show summaries of the average daily vehicle trips generated and daily vehicle miles traveled under both existing and cumulative year conditions for the entire SCAG model region covering six counties.

TABLE 3.12.4-3
EXISTING (2015) AVERAGE VEHICLE TRIPS AND VEHICLE MILES TRAVELED

Scenario	Daily Vehicle Miles Traveled (VMT)	Daily Vehicle Trips (VT)
Existing	428,701,000	41,762,200
New 3,680 Single-Family Homes	588,000	28,400
Hauled Water Trucks	4,300	134
Existing Plus Project	429,293,300	41,790,734

SOURCE: Fehr & Peers. 2015. Draft Single-Family Residential Hauled Water Initiative: Traffic Analysis. (Appendix M).

TABLE 3.12.4-4
CUMULATIVE YEAR (2035) AVERAGE VEHICLE TRIPS AND VEHICLE MILES TRAVELED

Scenario	Daily Vehicle Miles Traveled (VMT)	Daily Vehicle Trips (VT)
Cumulative Year	504,198,000	47,707,200
New 3,680 Single-Family Homes	503,000	26,000
Hauled Water Trucks	4,300	134
Cumulative Year Plus Project	504,705,300	47,733,334

SOURCE: Fehr & Peers. 2015. Draft Single-Family Residential Hauled Water Initiative: Traffic Analysis. (Appendix M).

Average vehicle trip lengths can be estimated by dividing total vehicle miles travelled (VMT) by total number of vehicle trips (VT). For both the Existing (2015) and Future (2035) scenarios, the average vehicle trip length in the SCAG six-county region is approximately 10 miles. For the proposed project, the average vehicle trip length would be over 20 miles in the existing scenario. In the Future scenario, the proposed project generates slightly less vehicle trips and less vehicle miles traveled than the project in the existing scenario due to increases in land use density and more bus routes in the North County area. Although the trip generation and VMT are slightly reduced for the project trips under the Future scenario, the average trip lengths are still much higher than the SCAG region-wide average. While the estimated average trip lengths for water-hauling trucks are longer than those for the personal vehicle trips, the truck trips represent less than one percent of the project-generated traffic. The primary reason for the increase in trip lengths above the regional average is the remoteness of the developable parcels and lack of land use diversity near these sites; the combined effect of which is that new residents will travel above-average distances for employment, commercial, and recreational purposes.

IMPACT TRA-4: Air Traffic

The proposed initiative would not create direct, indirect, of cumulative impacts to air traffic patterns at the two public or eight private airports, located within two miles of the 42,867 parcels within the proposed initiative study area that would be potentially eligible for development of single-family residences using hauled water as the primary source of potable water (Table 3.12.2-4).[26] None of the airports in the proposed initiative study support general aviation commercial flights. New residents would be expected to use existing general aviation facilities for commercial flights in Burbank, Ontario, or Los Angeles. Section 22.20.110 of the Los Angeles County Code limits the maximum height of single-family residences to 35 feet above existing or excavated grade, except in zones designated as C-3, C-R, M-1, and MPD, and would thus not be subject to review by the FAA for potential effects on air traffic patterns, as it is well below the established threshold of 200 feet.

IMPACT TRA-5: Alternative Transportation

The proposed initiative would not result in impacts to transportation and traffic in relation to conflict with adopted policies, plans, or programs regarding alternative modes of transportation, or compromising the safety of such facilities. Although the proposed initiative does not involve direct construction and occupancy of single-family residences, the ability to obtain a building permit using hauled water as the primary source of potable water would be expected to result in a "reasonable

[26] County of Los Angeles. n.d. Location Management System. Available online at: http://egis3.lacounty.gov/lms/

worst case" of up to 184 single-family residences per year, or a total of 3,680 over the 20-year planning horizon. While the proposed initiative has the potential to result in up to 184 single-family residences per year in the proposed initiative study area, the majority of the homes would be constructed in rural, undeveloped areas of unincorporated Los Angeles County, and would not be anticipated to impact public transit, bicycle paths, or pedestrian facilities that are characteristic of the highly developed, urban areas. Therefore, the proposed initiative is not anticipated to impact traffic in relation to public transit, bicycle paths, or pedestrian facilities.

3.12.5 CUMULATIVE IMPACTS

The proposed initiative was analyzed with regards to the standards, plans, and policies related to assessment of transportation and traffic impacts for cumulative projects in the region.The analysis of potential cumulative impacts to the regional transportation system was conducted for all related projects that are anticipated to occur in the project vicinity for Existing and Cumulative (2035) Years. In accordance with the procedures outlined in *2010 Congestion Management Program for Los Angeles County*, regional traffic impact analyses are conducted for regional facilities throughout Los Angeles County. LOS is estimated with calculation of the demand to capacity ratio used to measure impacts. Seven CMP arterial locations and five freeway mainline locations in the study area are analyzed.

Table 3.12.4-5 through Table 3.12.4-8 present existing and cumulative impacts for all the study areas analyzed. The incremental impact of the proposed project to transportation and traffic, when added to the related past, present, or reasonably foreseeable, probable future projects listed in Section 2, Project Description, would not be expected to be significant due to the relatively minor project-related increases in traffic volumes.

Based on the growth forecasts provided by Fehr & Peers for the entire Los Angeles County region from 2015–2035, the areas nearest to the Cities of Lancaster, Palmdale, and Santa Clarita were assumed to be the most likely for development based on the Antelope Valley Area Plan. The following areas were determined to be unsuitable for development:

- Parcels in the Antelope Valley Northeast Subarea and the East San Gabriel Mountains Subarea because of their relative remoteness, inaccessibility, and limited construction activity.
- Parcels in the agricultural land far to the west of the City of Lancaster due to their remoteness and suitability for renewable energy production.
- Parcels in the area planned for development as part of the Tejon Ranch's Centennial project, with the expectation that that area would be part of a water district in the future, and would be served by other municipal services.
- Parcels on unincorporated islands within the Cities of Lancaster and Palmdale due to their remoteness and inaccessibility.

TABLE 3.12.4-5
CMP SEGMENT LOS – EXISTING AND EXISTING WITH PROJECT (2015)

CMP ID	Location	Functional Class	Lanes	Existing			Existing plus Project			
				Count	V/C	LOS	Forecast	V/C	LOS	V/C Change
A.M. Peak Hour Segment Results										
90	SR-138 e/o 60th St W	Major Highway	2	276	0.173	A	330	0.206	A	0.033
93	Henry Mayo Dr w/o Commerce Center Dr	Expressway	4	2,700	0.844	D	2,710	0.847	D	0.003
96	SR-138 e/o 300th St W	Major Highway	2	243	0.152	A	270	0.169	A	0.017
98	SR-138 w/o 87th St E	Major Highway	2	963	0.602	B	990	0.619	B	0.017
99	SR-138 w/o 263rd St E	Major Highway	2	529	0.331	A	540	0.338	A	0.007
102	Sierra Hwy w/o Ward Rd	Major Highway	2	752	0.470	A	770	0.481	A	0.011
103	Sierra Hwy n/o Vasquez Canyon Rd	Major Highway	2	993	0.621	B	1,060	0.663	B	0.042
P.M. Peak Hour Segment Results										
90	SR-138 e/o 60th St W	Major Highway	2	396	0.248	A	450	0.281	A	0.033
93	Henry Mayo Dr w/o Commerce Center Dr	Expressway	4	3,100	0.969	E	3,110	0.972	E	0.003
96	SR-138 e/o 300th St W	Major Highway	2	376	0.235	A	410	0.256	A	0.021
98	SR-138 w/o 87th St E	Major Highway	2	1,434	0.896	D	1,480	0.925	E	0.029
99	SR-138 w/o 263rd St E	Major Highway	2	773	0.483	A	810	0.506	A	0.023
102	Sierra Hwy w/o Ward Rd	Major Highway	2	744	0.465	A	760	0.475	A	0.010
103	Sierra Hwy n/o Vasquez Canyon Rd	Major Highway	2	895	0.559	A	950	0.594	A	0.035

SOURCE: Fehr & Peers. 2015. Draft Single-Family Residential Hauled Water Initiative: Traffic Analysis. (Appendix M).

TABLE 3.12.4-6
CMP FREEWAY MAINLINE LOS – EXISTING AND EXISTING WITH PROJECT (2015)

CMP ID	Location	Functional Class	Lanes	Existing			Existing plus Project			
				Count	D/C	LOS	Forecast	D/C	LOS	D/C Change
A.M. Peak Hour Freeway Mainline Results										
1008	Route 5 n/o Route 14 NB	Freeway	5	7,900	0.790	D	7,910	0.791	D	0.001
1008	Route 5 n/o Route 14 SB	Freeway	5	9,700	0.970	E	9,750	0.975	E	0.005
1009	Route 5 n/o Route 126 West NB	Freeway	4	4,000	0.500	B	4,010	0.501	B	0.001
1009	Route 5 n/o Route 126 West SB	Freeway	4	4,600	0.575	C	4,650	0.581	C	0.006
1022	Route 14 n/o Route 5 NB	Freeway	6	3,000	0.250	A	3,010	0.251	A	0.001
1022	Route 14 n/o Route 5 SB	Freeway	6	8,100	0.675	C	8,220	0.685	C	0.010
1023	Route 14 s/o Angeles Forest Highway NB	Freeway	3	2,100	0.350	A	2,200	0.367	B	0.017
1023	Route 14 s/o Angeles Forest Highway SB	Freeway	3	4,900	0.817	D	4,980	0.830	D	0.013
1024	Route 14 s/o Route 48 (Avenue D) NB	Freeway	2	1,200	0.300	A	1,210	0.303	A	0.003
1024	Route 14 s/o Route 48 (Avenue D) SB	Freeway	2	1,400	0.350	A	1,460	0.365	B	0.015
P.M. Peak Hour Freeway Mainline Results										
1008	Route 5 n/o Route 14 NB	Freeway	5	9,700	0.970	E	9,770	0.977	E	0.007
1008	Route 5 n/o Route 14 SB	Freeway	5	7,700	0.770	C	7,710	0.771	D	0.001
1009	Route 5 n/o Route 126 West NB	Freeway	4	4,900	0.613	C	4,950	0.619	C	0.006
1009	Route 5 n/o Route 126 West SB	Freeway	4	3,600	0.450	B	3,640	0.455	B	0.005
1022	Route 14 n/o Route 5 NB	Freeway	6	7,800	0.650	C	7,960	0.663	C	0.013
1022	Route 14 n/o Route 5 SB	Freeway	6	4,200	0.350	A	4,250	0.354	B	0.004
1023	Route 14 s/o Angeles Forest Highway NB	Freeway	3	5,100	0.850	D	5,210	0.868	D	0.018
1023	Route 14 s/o Angeles Forest Highway SB	Freeway	3	2,500	0.417	B	2,590	0.432	B	0.015
1024	Route 14 s/o Route 48 (Avenue D) NB	Freeway	2	1,700	0.425	B	1,750	0.438	B	0.013
1024	Route 14 s/o Route 48 (Avenue D) SB	Freeway	2	1,700	0.425	B	1,720	0.430	B	0.005

SOURCE: Fehr & Peers. 2015. Draft Single-Family Residential Hauled Water Initiative: Traffic Analysis. (Appendix M).

TABLE 3.12.4-7
CMP SEGMENT LOS – CUMULATIVE YEAR AND CUMULATIVE YEAR WITH PROJECT (2035)

CMP ID	Location	Functional Class	Lanes	Cumulative Year			Cumulative Year plus Project			
				Count	V/C	LOS	Forecast	V/C	LOS	V/C Change
A.M. Peak Hour Segment Results										
90	SR-138 e/o 60th St W	Freeway	4	4,200	0.525	A	4,250	0.531	A	0.006
93	Henry Mayo Dr w/o Commerce Center Dr	Expressway	4	3,000	0.938	E	3,010	0.941	E	0.003
96	SR-138 e/o 300th St W	Freeway	4	4,000	0.500	A	4,030	0.504	A	0.004
98	SR-138 w/o 87th St E	Expressway	4	2,000	0.625	B	2,030	0.634	B	0.009
99	SR-138 w/o 263rd St E	Expressway	2	900	0.563	A	920	0.575	A	0.012
102	Sierra Hwy w/o Ward Rd	Major Highway	2	800	0.500	A	820	0.513	A	0.013
103	Sierra Hwy n/o Vasquez Canyon Rd	Major Highway	2	1,300	0.813	D	1,360	0.850	D	0.037
P.M. Peak Hour Segment Results										
90	SR-138 e/o 60th St W	Freeway	4	4,500	0.563	A	4,560	0.570	A	0.007
93	Henry Mayo Dr w/o Commerce Center Dr	Expressway	4	3,300	1.031	F(0)	3,310	1.034	F(0)	0.003
96	SR-138 e/o 300th St W	Freeway	4	4,300	0.538	A	4,330	0.541	A	0.003
98	SR-138 w/o 87th St E	Expressway	4	2,500	0.781	C	2,550	0.797	C	0.016
99	SR-138 w/o 263rd St E	Expressway	2	1,000	0.625	B	1,040	0.650	B	0.025
102	Sierra Hwy w/o Ward Rd	Major Highway	2	800	0.500	A	820	0.513	A	0.013
103	Sierra Hwy n/o Vasquez Canyon Rd	Major Highway	2	1,200	0.750	C	1,260	0.788	C	0.038

SOURCE: Fehr & Peers. 2015. Draft Single-Family Residential Hauled Water Initiative: Traffic Analysis. (Appendix M).

TABLE 3.12.4-8
CMP FREEWAY MAINLINE LOS – CUMULATIVE YEAR AND CUMULATIVE YEAR WITH PROJECT (2035)

CMP ID	Location	Functional Class	Lanes	Cumulative Year			Cumulative Year plus Project			
				Count	D/C	LOS	Forecast	D/C	LOS	D/C Change
A.M. Peak Hour Freeway Mainline Results										
1008	Route 5 n/o Route 14 NB	Freeway	6	9,200	0.767	C	9,210	0.768	C	0.001
1008	Route 5 n/o Route 14 SB	Freeway	6	14,100	1.175	F(0)	14,150	1.179	F(0)	0.004
1009	Route 5 n/o Route 126 West NB	Freeway	5	5,100	0.510	B	5,110	0.511	B	0.001
1009	Route 5 n/o Route 126 West SB	Freeway	5	7,400	0.740	C	7,460	0.746	C	0.006
1022	Route 14 n/o Route 5 NB	Freeway	6	3,400	0.283	A	3,410	0.284	A	0.001
1022	Route 14 n/o Route 5 SB	Freeway	6	8,700	0.725	C	8,810	0.734	C	0.009
1023	Route 14 s/o Angeles Forest Highway NB	Freeway	3	3,600	0.600	C	3,690	0.615	C	0.015
1023	Route 14 s/o Angeles Forest Highway SB	Freeway	3	5,800	0.967	E	5,880	0.980	E	0.013
1024	Route 14 s/o Route 48 (Avenue D) NB	Freeway	2	3,500	0.875	D	3,510	0.878	D	0.003
1024	Route 14 s/o Route 48 (Avenue D) SB	Freeway	2	3,300	0.825	D	3,360	0.840	D	0.015
P.M. Peak Hour Freeway Mainline Results										
1008	Route 5 n/o Route 14 NB	Freeway	6	13,900	1.158	F(0)	13,970	1.164	F(0)	0.006
1008	Route 5 n/o Route 14 SB	Freeway	6	9,700	0.808	D	9,710	0.809	D	0.001
1009	Route 5 n/o Route 126 West NB	Freeway	5	8,200	0.820	D	8,250	0.825	D	0.005
1009	Route 5 n/o Route 126 West SB	Freeway	5	4,900	0.490	B	4,940	0.494	B	0.004
1022	Route 14 n/o Route 5 NB	Freeway	6	8,300	0.692	C	8,450	0.704	C	0.012
1022	Route 14 n/o Route 5 SB	Freeway	6	4,700	0.392	B	4,750	0.396	B	0.004
1023	Route 14 s/o Angeles Forest Highway NB	Freeway	3	5,700	0.950	E	5,810	0.968	E	0.018
1023	Route 14 s/o Angeles Forest Highway SB	Freeway	3	4,300	0.717	C	4,390	0.732	C	0.015
1024	Route 14 s/o Route 48 (Avenue D) NB	Freeway	2	4,000	1.000	E	4,050	1.013	F(0)	0.013
1024	Route 14 s/o Route 48 (Avenue D) SB	Freeway	2	3,700	0.925	D	3,730	0.933	E	0.008

SOURCE: Fehr & Peers. 2015. Draft Single-Family Residential Hauled Water Initiative: Traffic Analysis. (Appendix M).

