Appendix F

Initial Study

SINGLE-FAMILY RESIDENTIAL HAULED WATER INITIATIVE FOR NEW DEVELOPMENT

INITIAL STUDY

Prepared for:

Los Angeles County Hauled Water Task Force
900 South Fremont Avenue, 11th Floor
Alhambra, California 91803-1331

Prepared by:

Sapphos Environmental, Inc.
430 North Halstead Street
Pasadena, California 91107

September 17, 2014

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APPENDICES

A Listed and Sensitive Species within Topographic Quadrangles and Surrounding Topographic Quadrangles Proposed Initiative Parcels
B Geology and Soils Technical Report
C Hazardous Materials Assessment

SECTION 1.0
PROJECT DESCRIPTION

1.1 PROJECT TITLE

Single-Family Residential Hauled Water Initiative for New Development

1.2 LEAD AGENCY / PROJECT SPONSOR

Los Angeles County
500 West Temple Street
Los Angeles, California 90012

1.3 CONTACT PERSON

Los Angeles County Hauled Water Task Force
Mr. Dale Sakamoto
900 South Fremont Avenue, 11th Floor
Alhambra, California 91803-1331
Telephone: (626) 458-3915
dsakamoto@dpw.lacounty.gov
Los Angeles County
Department of Public Works

1.4 LOCATION

The area that would be subject to the Single-Family Residential Hauled Water Initiative for New Development (proposed initiative) consists of 42,677 parcels in the unincorporated territory of Los Angeles County (Figure 1.4-1, *Proposed Initiative Study Area*).[1] The combined proposed initiative study area consists of approximately 285,500 acres or approximately 450 square miles.

The parcels that would be affected by the proposed initiative are located entirely within the 5th Supervisorial District in the northern one-third of the County, including areas located north and east of the San Gabriel Mountains in the Antelope Valley; areas located northeast of the City of Santa Clarita, north and south of California State Route 14; areas that are southwest of the City of Palmdale in the communities of Agua Dulce and Acton; and in the Kagel Canyon area in the Angeles National Forest. The subject parcels have been categorized into seven subareas:

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

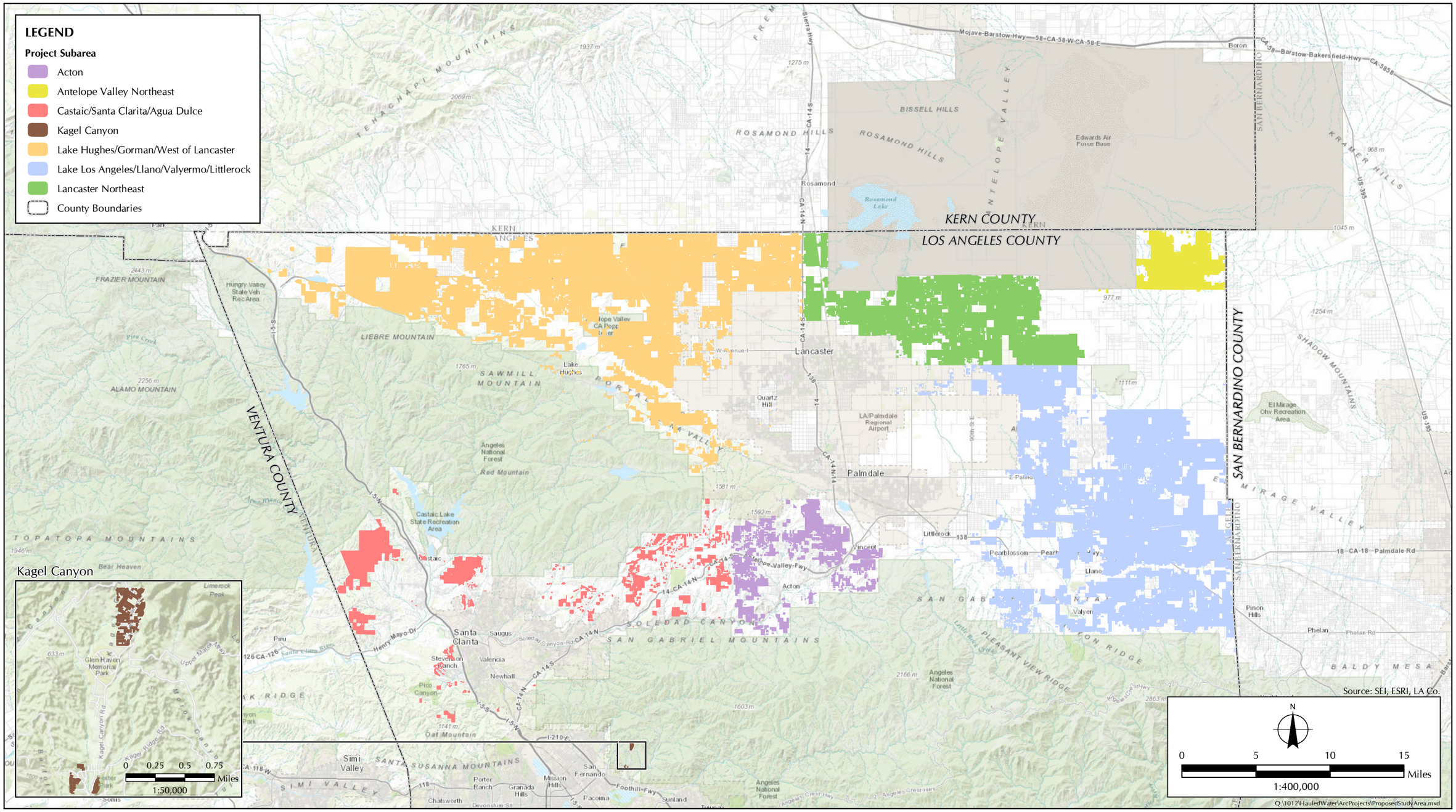

FIGURE 1.4-1

Proposed Initiative Study Area

1. **Lake Hughes/Gorman/West of Lancaster:** The Lake Hughes/Gorman/West of Lancaster subarea is located in an area generally located west of State Highway 14 and north of the Angeles National Forest. This subarea consists of 14,356 parcels and encompasses approximately 164.6 square miles (105,352.0 acres). State Highway 138 bisects the subarea in an east-west direction, and State Highway 14 forms the eastern boundary of this subarea (Figure 1.4-2, *Lake Hughes/Gorman/West of Lancaster Subarea*). This subarea is adjacent to the northwestern edge of the incorporated City of Lancaster.

2. **Lancaster Northeast:** The Lancaster Northeast subarea is located in an area generally east of State Highway 14 and north of East Avenue J. This subarea consists of 8,302 parcels and encompasses approximately 67.1 square miles (42,948.2 acres). State Highway 14 forms the western boundary and East Avenue J forms the southern boundary of this subarea. Edwards Air Force Base is located north of the study area (Figure 1.4-3, *Lancaster Northeast Subarea*). This subarea is adjacent to the northeastern edge of the incorporated City of Lancaster.

3. **Antelope Valley Northeast:** The Antelope Valley Northeast subarea is located in an area generally located north of East Avenue E and east of 165th Street East in the far northeastern portion of Los Angeles County. This subarea consists of 1,820 parcels and encompasses approximately 16.7 square miles (10,716.0 acres). This subarea is relatively isolated and is located in the northeastern area of Los Angeles County (Figure 1.4-4, *Antelope Valley Northeast Subarea*). This subarea is located approximately 10.9 miles northeast of the incorporated City of Palmdale and approximately 11.3 miles northeast of the incorporated City of Lancaster.

4. **Lake Los Angeles/Llano/Valyermo/Littlerock:** The Lake Los Angeles/Llano/ Valyermo/Littlerock subarea is located in an area generally south of East Avenue J, east of 47th Street East. This subarea consists of 14,946 parcels and encompasses approximately 154.4 square miles (98,843.3 acres). Avenue J forms the northern boundary, the Cities of Palmdale and Lancaster form the western boundary, and the San Bernardino County line forms the eastern boundary of this subarea (Figure 1.4-5, *Lake Los Angeles/Llano/Valyermo/Littlerock Subarea*). This subarea is adjacent to the eastern edge of the incorporated City of Palmdale.

5. **Acton:** The Acton subarea is located in an area generally east of Hubbard Road and West of 47th Street East. This subarea consists of 1,129 parcels and encompasses approximately 20.6 square miles (13,155.0 acres). The Angeles National Forest is located to the north and south of the subarea (Figure 1.4-6, *Acton Subarea*). This subarea is adjacent to the southwestern edge of the incorporated City of Palmdale.

6. **Castaic/Santa Clarita/Agua Dulce:** The Castaic/Santa Clarita/Agua Dulce subarea is located generally west of Hubbard Road and north of the 210 Freeway excluding Kagel Canyon. This subarea consists of 1,626 parcels and encompasses approximately 22.4 square miles (14,357.9 acres) (Figure 1.4-7, *Castaic/Santa Clarita/Agua Dulce Subarea*). This subarea is adjacent to the northern, western, and southern edges of the incorporated City of Santa Clarita and the northern edge of the incorporated City of Los Angeles.