IMPACT TRA-1: Roadways and Circulation Systems

The proposed initiative would result in less than significant impacts on roadways and circulation systems when taken into consideration with other past, recent, and reasonably foreseeable projects, particularly the Centennial and Northlake planned communities. The proposed initiative would contribute incremental increases with the Centennial Project on traffic and transportation patterns. The proposed initiative would involve the development of 3,680 parcels within the proposed initiative study area, resulting in more vehicle trips and more vehicle miles travelled in 2035 regionally than under existing conditions. The Centennial project is intended to encourage people to reside closer to work and commute a lesser distance, and would have regional shopping and employment needs met locally. It is anticipated that increases in land use density, provisioning of services, retail, and employment closer to residential neighborhoods, and more travel options in the North County area, would offset impact from increases in traffic from the Centennial project alone. The truck trips used for hauling water represent less than one percent of total regional traffic. In the Centennial project, the project's contribution to overall increases in regional traffic volumes is minor and less than significant. Increases in localized trip would increase local congestion but overall VMT across the region would be expected to result in per capita reductions as a result of the Centennial project; therefore, overall impact is less than significant.

Within each of the seven subareas comprising the project area, the parcels to be developed were randomly distributed based on geographic distribution of available parcels. The project, in addition to related projects in the region, is likely to contribute up to 40 percent of the growth in the Acton and Castaic/Santa Clarita/Agua Dolce subareas. The Lancaster Northeast Subarea however, will only include three percent of the growth even though 14 percent of the parcels are in this subarea.

The North County Subarea Model contains the 2035 planning network identified in the 2012 SCAG RTP. The RTP's planning network includes all financially constrained projects within the SCAG region that are expected to be constructed by 2035. The following major projects are contained in the subarea model under future conditions:

- High Speed Rail – The 2035 Planning network reflects Phase I of the High Speed Rail project, with extents from the City of Anaheim into Kern County. In the model area, the High Speed Rail travels north-south between SR-14 and I-15. The High Speed Rail also travels south on SR-14 through the City of Santa Clarita with a station in the City of Palmdale.

- High Desert Corridor – New expressway route with limited access beginning at SR-14 and extending east into San Bernardino County. The High Desert Corridor would be a divided highway with three to four travel lanes in each direction.

- SR-138 between I-5 and SR-14 – Planned widening from a two-lane full-access expressway route with at-grade crossings to a four- to six-lane limited-access divided highway/expressway route.

- Sierra Highway between SR-138 and Avenue E – Planned widening from a two-lane full-access arterial to a four-lane limited access expressway route (SR-138 extension/High Desert Corridor).

- Avenue E between Sierra Highway and 90th Street – Planned widening from a two-lane full-access collector to a four-lane limited access expressway route (SR-138 extension).

- 90th Street between Avenue E and Avenue L – Planned widening from a two-lane full-access collector to a four-lane limited access expressway route (SR-138 extension).

- I-5 between Ridge Route Road and SR-14 – Construction of an HOV lane in each direction.

- SR-14 between Avenue M and I-5 – Addition of an HOV lane in each direction.

Within the subareas comprising the project area, the High Desert Corridor Project would involve construction of the 63-mile High Desert Corridor as a new transportation facility in the High Desert region of Los Angeles and San Bernardino counties to provide route continuity and relieve traffic congestion between State Route 14 in Los Angeles County and State Route 18 and Interstate 15 in San Bernardino County. This project would result in increased access to extension of roads through the Lake Los Angeles/Llano/Valyermo/Littlerock subarea to the City of Palmdale, and would also be expected to indirectly increase housing development within the rural communities of Pearblossom, Lake Los Angeles, Littlerock, Valyermo, and Llano as a result of increased transportation access within the subarea. The proposed initiative would not be expected to contribute incrementally with the High Desert Corridor Project to significantly impact transportation and traffic patterns since the development of 3,680 parcels within the proposed initiative study area within the 2015 to 2035 20-year planning horizon would only result in minor increases in regional traffic based on the growth forecast for CMP, in combination with the High Desert Corridor project.

The Centennial project would be expected to result in the development of 19,333 dwelling units (a maximum of 23,000 dwelling units) within the Antelope Valley Area Plan area, which would likely result in substantial new homes and increases in traffic generation activities within the North County Subareas. However, these trips are likely to be more localized as the specific plan to implement the Centennial Project focuses on more jobs and a business district that would allow people to commute shorter distances for work. This higher land density would increase local congestion but decrease overall VMT across the region.

IMPACT TRA-2: Hazardous Design Features

The proposed initiative, when taken into consideration with the related projects, would result in a less than significant impact related to an increase in hazards due to design features, or conflicts between incompatible uses. The land use strategies of the related projects are generally focused on growth in High Quality Transit Areas (HQTAs) and Transit Priority Areas. These land use strategies are generally located away from high-speed facilities where potential hazards due to design features tend to be high. Moreover, development in HQTAs would increase the number of residents in proximity to transit and in areas with good opportunities for walking and biking, making it imperative to design facilities with bike racks, improved sidewalks, bikeways and greenways, and transit stations to promote pedestrian and other forms of active transportation. Many other projects such as Centennial would facilitate development in a phased manner with active transportation facilities to promote recreational and pedestrian access, thus reducing impacts with respect to hazards.

IMPACT TRA-3: Emergency Access

The proposed initiative, when taken into consideration with the related projects, would result in a less than significant impact to emergency access. The amount of traffic that is generated by other projects outside the initiative area is not anticipated to surpass the amount of traffic entitled by the initiative in such a manner that it would result in inadequate emergency access on existing roadways, and no additional access roads are needed. Projects outside the area would be developed consistent with area and general plan circulation and safety elements, including planning for emergency access, which would minimize the cumulative impacts of these projects to less than significant.

IMPACT TRA-4: Air Traffic

The proposed initiative would result in no contribution to cumulative impacts with regard to air traffic patterns. The proposed initiative has no impact on air traffic patterns; therefore, it has no contribution to cumulative impacts associated with the related projects. Therefore, when considered with related projects, the proposed initiative would result in no cumulative impacts with respect to air traffic patterns.

IMPACT TRA-5: Alternative Transportation

The proposed initiative would result no contribution to cumulative impacts related to potential conflicts with adopted policies and plans, regarding public transit, bicycle, or pedestrian facilities. The proposed initiative would not conflict with adopted policies and plans, regarding public transit, bicycle, or pedestrian facilities. Therefore, the proposed initiative would not contribute to cumulative impacts.

3.12.6 MITIGATION MEASURES

IMPACT TRA-1: Roadways and Circulation Systems

The consideration of mitigation measures is not required.

IMPACT TRA-2: Hazardous Design Features

The consideration of mitigation measures is not required.

IMPACT TRA-3: Emergency Access

The consideration of mitigation measures is not required.

IMPACT TRA-4: Air Traffic

The consideration of mitigation measures is not required.

IMPACT TRA-5: Alternative Transportation

The consideration of mitigation measures is not required.

3.12.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

IMPACT TRA-1: Roadways and Circulation Systems

The consideration of mitigation measures is not required, and impacts would be **less than significant**.

IMPACT TRA-2: Hazardous Design Features

The consideration of mitigation measures is not required, and impacts would be **less than significant**.

IMPACT TRA-3: Emergency Access

The consideration of mitigation measures is not required, and impacts would be **less than significant**.

IMPACT TRA-4: Air Traffic

The consideration of mitigation measures is not required, because the proposed initiative would have **no impact**.

IMPACT TRA-5: Alternative Transportation

The consideration of mitigation measures is not required, because the proposed initiative would have **no impact**.

SECTION 3.13
UTILITIES AND SERVICE SYSTEMS

As a result of the Initial Study,[1] the County of Los Angeles (County) determined that the Single-Family Residential Hauled Water Initiative for New Development (proposed initiative) would have the potential to result in significant impacts to utilities and service systems. Therefore, this issue has been carried forward for detailed analysis in this environmental impact report (EIR). This analysis was undertaken to identify opportunities to avoid, reduce, or otherwise mitigate potential significant impacts to hydrology and water quality and to identify potential alternatives. The analysis of utilities and service systems consists of a summary of the regulatory framework that guides the decision-making process, a description of the existing conditions within the proposed initiative study area, thresholds for determining if the proposed initiative would result in significant impacts, anticipated impacts (direct, indirect, and cumulative), mitigation measures, and level of significance after mitigation.

The proposed initiative would apply to the entirety of Los Angeles County. However, the area that would be affected by the proposed initiative, as determined by the County's GIS model, consists of 42,867 parcels in the unincorporated territory of Los Angeles County (County) (Figure 2.1-1, *Proposed Initiative Study Area*).[2] The combined proposed initiative study area consists of approximately 340,461 acres or approximately 532 square miles. The evaluation of utilities and service systems is based on the consideration of 42,867 parcels, zoned for single-family residential development in the unincorporated area of Los Angeles County, that, since January 2003, have not been eligible for the issuance of building permits where the property owner has not been able to demonstrate a reliable source of potable water from a public or private water purveyor or groundwater. The proposed initiative would not authorize construction of single-family residential development per se. It simply provides for the use of hauled water as an allowable source of potable water during the building permit application process where the property is not located within a public or private water district and where potable water for domestic and fire protection requirements cannot be provided by an on-site groundwater well. A review of building permit application data from 1997 through 2003, a period during which some building permits were authorized using hauled water as a source of potable water, a total of approximately 150 building permits were issued per year in the proposed initiative study area, for single- family residential development not associated with subdivision development.[3] The analysis of the proposed initiative is based on the issuance of up to 184 permits per year in the proposed initiative study area (please see Section 2.7 of this EIR for additional details).

Utilities and service systems were evaluated with regard to the federal, state, and local statutes and regulations, the Public Services and Facilities Element of the Los Angeles County General Plan 2035,[4] the 2015 Antelope Valley Area Plan – Town & Country,[5] the 2012 Santa Clarita Valley Area

[1] County of Los Angeles. September 2014. County of Los Angeles Single-Family Residential Hauled Water Initiative for New Development Initial Study. Prepared by: Sapphos Environmental, Inc., Pasadena, CA.

[2] Assessor's Parcels Numbers for the referenced parcels are on file at the County of Los Angeles Department of Regional Planning.

[3] County Building and Safety Division building permit records have been digitally tracked since 1997; records were not readily available from before 1997.

[4] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 13: Public Services and Facilities Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch13.pdf

Plan,[6] the State Water Resources Control Board Onsite Wastewater Treatment System (OWTS) Policy,[7] and the Hauled Water Ordinance Water Supply, Hydrology, and Water Quality Analysis.[8]

3.13.1 REGULATORY FRAMEWORK

Federal

Clean Water Act, Section 401

The Federal Clean Water Act of 1972 (CWA) established the basic structure for regulating discharges of pollutants into the waters of the U.S. and regulating quality standards for surface waters.[9] Under the CWA, the U.S. Environmental Protection Agency (EPA) has implemented pollution control programs such as setting wastewater standards for industries and surface waters. Section 401 of the CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. The U.S. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Point sources are discrete conveyances, such as pipes or manmade ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters.

The provisions of Section 401 of the CWA are enforced through the State Water Resources Control Board and local Regional Water Quality Control Boards (RWQCBs); the parcels that would be eligible for the use of hauled water are located within the boundaries of two local water quality control board authorities: Lahontan RWQCB and the Los Angeles RWQCB.

State

California Integrated Waste Management Act

The California Integrated Waste Management Act of 1989 (Assembly Bill [AB] 939) was enacted to reduce, recycle, and reuse solid waste generated in the State to the maximum extent feasible. Specifically, the Act requires city and county jurisdictions to identify an implementation schedule to divert 50 percent of the total waste stream from landfill disposal by the year 2000. The Act also requires each city and county to promote source reduction, recycling, and safe disposal or transformation. Cities and counties are required to maintain the 50-percent diversion specified by AB 939 by the year 2000.

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[5] County of Los Angeles Department of Regional Planning. 16 June 2015. Antelope Valley Area Plan – Town & Country. Available online at: http://planning.lacounty.gov/tnc/documents/

[6] County of Los Angeles Department of Regional Planning. 2012. Santa Clarita Valley Area Plan. Available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf

[7] State Water Resource Control Board. 19 June 2012. OWTS Policy, Water Quality Control Policy for Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment Systems

[8] HDR Inc. 2015. Hauled Water Ordinance Water Supply, Hydrology, and Water Quality Analysis. Prepared for: County of Los Angeles.

[9] California Water Boards Fact Sheet. n.d. Water Quality Control Policy for Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment Systems (OWTS Policy). Available online at: http://www.waterboards.ca.gov/water_issues/programs/owts/index.shtml

For Los Angeles County, the County's Department of Public Works (Public Works) is responsible for preparing and administering the Summary Plan and the Countywide Siting Element (CSE). These documents were approved by the County, a majority of the cities within the County containing a majority of the cities' population, the County Board of Supervisors, and CalRecycle. The Summary Plan, approved by CalRecycle on June 23, 1999, describes the steps to be taken by local agencies, acting independently and in concert, to achieve the mandated State diversion rate by integrating strategies aimed toward reducing, reusing, recycling, diverting, and marketing solid waste generated within the County. The CSE, approved by CalRecycle on June 24, 1998, identifies how, for a 15-year planning period, the County and the cities within it would meet their long-term disposal capacity needs to safely handle solid waste generated in the County that cannot be reduced, recycled, or composted.

California Solid Waste Reuse and Recycling Act

The California Solid Waste Reuse and Recycling Act of 1991 (AB 2176) was enacted to assist local jurisdictions with accomplishing the goals of AB 939.[10] In accordance with AB 2176, any development project that has submitted an application for a building permit must include adequate, accessible areas for the collection and loading of recyclable materials. Furthermore, the areas to be utilized must be adequate in capacity, number, and distribution to serve the project. Moreover, the collection areas are to be located as close to existing exterior refuse collection areas as possible.

Onsite Wastewater Treatment Systems (OWTS) Policy: Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems

In June 2012, the State Water Resources Control Board published the OWTS Policy: Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems. The OWTS Policy allows for the continued use of OWTS, while protecting water quality and public health. This Policy recognizes that responsible local agencies can provide the most effective means to manage OWTS on a routine basis. Therefore, as an important element, it is the intent of this policy to efficiently utilize, and improve upon where necessary, existing local programs through coordination between the State and local agencies. To accomplish this purpose, this Policy establishes a statewide, risk-based, tiered approach for the regulation and management of OWTS installations and replacements and sets the level of performance and protection expected from OWTS. In particular, the Policy requires actions for water bodies specifically identified as part of this Policy where OWTS contribute to water quality degradation that adversely affect beneficial uses.

Executive Order B-29-15

April 1, 2015, the governor issued Executive Order B-29-15. Key provisions include ordering the State Water Resources Control Board to impose restrictions to achieve a 25 percent reduction in potable urban water usage through February 28, 2016; directing the California Department of Water Resources to lead a statewide initiative, in partnership with local agencies, to collectively replace 50 million square feet of lawns and ornamental turf with drought tolerant landscapes; and

[10] CalRecycle Model Ordinance on Recycling Space Allocation - AB 1327. 11 October 1991.

directing the California Energy Commission to implement a statewide appliance rebate program to provide monetary incentives for the replacement of inefficient household devices.

Governor's Drought Declaration

On January 17, 2014, the Governor of California proclaimed a State of Emergency and directed state officials to take all necessary actions to make water immediately available.

The proclamation includes six key measures:

- asking all Californians to reduce water consumption by 20 percent and referring residents and water agencies to the Save Our Water campaign - www.saveourwater.com - for practical advice on how to do so;
- directing local water suppliers to immediately implement local water shortage contingency plans;
- ordering the State Water Resources Control Board (State Water Board) to consider petitions for consolidation of places of use for the State Water Project and Central Valley Project, which could streamline water transfers and exchanges between water users;
- directing the California Department of Water Resources and the State Water Board to accelerate funding for projects that could break ground this year and enhance water supplies;
- ordering the State Water Board to put water rights holders across the state on notice that they may be directed to cease or reduce water diversions based on water shortages; and
- asking the State Water Board to consider modifying requirements for releases of water from reservoirs or diversion limitations so that water may be conserved in reservoirs to protect cold water supplies for salmon, maintain water supplies and improve water quality.

The governor continued the State of Emergency on April 25, 2014.

Local

Los Angeles County General Plan 2035

The Public Services and Facilities Element of the Los Angeles County General Plan 2035 promotes the orderly and efficient planning of public facilities and infrastructure in conjunction with land use development and growth regarding the relevant topics of drinking water, sanitary sewers, solid waste, and utilities.[11] The Public Services and Facilities Element has established the following goals and policies relevant to utilities in consideration of the proposed initiative:

- **Goal 1:** A coordinated, reliable, and equitable network of public facilities that preserves resources, ensures public health and safety, and keeps pace with planned development.

[11] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 13: Public Services and Facilities Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch13.pdf

- **Policy PS/F 1.1:** Discourage development in areas without adequate public services and facilities.
- **Policy PS/F 1.2:** Ensure that adequate services and facilities are provided in conjunction with development through phasing or other mechanisms.
- **Policy PS/F 1.3:** Ensure coordinated service provision through collaboration between County departments and service providers.
- **Policy PS/F 1.5:** Focus infrastructure investment, maintenance and expansion efforts where the General Plan encourages growth, such as TODs.

- **Goal PS/F 3:** Increased local water supplies through the use of new technologies.
  - **Policy PS/F 3.1:** Increase the supply of water though the development of new sources, such as recycled water, gray water, and rainwater harvesting.
  - **Policy PS/F 3.2:** Support the increased production, distribution, and use of recycled water, gray water, and rainwater harvesting to provide for groundwater recharge, seawater intrusion barrier injection, irrigation, industrial processes and other beneficial uses.

2015 Antelope Valley Area Plan – Town & Country

The planning area of the 2015 Antelope Valley Area Plan – Town & Country (Antelope Valley Area Plan), a component of the adopted Los Angeles County General Plan, provides planning policies for The Antelope Valley planning area bounded by the Kern County border to the north, the Ventura County border to the west, the Angeles National Forest (inclusive) to the south, and the San Bernardino County border to the east. It excludes the Cities of Lancaster and Palmdale. This area covers approximately 1,800 square miles and includes over two dozen communities; 90 percent of the area that would be potentially affected by the proposed initiative.[12]

Goals and Policies

Water Resources

- **Goal COS 1:** Growth and development are guided by water supply constraints
  - **Policy COS 1.1:** Require that all new development proposals demonstrate a sufficient and sustainable water supply prior to approval.
  - **Policy COS 1.2:** Limit the amount of potential development in areas that are not, or not expected to be, served by existing and/or planned public water infrastructure through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.
  - **Policy COS 1.3:** Limit the amount of potential development in groundwater recharge areas through appropriate land use designations with very low residential densities, as indicated in the Land Use Policy Map (Map 2.1) of this Area Plan.

[12] County of Los Angeles Department of Regional Planning. 16 June 2015. Antelope Valley Area Plan – Town & Country. Available online at: http://planning.lacounty.gov/tnc/documents/

- **Policy COS 1.4:** Promote the use of recycled water, where available, for agricultural and industrial uses and support efforts to expand recycled water infrastructure.

- **Goal COS 2:** Effective conservation measures provide an adequate supply of clean water to meet the present and future needs of humans and natural ecosystems.
  - **Policy COS 2.1:** Require new landscaping to comply with applicable water efficiency requirements in the County Code.
  - **Policy COS 2.2:** Require low-flow plumbing fixtures in all new developments.
  - **Policy COS 2.3:** Require onsite stormwater infiltration in all new developments through the use of appropriate measures, such as permeable surface coverage, permeable paving of parking and pedestrian areas, catch basins, and other low impact development strategies.
  - **Policy COS 2.4:** Discourage water intensive recreational uses, such as golf courses, unless recycled water is used to sustain these uses.
  - **Policy COS 2.5:** Discourage the use of potable water for washing outdoor surfaces.
  - **Policy COS 2.6:** Support experiments in alternate forms of water provision and re-use, such as "air to water technology" and gray water systems.
  - **Policy COS 2.7:** Limit use of groundwater sources to their safe yield limits.
  - **Policy COS 2.8:** Coordinate with federal, state, regional and local agencies to develop and implement new technologies in water management.

- **Goal COS 3:** A clean water supply untainted by natural and man-made pollutants and contaminants.
  - **Policy COS 3.1:** Discourage the use of chemical fertilizers, herbicides and pesticides in landscaping to reduce water pollution.
  - **Policy COS 3.2:** Restrict the use of septic systems in areas adjacent to aqueducts and waterways to prevent wastewater intrusion into the water supply.
  - **Policy COS 3.3:** Require a public or private sewerage system for land use densities that would threaten nitrate pollution of groundwater if unsewered, or when otherwise required by County regulations.
  - **Policy COS 3.4:** Support preservation, restoration and strategic acquisition of open space to preserve natural streams, drainage channels, wetlands, and rivers, which are necessary for the healthy functioning of ecosystems.
  - **Policy COS 3.5:** Protect underground water supplies by enforcing controls on sources of pollutants.
  - **Policy COS 3.6:** Support and encourage water banking facilities throughout the Antelope Valley, including within Significant Ecological Areas.

2012 Santa Clarita Valley Area Plan

The Castaic/Santa Clarita/Agua Dulce subarea (10 percent of the area potentially affected by the proposed initiative) is located within the Planning Area of the Santa Clarita Valley Area Plan, which

comprises the entire Santa Clarita Valley.[13] Relevant guiding principles stated in the Santa Clarita Valley Area Plan include:

Guiding Principals

- **Environmental Resources**
  11. New development shall be designed to improve energy efficiency, reducing energy and natural resource consumption by such techniques as the use of solar generators, recycling of treated wastewater, capture of storm runoff on-site, and use of recycled materials in building construction, native and drought-tolerant landscape, and energy and water efficient appliances and systems.

- **Infrastructure**
  28. The location and timing of development shall be coordinated with the provision of adequate water, wastewater treatment, storm drainage, telecommunications, energy, roads, and other infrastructure.

- **Goal LU-7: Environmentally Responsible Development**
  - **Objective LU-7.2**: Ensure an adequate water supply to meet the demand of growth.
    - **Policy LU-7.2.1:** Monitor growth, and coordinate with water districts as needed to ensure that long-range needs for potable and reclaimed water will be met.
    - **Policy LU-7.2.2:** If water supplies are reduced from projected levels due to drought, emergency, or other unanticipated events, take appropriate steps to limit, reduce, or otherwise modify growth permitted by the Area Plan in consultation with water districts to ensure adequate long-term supply for existing businesses and residents. Require that all new development proposals demonstrate a sufficient and sustainable water supply prior to approval.
  - **Objective LU-7.3:** Protect surface and ground water quality through design of development sites and drainage improvements.
    - **Policy LU-7.3.1:** Promote the use of permeable paving materials to allow infiltration of surface water into the water table.
    - **Policy LU-7.3.2:** Maintain stormwater runoff onsite by directing drainage into rain gardens, natural landscaped swales, rain barrels, permeable areas and use of drainage areas as design elements, where feasible and reasonable.
    - **Policy LU-7.3.3:** Seek methods to decrease impermeable site area where reasonable and feasible, in order to reduce stormwater runoff and increase groundwater infiltration, including use of shared parking and other means as appropriate.
    - **Policy LU-7.3.6:** Support emerging methods and technologies for the on-site capture, treatment, and infiltration of stormwater and

[13] County of Los Angeles Department of Regional Planning. 2012. Santa Clarita Valley Area Plan. Available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf

greywater, and amend the County Code to allow these methods and technologies when they are proven to be safe and feasible.

- **Objective LU-7.4:** Promote water conservation through building and site design.
  - **Policy LU-7.4.1:** Require the use of drought tolerant landscaping, native California plant materials, and evapotranspiration (smart) irrigation systems.
- **Objective LU-7.5:** Promote waste reduction through site and building design.
  - **Policy LU-7.5.1:** Ensure that all new development provides adequate space for recycling receptacles and bins on site.
  - **Policy LU-7.5.2:** Promote the use of recycled building material.

- **Goal LU-9: Public Facilities**
  - **Objective LU-9.1:** Coordinate land use planning with provision of adequate public services and facilities to support development.
    - **Policy LU-9.1.1:** Ensure construction of adequate infrastructure to meet the needs of new development prior to occupancy.
    - **Policy LU-9.1.2:** Coordinate review of development projects with other agencies and special districts providing utilities and other services.
    - **Policy LU-9.1.3:** Protect major utility transmission corridors, pumping stations, reservoirs, booster stations, and other similar facilities from encroachment by incompatible uses, while allowing non-intrusive uses such as plant nurseries, greenbelts, and recreational trails.
    - **Policy LU-9.1.4:** Develop and apply compatible standards within County and City of Santa Clarita areas for design and maintenance of utility infrastructure, in consideration of the character of each community.
    - **Policy LU-9.1.6:** Coordinate with appropriate agencies and organizations to ensure that landfill expansion needs are met while minimizing adverse impacts to Valley residents.

Los Angeles County Integrated Waste Management Plan

The California Integrated Waste Management Act of 1989 (AB 939) requires that the responsibility for solid waste management be shared between the State and local governments. The State has directed the County to prepare and implement a local integrated waste management plan in accordance with AB 939. The Los Angeles County Integrated Waste Management Plan Executive Summary presents the countywide goals and objectives for integrated solid waste management and describes the County's system of governmental solid waste management infrastructure and the current system of solid waste management in the cities and unincorporated areas of the County. This document also summarizes the types of programs planned for individual jurisdictions and describes countywide programs that could be consolidated.[14]

[14] County of Los Angeles Department of Regional Planning. January 1993. Los Angeles County Streamlined General Plan, Public Facilities Element. Los Angeles, CA

The Los Angeles County Integrated Waste Management Plan, 2000 Annual Report on the Countywide Summary Plan and Countywide Siting Element, describes the County's approach to dealing with a broad range of solid waste issues, including processing capacity, markets for recovered materials, waste reduction mandates, waste disposed at Class I and Class II disposal facilities, allocation of "orphan" waste (waste that comes from an unknown origin), the accuracy of the State Disposal Reporting System (DRS), and the California Integrated Waste Management Board (CIWMB) enforcement policy. This document also includes the Los Angeles County Integrated Waste Management task force recommendations that can be implemented at the State and local levels to improve the current waste management system. The task force's recommendations focus on improving the quality of programs, rather than relying on quantity measurements in complying with the State's waste reduction mandates.[15] The proposed initiative would be subject to the Los Angeles County Integrated Waste Management Plan.

This Policy only authorizes subsurface disposal of domestic strength, and in limited instances high strength, wastewater and establishes minimum requirements for the permitting, monitoring, and operation of OWTS for protecting beneficial uses of waters.[16]

Antelope Valley Integrated Regional Water Management Plan

In an effort to represent the broad interests within the Antelope Valley Region, a number of organizations joined to form a Regional Water Management Group (RWMG) to work together and create the Antelope Valley Integrated Waste Water Management (AV IRWM) Plan. Members of the RWMG include the Antelope Valley-East Kern Water Agency (AVEK), Antelope Valley State Water Contractors Association (AVSWCA), City of Lancaster, City of Palmdale, Littlerock Creek Irrigation District, Los Angeles County Sanitation District (LACSD) Nos. 14 and 20, Los Angeles County Waterworks District No. 40 (LACWWD 40), Palmdale Water District (PWD), Quartz Hill Water District (QHWD), and Rosamond Community Services District (RCSD). These agencies agreed to contribute funds to help develop the AV IRWM Plan, provide and share information, review and comment on drafts, adopt the final AV IRWM Plan, and assist in future grant applications for the priority projects identified in the AV IRWM Plan.

In January 2007, the RWMG and other community participants (the Stakeholders) set about developing a broadly supported water resource management plan that defines a meaningful course of action to meet the expected demands for water within the entire Antelope Valley Region through 2035. They chose to create the water resource management plan consistent with the State-sponsored Integrated Regional Water Management Program that makes grant funds available to support sound regional water management. The goals of the AV IRWM Plan are to address:

- How municipal and industrial (M&I) purveyors can reliably provide the quantity and quality of water that will be demanded by a growing population;
- Options to satisfy agricultural users' demand for reliable supplies of reasonable cost irrigation water; and
- Opportunities to protect and enhance the current water resources (including groundwater) and the environmental resources within the Antelope Valley Region.

[15] County of Los Department of Public Works. 2001. Los Angeles County Integrated Waste Management Plan, 2000 Annual Report on the Countywide Summary Plan and Countywide Siting Element. Alhambra, CA.

[16] State Water Resources Control Board. 19 June 2012. OWTS Policy, Water Quality Control Policy for Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment Systems\

Upper Santa Clara River Integrated Regional Water Management Plan

The Upper Santa Clara River Integrated Regional Water Management Plan applies to the upper reaches of the Santa Clara River. The Region included in this IRWMP is located within the upper portion of the Watershed. The Region represents an area of approximately 654 square miles. The Upper Basin of the Santa Clara River, as defined for the purposes of this IRWMP, is bounded by the San Gabriel Mountains to the south and southeast, the Santa Susana Mountains to the southwest, the Transverse Ranges to the northeast, the Sierra Pelona Mountains to the east, and the Ventura County line to the west. The Region encompasses the City of Santa Clarita, the unincorporated communities of Castaic, Stevenson Ranch, West Ranch, Agua Dulce, and Acton, as well as portions of the Angeles National Forest. The Upper Santa Clara River Watershed is a logical region for integrated regional water management due to its history of Upper Santa Clara River cooperative water management, the topography and geography of the Region, and the similarity of water issues facing agencies in the Region. The Region is a contiguous geographic area and has been defined in a manner to maximize opportunities for integration of water management activities.

Objectives of the Upper Santa Clara River IRWMP include:

- ***Reduce Potable Water Demand***: Implement technological, legislative and behavioral changes that will reduce user demands for water.
- ***Increase Water Supply:*** Understand future regional demands and obtain necessary water supply sources.
- ***Improve Water Quality***: Supply drinking water with appropriate quality; improve groundwater quality; and attain water quality standards.
- ***Promote Resource Stewardship:*** Preserve and improve ecosystem health, and preserve and enhance water-dependent recreation.
- ***Flooding/Hydromodification:*** Reduce flood damage and/or the negative effects on waterways and watershed health caused by hydromodification and flooding outside the natural erosion and deposition process endemic to the Santa Clara River.
- ***Take Action within the Watershed to Adapt to Climate Change***
- ***Promote Projects and Actions that Reduce Greenhouse Gas Emissions***

3.13.2 EXISTING CONDITIONS

Wastewater

The Santa Clara River Watershed (Watershed) consists of approximately 1,634 square miles and contains the upper reaches of the Santa Clara River. The river, which is the largest natural river remaining in Southern California travels through two counties, Los Angeles and Ventura.

There are four water reclamation plants (WRPs) within the proposed initiative study area (Figure 3.13.2-1, *Water Reclamation Plants*). Each of the four WRPs serves 50,000 to 160,000 people.

Saugus WRP

The Saugus WRP is located at 26200 Springbrook Avenue in the City of Santa Clarita. The plant occupies four acres east of San Fernando Road in the city of Santa Clarita and was put into operation in July 1962 with a capacity of 0.25 million gallons per day (gpd). The Saugus WRP

FIGURE 3.13.2-1
Water Reclamation Plans

provides primary, secondary and tertiary treatment for 6.5 million gallons of wastewater per day. The Saugus WRP operates with the Valencia WRP as part of the Santa Clarita Valley Sanitation District. No facilities for solids processing are located at the Saugus WRP. Instead, all wastewater solids are conveyed by trunk sewers to the Valencia WRP for treatment.

Valencia WRP

The Valencia WRP is located at 28185 The Old Road in the City of Valencia. The plant occupies 27 acres west of the Golden State (5) Freeway. The treatment plant was constructed in 1967 and initially had a capacity of 1.5 million gpd of secondary treatment. The Valencia WRP is a tertiary treatment plant with solids processing facilities. The plant provides primary, secondary, and tertiary treatment for 21.6 million gallons of wastewater per day. The Valencia WRP processes all wastewater solids generated in the Santa Clarita Valley Sanitation District (i.e., from the Saugus and Valencia WRPs). The wastewater solids are anaerobically digested, stored, and then dewatered using plate and frame filter presses. The dewatered cake, or biosolids, is hauled away for composting. Methane gas is produced during the digestion process and is utilized by a co-generation process that heats water and produces electricity.

Lancaster WRP

The Lancaster WRP is located at 1865 West Avenue "D" in the City of Lancaster and occupies 554 acres east of the Antelope Valley (14) Freeway. The plant was placed in operation on September 24, 1959, with an initial capacity of 6.5 million gpd. It replaced a previous plant which was located on Avenue H between 20th and 30th Streets West. This original plant began operation on December 2, 1941. The Lancaster WRP provides tertiary treatment for up to 18 million gallons of wastewater per day. The Lancaster WRP plant serves a population of approximately 160,000 people. In addition to producing reclaimed water, the Lancaster WRP processes all wastewater solids generated at the plant. The wastewater solids are anaerobically digested, centrifugally dewatered, and stored in concrete lined drying beds where some additional drying occurs. The dried biosolids are hauled away and beneficially reused. Methane gas is produced during the digestion process and is used to fuel the boiler that heats the anaerobic digesters. The Lancaster WRP has historically supported the Antelope Valley Tertiary Treatment Plant, which uses chemical coagulation and dual-media filtration to remove additional amounts of phosphorus from reclaimed water. On average, three million gpd of the Lancaster WRP effluent is reused at a local farm for irrigation of fodder crops, nearly three million gpd are sent to Piute Ponds to maintain 200 acres of wetlands as a wildlife refuge, and approximately 0.5 million gpd of water is reused at the Apollo Lakes Regional Park during most of the year to maintain the water level in the lakes and for irrigation.

Palmdale WRP

The Palmdale WRP is located at 39300 30th Street East in the City of Palmdale. The plant currently occupies 286 acres east of the Antelope Valley (14) Freeway. It was placed in operation in September 1953 and had a capacity of 0.75 million gpd. The Palmdale WRP is a tertiary treatment plant with solids processing facilities. The plant provides primary, secondary, and tertiary treatment for a design capacity of 12 million gallons of wastewater per day. The plant serves a population of approximately 150,000 people. Effluent is reused for irrigation of trees and fodder crops on City of Los Angeles Department of Airports' property and also for parks in the city of Palmdale. The Palmdale WRP processes all wastewater solids generated within its service area. The wastewater

solids are anaerobically digested, stored, and then dewatered using centrifuges. The dewatered cake, or biosolids, is hauled away for agricultural land application.