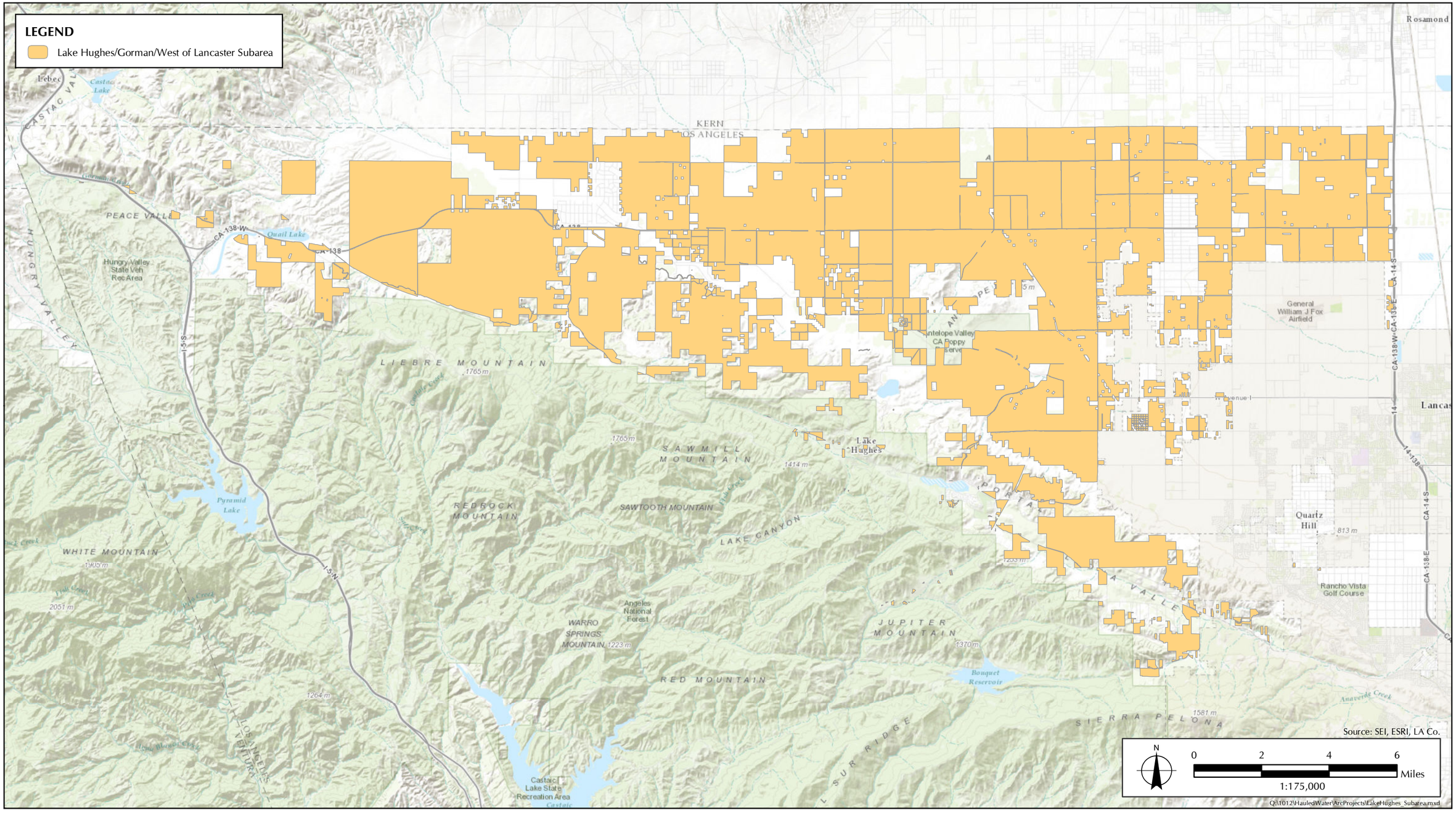

FIGURE 1.4-2

Lake Hughes/Gorman/West of Lancaster Subarea

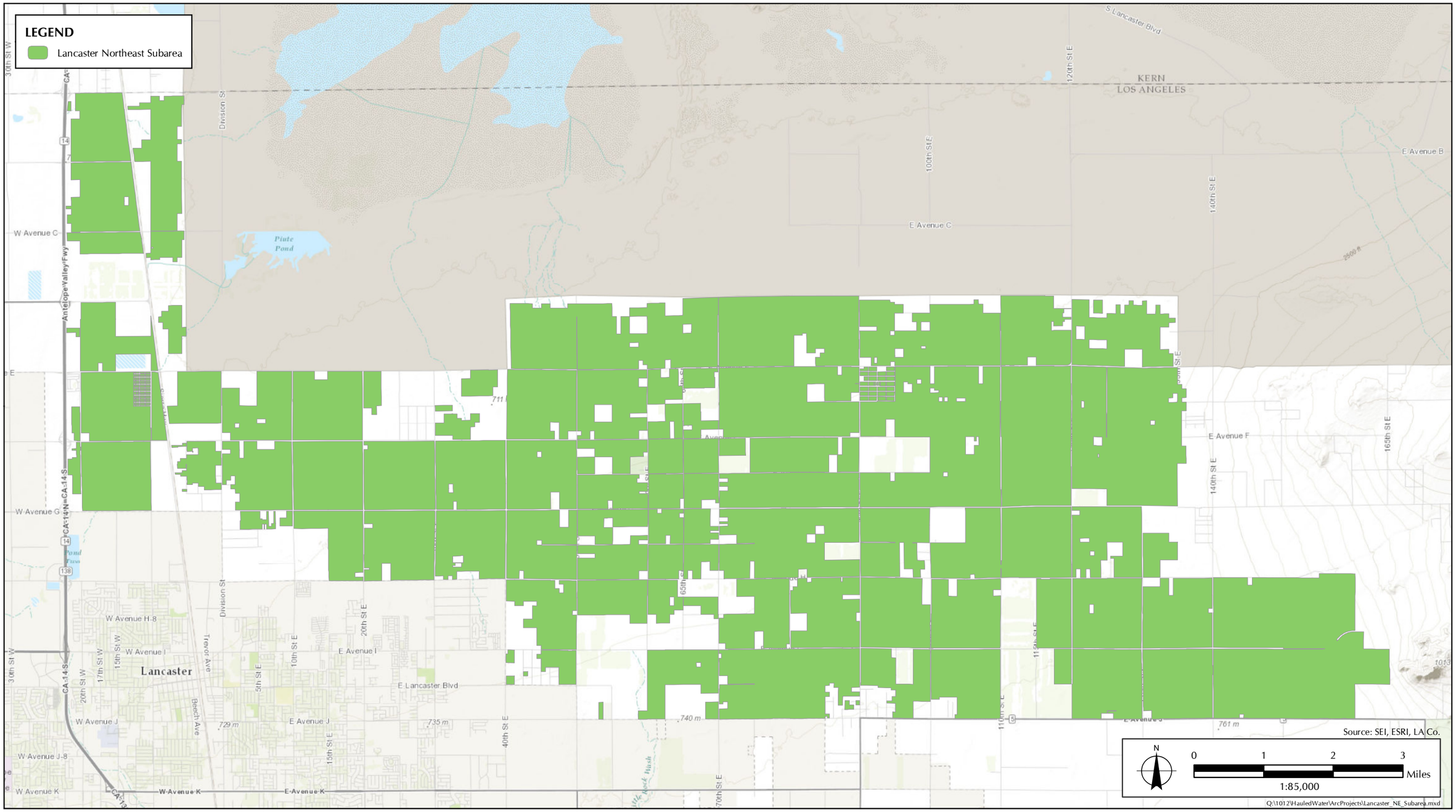

FIGURE 1.4-3

Lancaster Northeast Subarea

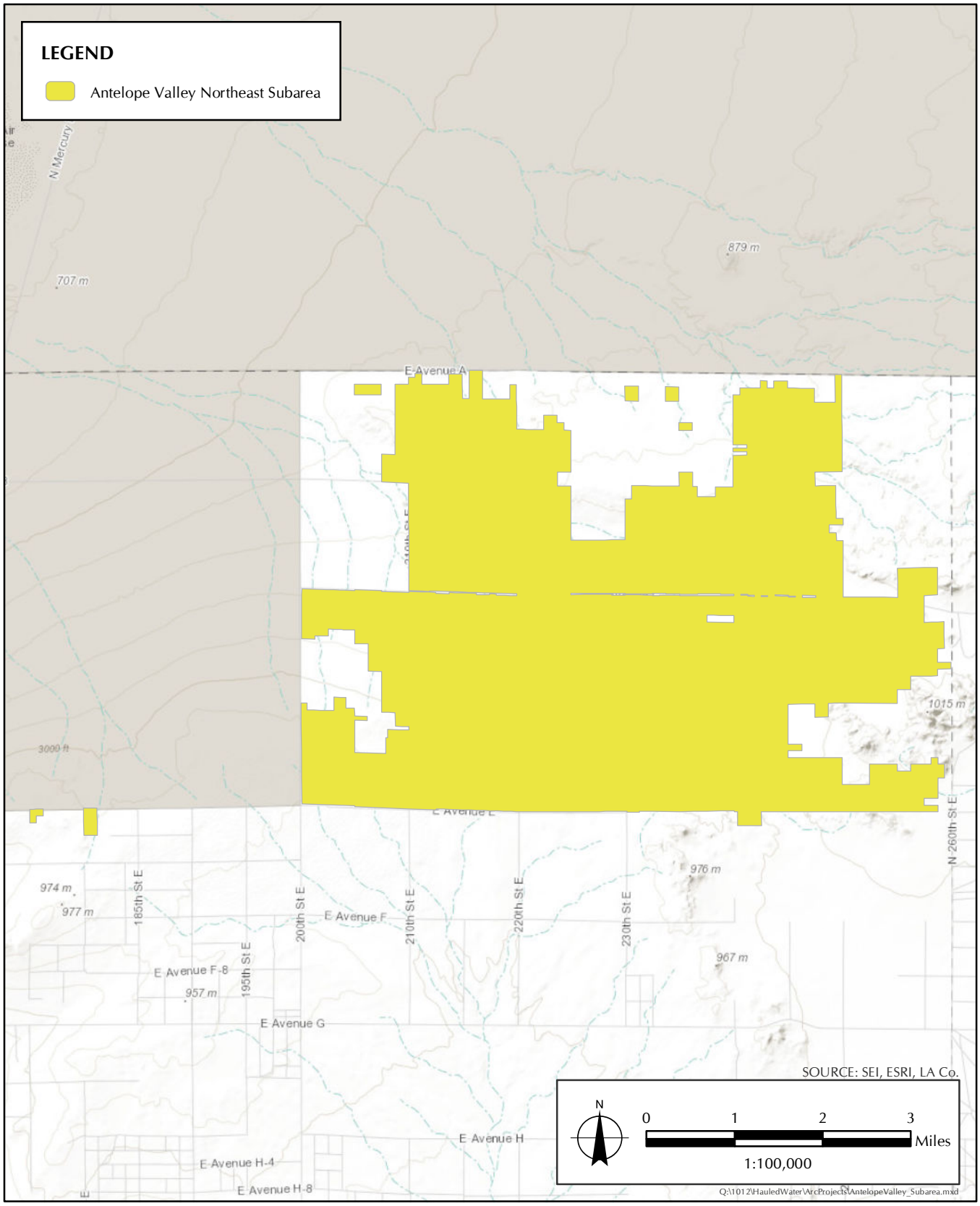

FIGURE 1.4-4

Antelope Valley Northeast Subarea

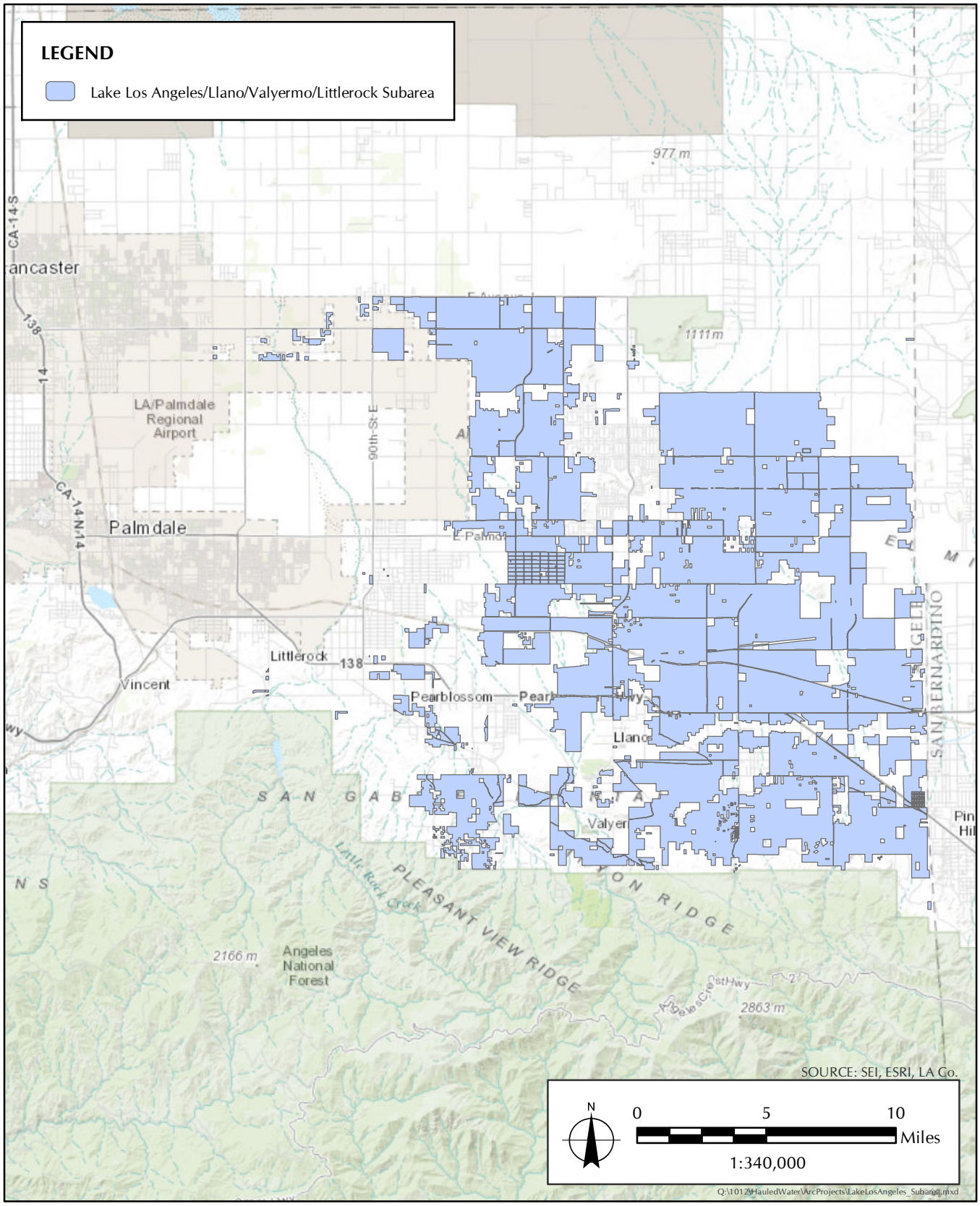

FIGURE 1.4-5

Lake Los Angeles/Llano/Valyermo/Littlerock Subarea

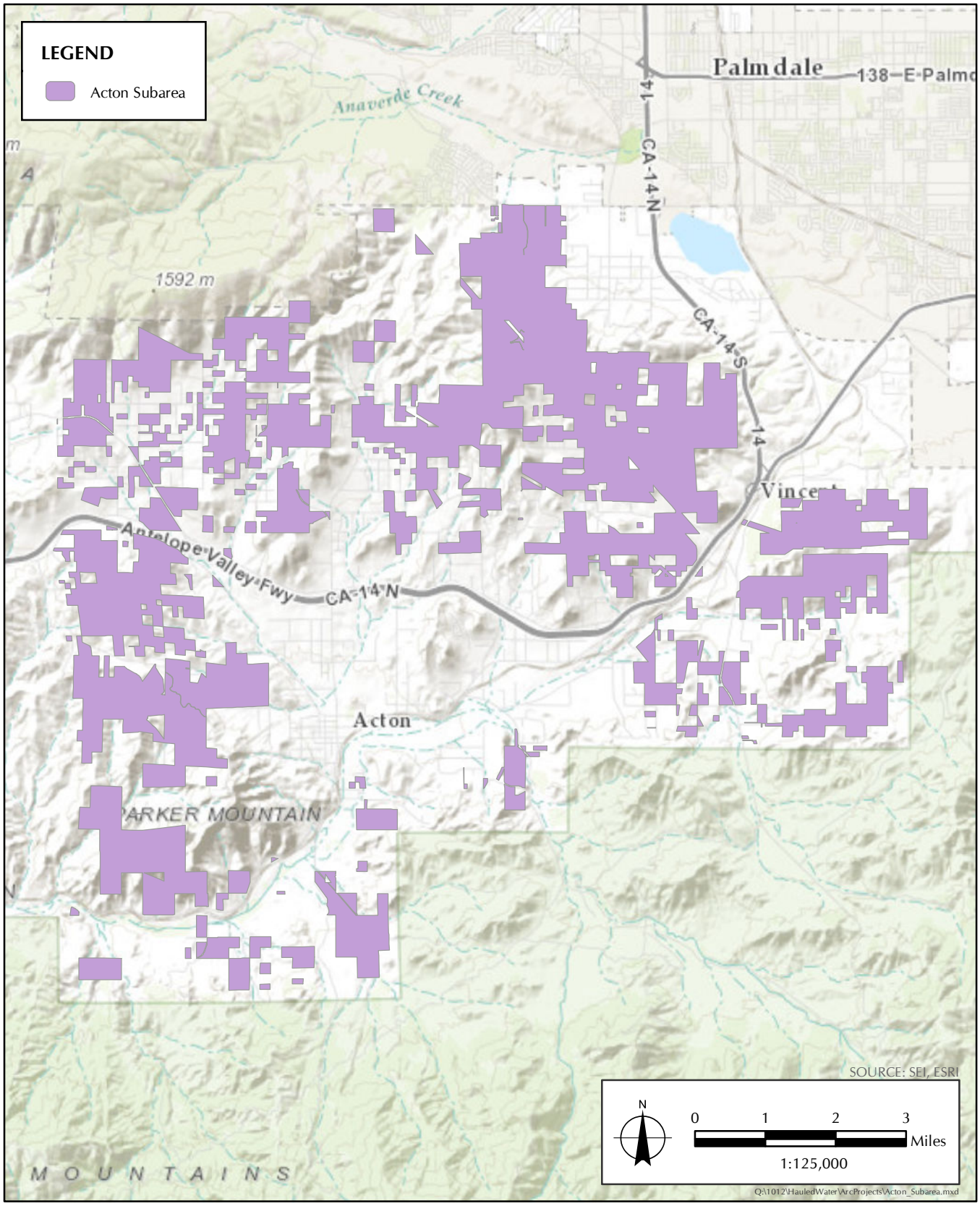

FIGURE 1.4-6

Acton Subarea

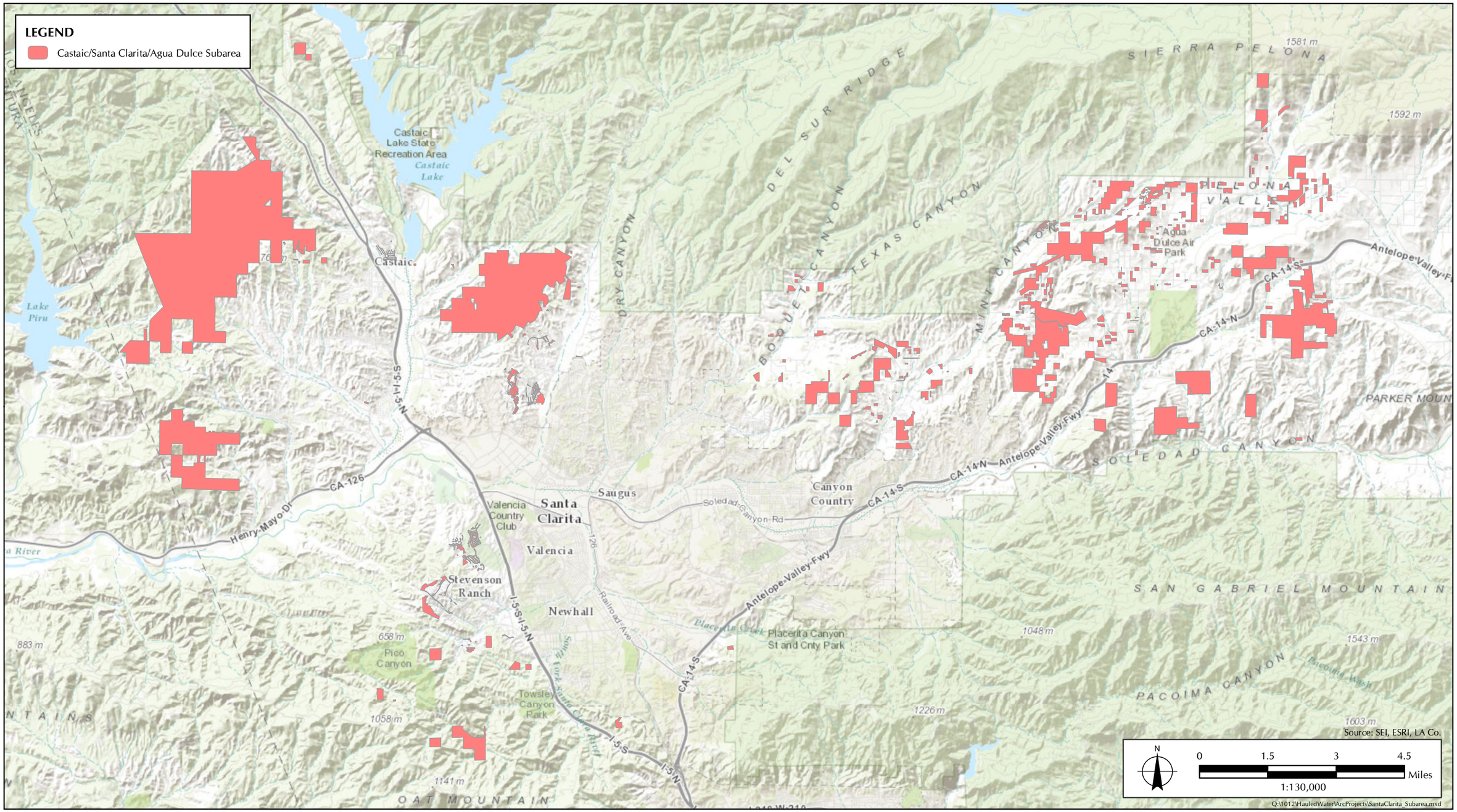

FIGURE 1.4-7

Castaic/Santa Clarita/Agua Dulce Subarea

7. **Kagel Canyon:** The Kagel Canyon subarea is the smallest of the project subareas and consists of 498 parcels surrounded by the Angeles National Forest generally located along Kagel Canyon Road north of the 210 Freeway, west of Little Tujunga Road, and east of Lopez Canyon Road. This subarea encompasses approximately 0.1 square mile (40.8 acres) (Figure 1.4-8, *Kagel Canyon Subarea*). This subarea is located approximately 0.1 mile northeast of the northern edge of the incorporated City of Los Angeles.

The proposed initiative study area is located within 42 USGS 7.5-minute quadrangle maps (Figure 1.4-9, *USGS 7.5-Minute Quadrangle Index*):

- Acton
- Adobe Mountain
- Agua Dulce
- Alpine Butte
- Black Mountain
- Burnt Peak
- Del Sur
- El Mirage
- Fairmont Butte
- Green Valley
- Hi Vista
- Jackrabbit Hill
- Juniper Hills
- La Liebre Ranch
- Lake Hughes
- Lancaster East
- Lancaster West
- Lebec
- Liebre Mountain
- Little Buttes
- Littlerock
- Lovejoy Buttes
- Mescal Creek
- Mint Canyon
- Neenach School
- Newhall
- Oat Mountain
- Pacifico Mountain
- Palmdale
- Redman
- Ritter Ridge
- Rogers Lake South
- Rosamond
- Rosamond Lake
- San Fernando
- Simi Valley East
- Sleepy Valley
- Sunland
- Val Verde
- Valyermo
- Warm Springs Mountain
- Whitaker Peak

The elevation of the overall proposed initiative study area ranges from 5,055 feet above sea level in the Valyermo area of the Lake Los Angeles/Llano/Valyermo/Littlerock subarea to 1,423 feet above sea level in the Kagel Canyon subarea (Figure 1.4-10, *Topographic Map*).

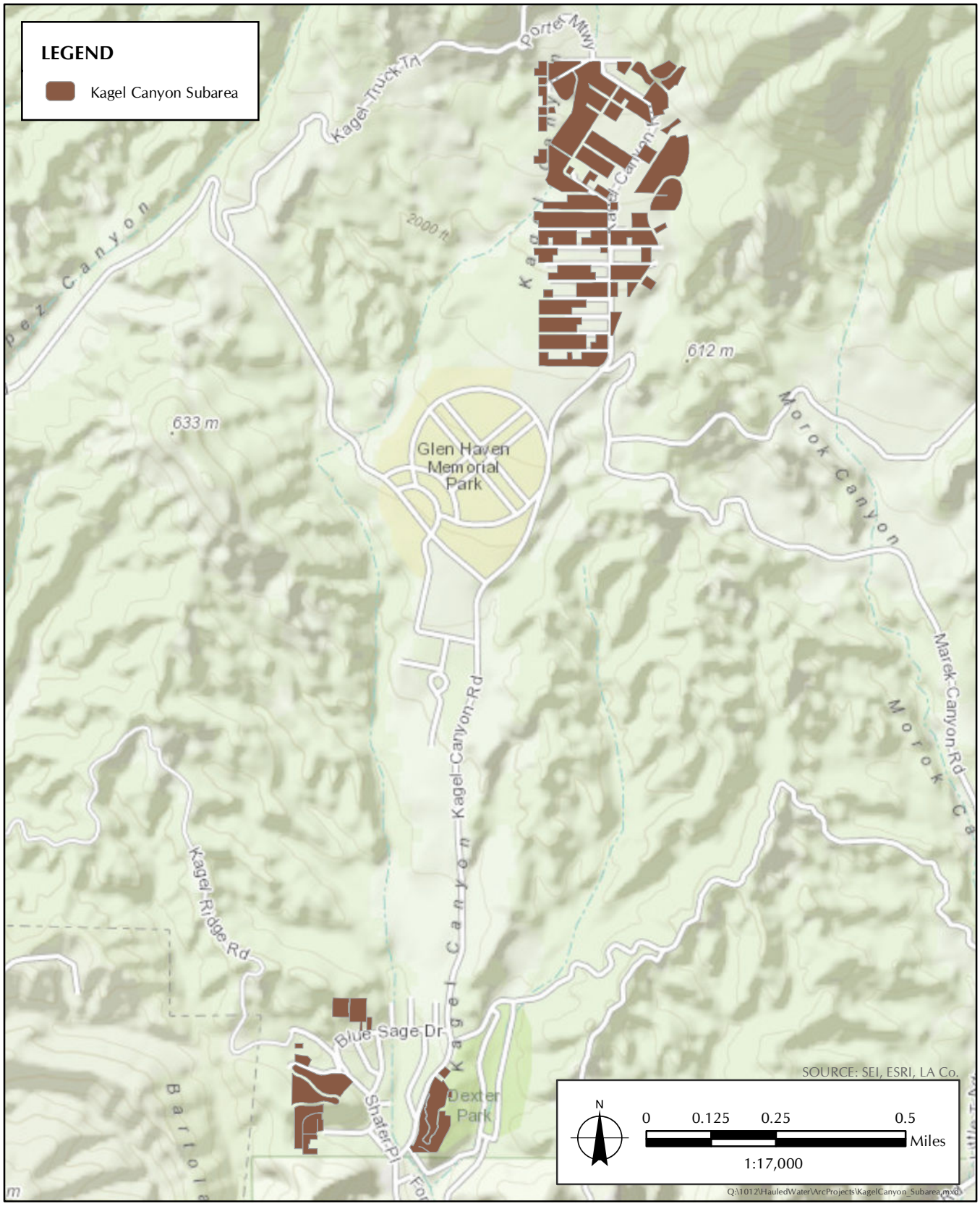

FIGURE 1.4-8

Kagel Canyon Subarea

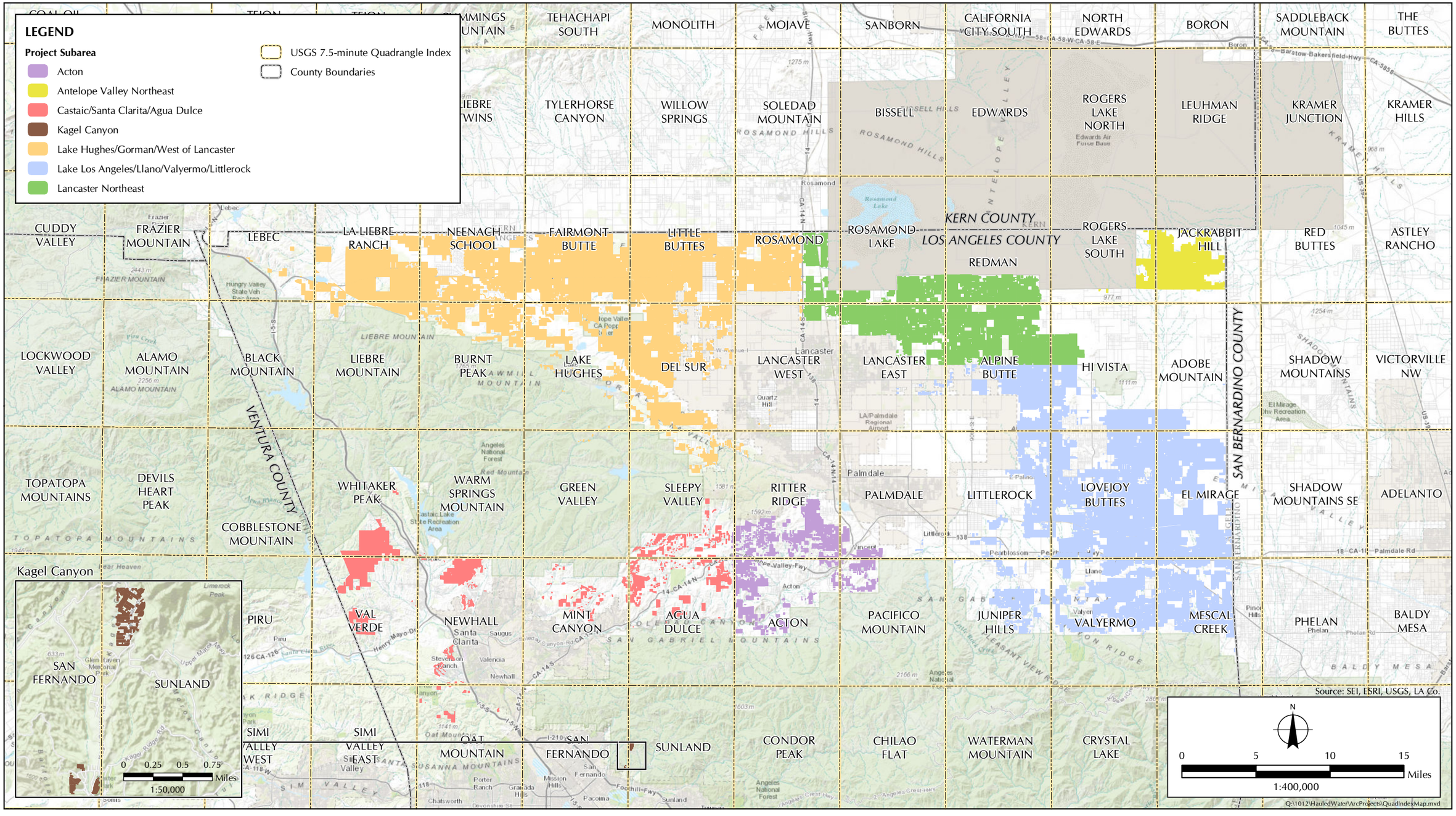

FIGURE 1.4-9

USGS 7.5-minute Quadrangle Index

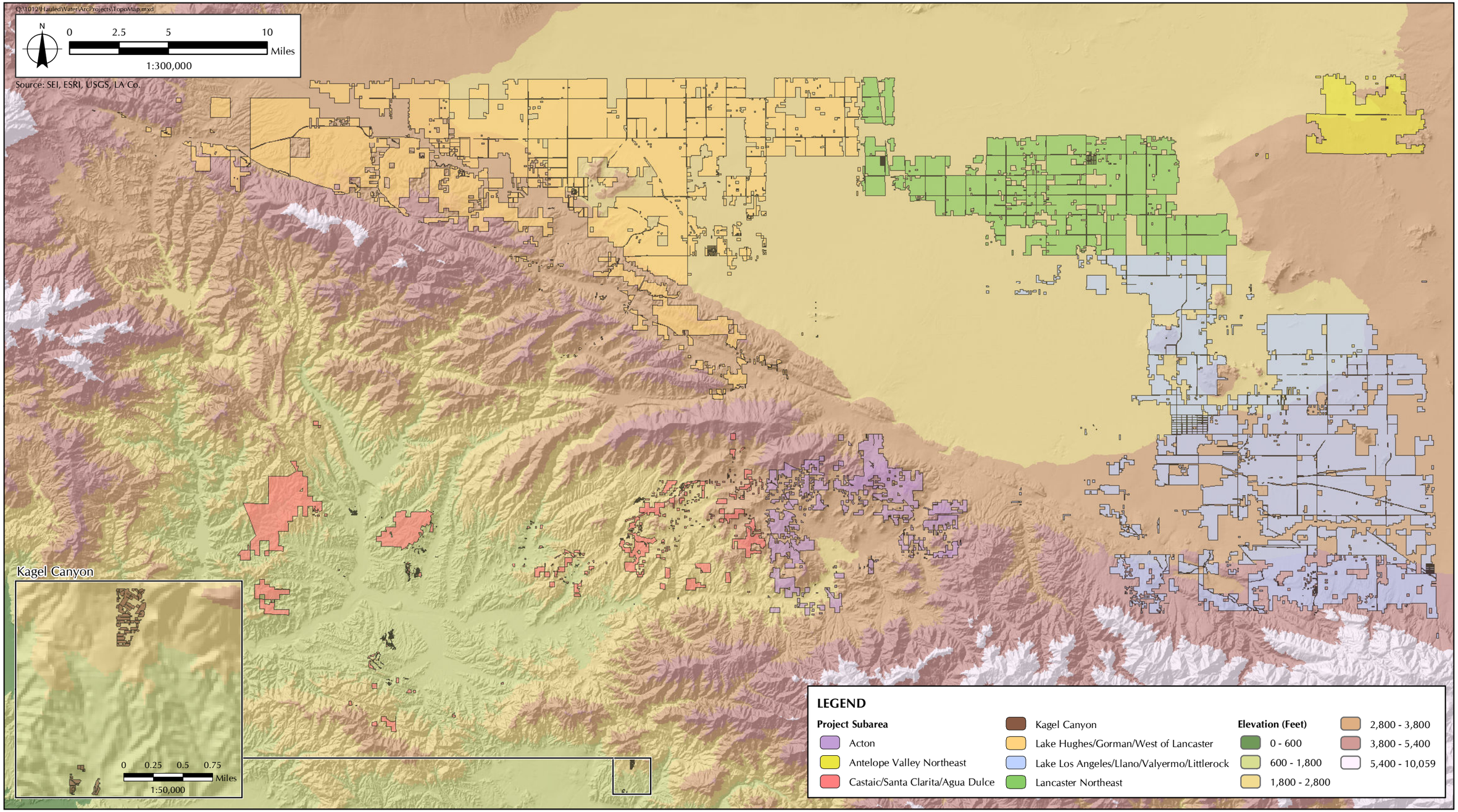

FIGURE 1.4-10

Topographic Map

1.5 GENERAL PLAN LAND USE DESIGNATION

1.5.1 Los Angeles County General Planning Areas

The seven subareas are located in two Planning Areas as designated in the adopted Land Use Element of the Los Angeles County General Plan (Figure 1.5.1-1, *Los Angeles County General Plan Planning Areas*, and Table 1.5.1-1, *Adopted Los Angeles County General Plan Planning Areas*).[2]

TABLE 1.5.1-1
ADOPTED LOS ANGELES COUNTY GENERAL PLAN PLANNING AREAS

Planning Area	Number of Subject Parcels in Planning Area	Percentage of Subject Parcels in Planning Area
Antelope Valley		
Antelope Valley Northeast	1,820	4.3
Lake Los Angeles/Llano/Valyermo/Littlerock	14,946	35.0
Lancaster Northeast	8,302	19.5
Acton	1,129	2.7
Lake Hughes/Gorman/West of Lancaster	14,356	33.6
Kagel Canyon	498	1.1
Santa Clarita Valley		
Castaic/Santa Clarita/Agua Dulce	1,626	3.8

1.5.2 Los Angeles County General Plan Land Use Designations

The 42,677 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 (Figure 1.5.2-1, *Los Angeles County Land Use Designations – Antelope Valley Areawide General Plan*, Figure 1.5.2-2, *Los Angeles County Land Use Designations – Santa Clarita Valley Area Plan*, and Table 1.5.2-1, *Adopted Los Angeles County General Plan Land Use Designations by Subarea*).