Stormwater Drainage

The seven subareas that would be eligible for development of single-family residences as a result of the proposed initiative are largely located in areas that are not served by municipal stormwater systems. The Los Angeles Flood Control District and the U.S. Army Corps of Engineers oversee stormwater drainages in the proposed initiative area.

Stormwater quality within the proposed initiative study area is regulated by the Lahontan and Los Angeles RWQCBs pursuant to the Water Quality Control Plan for the Lahontan Region and the Water Quality Control Plan Los Angeles Region. Table 3.13.2-1, *Parcels within Lahontan and Los Angeles Regional Water Quality Control Board Jurisdictions*).

TABLE 3.13.2-1
PARCELS WITHIN LAHONTAN AND LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD JURISDICTIONS

Subarea	RWQCB NAME	Percentage of Parcels
Acton	Lahontan	1.60
	Los Angeles	3.20
Castaic/Santa Clarita/Agua Dulce	Los Angeles	4.99
Antelope Valley Northeast	Lahontan	3.72
Kagel Canyon	Los Angeles	0.01
Lake Hughes/Gorman/West of Lancaster	Lahontan	36.31
	Los Angeles	0.94
Lake Los Angeles/Llano/Valyermo/Littlerock	Lahontan	34.32
Lancaster Northeast	Lahontan	14.91

Water Supply

California experienced an unprecedented five consecutive years of severe drought conditions between 2011 and 2015:

- California's 2015 and 2014 Water Years, which ended September 30, 2015 were the warmest years on record.
- 2014 was the third-driest year on record.
- On April 1, 2015, the California Department of Water Resources measured the statewide water content of Sierra snowpack at five percent of average for April 1st. These levels are lower than any year in records going back to 1950. The April 1 snowpack measurement is crucial because this is when the snowpack is normally at

its peak and begins to melt into streams and reservoirs. Snowpack, through runoff, provides about one-third of the water used by California's cities and farms.[17]

On November 13, 2015, in response to the extended drought conditions, Governor Edmund G. Brown Jr. issued an executive order that calls for additional actions to build on the state's ongoing response to record dry conditions and assist recovery efforts from this year's devastating wildfires.

Governor Brown declared a drought state of emergency in January 2014 and directed state agencies to take all necessary actions to respond to drought conditions. In April 2015, Governor Brown announced the first-ever 25-percent statewide mandatory water reductions and a series of actions to help save water, increase enforcement to prevent wasteful water use, streamline the state's drought response and invest in new technologies that will make California more drought-resilient. Californians have responded with unprecedented conservation efforts, exceeding the Governor's water reduction order for four consecutive months between August and November 2015.[18]

The developable parcels within the proposed initiative study area are not within retail water agency service areas and, therefore, are unable to connect to existing potable water distribution systems.

The proposed initiative study area encompasses a large area with multiple potential existing water purveyors to supply water to hauled water purveyors (Figure 3.13.2-2, *Los Angeles County Water Districts and Potential Hauled Water Retailer Locations*). The Castaic Lake Water Agency UWMP accounts for the entire water supply for the retail agencies in its region. The AVEK UWMP accounts for the SWP supply for the retail agencies in its region. These two UWMPS account for most of the water supply in the proposed initiative area. Additional water supply used in the AVEK region consists of groundwater directly pumped by retail water agencies or others with minor pumping rights.

The estimated average water use per capita used for this analysis was determined based on the surrounding water districts usage rates in 2014. The average residential gallons per capita per day (R-GPCD) water use of surrounding districts are 191 R-GPCD. Table 3.13.2-2 lists the average water use per district.

[17] http://ca.water.usgs.gov/data/drought/

[18] http://ca.gov/drought/topstory/top-story-50.html

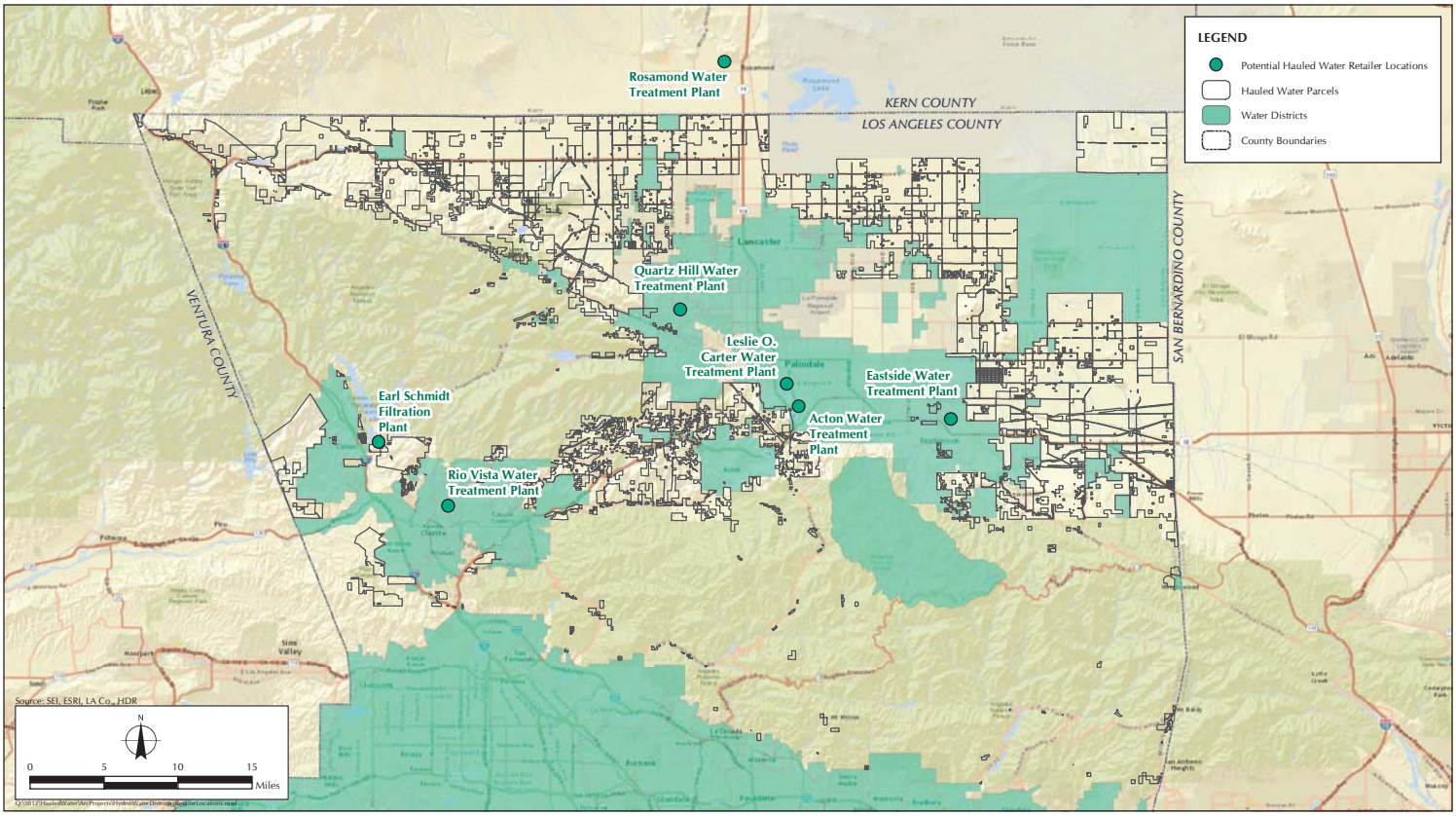

FIGURE 3.13.2-2

Los Angeles County Water Districts and Potential Hauled Water Retailer Locations

TABLE 3.13.2-2
AVERAGE WATER USE IN REGION

Supplier	Water Use (R-GPCD)
Castaic Lake Water Agency Santa Clarita Water Division	196
Castaic Lake Water Agency Santa Clarita Water Division	199
Castaic Lake Water Agency Santa Clarita Water Division	170
Castaic Lake Water Agency Santa Clarita Water Division	155
Los Angeles County Public Works Waterworks District 40	236
Los Angeles County Public Works Waterworks District 40	233
Los Angeles County Public Works Waterworks District 40	250
Los Angeles County Public Works Waterworks District 40	186
Newhall County Water District	160
Newhall County Water District	190
Newhall County Water District	166
Newhall County Water District	178
Palmdale Water District	208
Palmdale Water District	201
Palmdale Water District	163
Palmdale Water District	163
AVERAGE	**191**

SOURCE: State Water Resources Control Board, 2014.

Due to the lack of designated private or municipal water purveyors in the proposed initiative study area, properties that meet all the specified criteria would be eligible to use potable water from water haulers. The water supply for water haulers would likely be obtained from potential water suppliers, such as AVEK member agencies, and other neighboring water suppliers. The availability of water from water purveyors was determined based on a comparison of the water demand and supply projections described in the Urban Water Management Plans (UWMP) of the water purveyors located at a maximum distance of approximately 10 miles from the proposed initiative study area. Travel distances of approximately 10 miles were determined to be a reasonable distance for water haulers to travel, based on the haul distances that have been routinely used for construction projects, particularly recent renewable energy projects in the Antelope Valley. Haul distances in excess of 10 miles can begin to contribute additional labor and fuel costs that may render the use of hauled water economically infeasible.

Los Angeles County Water Works District (LACWWD) is a retail water purveyor that operates three districts, District 37 – Acton and District 40-04/34 – Antelope Valley, that are located at a maximum distance of approximately 10 miles from the proposed initiative study area. The Integrated UWMP for LA County's District 40 and Quartz Hill Water District plans for land use transitions from agricultural to residential and industrial use in its demand projections. Based on the forecasted development of its service area, LACWWD projects to have sufficient water supply to serve its three districts for a single dry year, multiple dry years, and average weather years. LACWWD obtains its water from AVEK, which obtains water from the California State Water Project (SWP) and local groundwater basins.

The Palmdale Water District (PWD), which is adjacent to the proposed initiative study area, accounts for a significant population increase in its 2010 UWMP. PWD's water supplies are obtained from groundwater, the SWP through AVEK, and Littlerock Dam Reservoir. Palmdale has an entitlement of 5,500 AFY from Littlerock Dam Reservoir. PWD is expected to match its projected water demand between 2015 and 2035 with no surplus of water.

AVEK serves portions of communities in the proposed initiative study area, such as Acton and Quartz Hill. AVEK receives deliveries from the SWP and provides water to LACWWD, PWD, and other water retail agencies in the Antelope Valley. Their 2010 UWMP projects shortages in SWP deliveries under dry year scenarios, which show deficits in their service areas (demand greater than supply). The retail districts, such as LACWWD, have developed supplemental water supplies, such as groundwater, and, therefore, are currently meeting demand.

Based on review of 2010 UWMPs developed by water districts surrounding the proposed initiative study area, most agencies were, in 2010, projecting sufficient water to meet anticipated growth needs within their districts. Some agencies, such as CLWA, in 2010 were predicting surplus water supplies. Others, such as AVEK, were predicting shortages. Due to the current drought conditions in California (2014), SWP allocations have decreased for all SWP Contractors. AVEK and CLWA's actual SWP allocation decreased between 2013 and 2014 to percentages much lower than projected in the 2010 UWMP and is shown in the 3.13.2-3 below. Since the actual SWP allocations are lower than expected, the projections made in the 2010 UWMP are higher estimates of AVEK and CLWA's supply. Since the 2012–2014 SWP allocations were not included in the wholesalers' 2010 UWMPs, the water supply estimated was higher than the actual water supply available as shown in Table 3.13.2-3. Table 3.13.2-3 serves as a reference and shows that approved allocations between 2012 and 2014 were substantially below the 2010 UWMP requested allocation, and have declined by an order of magnitude during the same three-year period of time.

TABLE 3.13.2-3
ACTUAL SWP ALLOCATIONS

Agency	2012		2013		2014	
	Initial Request	Approved Allocation	Initial Request	Approved Allocation	Initial Request	Approved Allocation
AVEK	141,400	(65%) 91,910	141,400	(35%) 49,490	144,844	(5%) 7,242
CLWA	95,200	(65%) 61,880	95,200	(35%) 33,320	95,200	(5%) 4,760

SOURCE: DWR 2014.

AVEK does not import water from any agencies other than the SWP. It relies on other types of supplies to account for decreased SWP allocations.

In addition to importing water from the SWP, CLWA has agreements with Buena Vista and Rosedale Water Districts in Kern County to receive a set amount of 11,000 AFY regardless of the weather year. Also, CLWA has a water transfer set up with Nickel Water, another Kern County district, which will provide a set supply of about 1,600 AFY. This additional source is intended to supply water to a planned development in Newhall Ranch. Newhall Ranch is a proposed master

plan development along the Santa Clara River and will include approximately 20,000 homes. Due to litigation between the County, the developers and project challengers, and public interest groups, the Newhall Ranch Project has been unable to start and it is unknown when development would begin. If the Newhall Ranch Project is postponed for several years, CLWA's additional supply for the Newhall Ranch Project may be a potential supply for the single-family residences determined to be eligible for development of a single-family residence using hauled water as a source of potable water, pursuant to the proposed initiative. An agreement with CLWA would be needed to determine if a portion of this supply could be used for the proposed initiative. In dry weather years, CLWA has an agreement with DWR that it can utilize water from Castaic Lake as an additional source.

In the 2010 Integrated UWMP, Los Angeles County Waterworks District (LACWWD) District No. 40 and Quartz Hill Water District (QHWD) describe a plan to add a non-potable recycled water distribution system that will be routed through Lancaster, Palmdale, and the unincorporated communities of LA County. The first phase of construction for the system, known as the AV Backbone, began in 2009 and is expected to be online by 2015. The AV Backbone is intended to provide recycled water to for non-potable uses, such as irrigation of parks, schools, and golf course. Lancaster Water Reclamation Plant (LWRP) will supply secondary treated water to the AV Backbone. LWRP was recently upgraded to a treatment capacity of 18 mgd and is planned to undergo another expansion to 21 mgd as described the 2006 Recycled Water Master Plan. With the increased treatment capacity and the construction of the AV Backbone, the availability of recycled water in the area will increase. The IRUWMP AV states that the amount of water provided by the AV Backbone will depend on the amount of development in the area. Based on the area's current growth predictions, the recycled water supply will be 5,400 AFY in 2015 and will increase to 8,200 AFY in 2020. By 2035, it is expected that the recycled water will make up about 12 percent of the area's supply. In an average weather year, the IRUWMP AV projects that its water supplies will remain constant between 2015 and 2035 and its demand will increase by about 43 percent due to population increase. The planned recycled water supply is expected to account for the area's projected population growth, by offsetting potable consumption for non-potable uses, but the growth projections do not account for the development of the proposed initiative. The recycled water development is expected to offset consumption of potable water supplies, which could make the potable supplies available for sale to water haulers. However the projected population growth within the district may utilize those freed-up potable water supplies.

The proposed initiative area is situated above three groundwater basins: Antelope Valley Basin, Santa Clara River Basin, and Acton Valley Basin. Antelope Valley Basin and Acton Valley Basin underlie the AVEK service area and Santa Clara River Basin underlies the CLWA service area. The information below shows that the ground water in Antelope Valley Basin is fully utilized and will not be able to support new groundwater wells. While there are no formal pumping limits set for Santa Clara River Basin and Acton Valley Basin, the available groundwater within these basins is already accounted for by existing users. Water purveyors with existing groundwater wells can potentially increase their pumping amounts to supply water to the proposed initiative.

Antelope Valley Basin

The majority of the proposed initiative's proposed parcels are above the Antelope Valley Basin. A water right adjudication process is being completed to identify which users have the legal authority to withdraw ground water and how much they can pump each year. The safe yield of the basin is stated to be 110,000 AFY in the Antelope Valley IRUWMP and for the report for Phase III of the adjudication. While the adjudication is still in process, the IRUWMP has made projections on the

allocations based on historical groundwater pumping use. LACWWD No. 40 is projected to have a constant groundwater pumping rate of 23,200 AFY and Quartz Hill Water District is projected to have a constant pumping rate of 2,500 AFY from 2015-2035. These projections are presented in Table 3.13.2-4 and are subject to change after the adjudication has been finalized.

TABLE 3.13.2-4
APPROXIMATE GROUNDWATER PUMPING ALLOCATIONS—
ANTELOPE VALLEY BASIN

District/Agency	Estimated Pumping Allocation (AFY)
District 40 - Estimated Adjudication 2015	23,200
QHWD - Estimated Adjudication 2015	2,500
PWD 2015	12,000
Cal Water Antelope Valley District 2015	1,000
Rosamond CSD - 2015	4,600
To Be Determined	66,700

The projected pumping allocations presented in Table 3.13.2-4 do not account for the entire annual safe yield of the Antelope Valley Groundwater Basin. In addition to the agencies listed, there are other parties involved in the adjudication, and their pumping allocations have not been determined at this time. The basin would be closed to new ground water pumping once the adjudication is completed. In order to obtain groundwater from Antelope Valley Basin, the water haulers would have to develop contracts with members that have pumping rights.