The certified 2014–2021 Housing Element of the Los Angeles County General Plan includes an Adequate Sites Inventory for the Housing Element update. The Housing Element assigned a Regional Housing Needs Assessment (RHNA) allocation of 30,145 housing units for the 2014–2021 Housing Element planning period, and the County has confirmed that none of the subject parcels considered under the proposed initiative have been identified by the Adequate Sites Inventory as vacant or underutilized sites that need to be developed in order to meet the County's RHNA allocation (Figure 1.5.2-3, *RHNA Allocation Sites*).[3,4]

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[2] Los Angeles County Department of Regional Planning. 25 November 1980. *Los Angeles County Existing Adopted General Plan, Land Use Element*. Available at: http://planning.lacounty.gov/ assets/upl/project/gp_web80-land-use.pdf

[3] Chung, Connie, Los Angeles County Department of Regional Planning, Los Angeles CA. 29 April 2014. Personal communication to Eric Charlton, Sapphos Environmental Inc., Pasadena CA.

[4] Los Angeles County Department of Regional Planning. Accessed 13 May 2014. *Los Angeles County Housing Element, 2014-2021*. Available at: http://planning.lacounty.gov/assets/upl/project/housing_element.pdf

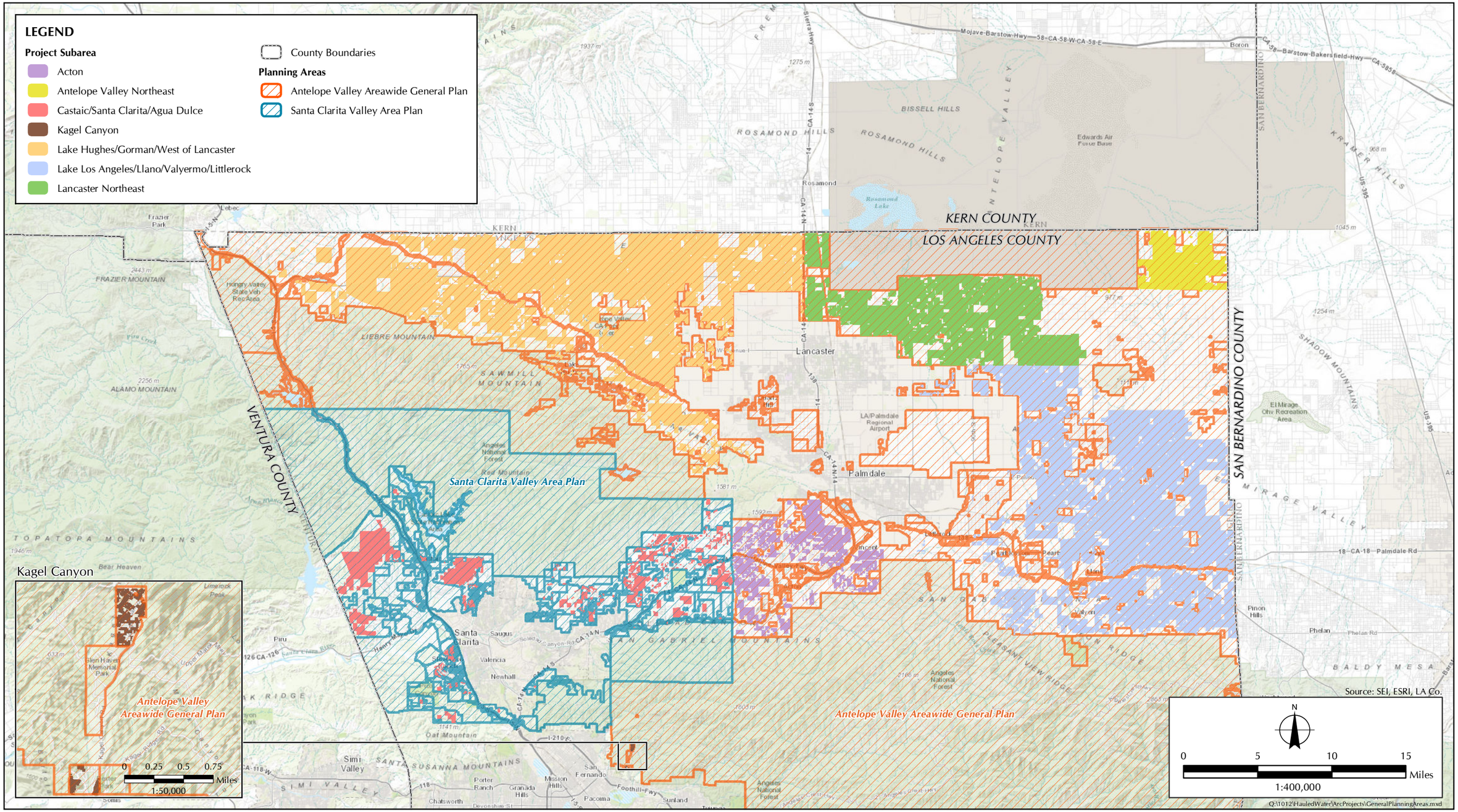

FIGURE 1.5.1-1

Los Angeles County General Plan Planning Areas

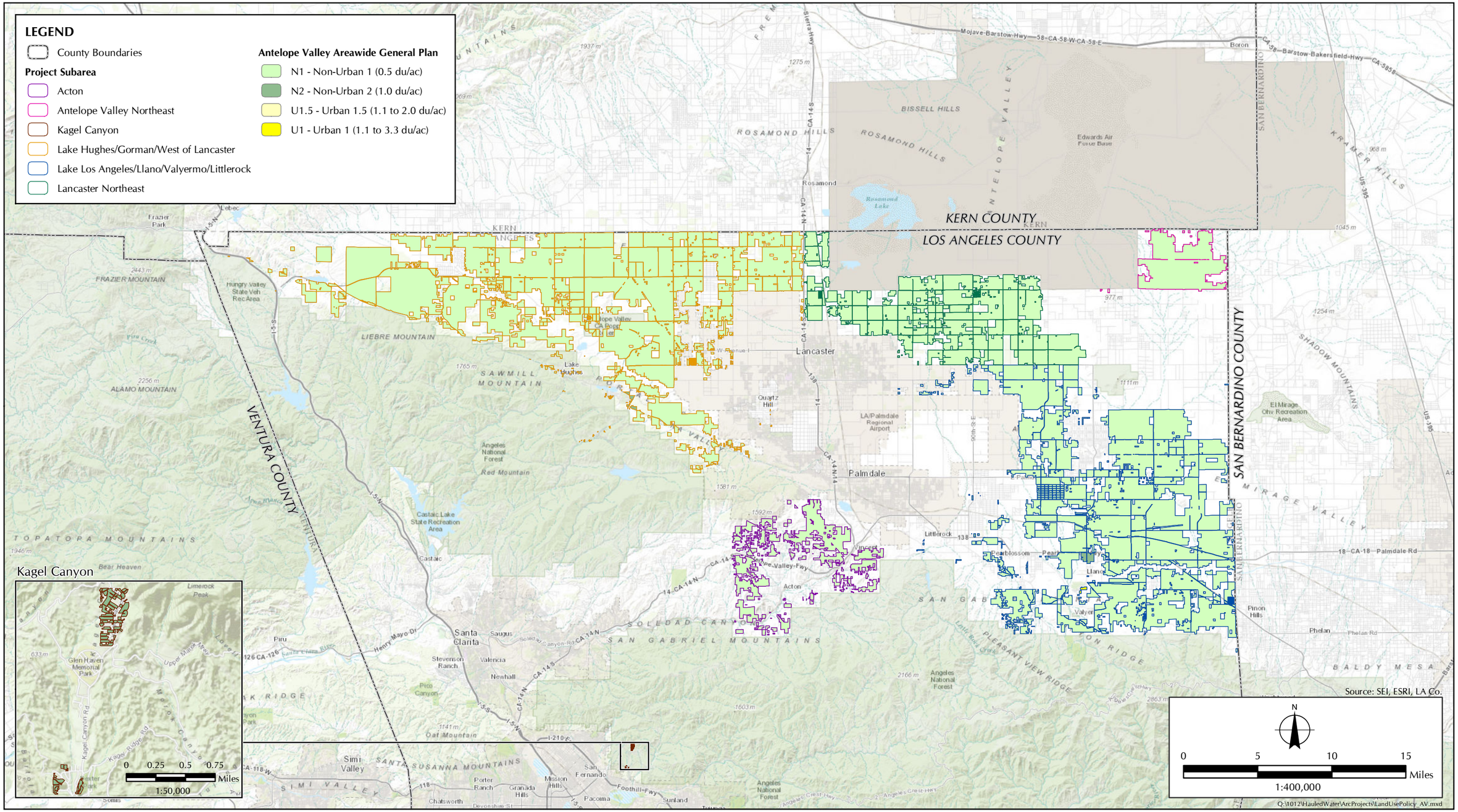

FIGURE 1.5.2-1

Los Angeles County Land Use Designations - Antelope Valley Areawide General Plan

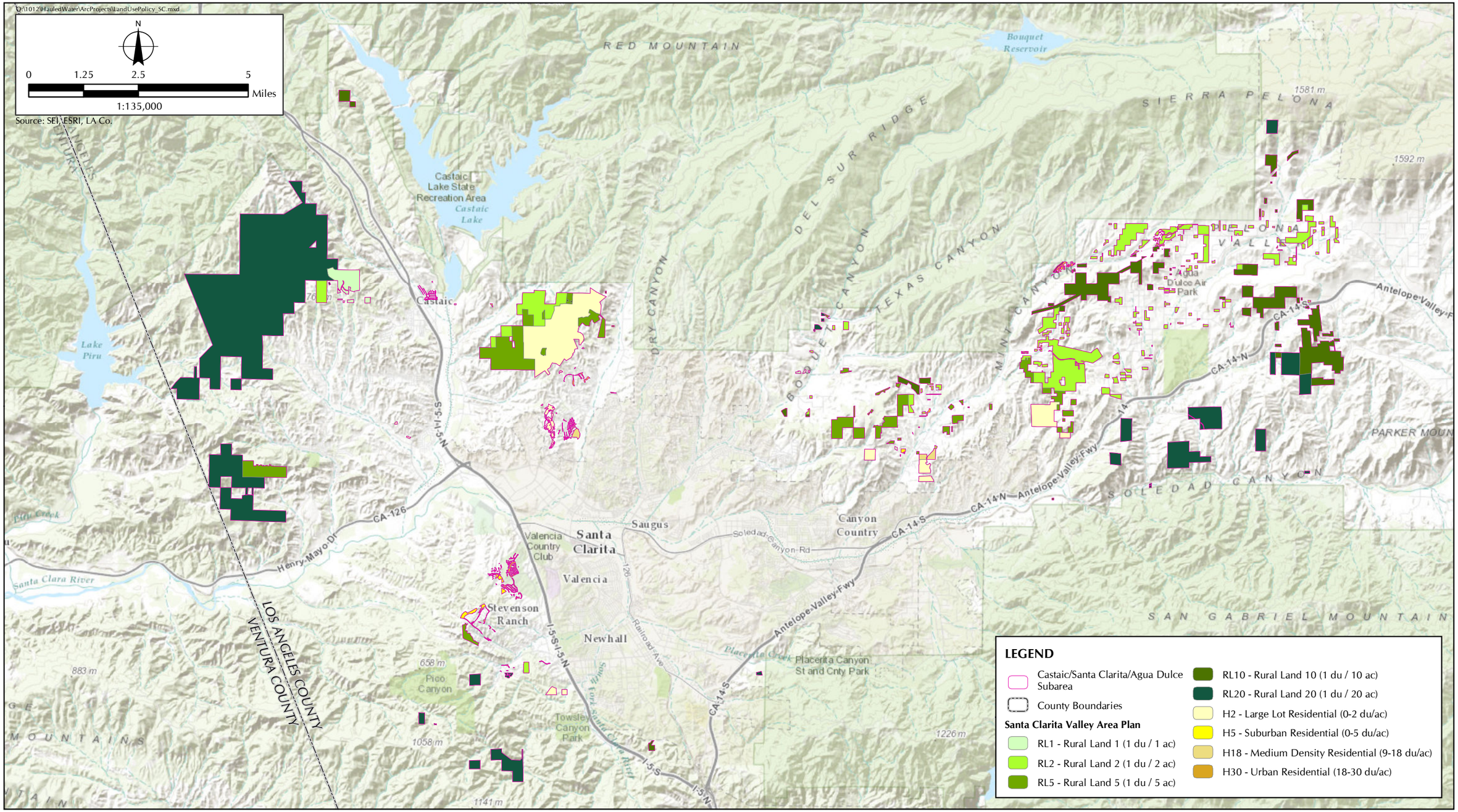

FIGURE 1.5.2-2

Los Angeles County Land Use Designations - Santa Clarita Valley Area Plan

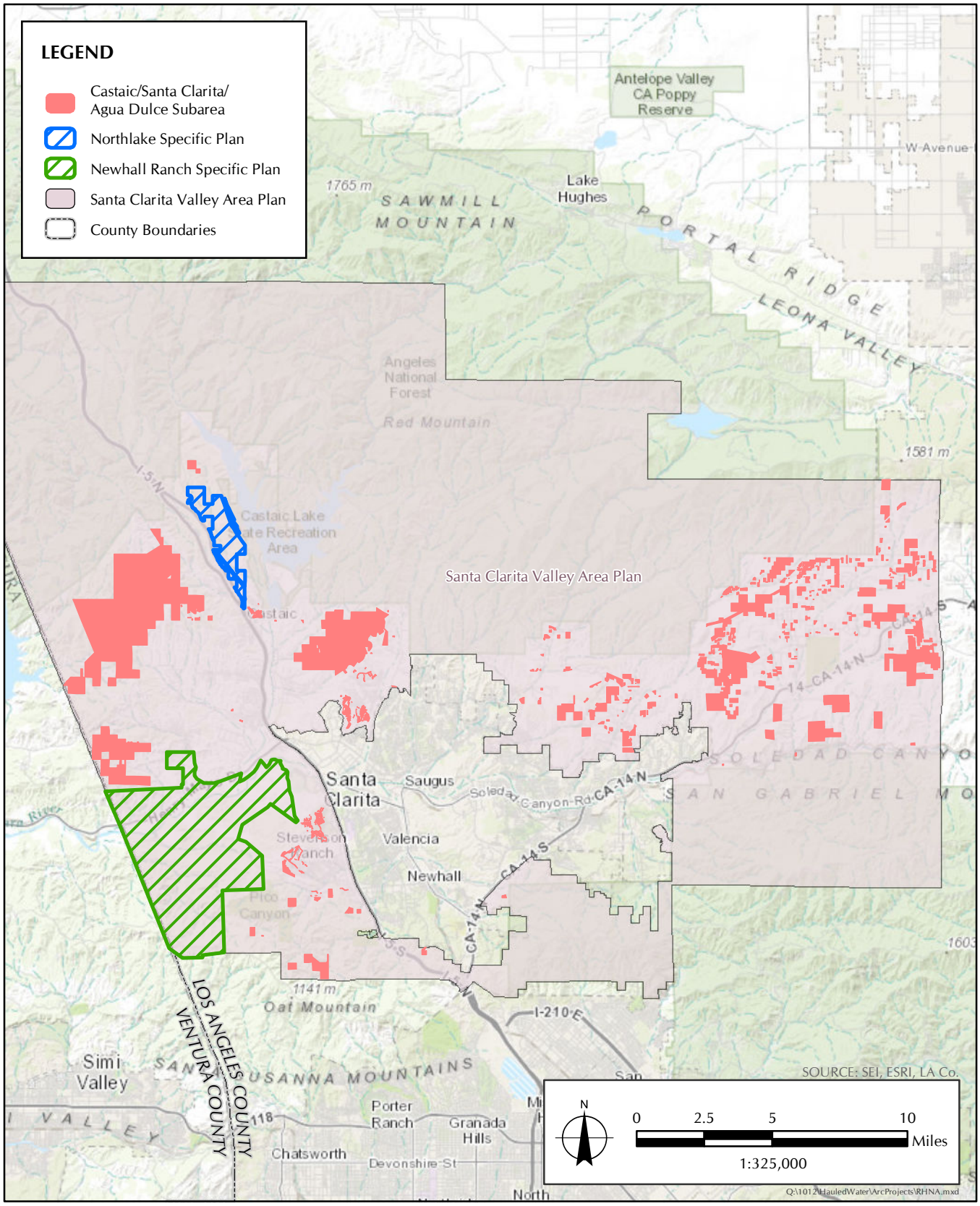

FIGURE 1.5.2-3

Regional Housing Needs Assessment Allocation Sites

TABLE 1.5.2-1
ADOPTED LOS ANGELES COUNTY GENERAL PLAN
LAND USE DESIGNATIONS BY SUBAREA

Subarea	Land Use Designation	Number of Parcels	Acres
Acton	N1 - Non-Urban 1 (0.5 du/ac)	1,129	13,155.0
Castaic/Santa Clarita/Agua Dulce	H18 - Residential 18	85	78.0
	H2 - Residential 2	250	1,490.0
	H30 - Residential 30	1	3.0
	H5 - Residential 5	256	131.0
	RL1 - Rural Land 1	52	215.0
	RL10 - Rural Land 10	215	1,769.9
	RL2 - Rural Land 2	467	2,190.9
	RL20 - Rural Land 20	155	7,055.0
	RL5 - Rural Land 5	145	1,424.7
Antelope Valley Northeast	N1 - Non-Urban 1 (0.5 du/ac)	1,820	10,716.0
Kagel Canyon	N2 - Non-Urban 2 (1.0 du/ac)	498	40.8
Lake Hughes/Gorman/West of Lancaster	N1 - Non-Urban 1 (0.5 du/ac)	14,280	105,096.4
	N2 - Non-Urban 2 (1.0 du/ac)	69	246.8
	U1 - Urban 1 (1.1 to 3.3 du/ac)	4	3.2
	U1.5 - Urban 1.5 (1.1 to 2.0 du/ac)	3	5.5
	No designated land use	1	5.0
Lake Los Angeles/Llano/Valyermo/ Littlerock	N1 - Non-Urban 1 (0.5 du/ac)	14,837	98,291.6
	N2 - Non-Urban 2 (1.0 du/ac)	105	491.8
	U1 - Urban 1 (1.1 to 3.3 du/ac)	4	59.9
Lancaster Northeast	N1 - Non-Urban 1 (0.5 du/ac)	8,295	42,925.5
	N2 - Non-Urban 2 (1.0 du/ac)	7	22.6
Total		**42,677**	**285,413.2**

1.6 ZONING

The 42,677 parcels that are the subject of the proposed initiative fall within eight zoning designations described in the Los Angeles County, California, Code of Ordinances – Title 22 Planning and Zoning[5] (Figure 1.6-1, *Zoning Designations in Proposed Initiative Subareas*, and Table 1.6-1, *Los Angeles County Zoning Designations by Subarea*).

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

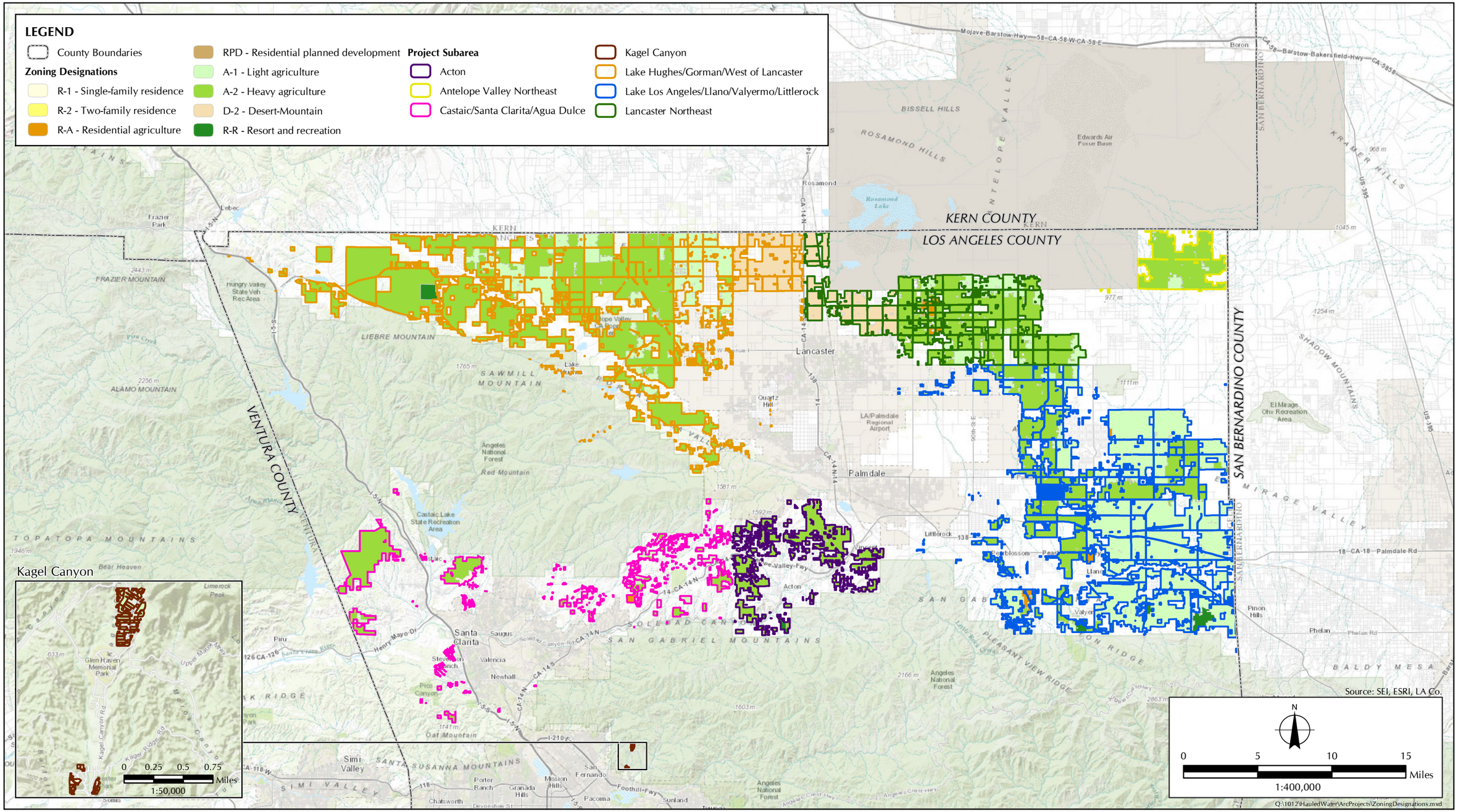

FIGURE 1.6-1

Zoning Designations in Proposed Initiative Subareas

TABLE 1.6-1
LOS ANGELES COUNTY ZONING DESIGNATIONS BY SUBAREA

Subarea	Zone Name	Zone Designation	Number of Parcels	Acres
Acton				
	Zone A-1	Light agricultural	124	753.7
	Zone A-2	Heavy agricultural	980	12,037.4
	Zone R-A	Residential agricultural	14	32.9
	Zone R-R	Resort and recreation	10	325.7
	Zone RPD	Residential planned development	1	5.2
Castaic/Santa Clarita/Agua Dulce				
	Zone A-1	Light agricultural	543	2,678.2
	Zone A-2	Heavy agricultural	535	10,866.0
	Zone R-1	Single-family residence	193	393.8
	Zone R-A	Residential agricultural	13	201.7
	Zone RPD	Residential planned development	342	218.3
Antelope Valley Northeast				
	Zone A-1	Light agricultural	201	625.5
	Zone A-2	Heavy agricultural	1,619	10,090.5
Kagel Canyon				
	Zone A-1	Light agricultural	392	32.3
	Zone R-1	Single-family residence	106	8.5
Lake Hughes/Gorman/West of Lancaster				
	Zone A-1	Light agricultural	5,661	21,021.2
	Zone A-2	Heavy agricultural	6,592	73,775.1
	Zone D-2	Desert-Mountain	2,034	9,709.0
	Zone R-1	Single-family residence	47	48.4
	Zone R-A	Residential agricultural	1	0.1
	Zone R-R	Resort and recreation	21	798.3
Lake Los Angeles/Llano/Valyermo/Littlerock				
	Zone A-1	Light agricultural	8,906	62,141.7
	Zone A-2	Heavy agricultural	5,876	34,290.3
	Zone R-2	Two-family residence	10	39.3
	Zone R-A	Residential agricultural	167	930.6
	Zone R-R	Resort and recreation	77	1,441.3
Lancaster Northeast				
	Zone A-1	Light agricultural	1,387	6,324.2
	Zone A-2	Heavy agricultural	4,446	25,739.3
	Zone D-2	Desert-Mountain	2,265	9,794.7
	Zone R-1	Single-family residence	35	126.1
	Zone R-A	Residential agricultural	169	963.9

1.7 PROJECT BACKGROUND

The County's efforts to consider and evaluate the feasibility of using hauled water for new residential construction in select areas of the County, embodied in the proposed Single-Family Residential Hauled Water Initiative for New Development, dates to 2003. On January 1, 2003, the County Department of Public Health, acting as the health authority, clarified the Los Angeles County Plumbing Code requirements for potable water:

> "The County of Los Angeles Department of Public Health (Department), acting as the health authority, has developed the requirements for potable water. Based on guidance from the State Department of Public Health, the Department does not recognize hauled water as a reliable source of water that is appropriate for drinking, culinary, or domestic purposes. 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." [6]

Based on a recommendation of the State of California Department of Public Health (CDPH),[7,8] the County Department of Public Health determined that hauled water is not a reliable source of water that is appropriate for drinking, culinary, or domestic purposes. It was also determined that hauled water does not provide the equivalent level of public health protection or reliability as a permitted public water system or an approved on-site source of supply. Prior to that time, local County building and safety officials, as part of the building permit process for new development, had issued approvals for proposed water sources that included hauled water without input or review by the County Department of Public Health.

> "Effective January 1, 2003, the Los Angeles County Department of Public Health, developed 'Water Availability Requirements' for residential and commercial development. This document effectively precluded the use of hauled water for new development and was in response to an advisory from the CDPH to all local building and planning agencies indicating that the State does not '…support the use of hauled water as a source of domestic water for new residential development.' "[9]

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[6] Los Angeles County 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] Los Angeles County Chief Executive Office. 17 August 2012. "Update on Hauled Water Report—Response to Public Input at Community Outreach Meetings. Attachment II. Los Angeles County Hauled Water Task Force [May 2012] Response to Public Comments on the Use of Hauled Water. Answer to No. 36." Los Angeles, California.

In response to the CDPH Advisory advising against the use of hauled water for new development, local building and safety officials began to require the County Department of Public Health to review and approve the proposed domestic water sources for new single-family residential development.

In July 2003, acting in response to the concerns of existing property owners wanting to develop their property and whose only potential source of potable water is hauled water, the County Board of Supervisors directed the Directors of Health Services, Public Works, and Regional Planning (collectively referred to as the Hauled Water Task Force [Task Force]) to (1) reevaluate the "Water Availability Policy" with recommendations to address the severe impacts to residents, (2) develop and implement a transition plan that includes alternative solutions for properties without an available source of potable groundwater, (3) identify steps to eliminate the negative impact of the "Water Availability Policy" on those property owners that were processing paperwork when the policy was initiated, and (4) convene community meetings in the Antelope Valley and Santa Clarita Valley/Agua Dulce areas to ascertain the water source needs and long-range plans for meeting those needs.[10]

In September 2009, the Task Force provided a report on the feasibility of using hauled water for new residential construction in select areas of the County, in response to the directive that had been issued by the Board of Supervisors in July 2003. The report:

> "… addressed several areas in consideration of the change to the County's policy, including: Public Health Considerations on Water Availability; County Review of Hauled Water Policy; Key Components of a Potential Hauled Water Program; Risk Analysis of the Use of Hauled Water; Estimated Cost to Obtain Permit for Hauled Water; and Next Steps."[11]

In November 2009, the County Board of Supervisors directed the County Chief Executive Office (CEO) to work with the Task Force to prepare a public presentation concerning the findings contained in the September 17, 2009, Report on the Feasibility of Using Hauled Water for New Residential Construction in Select Areas of the County, engage the Task Force to conduct a series of three community meetings regarding the report, and report back to the Board of Supervisors.

Three community meetings were held, in Juniper Hills, Lancaster, and Acton, in June 2010. An additional meeting was held with the Association of Rural Town Councils. The meetings were well attended with substantial input received from meeting participants. Property owners were largely in favor of a single-family residential hauled water policy for new development. The Task Force documented the results of the community meetings in a Summary Input Report. The Summary Input Report acknowledged a change in State Law, requiring, effective January 2011, interior fire sprinkler systems in all new one- and two-family and town home construction.

The Task Force held community outreach meetings and submitted its report in August of 2012. In September of 2012, the County Board of Supervisors identified the next steps in the consideration

[10] Los Angeles County Chief Executive Office. 15 July 2003. "Motion by Supervisor Michael D. Antonovich." Los Angeles, CA.

[11] Los Angeles County Chief Executive Office. 13 August 2010. "Hauled Water Report—Public Input at Community Outreach Meetings." Los Angeles, CA.

of the potential use of hauled water to support single-family residences in select areas of the County:

(1) Directed the Task Force to prepare a work program, outreach plan, and estimated timeline for the issuance of a Request for Proposal for the purposes of retaining a consultant to prepare the appropriate environmental compliance documents pursuant to the California Environmental Quality Act (CEQA) for the draft single-family residential hauled water policy for new development, and

(2) Directed County Counsel, in consultation with the Task Force, to draft a proposed ordinance for the Board's consideration that amends applicable Los Angeles County Codes to provide for a single-family residential hauled water use policy for new development which incorporates the provisions previously outlined, and in the Response to Public Comments document, subject to any amendments made by the Board, and as informed by the required CEQA Analysis.[12]

In October 2013, the Task Force solicited proposals for the requested environmental compliance documentation to consider and evaluate the proposed single-family residential hauled water use initiative for new development.