The amount of available water in the basin is also limited by the ground water quality. A 2008 USGS publication on groundwater quality in the Antelope Valley found the following from its testing:

- Perchlorate is a compound with potential impacts to human health. In the 2008 USGS study, it was detected in 49 samples and none of the samples exceeded the CA-MCL of 6-μg/L and 94 percent of those samples had levels lower than one-third of the CA-MCL.

- Elevated concentrations of metals and trace elements occur in places that may limit ground water use for drinking water because of public health concerns or issues with taste, color and odor. In the 2008 USGS study, there were 17 trace elements with human-health thresholds and four, arsenic, boron, chromium VI and vanadium, were found to be over the drinking water limits. Arsenic was found to be over its maximum contaminant level as set by the EPA and adopted by CDPH (MCL-US) in five samples and three samples contained levels of boron that exceeded its notification level (NL-CA). Four out of 19 wells sampled in the Antelope Valley Basin had concentrations of chromium VI that exceeded its MCL-CA of 10-ug/L.

Santa Clara River Basin

The Santa Clara River Basin is not adjudicated, but a Groundwater Management Plan (GWMP) for the basin was adopted in 2003. The GWMP establishes planning and monitoring of the basin's supplies, but it does not set formal restrictions on groundwater pumping.

The basin has an upper and lower aquifer from which groundwater can be extracted. The upper aquifer, the Alluvium formation, has a maximum depth of 200 feet and the lower aquifer, the Saugus formation, has an approximate depth of 2,000 feet. The available groundwater from this basin is limited due to the historical contamination issues.

The CLWA 2010 UWMP lists that a maximum of 40,000 AFY can be extracted from the Alluvium formation and a maximum of 15,000 AFY can be extracted from the Saugus formation. Table 3.13.2-5 lists the projected groundwater pumping amounts from each agency within CLWA.

TABLE 3.13.2-5
PROJECTED GROUNDWATER PUMPING AMOUNTS—SANTA CLARA RIVER BASIN

Groundwater Pumping from Alluvium Formation	
Agency	**Projected Pumping Amounts 2015 (AFY)**
NCWD	1,825
SCWD	10,500
VWC	11,675
Agricultural & Other	14,500
Unknown/Unaccounted For	**1,500**
Groundwater Pumping from Saugus Formation	
LACWWD	500
NCWD	4,400
SCWD	2,850
VWC	2,850
Agricultural & Other	900
Unknown/Unaccounted For	**3,500**

SOURCE: CLWA 2010 UWMP.

As shown in Table 3.13.2-5, the basin can adequately supply the projected demands of the local agencies before the basin's maximum yield is reached. Based on available information, Santa Clara River Basin has approximately 5,000 AFY of groundwater that is not projected to be used by an existing agency. A portion of this groundwater may be used by private well owners or it may be unused. Since the basin is not adjudicated and is not expected to be in overdraft, the proposed initiative could potentially lead an agency with existing groundwater wells to decide to increase its pumping amounts and supply the additional supply to the proposed initiative study area.

The basin's water supply capacity is limited due to previous contamination issues. Between 1997 and 2005, six wells had levels of perchlorate that were high enough to shut down pumping from those wells. These wells are all located near a former manufacturing site, Whittaker-Bermite Property, with perchlorate contamination that is being cleaned by California Department of Toxic Substances Control (DTSC). Table 3.13.2-6 lists the pumping capacity and status of contaminated wells in the Santa Clara River Basin.

TABLE 3.13.2-6
STATUS OF CONTAMINATED WELLS IN SANTA CLARA RIVER BASIN

Well Name	Original Pumping Capacity (gpm)	Status
Saugus 1 & 2	2,600 (each)	Both have returned to service with a reduced pumping capacity of 1,200 gpm (each)
NCWD-11	1,200	Removed from service and has not been returned to service
VWC-Q2	1,200	Returned to service
SCWD-Stadium	778	Sealed and replaced by a new well with a projected pumping capacity of 800 gpm
VWC-157	1,500	Replaced by a new well, VWC-206, with a capacity of 1,500 gpm

The contamination of wells Saugus 1 & 2 and NCWD-11 resulted in a decrease in groundwater pumping capacity of 4,000 gpm. As the Whittaker-Bermite Property is cleaned, there is a possibility that wells near the property would also be contaminated and further reduce the basin's pumping capacity.

Acton Valley Basin

Acton Valley Basin is a small groundwater basin with a total storage capacity of about 40,000 AFY, an annual natural recharge of 7,200 AFY, and a safe yield of 1,540 AFY. LACWWD No. 37 has three wells that pump approximately 2,200 AFY from the basin. Although the basin is not adjudicated, most of its groundwater is already utilized by existing groundwater pumpers.

The basin's water quality was found to have high levels of total dissolved solids, sulfate, and chloride in 1989. DWR's Bulletin 118 states that only one of the 14 sampled wells was found to have a nitrate concentration greater than the maximum contaminant level (MCL). Based on results from studies done on this basin, it does not have a major contamination issue that would reduce the amount of available water.

The research for this study shows that the majority of the area's available groundwater is already being pumped by local users. This is based on the safe yield of the three basins and projected pumping rates in various weather years. The proposed initiative could result in groundwater purchase agreements between water haulers and agencies that have existing wells, and the available amount is dependent on each agency.

Solid Waste

Solid Waste from Septic Fields

The majority of the proposed initiative study area is not served by sewer systems; development. Development of single-family residences that are not served by sewers are allowed to use septic tanks or septic fields where suitable conditions exist. It is anticipated that new single-family residences relying on the proposed initiative for water would utilize individual onsite wastewater treatment systems (OWTS) that require periodic servicing and disposal of solid waste. It is anticipated that the vast majority of developed OWTS would fall under State Water Resources Control Board OWTS Policy Tier 1: Low Risk New or Replacement OWTS, and would adhere to

sections 7 and 8 of the OWTS policy. Any OWTS that is considered "high risk" or developed within 600 feet of an impaired surface water body will require additional regulation under OWTS Policy Tier 3 (Figure 3.9.2-1). OWTS effluent is usually disposed of through its dispersal system (leach fields, seepage pits, and/or subsurface drip dispersal system). In general, settled solids from OWTS are pumped out periodically and hauled to a treatment facility for disposal.

Household Solid Waste

Table 3.13.2-7, *Average Household Solid Waste per Year*, depicts the average pounds of household solid waste per resident per day and provides an annual total for the subject parcels.

TABLE 3.13.2-7
AVERAGE HOUSEHOLD SOLID WASTE PER YEAR

Average Residents per Household	Avg. lbs/Resident/Day**	Avg. Waste /Household/year
3.5	4.74	6,055.34 lbs(3.02 tons)

NOTE: * Based on 3.5 people per single-family residence
** Based on Los Angeles Countywide Integrated Waste Management Plan 2012 Annual Report

The landfills within the proposed initiative study area are operated by the Los Angeles County Sanitation District. Four of the County's 11 regional active landfills are located in the vicinity of the parcels subject to the proposed initiative (Figure 3.13.2-3, *Regional Active Landfills*).The four landfills within the proposed initiative study area are:

- Chiquita Canyon Landfill (29201 Henry Mayo Drive, Valencia, CA)
- Sunshine Canyon Landfill (14747 San Fernando Rd, Sylmar, CA 91342)
- Antelope Valley Landfill (1200 W City Ranch Rd, Palmdale, CA 93551)
- Lancaster Landfill (600 E Avenue F, Lancaster, CA 93535

Capacity analysis and remaining life of the landfills are depicted in Table 3.13.2-8, *2011 Annual Report: Los Angeles County Countywide Integrated Waste Management Plan Remaining Permitted Disposal Capacity of Existing Solid Waste Disposal Facilities in Los Angeles County*.

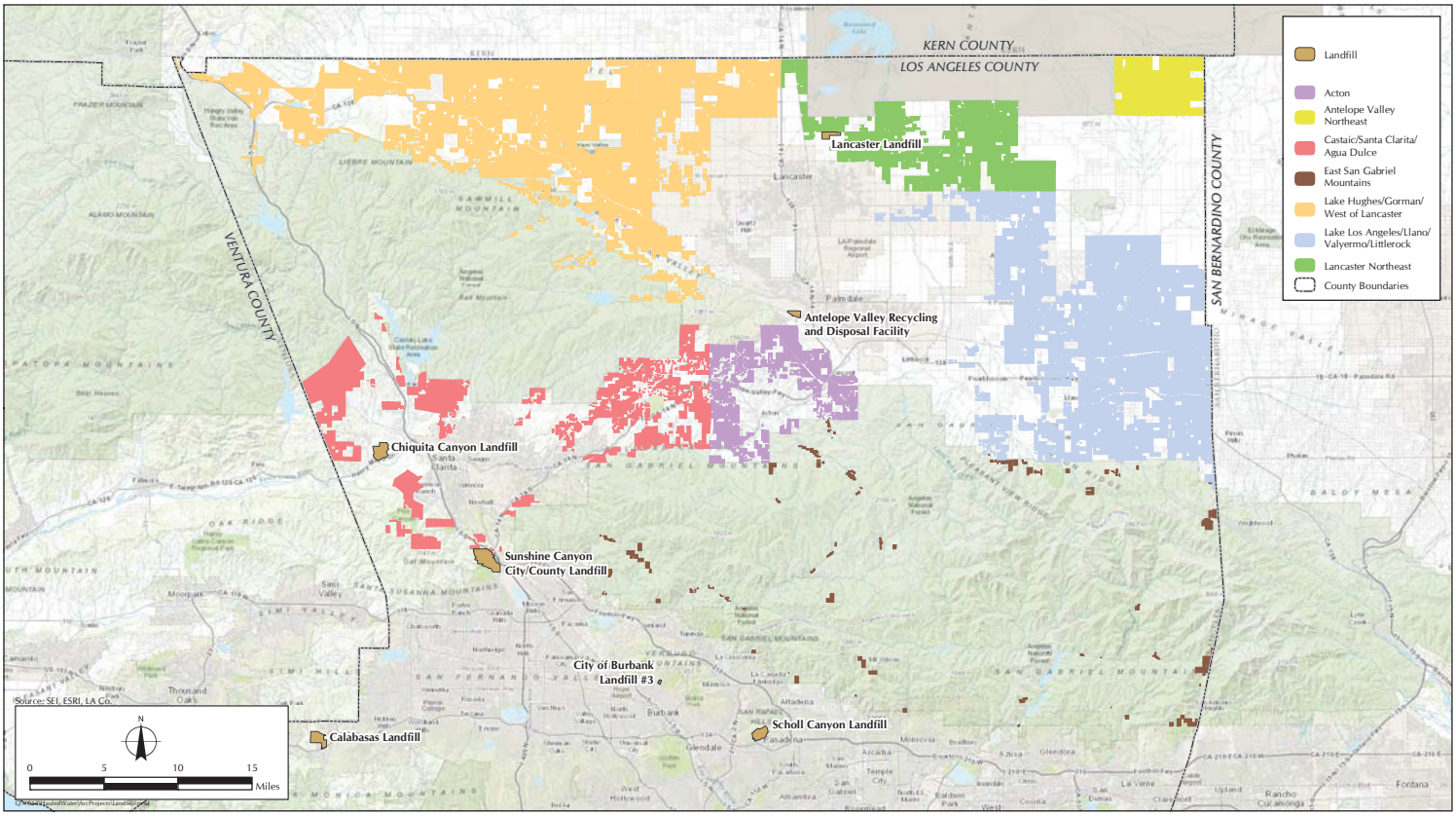

FIGURE 3.13.2-3
Regional Active Landfills

TABLE 3.13.2-8
2011 ANNUAL REPORT:
LOS ANGELES COUNTY COUNTYWIDE INTEGRATED WASTE MANAGEMENT PLAN
REMAINING PERMITTED DISPOSAL CAPACITY OF EXISTING SOLID WASTE DISPOSAL FACILITIES IN LOS ANGELES COUNTY[19]

Facility	Solid Waste Facility Permit Number	Location	Permitted Operation	SWFP Maximum Daily Capacity	LUP Maximum Daily Capacity	2011 Annual Disposal (million tons) (see Note 1)			2011 Average Daily Disposal (tons per day) (see Note 1)			Estimated Remaining Permitted Capacity (as of December 31, 2011) (see Note 2)		Remaining Life (b)
		City or Unincorporated Area	Days/Week	Tons	Tons	In-County	Out-of-County	Total	In-County	Out-of-County	Total	Million Tons	Million (a) Cubic Yards	Years
Antelope Valley	19-AA-5624	Palmdale	6	1,800	1,800	0.114	0.000	0.114	364	1	365	16.09	21.17	141
Chiquita Canyon	19-AA-0052	Unincorporated Area	6	6,000	6,000	1.319	0.011	1.330		4,22386	4,264	4.90	6.59	4
Lancaster	19-AA-0050	Unincorporated Area	6	1,700	1,700	0.247	0.006	0.252	790	19	809	0.31	0.37	1
Sunshine Canyon City/County	19-AA-2000	Los Angeles/ Unincorporated Area	6	12,100	12,100	2.434	0.000	2.434	7,801	0	7,801	82.39	97.99	25

NOTES: 1. Disposal quantities are based on actual tonnages reported by owners/operators of permitted solid waste disposal facilities to the Los Angeles County Department of Public Works' Solid Waste Information Management System (www.LACountySWIMS.org.)
2. Estimated Remaining Permitted Capacity based on landfill owner/operator's response in a written survey conducted by Los Angeles County Department of Public Works in May 2011 as well as site-specific permit criteria established by local land use agencies,
(a) Conversion factor based on in-place solid waste density if provided by landfill operators, otherwise a conversion factor of 1,200 pounds per cubic yard was used.
(b) Remaining Life is based on either the 2011 average daily disposal tonnage or the facility's permit expiration date, whichever is later.

KEY: LUP – Land Use Permit or Conditional Use Permit
SWFP – Solid Waste Facility Permit

[19] County of Los Angeles Department of Public Works. 2001. Los Angeles County Integrated Waste Management Plan, 2000 Annual Report on the Countywide Summary Plan and Countywide Siting Element. Alhambra, CA.

3.13.3 THRESHOLDS OF SIGNIFICANCE

The potential for the proposed initiative to result in impacts related to utilities and service systems was analyzed in relation to the questions contained in Appendix G of the State CEQA Guidelines. Would the proposed initiative:

a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

d. Lack sufficient water supplies available to serve the project from existing entitlements and resources or would require new or expanded entitlements?

e. Result in a determination by the wastewater treatment provider that serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

f. Is not served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

g. Does not comply with federal, state, and local statutes and regulations related to solid waste?

h. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

i. Lack sufficient water supplies available to serve the project from existing entitlements and resources or would require new or expanded entitlements?

j. Result in a determination by the wastewater treatment provider that serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

3.13.4 IMPACT ANALYSIS

The analysis of significant impacts to utilities and service systems was based on a reasonable worst-case scenario that assumes the annual average rate of issuance of building permits over the 20-year 2015 to 2035 planning horizon would be approximately 32 per year in the Santa Clarita Valley and approximately 152 per year in the Antelope Valley for a total of 184 permits per year for both areas. The total anticipated building permits over the 20-year 2015 to 2035 planning horizon would be approximately 3,680. The reasonable worst-case scenario of approximately 3,680 single-family homes that could be expected to be constructed during the 2015 to 2035 20-year planning

horizon would result in a population increase of approximately 12,880 persons based on 3.5 persons per household.

IMPACT USS-1: Exceed Wastewater Treatment Requirements of the applicable Regional Water Quality Control Board?

The proposed initiative has the potential to result in potentially significant impacts associated with utilities and service systems in relation to exceeding wastewater treatment requirements established by the State Water Resources Control Board OWTS Policy. It is anticipated that the proposed initiative study area would utilize individual OWTS, where effluent is usually disposed of through leach fields or septic tanks. In the case of septic tanks, settled solids are pumped out periodically (every three to five years) and hauled to a treatment facility for disposal. Based on the 2012 average single-family residence household size of 3.5 people in unincorporated Los Angeles County and a reasonable worst-case scenario of 184 building permits per year, the proposed initiative would likely result in 12,880 additional people over an estimated 20-year period. In 2012, in the preamble to the OWTS Policy, the State Water Resources Control Board acknowledges that OWTS are useful and necessary structures, and that the vast majority function in a satisfactory manner. However, the preamble goes on to state that "OWTS for a varied list of reasons have not satisfactorily protected either water quality or public health." These failures are attributed to, among other things, poor design and improper site conditions, as well as, excessive density. The OWTS policy establishes as statewide, risk-based tiered approach for the regulation and management of OWTS installations and replacements and sets the level of performance and protection expected from OWTS. Therefore, there is potential for the operation of up to 3,680 OWTS over the life of the proposed initiative to compromise groundwater and public health, or result in excessive density of OWTS; therefore, requiring the consideration of mitigation measures.