In April 2014, the County Board of Supervisors authorized a contract for the preparation of the environmental compliance documentation.

1.8 PROJECT DESCRIPTION

The Los Angeles County Board of Supervisors has directed the preparation of a proposed ordinance that would allow hauled water as the primary source of potable water for new development of single-family residences on existing vacant legal lots, or lots that are eligible for a certificate of compliance, where the property owner has demonstrated that there is no other feasible source of private or municipal potable water, or capability of developing an on-site well to provide potable water to the property, and only if the property lies outside of the boundaries of the local private and municipal water districts, and is not eligible for service by the nearest public-community water purveyor. The ordinance is proposed for parcels that are larger than 2,000 square feet in size, with slopes under 50 percent (26.6°). All criteria would need to be met at the effective date of the ordinance. The term vacant is used as identified by the County Assessor. The ordinance would be applicable solely to the unincorporated areas of Los Angeles County.

In order to determine which areas would be subject to the proposed initiative, the Los Angeles County Department of Regional Planning developed a geographic information system (GIS) suitability model in 2012 based on five criteria defined by the Task Force:

- Parcels located in the unincorporated territory of Los Angeles County
- Vacant parcels
- Parcels located in areas where there is no designated water purveyor

[12] Los Angeles County Chief Executive Office. 17 August 2012. "Update on Hauled Water Report—Response to Public Input at Community Outreach Meetings. Attachment II. Los Angeles County Hauled Water Task Force [may 23012] Response to Public Comments on the Use of Hauled Water. Answer to No. 36." Los Angeles, CA.

- Zoning and General Plan designation that allow for development of a .single-family residence
- Parcel size >2,000 square feet with slopes under 50 percent (26.6°)

1.9 EXISTING CONDITIONS

Lake Hughes/Gorman/West of Lancaster

The Lake Hughes/Gorman/West of Lancaster subarea is located in an area generally west of State Highway 14 and north of the Angeles National Forest; however, there are also several National Forest inholding parcels located along San Francisquito Canyon and Lake Hughes Road. The topography of this subarea is generally flat, except for the parcels located along San Francisquito Canyon and Lake Hughes Road, which are located in mountainous terrain. The highest elevation within this subarea is approximately 4,850 feet above mean sea level (MSL), and the lowest elevation is approximately 2,315 feet above MSL. State Highway 14 provides access to the subarea from the east, and Interstate 5 provides access to the subarea from the west. The main existing land uses in this subarea are agriculture and rural residential uses. The Angeles National Forest surrounds 39 private inholding parcels within this subarea. The parcels that are located within National Forest boundaries are private inholdings that have been designated in the 2005 update to the *Angeles National Forest Land Management Plan* as Non-Forest System Land Ownership and therefore are not subject to the national land management plan.[13,14] Five existing Significant Ecological Areas (SEAs) (approximately 23,725.1 acres) intersect with the subject parcels within this subarea and are subject to the provisions of the 1982 Hillside Management and Significant Ecological Areas Ordinance: Ritter Ridge (SEA #56), Fairmont & Antelope Buttes (SEA #57), Portal Ridge-Libre Mountain (SEA #58), Tehachapi Foothills (SEA #59), and Joshua Tree Woodland Habitat (SEA #60).[15] Three proposed SEAs intersect with the subject parcels within this subarea that may be adopted with the 2014 update to the Los Angeles County General Plan 2035 Update: Joshua Tree Woodlands (proposed SEA #10), San Andreas (proposed SEA #17), and Santa Clara River (proposed SEA #20).[16] Los Angeles County has designated significant ridgelines to be preserved and protected pursuant to policies of the Conservation and Natural Resources Element of the Los Angeles County General Plan, located across the southern parcels of the subarea in the Andreas Rift Zone of the San Gabriel Mountains (see Figure 1.4-2).[17] Two community standards districts in the North County, Castaic and Elizabeth Lake and Lake Hughes, designate and regulate significant ridgelines. The Pacific Crest National Scenic Trail, which was designated as a National

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[13] United States Department of Agriculture Forest Service, Angeles National Forest. April 2006. *Record of Decision, Angeles National Forest Land Management Plan*. Available at: http://www.fs.usda.gov/detail/angeles/landmanagement/planning/?cid=stelprdb5324056#I

[14] United States Department of Agriculture Forest Service. September 2005. *Final Land Management Plan Alternative 4a Selected: Land Use Zones* [Map]. Available at: http://www.fs.usda.gov/Internet/FSE_MEDIA/stelprdb5311720.pdf

[15] Los Angeles County Department of Regional Planning. Accessed 6 May 2014. "SEA Program." Available at: http://planning.lacounty.gov/sea/ordinance

[16] Los Angeles County Department of Regional Planning. January 2014. *2014 Draft Los Angeles County General Plan 2035 Update*. "Chapter 9: Conservation and Natural Resources Element." Available at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter9_2014.pdf

[17] Los Angeles County Department of Regional Planning. January 2014. *Draft Los Angeles County General Plan 2035 Update*. "Chapter 9: Conservation and Natural Resources Element." Available at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter9_2014.pdf

Scenic Trail under the 1968 National Trails System Act, passes through the western side of the subarea from Kern County south into Angeles National Forest.[18] Several of the subject parcels within this subarea (approximately 15,622.3 acres) are located within the Federal Emergency Management Agency (FEMA)–designated 100-year floodplain and subject to FEMA's mandatory flood insurance purchase requirements and floodplain management standards.[19] Parcels within the southern portion of this subarea are located within the State-designated Alquist-Priolo Earthquake Fault Zone and subject to the human occupancy restrictions of the 1971 Alquist-Priolo Earthquake Fault Zoning (AP) Act.[20]

Lancaster Northeast

The Lancaster Northeast subarea is located in an area generally east of State Highway 14 and north of East Avenue J. The topography of this subarea is generally flat; the highest elevation within this subarea is approximately 2,692 feet above MSL, and the lowest elevation is approximately 2,298 feet above MSL. State Highway 14 provides access to the subarea from the west. The predominant existing land uses in this subarea consist of agricultural, recreation, and rural residential uses (see Figure 1.4-3). Three SEAs (approximately 1,460.8 acres) intersect with the subject parcels within this subarea: Edwards Air Force Base (SEA #47), Rosamond Lake (SEA #50), and Saddleback Butte State Park (SEA #51).[21] One proposed SEA intersects with the subject parcels within this subarea: Antelope Valley (proposed SEA #3).[22] Several of the subject parcels in this subarea (approximately 16,206.5 acres) are located within the FEMA-designated 100-year flood plain.

Antelope Valley Northeast

The Antelope Valley Northeast subarea is located in an area generally north of East Avenue E and east of 165th Street East in the far northeastern portion of Los Angeles County. The topography of this subarea is mainly flat, with a few hills to the north. The highest elevation within this subarea is approximately 3,016 feet above MSL, and the lowest elevation is approximately 2,595 feet above MSL. There are no existing primary access roads to the area; however, East Avenue G provides access to the area from the Lancaster area. Presently, the entirety of this subarea is vacant. Saddleback Butte State Park is located to the south of the subarea (see Figure 1.4-4). One proposed SEA intersects with the subject parcels within this subarea: Antelope Valley (proposed SEA #3).[23] A

[18] National Park Service. Website last modified 12 July 2012. *The National Trails System Act*. Also found in United States Code, Volume 16, Sections 1241-1251. Available at: http://www.nps.gov/nts/legislation.html

[19] Federal Emergency Management Agency. n.d. *Zone A*. Available at: http://www.fema.gov/floodplain-management/zone

[20] State of California Department of Conservation. 2013. *California Geological Survey – Alquist-Priolo Earthquake Fault Zones*. Available at: http://www.conservation.ca.gov/cgs/rghm/ap/Pages/index.aspx

[21] Los Angeles County Department of Regional Planning. Accessed 6 May 2014. "SEA Program." Available at: http://planning.lacounty.gov/sea/ordinance

[22] Los Angeles County Department of Regional Planning. January 2014. *Draft Los Angeles County General Plan 2035 Update*. "Chapter 9: Conservation and Natural Resources Element." Available at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter9_2014.pdf

[23] Los Angeles County Department of Regional Planning. January 2014. *Draft Los Angeles County General Plan 2035 Update*. "Chapter 9: Conservation and Natural Resources Element." Available at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter9_2014.pdf

few of the subject parcels in the northern portion of the subarea (approximately 116.1 acres) are located within the FEMA-designated 100-year floodplain.[24]

Lake Los Angeles/Llano/Valyermo/Littlerock

The Lake Los Angeles/Llano/Valyermo/Littlerock subarea is located in an area generally south of East Avenue J, east of 47th Street East. The topography of this subarea is generally flat, except for several parcels that are located on slopes of the San Gabriel Mountains to the south (see Figure 1.4-5). The highest elevation within this subarea is approximately 5,020 feet above MSL, and the lowest elevation is approximately 2,642 feet above MSL. State Highways 138 and 18 provide the primary access to this subarea. Predominant existing land uses within this subarea consist of vacant land, single-family residential subdivisions, agricultural uses, and scattered rural residential uses. The Angeles National Forest forms the southern border of this subarea. Seven existing SEAs (approximately 26,557.0 acres) intersect with the subject parcels within this subarea: Big Rock Wash (SEA #48), Little Rock Wash (SEA #49), Saddleback Butte State Park (SEA #51), Alpine Butte (SEA #52), Lovejoy Butte (SEA #53), Piute Butte (SEA #54), and Desert-Montane Transect (SEA #55).[25] One proposed SEA intersects with the subject parcels within this subarea: Antelope Valley (proposed SEA #3).[26] Several of the subject parcels within this subarea (approximately 13,755.1 acres) are located within the FEMA-designated 100-year floodplain.[27] The southern portion of this subarea contains parcels located within the Alquist-Priolo Earthquake Fault Zone.[28]

Acton

The Acton subarea is located in an area generally east of Hubbard Road and West of 47th Street East. The topography of the subarea is mainly mountainous and hilly. The highest elevation within this subarea is approximately 4,854 feet above MSL, and the lowest elevation is approximately 2,356 feet above MSL. State Highway 14 provides the primary access to this subarea. Predominant existing land uses consist of rural residential uses, single-family residential uses, and scattered agricultural uses. The Angeles National Forest forms the southern border of this subarea. Los Angeles County-designated significant ridgelines are located to the west of the subarea (see Figure 1.4-6).[29] Two existing SEAs (approximately 671.4 acres) intersect with the subject parcels within this subarea: Santa Clara River (SEA #23) and Kentucky Springs (SEA #61).[30] One proposed SEA

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[24] Federal Emergency Management Agency. n.d. *Zone A*. Available online at: http://www.fema.gov/floodplain-management/zone

[25] Los Angeles County Department of Regional Planning. Accessed 6 May 2014. "SEA Program." Available at: http://planning.lacounty.gov/sea/ordinance

[26] Los Angeles County Department of Regional Planning. January 2014. *Draft Los Angeles County General Plan 2035 Update*. "Chapter 9: Conservation and Natural Resources Element." Available at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter9_2014.pdf

[27] Federal Emergency Management Agency. n.d. *Zone A*. Available online at: http://www.fema.gov/floodplain-management/zone

[28] State of California Department of Conservation. 2013. *California Geological Survey – Alquist-Priolo Earthquake Fault Zones*. Available at: http://www.conservation.ca.gov/cgs/rghm/ap/Pages/index.aspx

[29] Los Angeles County Department of Regional Planning. January 2014. *Draft Los Angeles County General Plan 2035 Update*. "Chapter 9: Conservation and Natural Resources Element." Available at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter9_2014.pdf

[30] Los Angeles County Department of Regional Planning. Accessed 6 May 2014. "SEA Program." Available at: http://planning.lacounty.gov/sea/ordinance

intersects with the subject parcels within this subarea: Santa Clara River (proposed SEA #20).[31] A few of the subject parcels within this subarea (approximately 164.7 acres) are located within the FEMA-designated 100-year floodplain.[32]

Castaic/Santa Clarita/Agua Dulce

The Castaic/Santa Clarita/Agua Dulce subarea is located generally west of Hubbard Road and north of the 210 Freeway excluding Kagel Canyon. The topography of this subarea is generally mountainous. The highest elevation within this subarea is approximately 2,830 feet above MSL, and the lowest elevation is approximately 1,262 feet above MSL. Interstate 5 and State Highway 14 are the primary access roads for this subarea. Additionally, State Highway 126 provides access to areas in the western portion of the subarea. Predominant existing land uses consist of rural residential, single-family residential, and scattered agricultural (see Figure 1.4-7). The Angeles National Forest forms the northern and southern borders of this subarea. Four existing SEAs (approximately 5,786.9 acres) intersect with the subject parcels within this subarea: Cruzan Mesa Vernal Pools (SEA #5), Santa Clara River (SEA #20), Santa Felicia (SEA #21), and Santa Susana Mountains/Simi Hills (SEA #23).[33] Four proposed SEAs intersect with the subject parcels within this subarea: Cruzan Mesa Vernal Pools (proposed SEA #5), Santa Clara River (proposed SEA #20), Santa Felicia (proposed SEA #21), and Santa Susana Mountains/Simi Hills (proposed SEA #23).[34] County-designated significant ridgelines are located throughout the subarea.[35,36] The Pacific Crest National Scenic Trail passes through the eastern portion of this subarea between the western and eastern areas of the Angeles National Forest.[37] A few of the subject parcels within this subarea (approximately 59.6 acres) are located within the FEMA-designated 100-year floodplain.[38]

Kagel Canyon

The Kagel Canyon subarea is the smallest of the proposed initiative subareas and is surrounded by the Angeles National Forest, generally located along Kagel Canyon Road north of the 210 Freeway, west of Little Tujunga Road, and east of Lopez Canyon Road. Predominant existing land uses consist of single-family and rural residential uses with scattered vacant parcels. The topography of

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[31] Los Angeles County Department of Regional Planning. January 2014. *Draft Los Angeles County General Plan 2035 Update*. "Chapter 9: Conservation and Natural Resources Element." Available at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter9_2014.pdf

[32] Federal Emergency Management Agency. n.d. *Zone A*. Available at: http://www.fema.gov/floodplain-management/zone

[33] Los Angeles County Department of Regional Planning. Accessed 6 May 2014. "SEA Program." Available at: http://planning.lacounty.gov/sea/ordinance

[34] Los Angeles County Department of Regional Planning. January 2014. *Draft Los Angeles County General Plan 2035 Update*. "Chapter 9: Conservation and Natural Resources Element." Available at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter9_2014.pdf

[35] Los Angeles County, Santa Clarita Valley Area Plan. 2012. Available at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf

[36] Los Angeles County Department of Regional Planning. January 2014. *Draft Los Angeles County General Plan 2035 Update*. "Chapter 9: Conservation and Natural Resources Element." Available at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter9_2014.pdf

[37] National Park Service. Website last modified 12 July 2012. *The National Trails System Act*. Also found in United States Code, Volume 16, Sections 1241-1251. Available online at: http://www.nps.gov/nts/legislation.html

[38] Federal Emergency Management Agency. n.d. *Zone A*. Available at: http://www.fema.gov/floodplain-management/zone

the subarea is very mountainous (see Figure 1.4-8). The highest elevation within this subarea is approximately 2,288 feet above MSL, and the lowest elevation is approximately 1,387 feet above MSL. Primary access to this subarea is provided by Kagel Canyon Road, which is located approximately 0.7 mile north of the Foothill Freeway (Interstate 210). Lopez Canyon Road also provides access to the canyon from the northwest. The Angeles National Forest surrounds all 498 private inholding parcels within this subarea, which have been designated in the 2005 update to the Angeles National Forest Land Management Plan as Non-Forest System Land Ownership and therefore are not subject to the national land management plan.[39,40] A very small southeastern portion of the subarea (approximately 0.03 acre) is located within the FEMA-designated 100-year floodplain.[41] Parcels within the southern section of the subarea are located within the Alquist-Priolo Earthquake Fault Zone.[42]

[39] United States Department of Agriculture Forest Service, Angeles National Forest. April 2006. *Record of Decision, Angeles National Forest Land Management Plan*. Available at: http://www.fs.usda.gov/detail/angeles/landmanagement/planning/?cid=stelprdb5324056#I.