IMPACT USS-2: Require or Result in the Construction of New Water or Wastewater Treatment Facilities or Expansion of Existing Facilities, the Construction of Which Could Cause Significant Environmental Effects?

The proposed initiative would result in less than significant impacts in relation to the construction of new water or wastewater treatment facilities or expansion of facilities. Table 3.13.4-1 illustrates the capacity of wastewater reclamation plants within the proposed initiative study area. Based on the 2012 average single-family residence household size of 3.5 people in unincorporated Los Angeles County and a reasonable worst-case scenario of 184 building permits per year, the proposed initiative would likely result in 644 additional people per year over an estimated 20-year period, or up to 12,880 additional people total from the single-family residential development of the 42,867 subject parcels. An estimated 30,368 gallons per year (gpy) (approximately 0.00008 million gallons per day [mgd]) of additional wastewater could potentially enter the existing wastewater treatment facilities. Therefore, there is no potential to overload the current capacity levels of the wastewater treatment facilities, and the construction of new water or wastewater treatment facilities would not be required.

TABLE 3.13.4-1
WATER RECLAMATION PLANT AND SERVICE POPULATION

Water Reclamation Plant	Flow Capacity	Population Served
Saugus	6.5 mgd	approx. 50,000
Valencia	21.6 mgd	approx. 150,000
Lancaster	18 mgd	approx. 160,000
Palmdale	12 mgd	approx. 150,000

KEY: mgd = million gallons per day.

Table 3.13.4-2, *Estimated Average Wastewater Flow Generated per Planning Area per Year,* is based on a reasonable worst-case development, if the proposed initiative were to be approved.

TABLE 3.13.4-2
ESTIMATED AVERAGE WASTEWATER FLOW GENERATED PER PLANNING AREA PER YEAR

Planning Area Population[1]	Avg. Wastewater Flow (gpd)/Planning Area[2]	Avg. Wastewater Volume (gal) Pumped/Year With Septic Only[3]
12,880	47,840	30,368

NOTES: [1] Average 3.5 people/single-family residence.
2 Average 260 gallons per day wastewater used/single-family residence.
[3] Average septic size of 1,200 gallons (size based on four- bedroom residence), pumping required every three years.

IMPACT USS-3: Require or Result in the Construction of New Storm Water Drainage Facilities or Expansion of Existing Facilities, the Construction of Which Could Cause Significant Environmental Effects?

There are no existing stormwater drainage facilities in the proposed initiative study area. The construction of up to 3,680 additional single-family residences over the 20-year planning horizon would have the potential to increase impervious surface in each of the seven subareas and result in stormwater runoff requiring stormwater drainage facilities. Stormwater drainage facilities may be needed to divert stormwater flow from the properties. During the development of each individual property, construction of storm drainage facilities would not be required. Once sufficient aggregation of developments occurs to cause erosion and/or flooding of downstream properties, the local agency may elect to construct storm drainage facilities. If new storm water drainage facilities are constructed or existing facilities are expanded to accommodate up to 3,680 new single-family homes in the proposed initiative study area, the impact to the offsite areas could cause potentially significant environmental effects. Table 3.13.4-3, *Proposed Initiative Estimated Impervious Surfaces*, depicts the potential acreage developed.

TABLE 3.13.4-3
PROPOSED INITIATIVE ESTIMATED IMPERVIOUS SURFACES

Estimated Parcels Developed over the 20-year Planning Period	Estimated Total Area of Impervious Surface (acres)
3,680	845

*Based on 10,000 square feet of impervious surface per parcel[20]

The development in areas that are not adequately served by stormwater drainage facilities is inconsistent with the goals and policies of Los Angeles County General Plan 2035.

- **Goal 1:** A coordinated, reliable, and equitable network of public facilities that preserves resources, ensures public health and safety, and keeps pace with planned development.
  - **Policy PS/F 1.1:** Discourage development in areas without adequate public services and facilities.
  - **Policy PS/F 1.2:** Ensure that adequate services and facilities are provided in conjunction with development through phasing or other mechanisms.
  - **Policy PS/F 1.3:** Ensure coordinated service provision through collaboration between County departments and service providers.

LA County's LID Standards Manual requires developments to manage stormwater runoff. Developments are categorized as Designated or Non-Designated. The single-family homes proposed to be developed in the proposed initiative would be categorized as Small-Scale Non-Designated Projects based on the assumption that they are developed individually. Small-Scale Non-Designated Projects are required to implement at least two County-approved BMPs. The BMPs can be used to retain stormwater runoff. The County's LID ordinance has requirements on the size of the BMPs in the manual. Procedures from the County's LID Standards Manual were followed to determine the difference in the proposed initiative's pre- and post-development runoff volumes and potential pollutant loads.

The rainfall depth from Soledad Canyon, Gage 405 was used to estimate the 85th percentile storm depth for Santa Clarita Valley, and Little Gleason, Gage 1074, for East San Gabriel Mountains, per LA County's Spatial Distribution Analysis of the 85th Percentile 24-hr Rainfall. A rainfall depth of 0.75-inches was used for the Antelope Valley since it was greater than the 85th percentile storm for that area. The total runoff volume generated by a general parcel in Antelope Valley, Santa Clarita Valley, and East San Gabriel Mountains for pre- and post-development conditions as required by LA County's LID Standards Manual is listed in Table 3.6.4-1, Hydrology Results for 85th Percentile of Storm Event.

[20] County of Los Angeles Department of Public Works. February 2014. Low Impact Development Standards Manual. Available online at:
http://dpw.lacounty.gov/ldd/lib/fp/Hydrology/Low%20Impact%20Development%20Standards%20Manual.pdf

TABLE 3.13.4-4
HYDROLOGY RESULTS FOR 85TH PERCENTILE OF STORM EVENT FOR A SINGLE PARCEL

	Storm	Rainfall Depth (inches)	Time of Concentration (minutes)	Peak Flow Rate (cfs)	24-Hour Runoff Volume (AF)
Antelope Valley					
Pre-development	85th Percentile	0.75	30	0.24	0.08
Post-development			30	0.35	0.11
Santa Clarita Valley					
Pre-development	85th Percentile	0.90	30	0.28	0.09
Post-development			30	0.41	0.13
East San Gabriel Mountains					
Pre-development	85th Percentile	1.28	30	0.72	0.13
Post-development			30	0.84	0.18

An increase of 0.04 AF of runoff would result for a typical developed parcel in Santa Clarita, and an increase in runoff of 0.03 AF is expected from a typical developed parcel in Antelope Valley. In the East San Gabriel Mountains, a runoff volume increase of 0.05 AF is expected. Each parcel is estimated to produce a slightly increased amount of runoff from the area's 85th percentile rainfall depth. Runoff from the proposed initiative would increase relative to existing baseline, ranging from 0.02 AF to 0.05 AF per parcel developed. Although implementation of BMPs, required pursuant to the County's LID Ordinance would reduce impacts, the implementation of two BMPs would not be expected to reduce impacts resulting from the increase in impervious surface from the residential use of the property to below the level of significance. Therefore, the direct, indirect, and cumulative impacts of the proposed initiative would likely contribute to need to new stormwater drainage facilities or expand existing facilities, constituting a significant impact requiring the consideration of mitigation measures.

IMPACT USS-4: Lack Sufficient Water Supplies Available to Serve the Project from Existing Entitlements and Resources or Would Require New or Expanded Entitlements?

The proposed initiative would result in significant impacts to utilities and service systems in relation to having sufficient water supplies available to serve the proposed initiative from existing entitlements and resources. Hauled water supplies are being evaluated as the primary source of potable water for new single-family residences that do not have access to private or public water distribution systems or groundwater. Based on the 2012 average single-family residence household size of 3.5 people in unincorporated Los Angeles County and a reasonable worst-case scenario of 184 building permits per year, the proposed initiative would likely result in 644 additional people per year over an estimated 20-year period, or up to 12,880 additional people total from the 3,680 single-family residences that would be expected to be developed.

The proposed initiative would obtain its water supply for eligible single family residences from licensed water haulers, who would purchase their water from retail water suppliers with a surplus supply or the haulers would act as retail water suppliers themselves. It is assumed that hauled water for the proposed initiative would not be obtained from water retailers that are projected to have a shortage in its water supplies and do not have adequate supplies to meet its demands and fire suppression requirements. The water supply for the proposed initiative would come from

multiple sources and would depend on retailers' availability of water. Contracts with surrounding water districts could potentially be developed by water haulers to include the development that could result from the proposed initiative. The impact of the new development's water demand could increase water districts' demand and would have a potential impact on the water districts' supply. Costs for water hauled longer distances would be higher. At some distance, the parcel owner's willingness to pay would not match the costs for hauling water from those distances. This study does not assess the maximum hauling distance based on a willingness to pay criteria. This study assesses the impacts of hauling water on the water supplies within proximity of the proposed initiative. The proposed initiative is expected to result in sustainable yield for renewable resources being exceeded and therefore is in conflict with Water Resource Goal COS 1: Growth and development are guided by water supply constraints, of the Antelope Valley Area Plan.[21]

Available water supplies were evaluated to determine if the worst-case development scenario would have an impact on local water supply. Due to the lack of water supply in the proposed initiative study area, water haulers for new single-family residences would obtain their water supply from potential water suppliers, such AVEK member agencies and other neighboring water suppliers. The availability of water from water purveyors was determined based on a comparison of the water demand and supply projections described in the UWMP of the water agencies located in the vicinity of the proposed initiative study area.

The estimated water demand that would result from the development of up to 3,680 single-family residences, facilitated by the allowance for use of hauled water as the primary source of potable water as a result of the proposed initiative, was calculated based 184 building permits, analyzed as Case 1 in the water supply assessment (see Appendix K).

The estimated average water use per capita used for this analysis was determined based on the surrounding water districts usage rates in 2014. The average residential gallons per capita per day (R-GPCD) water use of surrounding districts are 191 R-GPCD (see Table 3.13.2-2).

Based on the lowest expected development rate of each year, Table 3.13.4-4 presents the projected water demand over the next 20 years (see Appendix K). Water demand was calculated based on the estimated average water use per person per day and the area's average household size in 2012 of 3.5 people.

TABLE 3.13.4-4
PROJECTED WATER DEMAND FROM DEVELOPMENT (Acre-Feet per Year)

	2015	2020	2025	2030	2035
184 Building Permits Per Year	138	689	1,378	2,067	2756

[21] County of Los Angeles Department of Regional Planning. Adopted 16 June 2015. Antelope Valley Area Plan – Town & Country: A Component of the Los Angeles County General Plan. Available online at: http://planning.lacounty.gov/tnc

Supply and Demand Projections of Potential Water Purveyors for Proposed Initiative

The availability of water was determined based on a comparison of the water demand and supply projections described in the 2010 UWMPs of the water agencies nearby the proposed initiative.

For the water supply analysis, the proposed initiative development is divided into two sections based on location and underlying groundwater basin. The development north of the San Gabriel Mountains is located within the Antelope Valley and above the Antelope Valley Groundwater Basin. The majority of the development west and in the San Gabriel Mountains is located within the Santa Clarita Valley and above the Santa Clara River Basin. For the purposes of this analysis, the primary water suppliers for the development in the Antelope Valley are assumed to be the retail agencies that are supplied by AVEK and the primary water suppliers for the development in the Santa Clarita Valley are the water retailers who are supplied by the Castaic Lake Water Agency. A detailed description of the two wholesale suppliers is provided in the Water Supply, Hydrology, and Water Quality Analysis Report developed by HDR (Appendix K).

The HDR Water Supply, Hydrology, and Water Quality Analysis Report demonstrates that historical building permit data in the area suggests that by 2035, significantly less than build-out is likely to occur. In the Case 1 scenario (184 homes per year), by 2035, for the average year there would still be a surplus of 13,378 AF. For the dry year, there would be a deficit of 47,953 AF, for the multiple dry years, a deficit of 4,487 AF. During severe drought, communities and water managers must often make difficult decisions about how scarce water resources would be used. Since California is currently in the fifth consecutive year of multiple dry years, the incremental contribution deficit from the potential development of up to 184 homes per year would further complicate difficult decisions regarding how to best manage regional water supplies. For example, the amount of limited water supply to be held in reservoirs for the future, or released to satisfy immediate water needs; or, would groundwater pumping be increased to augment surface water supplies. The potential exacerbation of water supply deficits during dry year scenarios is a significant impact requiring the consideration of mitigation measures.

IMPACT USS-5: Result in a Determination by the Wastewater Treatment Provider That Serves or May Serve the Project That It Does Not Have Adequate Capacity to Serve the Project's Projected Demand in Addition to the Provider's Existing Commitments?

The proposed initiative would result in less than significant impacts in relation to a determination by the wastewater treatment provider which serves or may serve the proposed initiative that it has adequate capacity to serve the proposed initiative's projected demand, in addition to the provider's existing commitments. Table 3.13.4-1 illustrates the capacity of wastewater reclamation plants within the proposed initiative study area. The areas that are potentially eligible for development are not connected to the wastewater treatment plants via a sanitary sewer connection. However, septic fields would need to be serviced every three to five years. Based on the 2012 average single-family residence household size of 3.5 people in unincorporated Los Angeles County and a reasonable worst-case scenario of 184 building permits per year, the proposed initiative would likely result in 644 additional people per year over an estimated 20-year period of time, or up to 12,880 additional people total from the single-family residential development of up to 3,680 parcels. An estimated 11.1 million gpd of wastewater could be generated at build-out; however, if all parcels are permitted to use OWTS, only an estimated 153,639 gallons per year (gpy) of additional wastewater could potentially enter the existing wastewater treatment facilities from wastewater that would enter the system every three to five years as a result of servicing full OWTS containment.

The additional 153,639 gpy of wastewater that could potentially enter the existing water or wastewater treatment facilities would not be enough to overload the current capacity levels of the wastewater treatment facilities. Therefore, there is less than significant potential to overload the current capacity levels of the wastewater treatment facilities and require the construction of new water or wastewater treatment facilities.

IMPACT USS-6: Is Not Served by a Landfill with Sufficient Permitted Capacity to Accommodate the Project's Solid Waste Disposal Needs?

The proposed initiative would result in potentially significant impacts in relation to being served by a landfill with sufficient permitted capacity to accommodate the proposed initiative's solid waste disposal needs. Based on the 2012 average single-family residence household size of 3.5 people in unincorporated Los Angeles County and a reasonable worst-case scenario of 184 building permits per year, the proposed initiative would likely result in 644 additional people per year over an estimated 20-year period of time, or up to 12,880 additional people total from the single-family residential development of the 42,867 subject parcels. Table 3.13.2-8 depicts the remaining permitted disposal capacity of existing solid waste disposal facilities in the proposed initiative study area. Based on an average of 3.02 tons of solid waste per year per household, the development of 3,680 single family residences over the 20 year planning period would result in 222,272 tons per year of solid waste potentially entering existing landfills, based on a reasonable worst-case development scenario. Therefore, there is potential to overload the current permitted capacity levels of the landfill facilities.

IMPACT USS-7: Does Not Comply with Federal, State, and Local Statutes and Regulations Related to Solid Waste?

The proposed initiative would result in no impacts in relation to complying with federal, State, and local statues and regulation related to solid waste. Potential development within the proposed initiative study area would be required to comply with federal, State, and local statutes and regulations related to solid waste.

3.13.5 CUMULATIVE IMPACT ANALYSIS

IMPACT USS-1: Exceed Wastewater Treatment Requirements of the applicable Regional Water Quality Control Board

The proposed initiative has the potential to result in potentially significant cumulative impacts associated with utilities and service systems in relation to exceeding wastewater treatment requirements established by the State Water Resources Control Board OWTS Policy. All four of the related projects would likely be under construction over the 20-year planning horizon. Therefore, there is potential for cumulative impacts as a result of the operation of up to 3,680 OWTS over the life of the proposed initiative to compromise groundwater and public health, or result in excessive density of OWTS.

IMPACT USS-2: Require or Result in the Construction of New Water or Wastewater Treatment Facilities or Expansion of Existing Facilities, the Construction of Which Could Cause Significant Environmental Effects?

The cumulative effects of the proposed initiative are expected to be less than significant with regard to construction of new water or wastewater treatment facilities or expansion of existing facilities.

IMPACT USS-3: Require or Result in the Construction of New Storm Water Drainage Facilities or Expansion of Existing Facilities, the Construction of Which Could Cause Significant Environmental Effects?

The proposed initiative has the potential to result in potentially significant cumulative impacts associated with utilities and service systems in relation to requiring or resulting in the construction of new storm water drainage facilities or expansion of existing facilities. All four of the related projects would likely be under construction over the 20-year planning horizon. The construction of up to 3,680 additional single-family residences over the 20-year planning horizon would have the potential to increase impervious surface in each of the seven subareas, and result in additional stormwater runoff, resulting in significant cumulative impacts requiring the consideration of mitigation measures.

IMPACT USS-4: Lack Sufficient Water Supplies Available to Serve the Project from Existing Entitlements and Resources or Would Require New or Expanded Entitlements?

The proposed initiative has the potential to result in significant cumulative impacts associated with utilities and service systems in relation to having sufficient water supplies available to serve the proposed initiative from existing entitlements and resources. All four of the related projects would likely be under construction over the 20-year planning horizon. Based on the 2012 average single-family residence household size of 3.5 people in unincorporated Los Angeles County and a reasonable worst-case scenario of 184 building permits per year, the proposed initiative would likely result in 644 additional people per year over an estimated 20-year period, or up to 12,880 additional people total from the 3,680 single-family residences that would be expected to be developed. There would be sufficient water supply for the build-out of the proposed initiative by 2035 for the average weather year scenario at the Case 1 and 2 development rates (Appendix K). However, in the single-dry and multiple-dry year scenarios, there would not be sufficient water supply for the existing customers and the proposed initiative. Although mitigation measures Utilities-3 through Utilities-5 could reduce household water use by 30 percent or more, and could decrease the average household demand from 669 GPD to 468 GPD, this would still result in a deficit in the single- and multiple-dry year scenarios, but the deficit would be lower.

IMPACT USS-5: Result in a Determination by the Wastewater Treatment Provider that Serves or May Serve the Project That It Does Not Have Adequate Capacity to Serve the Project's Projected Demand in Addition to the Provider's Existing Commitments?

The proposed initiative would not result in cumulative impacts with regard to resulting in a determination by the wastewater treatment provider that serves or may serve the proposed initiative that it does not have adequate capacity to serve the proposed initiative's projected demand in addition to the provider's existing commitments.

IMPACT USS-6: Is Not Served by a Landfill with Sufficient Permitted Capacity to Accommodate the Project's Solid Waste Disposal Needs?

The proposed initiative may result in significant cumulative impacts with regard to being served by a landfill with sufficient permitted capacity to accommodate the proposed initiative's solid waste disposal needs. All four of the related projects would likely be under construction over the 20-year planning horizon. As a result of the proposed initiative, there is the potential for 222,272 tons per year of solid waste entering existing landfills, based on a reasonable worst-case development scenario of 3,680 building permits over the 20-year planning period. Therefore, there is potential for cumulative impacts as a result of the potential to overload the current permitted capacity levels of the landfill facilities.

IMPACT USS-7: Does Not Comply with Federal, State, and Local Statutes and Regulations Related to Solid Waste?

The proposed initiative would not result in cumulative impacts with regard to compliance with federal, state, and local statues and regulations related to solid waste.

3.13.6 MITIGATION MEASURES

The proposed initiative would result in significant impacts to utilities, including potential cumulative flood risk impacts, requiring the consideration of mitigation measures.

IMPACT USS-1: Exceed Wastewater Treatment Requirements of the applicable Regional Water Quality Control Board?

MM-USS-1: To mitigate potential impacts to existing potable water sources, including groundwater resources, in the proposed initiative study area from development of single-family homes where an established water purveyor or groundwater well cannot feasibly serve as the primary source of potable water, the County would provide notification during the plan check review process to property owners seeking permits for a single-family residence where hauled water would be used as the primary source of potable water, of the need to obtain a "will-serve" letter from an established water purveyor. To obtain a will-serve letter, a property owner would provide improvement plans prepared in accordance with the provisions of the County's Building Permit Application process, and any fee for plan review and forms that may be applicable for review.

IMPACT USS-2: Require or Result in the Construction of New Water or Wastewater Treatment Facilities or Expansion of Existing Facilities, the Construction of Which Could Cause Significant Environmental Effects?

The consideration of mitigation measures is not required.

IMPACT USS-3: Require or Result in the Construction of New Storm Water Drainage Facilities or Expansion of Existing Facilities, the Construction of Which Could Cause Significant Environmental Effects?

No feasible mitigation measures were identified.

IMPACT USS-4: Lack Sufficient Water Supplies Available to Serve the Project from Existing Entitlements and Resources or Would Require New or Expanded Entitlements?

No feasible mitigation measures were identified.

IMPACT USS-5: Result in a Determination by the Wastewater Treatment Provider That Serves or May Serve the Project That It Does Not Have Adequate Capacity to Serve the Project's Projected Demand in Addition to the Provider's Existing Commitments?

The consideration of mitigation measures is not required.

IMPACT USS-6: Is Not Served by a Landfill with Sufficient Permitted Capacity to Accommodate the Project's Solid Waste Disposal Needs?

No feasible mitigation measures were identified.

IMPACT USS-7: Does Not Comply with Federal, State, and Local Statutes and Regulations Related to Solid Waste?

The consideration of mitigation measures is not required.

3.13.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

IMPACT USS-1: Exceed Wastewater Treatment Requirements of the applicable Regional Water Quality Control Board?

The proposed initiative has the potential to result in significant impacts associated with utilities and service systems in relation to exceeding wastewater treatment requirements established by the State Water Resources Control Board OWTS Policy. **MM-USS-1** would reduce some of the impacts from OWTS. However, there is potential for the operation of up to 3,680 OWTS over the 20-year planning horizon to compromise groundwater and public health, or result in excessive density of OWTS. Impacts would remain **significant and unavoidable**.

IMPACT USS-2: Require or Result in the Construction of New Water or Wastewater Treatment Facilities or Expansion of Existing Facilities, the Construction of Which Could Cause Significant Environmental Effects?

The proposed initiative would result in less than significant impacts in relation to the construction of new water or wastewater treatment facilities or expansion of facilities. Based on the 2012 average single-family residence household size of 3.5 people in unincorporated Los Angeles County and a reasonable worst-case scenario of 184 building permits per year, the proposed initiative would likely result in 644 additional people per year over an estimated 20-year period, or up to 12,880 additional people total from the single-family residential development of the 42,867 subject parcels. An estimated 30,368 gallons per year (gpy) (approximately 0.00008 mgd) of additional wastewater could potentially enter the existing wastewater treatment facilities. Therefore, there is no potential to overload the current capacity levels of the wastewater treatment facilities, and the construction of new water or wastewater treatment facilities would not be required and impacts would be **less than significant**.

IMPACT USS-3: Require or Result in the Construction of New Storm Water Drainage Facilities or Expansion of Existing Facilities, the Construction of Which Could Cause Significant Environmental Effects?

The construction of new storm water drainage facilities or expansion of existing facilities to accommodate up to 3,680 new single-family homes in the proposed initiative study would be expected to affect off-site areas, which could cause potentially significant environmental effects. The construction of up to 3,680 additional single-family residences over the 20-year planning horizon would have the potential to increase impervious surface by approximately 845 acres. This would likely result in stormwater runoff requiring stormwater drainage systems. During the development of each individual property, construction of storm drainage facilities would not be required. Once sufficient aggregation of developments occurs to cause erosion and/or flooding of downstream properties, the local agency may elect to construct storm drainage facilities. If new storm water drainage facilities are constructed or existing facilities are expanded to accommodate up to 3,680 new single-family homes in the proposed initiative study area, the impact to the offsite areas could cause potentially significant environmental effects.

As part of the County of Los Angeles Department of Public Works, Building and Safety Division plan check and agency referral process, and the Department of Regional Planning Site Plan Review Application, property owners that have been determined to be eligible to develop properties using hauled water as the primary source of potable water would be notified of the requirement to comply with the County's LID ordinance, requiring the property owner to maintain 200 gallons of infiltration by use of the LID BMPs (please see EIR Appendix C, *Regulatory Measures*).

Although implementation of BMPs, required pursuant to the County's LID Ordinance, would reduce impacts, the implementation of two BMPs would not be expected to reduce impacts resulting from the increase in impervious surface from the residential use of the property and other related projects in the region to below the level of significance. Therefore, the direct, indirect and cumulative impacts of the proposed initiative would likely contribute to need to new stormwater drainage facilities or expand existing facilities, and impacts would be **significant and unavoidable**.

IMPACT USS-4: Lack Sufficient Water Supplies Available to Serve the Project from Existing Entitlements and Resources or Would Require New or Expanded Entitlements?

The proposed initiative would result in potentially significant impacts to utilities and service systems in relation to having sufficient water supplies available to serve the proposed initiative from existing entitlements and resources. Based on the 2012 average single-family residence household size of 3.5 people in unincorporated Los Angeles County and a reasonable worst-case scenario of 184 building permits per year, the proposed initiative would likely result in 644 additional people per year over an estimated 20-year period, or up to 12,880 additional people total from the 3,680 single-family residences that would be expected to be developed. There would be sufficient water supply for the build-out of the proposed initiative by 2035 for the average weather year scenario at the Case 1 and 2 development rates (Appendix K). However, in the single-dry and multiple-dry year scenarios, there would not be sufficient water supply for the existing customers and the proposed initiative; therefore, impacts would remain **significant and unavoidable**.

IMPACT USS-5: Result in a Determination by the Wastewater Treatment Provider That Serves or May Serve the Project That It Does Not Have Adequate Capacity to Serve the Project's Projected Demand in Addition to the Provider's Existing Commitments?

The consideration of mitigation measures is not required, and impacts would be **less than significant**.

IMPACT USS-6: Is Not Served by a Landfill with Sufficient Permitted Capacity to Accommodate the Project's Solid Waste Disposal Needs?

The proposed initiative would result in potentially significant impacts in relation to being served by a landfill with sufficient permitted capacity to accommodate the proposed initiative's solid waste disposal needs. Based on the 2012 average single-family residence household size of 3.5 people in unincorporated Los Angeles County and a reasonable worst-case scenario of 184 building permits per year, the proposed initiative would likely result in 644 additional people per year over an estimated 20-year period of time, or up to 12,880 additional people total from the single-family residential development of the 42,867 subject parcels. The development of 3,680 single family residences over the 20-year planning period would result in 222,272 tons per year of solid waste potentially entering existing landfills, based on a reasonable worst-case development scenario. Therefore, there is potential to overload the current permitted capacity levels of the landfill facilities. Impacts would remain **significant and unavoidable**.

IMPACT USS-7: Does Not Comply with Federal, State, and Local Statutes and Regulations Related to Solid Waste?

The consideration of mitigation measures is not required, and impacts would be **less than significant**.

SECTION 3.14
ENERGY

As a result of the Initial Study,[1] the County of Los Angeles (County) determined that the Single-Family Residential Hauled Water Initiative for New Development (proposed initiative) would have the potential to result in significant impacts to energy. Therefore, this issue has been carried forward for detailed analysis in this environmental impact report (EIR). This analysis was undertaken to identify opportunities to avoid, reduce, or otherwise mitigate potential significant impacts to energy and to identify potential alternatives. The analysis of energy consists of a summary of the regulatory framework that guides the decision-making process, a description of the existing conditions within the proposed initiative study area, thresholds for determining if the proposed initiative would result in significant impacts, anticipated impacts (direct, indirect, and cumulative), mitigation measures, and level of significance after mitigation.

The proposed initiative would apply to the entirety of Los Angeles County. However, the area that would be affected by the proposed initiative, as determined by the County's GIS model, consists of 42,867 parcels in the unincorporated territory of Los Angeles County (County) (Figure 2.1-1, *Proposed Initiative Study Area*).[2] The combined proposed initiative study area consists of approximately 340,461 acres or approximately 532 square miles. The evaluation of energy is based on the consideration of 42,867 parcels, zoned for single-family residential development in the unincorporated area of Los Angeles County, that, since January 2003, have not been eligible for the issuance of building permits where the property owner has not been able to demonstrate a reliable source of potable water from a public or private water purveyor or groundwater. The proposed initiative would not authorize construction of single-family residential development per se. It simply provides for the use of hauled water as an allowable source of potable water during the building permit application process where the property is not located within a public or private water district and where potable water for domestic and fire protection requirements cannot be provided by an on-site groundwater well. A review of building permit application data from 1997 through 2003, a period during which some building permits were authorized using hauled water as a source of potable water, a total of approximately 150 building permits were issued per year in the proposed initiative study area, for single- family residential development not associated with subdivision development.[3] The analysis of the proposed initiative is based on the issuance of up to 184 permits per year in the proposed initiative study area (please see Section 2.7 of this EIR for additional details).

[1] County of Los Angeles. September 2014. County of Los Angeles Single-Family Residential Hauled Water Initiative for New Development Initial Study. Prepared by: Sapphos Environmental, Inc.

[2] Assessor's Parcels Numbers for the referenced parcels are on file at the Los Angeles County Department of Regional Planning.

[3] County Building and Safety Division building permit records have been digitally tracked since 1997; records were not readily available from before 1997.

3.14.1 REGULATORY FRAMEWORK

Federal

Energy Policy Act of 1992

The Energy Policy Act (Public Law 102-486, abbreviated as EPACT92) is a U.S. government act. It was passed by Congress and set goals, created mandates, and amended utility laws to increase clean energy use and improve overall energy efficiency in the United States. EPACT92 established regulations requiring certain federal, state, and alternative fuel provider fleets to build an inventory of alternative fuel vehicles. It was amended several times in the Energy Conservation and Reauthorization Act of 1998 and in 2005 via the Energy Policy Act in 2005, which emphasized alternative fuel use and infrastructure development.

Energy Policy Act of 2005

On August 8, 2005, President George W. Bush signed the National Energy Policy Act of 2005 (Public Law 109-58) into law. This comprehensive energy legislation contains several electricity-related provisions that aim to:

- Help ensure that consumers receive electricity over a dependable, modern infrastructure
- Remove outdated obstacles to investment in electricity transmission lines
- Make electric reliability standards mandatory instead of optional
- Give federal officials the authority to site new power lines in Department of Energy (DOE)–designated national corridors in certain limited circumstances

The Renewable Fuel Standard (RFS) program was created under the Energy Policy Act (EPAct) of 2005, and established the first renewable fuel volume mandate in the United States. The program regulations were developed in collaboration with refiners, renewable fuel producers, and many other stakeholders. As required under EPAct, the original RFS program (RFS1) required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act (EISA; Public Law 110-140) was signed into law by President George W. Bush on December 19, 2007. The Act's goal is to achieve energy security in the United States by increasing renewable fuel production, improving energy efficiency and performance, protecting consumers, improving vehicle fuel economy, and promoting research on greenhouse gas capture and storage. Under the EISA, the RFS program (RFS2) was expanded in several key ways:

- EISA expanded the RFS program to include diesel, in addition to gasoline.
- EISA increased the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022.
- EISA established new categories of renewable fuel, and set separate volume requirements for each one.

- EISA required EPA to apply lifecycle greenhouse gas performance threshold standards to ensure that each category of renewable fuel emits fewer greenhouse gases than the petroleum fuel it replaces.

RFS2 lays the foundation for achieving significant reductions of greenhouse gas emissions from the use of renewable fuels, for reducing imported petroleum, and for encouraging the development and expansion of our nation's renewable fuels sector.

The EISA also includes a variety of new standards for lighting and for residential and commercial appliance equipment. The equipment includes residential refrigerators, freezers, refrigerator-freezers, metal halide lamps, and commercial walk-in coolers and freezers.

Corporate Average Fuel Economy (CAFE)

Congress first enacted CAFE in 1975 to reduce energy consumption by increasing the fuel economy of cars and light trucks. CAFE standards are fleet-wide standards that must be achieved by automakers each year, adding more fuel-efficient vehicles to the nation's roads annually.

State

Assembly Bill 1493 (2009) / Advanced Clean Cars Program

The Advanced Clean Cars Program under AB 1493 (referred to as Pavley I), requires the California Air Resources Board (CARB) to develop and adopt standards for vehicle manufacturers to reduce GHG emissions coming from passenger vehicles and light-duty trucks at a "maximum feasible and cost effective reduction" by January 1, 2005. Pavley I took effect for model years starting in 2009 to 2016 and Pavley II, which is now referred to as "LEV (Low Emission Vehicle) III GHG" will cover 2017 to 2025. Fleet average emission standards would reach 22 percent reduction by 2012 and 30 percent by 2016.

As of January 2012, CARB adopted the Advanced Clean Cars program to extend Assembly Bill (AB) 1493 through model years 2017 to 2025. This program will promote all types of clean fuel technologies such as plug-in hybrids, battery electric vehicles, compressed natural gas (CNG) vehicles, and hydrogen powered vehicles while reducing smog and saving consumers' money in fuel costs. By 2025, when the rules will be fully implemented:

- New automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.
- Environmentally superior cars will be available across the range of models, from compacts, to SUVs, pickups and minivans.
- Consumer savings on fuel costs will average $6,000 over the life of the car. The savings more than offsets the average $1,900 increase in vehicle price for the ultra-clean, high-efficiency technology.

Part 11 of the California Code of Regulations: Green Building Code

The California Green Building Standards Code, which is Part 11 of the California Code of Regulations, is commonly referred to as the CALGreen Code. The 2008 edition, the first edition of the CALGreen Code, contained only voluntary standards. The 2010 CALGreen Code is a code with mandatory requirements for state-regulated buildings and structures throughout California

beginning on January 1, 2011. The code requires building commissioning, which is a process for the verification that all building systems, such as heating and cooling equipment and lighting systems, are functioning at their maximum efficiency.