[40] United States Department of Agriculture Forest Service. September 2005. *Final Land Management Plan Alternative 4a Selected: Land Use Zones* [Map]. Available at: http://www.fs.usda.gov/Internet/FSE_MEDIA/stelprdb5311720.pdf

[41] Federal Emergency Management Agency. n.d. *Zone A*. Available at: http://www.fema.gov/floodplain-management/zone

[42] State of California Department of Conservation. 2013. *California Geological Survey – Alquist-Priolo Earthquake Fault Zones*. Available at: http://www.conservation.ca.gov/cgs/rghm/ap/Pages/index.aspx

SECTION 2.0
ENVIRONMENTAL CHECKLIST

This section contains a copy of the Environmental Checklist prepared for the proposed Single-Family Residential Hauled Water Initiative for New Development (proposed initiative). The checklist used is consistent with Appendix G of the State CEQA Guidelines. A summary of the substantial evidence that was used to support the responses in the Environmental Checklist is contained in Section 3.

DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☑ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

9/17/2014
Date

Dale Sakamoto
Printed Name

Los Angeles County Hauled Water Task Force
For

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
2.1. AESTHETICS -- Would the proposed project:				
a) Have a substantial adverse effect on a scenic vista?	☒			
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?		☒		
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☒			
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?		☒		
2.2. AGRICULTURE AND FORESTRY RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provide in Forest Protocols adopted by the California Air Resources Board. Would the proposed project:				

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?			☒	
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?				☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				☒
2.3. AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the proposed project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☒			
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☒			

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the proposed project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☒			
d) Expose sensitive receptors to substantial pollutant concentrations?	☒			
e) Create objectionable odors affecting a substantial number of people?			☒	
2.4. BIOLOGICAL RESOURCES -- Would the proposed project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☒			
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☒			
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☒			
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☒			

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☒			
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☒			
2.5. CULTURAL RESOURCES -- Would the proposed project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☒			
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 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?	☒			
2.6. GEOLOGY AND SOILS -- Would the proposed project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				☒
ii) Strong seismic ground shaking?				☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
iii) Seismic-related ground failure, including liquefaction?				☒
iv) Landslides?				☒
b) Result in substantial soil erosion or the loss of topsoil?				☒
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?				☒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				☒
2.7 GREENHOUSE GAS EMISSIONS – Would the proposed project:				
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 or reducing the emissions of greenhouse gases?	☒			
2.8. HAZARDS AND HAZARDOUS MATERIALS -- Would the proposed project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			☒	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				☒
e) For a proposed 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 result in a safety hazard for people residing or working in the proposed project area?			☒	
f) For a proposed project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the proposed project area?			☒	
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				☒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?			☒	
2.9. HYDROLOGY AND WATER QUALITY -- Would the proposed project:				
a) Violate any water quality standards or waste discharge requirements?	☒			

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
b) 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 which 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 through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☒			
d) 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 which would result in flooding on- or off-site?	☒			
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater 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 within a 100-year flood hazard area structures which 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?	☒			

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
j) Inundation by seiche, tsunami, or mudflow?	☒			
2.10. LAND USE AND PLANNING - Would the proposed project:				
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?	☒			
2.11. MINERAL RESOURCES -- Would the proposed project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				☒
2.12. NOISE --				
Would the proposed project 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 groundborne vibration or groundborne noise levels?			☒	

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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 two miles of a public airport or public use airport, would the proposed project expose people residing or working in the proposed project area to excessive noise levels?	☒			
f) For a project within the vicinity of a private airstrip, would the proposed project expose people residing or working in the proposed project area to excessive noise levels?	☒			
2.13. POPULATION AND HOUSING -- Would the proposed project:				
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 numbers of existing housing, necessitating the construction of replacement housing elsewhere?				☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
2.14. PUBLIC SERVICES --				
a) Would the proposed project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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:				
Fire protection?	☒			
Police protection?	☒			
Schools?	☒			
Parks?	☒			
Other public facilities?	☒			
2.15. RECREATION --				
a) Would the proposed 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?	☒			

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
2.16. TRANSPORTATION/TRAFFIC -- Would the proposed project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the 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?	☒			
b) Conflict with an 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?	☒			
c) 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?				☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				☒
e) Result in inadequate emergency access?				☒
f) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				☒
2.17. UTILITIES AND SERVICE SYSTEMS -- Would the proposed project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☒			

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☒			
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			☒	
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☒			
g) Comply with federal, state, and local statutes and regulations related to solid waste?				☒
2.18. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☒			

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Does the project have impacts that are individually limited, but cumulatively considerable? (Cumulatively considerable means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☒			
c) Does the proposed project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☒			

SECTION 3.0
ENVIRONMENTAL ANALYSIS

The environmental analysis provided in this section describes the information that was considered in evaluating the questions in Section 2.0, Environmental Checklist.

SECTION 3.1
AESTHETICS

This analysis is undertaken to determine if the proposed Single-Family Residential Hauled Water Initiative for New Development (proposed initiative) may have a significant impact to aesthetics, thus requiring the consideration of mitigation measures or alternatives, in accordance with Section 15063 of the State California Environmental Quality Act (CEQA) Guidelines.[1] The evaluation of aesthetics is based on the consideration of 42,677 parcels, zoned in a manner that allows for development of single-family residences in the unincorporated area of Los Angeles County, that, since January 2003, have been ineligible for building permits due to a lack of accessible potable water from a public or private water purveyor or groundwater. Aesthetics were evaluated with regard to the 1968 National Trails System Act;[2] the California Department of Transportation's (Caltrans) Scenic Highway System[3] designations; the Land Use Element,[4] Regional Recreation Areas Plan,[5] Scenic Highways Element,[6] and Conservation and Open Space Element[7] of the adopted Los Angeles County General Plan; the Conservation and Natural Resources Element[8] of the Los Angeles County General Plan 2035 Update; the 1986 Antelope Valley Areawide General Plan;[9] the 2012 Santa Clarita Valley Area Plan;[10] a review of the Los Angeles County Rural Outdoor Lighting District Ordinance,[11] and the development standards for the Los Angeles County community standards district ordinances.[12]

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[1] *California Code of Regulations*. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

[2] National Park Service. Website last modified 12 July 2012. *The National Trails System Act*. Also found in United States Code, Volume 16, Sections 1241-1251. Available online at: http://www.nps.gov/nts/legislation.html

[3] California Department of Transportation. Accessed 11 April 2014. *Scenic Highway Program: Eligible (E) and Officially Designated (OD) Routes*. Available online at: http://www.dot.ca.gov/hq/LandArch/scenic/cahisys.htm

[4] Los Angeles County Department of Regional Planning. November 25, 1980. *Los Angeles County General Plan Land Use Element*. Available online at http://planning.lacounty.gov/assets/upl/project/gp_web80-land-use.pdf

[5] Los Angeles County Department of Regional Planning. July 29, 1965. *Regional Recreation Areas Plan*. Available online at http://planning.lacounty.gov/assets/upl/project/gp_web80-regional-recreation-areas-plan.pdf

[6] Los Angeles County Department of Regional Planning. October 11, 1974. *Adopted Los Angeles County General Plan. Scenic Highway Element*. PDF available online at: http://planning.lacounty.gov/assets/upl/project/gp_web80-scenic-highway-element.pdf

[7] Los Angeles County Department of Regional Planning. November 25, 1980. *Los Angeles County General Plan Conservation and Open Space Element*. Available online at http://planning.lacounty.gov/assets/upl/project/gp_web80-conservation-and-open-space.pdf

[8] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan: Public Review Draft*. Chapter 9: Conservation and Natural Resources Element. PDF available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter9_2014.pdf

[9] Los Angeles County Department of Regional Planning. December 4, 1986. *Antelope Valley Areawide General Plan: A Component of the Los Angeles County General Plan*. PDF available online at: http://planning.lacounty.gov/assets/upl/data/pd_antelope-valley.pdf

[10] *Los Angeles County, Santa Clarita Valley Area Plan, 2012*. PDF available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf

[11] Los Angeles County Department of Regional Planning. 28 September 2012. *Ordinance No. 2012-0047*. PDF available online at: http://planning.lacounty.gov/assets/upl/data/ord_outdoor-lighting.pdf Main website: http://planning.lacounty.gov/view/rural_outdoor_lighting_district_ordinance/

[12] County of Los Angeles. n.d. *Los Angeles County, California, Code of Ordinances: Title 22 – Planning and Zoning: Division 1 – Planning and Zoning: Chapter 22.44 – Supplemental Districts: Part 2 Community Standards Districts*. Website. Available online at: https://library.municode.com/HTML/16274/level4/TIT22PLZO_DIV1PLZO_CH22.44SUDI_PT2COSTDI.html#TIT22PLZ

Definitions

Scenic Resources: Significant visual resources identified by local planning documents that can be maintained and enhanced to promote a positive image in the community, such as natural open spaces, topographic formations, and landscapes that contribute to a high level of visual quality. Natural landforms and landscapes are often established as scenic resources, such as lakes, rivers and streams, mountain meadows, and oak woodlands. However, scenic resources can also include man-made open spaces and the built environment, such as parks, trails, nature preserves, sculpture gardens, and similar features.[13]

State-Designated Scenic Highway: The State Scenic Highway Program was created in 1963 to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the natural landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view.[14]

Glare: Perceived glare is the unwanted and potentially objectionable sensation as observed by a person looking directly into the light source (e.g., the sun, the sun's reflection, automobile headlights, or other light fixtures). Reflective surfaces on existing buildings, car windshields, etc., can expose people and property to varying levels of glare.

3.1.1 REGULATORY FRAMEWORK

Federal

1968 National Trails System Act

The Pacific Crest Trail, a federally designated National Scenic Trail primarily administered by the U.S. Forest Service, passes through the western portion of the Lake Hughes/Gorman/West of Lancaster subarea and the eastern portion of the Castaic/Santa Clarita/Agua Dulce subarea. The Pacific Crest Trail is managed pursuant to the 1968 National Trails System Act, which instituted a national system of recreation, scenic and historic trails, and standards to preserve the scenic value of these trails.[15] National scenic trails, established in section 5 of the Act, are designated extended trails (at least 100 miles in length) intended to provide maximum outdoor recreation potential and for the conservation and enjoyment of the nationally significant scenic, historic, natural, or cultural qualities of the areas through which such trails may pass. Natural scenic trails may be located as to represent desert, marsh, grassland, mountain, canyon, river, forest, and other areas, as well as landforms which exhibit significant characteristics of the physiographic regions of the United States. Section 7(a)(2) of the 1968 Act establishes the relationship between the trail and the management of adjacent land:

O_DIV1PLZO_CH22.44SUDI_PT2COSTDI_22.44.126ACCOSTDI

[13] *Los Angeles County, Santa Clarita Valley Area Plan, 2012*. PDF available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf

[14] Los Angeles County Department of Regional Planning. July 29, 1965. *Regional Recreation Areas Plan*. Available online at http://planning.lacounty.gov/assets/upl/project/gp_web80-regional-recreation-areas-plan.pdf

[15] National Park Service. Website last modified 12 July 2012. *The National Trails System Act*. Also found in United States Code, Volume 16, Sections 1241-1251. Available online at: http://www.nps.gov/nts/legislation.html

Development and management of each segment of the National Trails System shall be designed to harmonize with and complement any established multiple-use plans for the specific area in order to insure continued maximum benefits from the land.

State

California Scenic Highway Program, Sections 260 through 263[16]

The California Scenic Highway Program preserves and protects scenic highway corridors throughout the State of California from changes that would diminish their aesthetic value. Caltrans designates scenic highway corridors and establishes those highways that are eligible for the program. The program was created in 1963 with the enactment of the State Scenic Highways Law. The street and highway code includes a list of those highways that are either designated or considered eligible for designation.[17] The purpose of the Scenic Highway Program is to enhance and protect scenic resources along California highways in the following ways:[18]

- Protect the scenic corridor from encroachment of incompatible land uses, such as junkyards, dumps, concrete plants, and gravel pits
- Mitigate activities within the corridor that detract from its scenic quality by proper siting, landscaping, or screening
- Prohibit billboards and regulate on-site signs so they do not detract from scenic views
- Make development more compatible with the environment and in harmony with the surroundings
- Regulate grading to prevent erosion, cause minimal alteration of existing contours, and preserve important vegetative features along the highway
- Preserve views of hillsides by minimizing development on steep slopes and along ridgelines
- Prevent the need for noise barriers (sound walls) by requiring a minimum setback for residential development adjacent to a scenic highway

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 Land Use Element,[19] Regional Recreation Areas Plan,[20] Scenic Highways Element,[21] and

[16] California Department of Transportation. Accessed 11 April 2014. *Frequently Asked Questions*. Available online at: http://www.dot.ca.gov/hq/LandArch/scenic/faq.htm

[17] California Department of Transportation. Accessed 11 April 2014. *Scenic Highway Program: Eligible (E) and Officially Designated (OD) Routes*. Available online at: http://www.dot.ca.gov/hq/LandArch/scenic/cahisys.htm

[18] California Department of Transportation. Accessed 11 April 2014. *The Benefits of Scenic Highway Designation*. Available online at: http://www.dot.ca.gov/hq/LandArch/scenic/can_do.htm

[19] Los Angeles County Department of Regional Planning. November 25, 1980. *Los Angeles County General Plan Land Use Element*. Available online at http://planning.lacounty.gov/assets/upl/project/gp_web80-land-use.pdf

Conservation and Open Space Element[22] of the adopted Los Angeles County General Plan and the Conservation and Natural Resources Element[23] of the Los Angeles County General Plan 2035 Update have both been referenced. It is anticipated that the Los Angeles County General Plan 2035 Update will be considered by the Board of Supervisors in late 2014.

Adopted Los Angeles County General Plan

The adopted Los Angeles County General Plan serves as an advisory document to provide decision-makers within Los Angeles County with a policy framework to guide specific, incremental decisions so as to move toward achievement of the Los Angeles County General Plan's stated goals and objectives. The general goals and policies of the adopted Los Angeles County General Plan relevant to aesthetics in consideration of the proposed initiative are:[24]

- **Goal:** Conserve resources and protect the environment
  - **Policy 10:** Protect areas that have significant natural resources and scenic values, including significant ecological areas, the coastal zone, and prime agricultural lands.