California Building Energy Efficiency Standards: 2013 Title 24, Part 6 (California Energy Code)

The Code California Energy Code (Title 24, Section 6) was created as part of the California Building Standards Code (Title 24 of the California Code of Regulations) by the California Building Standards Commission in 1978 to establish statewide building energy efficiency standards to reduce California's energy consumption. These standards include provisions applicable to all buildings, residential and nonresidential, which describe requirements for documentation and certificates that the building meets the standards. These provisions include mandatory requirements for efficiency and design of the following types of systems, equipment, and appliances:

- Air conditioning systems
- Heat pumps
- Water chillers
- Gas- and oil-fired boilers
- Cooling equipment
- Water heaters and equipment
- Pool and spa heaters and equipment
- Gas-fired equipment including furnaces and stoves/ovens
- Windows and exterior doors
- Joints and other building structure openings ("envelope")
- Insulation and cool roofs
- Lighting control devices

California's Building Energy Efficiency Standards are updated on an approximately three-year cycle as technology and methods have evolved. As a result of new law under AB 970, passed in the fall of 2000 in response to the state's electricity crisis, an emergency update of the standards went into effect in June 2001. The CEC then initiated an immediate follow-on proceeding to consider and adopt updated standards that could not be completed during the emergency proceeding. The 2013 Standards went into effect July 1, 2014. The 2016 Standards, which will go into effect on January 1, 2017, will continue to improve upon the current 2013 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings.

The 2013 Standards focus on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings, and include requirements that will enable both demand reductions during critical peak periods and future solar electric and thermal system installations.

Executive Order B-16-2012

Executive Order (EO) B-16-2012 establishes long-term targets of reaching 1.5 million zero emission vehicles (ZEVs) on California's roadways by 2025 and sets ZEV purchasing requirements for State Government fleets. EO B-16-2012 also sets a target for 2050 of a reduction of GHG emissions from the transportation sector equaling 80 percent less than 1990 levels. In February 2013, an interagency working group developed the ZEV Action Plan, which identifies specific strategies and

actions that State agencies will take to meet the milestones of the Executive Order. The ZEV Action Plan states:

> ZEVs are crucial to achieving the state's 2050 greenhouse gas goal of 80 percent emission reductions below 1990 levels, as well as meeting federal air quality standards. Achieving 1.5 million ZEVs by 2025 is essential to advance the market and put the state on a path to meet these requirements.

Local

Los Angeles County General Plan 2035

In 2006, the Board of Supervisors adopted an Energy and Environmental Program (EEP). This program helps reduce GHGs in the community and from County operations through energy conservation and other environmental programs. For example, the EEP established a reduction target of 20 percent by 2015, and implements conservation monitoring practices and water and energy shortage awareness programs for County buildings and departments.[4]

The Los Angeles County Community Action Plan (CCAP) is part of the LA County General Plan and provides strategies for reducing VMT, energy efficiency, and sustainable design to reduce GHG emissions within the unincorporated areas of Los Angeles County.[5] Further information on green programs in Los Angeles County is described at http://green.lacounty.gov/wps/portal/green.

2012 Santa Clarita Valley Area Plan

The Castaic/Santa Clarita/Agua Dulce subarea (10 percent of the area potentially affected by the proposed initiative) is located within the Planning Area of the Santa Clarita Valley Area Plan, which includes the entire Santa Clarita Valley.[6] Relevant objectives and policies stated in the Santa Clarita Valley Area Plan include:

- **Goal CO-8: Greenhouse Gas Reduction** Development designed to improve energy efficiency, reduce energy and natural resource consumption, and reduce emissions of greenhouse gases. (Guiding Principle #11)
  - **Objective CO-8.3**: Encourage green building and sustainable development practices on private development projects, to the extent reasonable and feasible.
    - **Policy CO-8.3.1:** Evaluate development proposals for consistency with the ordinances developed through the County's Green Building Program.

[4] Los Angeles County Department of Regional Planning. Adopted 6 October 2015. Los Angeles County General Plan 2035: Chapter 8: Air Quality Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch8.pdf

[5] Los Angeles County Department of Regional Planning. Adopted 6 October 2015. Los Angeles County General Plan 2035: Chapter 8: Air Quality Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch8.pdf

[6] Los Angeles County Department of Regional Planning. 2012. Santa Clarita Valley Area Plan. Available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf

- **Policy CO-8.3.2:** Promote construction of energy efficient buildings through the certification requirements of the ordinances developed through the County's Green Building Program.
- **Policy CO-8.3.3:** Promote energy efficiency and water conservation upgrades to existing non-residential buildings at the time of major remodel or additions.
- **Policy CO-8.3.4:** Encourage new residential development to include on-site solar photovoltaic systems, or pre-wiring, in at least 50% of the residential units, in concert with other significant energy conservation efforts.
- **Policy CO-8.3.6:** Require new development to use passive solar heating and cooling techniques in building design and construction, which may include but are not be limited to building orientation, clerestory windows, skylights, placement and type of windows, overhangs to shade doors and windows, and use of light colored roofs, shade trees, and paving materials.
- **Policy CO-8.3.7:** Encourage the use of trees and landscaping to reduce heating and cooling energy loads, through shading of buildings and parking lots.
- **Policy CO-8.3.8:** Encourage energy-conserving heating and cooling systems and appliances, and energy-efficiency in windows and insulation, in all new construction.
- **Policy CO-8.3.10**: Provide incentives and technical assistance for installation of energy-efficient improvements in existing and new buildings.
- **Policy CO-8.3.12**: Reduce extensive heat gain from paved surfaces through development standards wherever feasible.

3.14.2 EXISTING CONDITIONS

Energy

In 2013, the total energy usage for the State of California was 7,684 trillion Btu (British thermal units),[7] a reduction from the 8,492 trillion Btu in 2007.[8] Of that, 2,908 trillion Btu was consumed by transportation sector uses and 1,480 trillion Btu was consumed by uses in the residential sector.[9] Despite this decrease in overall use, resulting in California ranking 49th in energy consumption per capita in 2013 among the 50 states, overall the state ranked second in the nation for energy use. The most relevant sources of energy for the proposed initiative would be electricity, natural gas, and gasoline for residential energy use and vehicle trips generated by increased transportation needs and hauled water trips.

[7] U.S. Energy Information Administration. n.d. California State Profile and Energy Estimates. Available online at: http://www.eia.gov/state/data.cfm?sid=CA#ConsumptionExpenditures

[8] U.S. Energy Information Administration. n.d. California State Profile and Energy Estimates. Available online at: http://www.eia.gov/state/data.cfm?sid=CA#ConsumptionExpenditures

[9] U.S. Energy Information Administration. n.d. California State Profile and Energy Estimates. Available online at: http://www.eia.gov/state/data.cfm?sid=CA#ConsumptionExpenditures

Electricity

The mild climate in much of California leads to less reliance on electricity for air-conditioning and heating than the rest of the country, which has allowed California to rank among the lowest energy consumers per capita in the nation.[10] In 2011, California generated more than 200,000 gigawatt-hours of electricity in state and transported it to consumers over 32,000 miles of transmission lines.[11] This production and distribution of power from plants in the state meets about 70 percent of the electricity demand in California. The remainder is imported from the Pacific Northwest and Southwest regions of the United States. Natural gas has remained the main source for electricity generation, at 45 percent of the total in-state electric generation system power.[12]

Natural Gas

In California, natural gas is used for residential, commercial, industrial and electric power generation. Electricity generation is the largest user of natural gas, followed by residential uses such as space and water heating. While supply and production of natural gas in the United States has increased greatly since 2008, California is not a large producer. In fact, California imports 90 percent of its natural gas via interstate pipelines, making it highly susceptible to disruptions and fluctuations in supply.[13]

Gasoline

In 2006, Californians consumed an estimated 20 billion gallons of gasoline and diesel fuel on the state's roadways, an increase of nearly 50 percent over the last 20 years.[14] According to the U.S. Energy Information Administration, in 2012 the transportation sector accounted for 37.9 percent of energy consumption in California.[15] This continuous demand for fuel has persisted for several reasons including population growth and more on-road vehicles, low per-mile cost of gasoline use during the past two decades and land use planning that places jobs and housing farther apart without transportation integration.[16]

Renewables

California's energy policy has determined a preferred order of meeting energy demands by listing energy efficiency and demand response as the top priority, followed by renewable resources and finally clean and efficient natural gas-fired power plants. Under the Renewables Portfolio Standard, California set a goal to increase the amount of electricity generated from renewable energy

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[10] U.S. Energy Information Administration. 2009. Household Energy Use in California, 2009. Available online at: http://www.eia.gov/consumption/residential/reports/2009/state_briefs/pdf/CA.pdf

[11] California Energy Commission. 2015. California Electricity Statistics & Data. Available online at: http://energyalmanac.ca.gov/electricity/

[12] California Energy Commission. 2015. California Electricity Statistics & Data. Available online at: http://energyalmanac.ca.gov/electricity/

[13] California Energy Commission. 2015. California Electricity Statistics & Data. Available online at: http://energyalmanac.ca.gov/electricity/

[14] http://www.energy.ca.gov/2007publications/CEC-600-2007-011/CEC-600-2007-011-CMF.PDF

[15] U.S. Energy Information Administration. n.d. California State Profile and Energy Estimates. Available online at: http://www.eia.gov/state/?sid=CA#tabs-2

[16] See http://www.energy.ca.gov/2007publications/CEC-600-2007-011/CEC-600-2007-011-CMF.PDF

resources to 20 percent by 2010 and in 2011 legislation passed that pushed that goal to 33 percent by 2020. Currently, California's in-state renewable generation is comprised of biomass, geothermal, small hydro, wind and solar generation sites that make up approximately 17 percent of the total in-state generational output.[17]

3.14.3 THRESHOLDS OF SIGNIFICANCE

Energy Conservation

The potential for the proposed initiative to result in impacts related to energy conservation was analyzed in relation to the goals outlined Appendix F of the State CEQA Guidelines. Would the proposed initiative:

1. Decrease overall per capita energy consumption, by decreasing reliance on fossil fuels, and increased reliance on renewable energy sources?

Significant long-term operational or direct energy impacts would occur if the proposed initiative places a substantial demand on regional energy supply or requires significant additional capacity.

3.14.4 IMPACT ANALYSIS

The analysis of significant impacts to energy is based on a reasonable worst-case scenario that assumes the annual average rate of issuance of building permits over the 20-year 2015 to 2035 planning horizon would be approximately 32 per year in the Santa Clarita Valley and approximately 152 per year in the Antelope Valley for a total of 184 permits per year for both areas. The total anticipated building permits over the 20-year 2015 to 2035 planning horizon would be approximately 3,680. The reasonable worst-case scenario of approximately 3,680 single-family homes that could be expected to be constructed during the 2015 to 2035 20-year planning horizon would result in a population increase of approximately 12,880 persons based on 3.5 persons per household.

IMPACT EN-1: Energy Conservation

The proposed initiative would result in a net increase in single-family homes with a higher per capita fuel consumption related due to the fuel used to haul water, constituting a significant impact. In 2009, California households use 62 million Btu of energy per home, 31 percent less than the U.S. average.[18] Adding 184 single-family residences to the region annually (not including energy used in the construction phase), would result in an increase of 11.4 billion Btu of energy consumed annually in the state. This annual increase is less than 1 percent of the residential energy consumed annually. In addition, advances in renewable technologies and increased regulations surrounding continued use of renewables would likely reduce this number over the 20-year period of the proposed initiative. The 2016 Southern California Association of Governments (SCAG) Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS) projects an 18 percent

[17] California Energy Commission. 2015. California Electricity Statistics & Data. Available online at: http://energyalmanac.ca.gov/electricity/

[18] Energy Information Administration. 2009. Household Energy Use in California. Available online at: http://www.eia.gov/consumption/residential/reports/2009/state_briefs/pdf/CA.pdf

decrease in residential energy consumption per household from 2012 (70 million Btu) to 2040 (57 million Btu).[19]

To determine the energy impact associated with the proposed initiative, total gallons of fuel consumed daily for 2015, 2035, and an average for the 20-year period was calculated based on the SCAG RTP model and average miles per gallon (mpg) for lightweight passenger vehicles and haul trucks (Appendix M, *Traffic Impact Study*). Table 3.14.4-1 and Table 3.14.4-2 show summaries of the average daily vehicle miles traveled and gallons of fuel consumed under both 2015 and 2035 conditions for the entire SCAG model region covering six counties.

TABLE 3.14.4-1
EXISTING (2015) AVERAGE VEHICLE TRIPS AND VEHICLE MILES TRAVELED WITH FUEL USE BY GALLON

Scenario	Daily Vehicle Miles Traveled (VMT)	Avg. MPG	Gallons of Fuel Consumed Daily
Existing	428,701,000	36	11,908,361
New 3,680 single-family homes	588,000	36	16,333
Hauled water trucks	4,300	7	614
Existing plus proposed initiative	429,293,300		11,925,309

NOTE: Percentage increase in fuel use: 0.1423 percent.

TABLE 3.14.4-2
CUMULATIVE YEAR (2035) AVERAGE VEHICLE TRIPS AND VEHICLE MILES TRAVELED WITH FUEL USE BY GALLON

Scenario	Daily Vehicle Miles Traveled (VMT)	Avg. MPG	Gallons of Fuel Consumed Daily
Cumulative year	504,198,000	36	14,005,500
New 3,680 single-family homes	503,000	36	13,972
Hauled water trucks	4,300	7	614
Cumulative year plus proposed initiative	504,705,300		14,020,087

NOTE: Percentage increase in fuel use: 0.1041 percent.
SOURCE: US Department of Transportation Table 4-23: Average Fuel Efficiency of U.S. Light Duty Vehicles Oak Ridge National Laboratory. 2014 Vehicle Technologies Report.

[19] Southern California Association of Governments (SCAG). 2016. SCAG Regional Transportation Plan/Sustainable Communities Strategy Program Environmental Impact Report, Energy. Available online at: http://scagrtpscs.net/Pages/FINAL2016PEIR.aspx

Using an average of 36 mpg[20] for passenger vehicles, it was determined that 11,908,361 gallons of fuel would be consumed daily in 2015 at existing levels. An average of seven mpg[21] was used to determine fuel use for hauled water trucks, as 614 gallons daily at 2015 levels. The addition of housing from the proposed initiative would create an overall increase in fuel use of 0.1423 percent at 2015 levels for the proposed initiative area. Using the same average mpg for 2035, the daily increase in gallons of fuel including new homes under the proposed initiative was determined to be 13,972 with the hauled water trucks using 614 gallons of fuel daily. The combination of these increases in fuel use would create an overall increase in the area of 0.1041 percent daily. The total energy impact for the initiative would be an increase of 106 million to 123 million gallons of fuel over the 20-year period from 2015 to 2035.

Over the 20-year period, the additional gallons of fuel used annually would decrease slightly due to the fuel efficiency improving in vehicles. However, the proposed initiative would result in a net increase in single-family homes with a higher per capita fuel consumption related due to the fuel used to haul water, constituting a significant impact requiring the consideration of mitigation measures.

3.14.5 CUMULATIVE IMPACT ANALYSIS

IMPACT EN-1: Energy Conservation

The proposed initiative would result in a net increase in single-family homes with a higher per capita fuel consumption related due to the fuel used to haul water, constituting a significant impact. Adoption of the proposed initiative would result in the increased use of between 14,586 and 16,947 gallons of fuel daily over the next 20 years, which would be a total of between 106 million and 123 million gallons over the 20-year period, constituting a significant impact. Assuming 184 houses are added to the region annually, an additional 11.4 billion Btu of energy would be consumed for residential uses annually at current rates of consumption. Combined with the Centennial Project, which proposes 23,000 homes and a population of 70,000; the Newhall Ranch Specific plan, which proposes 20,885 residential units and a population of 73,000; the Northlake Specific Plan, which proposes 3,623 residential units and a population of 12,680; and the development of the High Desert Corridor, the cumulative impacts of the proposed initiative with regard to energy use would be significant. The direct effects of over 100 million gallons of fuel consumption to support hauled water and 11.4 billion Btu of energy from operational use of the residential structures, when combined with an additional nearly 50,000 residential units from related projects would contribute to significant direct, indirect and cumulative impacts.

3.14.6 MITIGATION MEASURES

The proposed initiative would result in significant impacts to energy, requiring the consideration of mitigation measures.

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[20] U.S. Department of Transportation. 2013. Table 4-23: Average Fuel Efficiency of U.S. Light Duty Vehicles. Available online at:
http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/national_transportation_statistics/html/table_04_23.html

[21] U.S. Department of Transportation. 2013. Table 4-23: Average Fuel Efficiency of U.S. Light Duty Vehicles. Available online at:
http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/national_transportation_statistics/html/table_04_23.html

IMPACT EN-1: Energy Conservation

No feasible mitigation measures were identified.

3.14.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

IMPACT EN-1: Energy Conservation

The direct effects of over 100 million gallons of fuel consumption to support hauled water and 11.4 billion Btu of energy from the residential structures, when combined with an additional nearly 50,000 residential units from related projects would contribute to significant direct, indirect and cumulative impacts that are **significant and unavoidable**.