- **Goal:** Urban Form
  - **Policy 37:** Promote the preservation and enhancement of landmarks, sites, and areas of cultural, historical, archaeological, and urban design significance.
  - **Policy 38:** Protect and enhance the visual uniqueness of natural edges and encourage superior design of major entryways.

Additionally, the County's priorities for development of Antelope Valley include:

- **59.** Encouraging the concentration of population growth within rural communities while maintaining the non-urban character of these communities.
- **61.** Maintaining the open and rural character of the non-urban areas of the Antelope Valley.

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[20] Los Angeles County Department of Regional Planning. July 29, 1965. *Regional Recreation Areas Plan*. Available online at http://planning.lacounty.gov/assets/upl/project/gp_web80-regional-recreation-areas-plan.pdf

[21] Los Angeles County Department of Regional Planning. October 11, 1974. Adopted Los Angeles County General Plan. *Scenic Highway Element*. PDF available online at: http://planning.lacounty.gov/assets/upl/project/gp_web80-scenic-highway-element.pdf

[22] Los Angeles County Department of Regional Planning. November 25, 1980. *Los Angeles County General Plan Conservation and Open Space Element*. Available online at http://planning.lacounty.gov/assets/upl/project/gp_web80-conservation-and-open-space.pdf

[23] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan: Public Review Draft*. Chapter 9: Conservation and Natural Resources Element. PDF available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter9_2014.pdf

[24] Los Angeles County Department of Regional Planning. 25 November 1980. *Existing Adopted General Plan*. "General Goals and Policies". PDF available online at: http://planning.lacounty.gov/assets/upl/project/gp_web80-general-goals-and-policies.pdf. Main website: http://planning.lacounty.gov/generalplan/existing

1980 Land Use Element

The adopted Land Use Element of the Los Angeles County General Plan includes policies that protect the visual quality of scenic resources, including views from scenic highways, roads, trails, and key vantage points, with an emphasis on protection of Significant Ecological Areas and scenic highways.[25] The Land Use Element states that residential uses that are consistent with the density and community character of the resource values are permitted uses within Significant Ecological Areas (SEAs); however, all development within designated SEAs is subject to SEA Performance Review in order to ensure compatibility and compliance with the following design criteria: compatibility with biotic resources; maintaining water bodies, watercourses, and tributaries in a natural state; maintaining wildlife movement corridors in a natural and undisturbed state; retaining sufficient natural vegetative cover to buffer critical resource areas from the proposed use; using fences or walls to buffer important habitat areas from development; and locating and designing roads and utilities in a manner that they do not conflict with critical resources, habitat areas, or migratory paths.

The Land Use Element has adopted the following design criteria for which proposed development within all adopted and proposed scenic corridors (including adopted State Scenic Highways) shall be reviewed that are relevant in consideration of the proposed initiative:

1. The proposed development should be designed to create a consistent visual relationship with surrounding development and with the natural terrain and vegetation.
2. Structures and landscaping should complement and enhance scenic views.
3. If possible, potential unsightly features should be located in areas not visible from the scenic highway. If this is not feasible, they should be screened by landscaping, fencing, or other appropriate means.
4. Grading should result in final contours which are compatible with the existing terrain.
5. The number of access roads to or from the scenic highway should be minimized wherever possible, consistent with safety and circulation needs.

1965 Regional Recreation Areas Plan

The adopted Los Angeles County General Plan contains a Regional Recreation Areas Plan that identified existing County scenic resources in 1965 including roadside rests, which provide places for drivers and passengers to rest in order to reduce fatigue; scenic drives, which afford visual enjoyment of nature either undisturbed or enhanced by the incidental or designed efforts of man; and vista points, which command a panoramic and spectacular view.[26]

[25] Los Angeles County. Accessed 11 April 2014. "Los Angeles County General Plan Land Use Element". Last updated November 25, 1980. PDF from Website. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_web80-land-use.pdf Main website: http://planning.lacounty.gov/generalplan/existing

[26] Los Angeles County Department of Regional Planning. Amended 29 July 1965. *Los Angeles County Regional Recreation Areas Plan*. A Part of the Recreation Element of the General Plan. PDF available online at: http://planning.lacounty.gov/assets/upl/project/gp_web80-regional-recreation-areas-plan.pdf Main website: http://planning.lacounty.gov/generalplan/existing

1974 Scenic Highway Element

It is the policy of the Scenic Highway Element of the adopted Los Angeles County General Plan to protect and enhance aesthetic resources within corridors of designated scenic highways.[27] The goals of the Scenic Highways Element are:

- A scenic highway system serving the public through a variety of transportation modes
- Enhanced recreational opportunities served by a system of scenic highways
- Preservation and enhancement of aesthetic resources within scenic corridors

The Scenic Highway Element has established the following criteria and standards within scenic corridors relevant to aesthetics in consideration of the proposed initiative:

- Controlling building heights, setbacks, and densities so as not to obstruct important views
- Screening incompatible land uses through landscaping, fencing, or other appropriate means
- Requiring site planning that locates unattractive uses where they will have the least possible visual impact on the landscape
- Grading with a minimum disturbance to natural landforms
- Preserving lakes, rivers, shorelines, and creeks in their natural condition or, if modified, treated so as to result in a naturalistic appearance

1980 Conservation and Open Space Element

The Conservation and Open Space Element of the Adopted Los Angeles County General Plan strives to protect the visual quality of scenic areas including ridgelines and scenic views from public roads, while encouraging public awareness and use of scenic resources, to meet its goal of incorporating ideas of compatibility and suitability with surrounding land uses into the planning process.[28] The Conservation and Open Space Element has established the following objective and policies relevant to aesthetics in consideration of the proposed initiative:

- **Objective:** Preserve and protect sites of historical, archaeological, scenic and scientific value
    - **Policy 16:** Protect the visual quality of scenic areas including ridgelines and scenic views from public views, trails and key vantage points.

[27] Los Angeles County Department of Regional Planning. 11 October 1974. *Scenic Highway Element*. PDF available online at: http://planning.lacounty.gov/assets/upl/project/gp_web80-scenic-highway-element.pdf Main website: http://planning.lacounty.gov/generalplan/existing

[28] Los Angeles County. Accessed 11 April 2014. *Los Angeles County General Plan Conservation and Open Space Element*. Last updated November 25, 1980. PDF from Website. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_web80-conservation-and-open-space.pdf From http://planning.lacounty.gov/generalplan/existing main website. Pages II-19 through II-29

Los Angeles County General Plan 2035 Update

Conservation and Natural Resources Element

The Conservation and Natural Resources Element of the Los Angeles County General Plan 2035 Update identifies the three officially designated State and County Scenic Highways in the County (Angeles Crest Highway State Route 2, two sections of Mulholland Highway, and Malibu Canyon-Las Virgenes Highway from CA-1 to Lost Hills Road), describes scenic viewsheds, and identifies significant ridgelines that need to be protected and preserved. According to County policy C/NR 13.10, significant ridgelines are identified by the following criteria:[29]

- Topographic complexity;
- Uniqueness of character and location;
- Presence of cultural or historic landmarks;
- Visual dominance on the skyline or viewshed, such as the height and elevation of a ridgeline; and,
- Environmental significance to natural ecosystems, parks, and trail systems.

The Conservation and Natural Resources Element has established six policies relevant to aesthetics in consideration of the proposed initiative:

- **Policy C/NR 13.1:** Protect scenic resources through land use regulations that mitigate development impacts.
- **Policy C/NR 13.2:** Protect ridgelines from incompatible development that diminishes their scenic value.
- **Policy C/NR 13.3:** Reduce light trespass, light pollution, and other threats to scenic resources.
- **Policy C/NR 13.4:** Encourage developments to be designed to create a consistent visual relationship with the natural terrain and vegetation.
- **Policy C/NR 13.5:** Encourage required grading to be compatible with the existing terrain.
- **Policy C/NR 13.8:** Manage development in Hillside Management Areas (HMAs) to protect their natural and scenic character and minimize risks from natural hazards, such as fire, flood, erosion, and landslides.
- **Policy C/NR 13.9:** Consider the following in the design of a project that is located within an HMA, to the greatest extent feasible:
    - Public safety and the protection of hillside resources through the application of safety and conservation design standards;
    - Maintenance of large contiguous open areas that limit exposure to landslide, liquefaction and fire hazard and protect natural features, such as significant ridgelines, watercourses, and SEAs.

[29] Los Angeles County Department of Regional Planning. January 2014. *2014 Draft General Plan 2035*. "Chapter 9: Conservation and Natural Resources Element." PDF available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter9_2014.pdf

1986 Antelope Valley Areawide General Plan

The Planning Area of the Antelope Valley Areawide General Plan, 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 subject parcels that would be potentially affected by the proposed initiative.[30] The Antelope Valley Areawide General Plan has established standards for the protection of ecological resources within designated Significant Ecological Areas and restrictions for residential uses within Hillside Management Areas (HMAs), or hillsides with a natural slope of 25% (4 horizontal to 1 vertical) or greater, to very low densities (up to 0.5 dwelling units/acre depending on the slope) with the provision that the "integrity" of the hillside formation and its natural vegetation is retained in order to prevent excessive runoff, landslides, and erosion and to maintain their "scenic and geologic" values. The General Plan states that these "Hillside Management Areas" generally correspond to the foothills of the San Gabriel, the Sierra Pelona and Tehachapi Mountains, and the butte areas on the Valley floor.

The Antelope Valley Areawide General Plan also establishes a priority to maintain the rural character and very low density of residential development from a history as agricultural settlements or local farm trade centers in the rural communities of Acton, Crystalaire, Gorman, Green Valley, Lake Hughes-Elizabeth Lake, Leona Valley, Littlerock, Pearblossom, and Wrightwood, to be protected in order to preserve a "low density community lifestyle integrated into the natural environment of the foothills." The General Plan has identified Antelope Acres, Big Pines, Del Sur, El Dorado, Hi Vista, Juniper Hills, Llano, Neenach, Redman, Roosevelt, Three Points, Valyermo, Westside Park, and White Fence Farms as "very low density, rural villages which are worthy of protection" where their residents express a sense of community pride and local identity; the General Plan states that "it is important to sustain these areas as unique, low-density 'living environments.'"

Chapter IV, *Planning Policies Relating to Specific Communities*, establishes the following policies relevant to aesthetics in consideration of the proposed initiative:

- **Acton:** The area should remain a rural community to protect the quality of life found there and to avoid the need for additional expensive public service systems. In keeping with Acton's rural setting, all future development shall be limited to a maximum height of two stories, except for the necessary appurtenances, such as roof antennae, air conditioning units, chimneys, solar panels and other similar accessories.
- **Antelope Acres:** Maintain homesite or ranch lifestyle.
- **Juniper Hills:** Designated for very low-density rural development to maintain its existing rural residential character.
- **Lake Los Angeles:** Located among the picturesque buttes of the eastern Antelope Valley, which should be preserved.

[30] Los Angeles County Department of Regional Planning. December 4, 1986. *Antelope Valley Areawide General Plan: A Component of the Los Angeles County General Plan*. PDF available online at: http://planning.lacounty.gov/assets/upl/data/pd_antelope-valley.pdf

- **Leona Valley:** Future local street improvements should be limited to a maximum paved width of 24 feet (not including shoulders). Street lights should be shielded to reflect away from adjacent residences.
- **Littlerock:** No residential structure should exceed a height of 35 feet, excepting appurtenances such as roof antennae, air conditioning units, etc.). Street lights should only be provided along important highways and at major intersections, and should be hooded to minimize the impact on adjacent residences.
- **Pearblossom:** The community enjoys a panoramic view of the desert in one direction and the San Gabriel Mountains in the other direction that should be preserved.
- **Quartz Hill:** To reinforce the existing community, all residential developments should recognize other existing or desired characteristics. All future residential development in the "U-2-D-", "U-1-", and "U-1-1/2"-designated areas should be set back from the front property line at a minimum of 30 feet. Additionally, the existing semi-rural character of the community, in part, results from the use of native plants in the landscaping of many properties. In particular, the Joshua and Juniper Trees have come to symbolize the special character of this area. As additional development occurs, many of these trees will be removed. If left unregulated, the potential is that very few will be left standing. Consequently, it is intended that, as part of the Community Standards District, controls will be exerted to protect these trees against unnecessary destruction.

Chapter V*, Policy Statements*, establishes the following relevant policies to aesthetics in consideration of the proposed initiative:

Land Use

- **Goal:** Pattern of Population and Land Use Distribution
  - **Policy 11.** Promote and enhance a rural community character in designated rural areas.

Community Design

- **Goal:** Compatibility and Proximity of Urban Activities
  - **Policy 62.** Mitigate where possible undesirable impacts of adjacent land uses (i.e., noise interruption, visual intrusion, and airborne emissions) through utilization of appropriate buffers, building codes and standards.
- **Goal:** Relationship of Urban and Natural Environments
  - **Policy 63.** Carefully integrate physical land use development into the natural environmental setting (e.g., hillside development should respect natural contours, rather than utilizing massive grading to reshape the site).
- **Goal:** Physical Appearances/Community Image
  - **Policy 69.** Protect significant vegetation such as the Joshua Tree.

Environmental Resource Management

- **Goal:** Natural Resources
  - **Policy 135.** Encourage development to utilize and enhance natural topographic features, thus establishing harmony between the natural and man-made environment.

- **Policy 136.** Encourage clustering of residential uses on the flatter lands within hilly and mountainous areas to minimize grading and to preserve the natural terrain.

2012 Santa Clarita Valley Area Plan

The Castaic/Santa Clarita/Agua Dulce subarea (10 percent of the subject parcels 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.[31] The Santa Clarita Valley Area Plan has designated Significant Ridgelines as valuable scenic resources to be protected during development and trail planning and construction.[32] 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.
  - **7.** The Santa Clarita Valley's prominent ridgelines shall be preserved and hillside development shall be limited to protect their valuable aesthetic and visual qualities intrinsic to the Valley landscape.
  - **8.** Development shall be located and designed to minimize the impact of the Valley topography, emphasizing the use of grading techniques for development pads that mimic the natural topography in lieu of repetitive flat pads to the extent feasible and consistent with a community's open space objectives.

The Land Use Element of the Santa Clarita Valley Area Plan has established the following goals, objectives, and policies relevant to aesthetics in consideration of the proposed initiative:

- **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-1.1.4:** 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.

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

[32] Los Angeles County, Santa Clarita Valley Area Plan, 2012. PDF available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf Appendix II, Page 280. "Figure CO-7: Santa Clarita Valley Area Plan: Scenic Resources."

- **Objective LU-1.2:** Maintain the distinctive community character of villages and neighborhoods throughout the planning area by establishing uses, densities, and design guidelines appropriate to the particular needs and goals of each area, including but not limited to the following:
    - **Policy LU-1.2.10:** In Agua Dulce, recognize the scenic and environmental qualities of Vasquez Rocks in future planning; protect the existing rural lifestyle while providing opportunities to enhance the village center; provide additional services to residents; and maintain community character in accordance with the County's Agua Dulce Community Standards District.
- **Objective LU 1.3:** Plan for density and intensity of development that respects and is reflective of the natural terrain.
    - **Policy LU-1.3.2:** Substantially retain the integrity and natural grade elevations of significant natural ridgelines and prominent landforms that form the Valley's skyline backdrop.
    - **Policy LU-1.3.3:** Discourage development on ridgelines and lands containing 50% slopes so that these areas are maintained as natural open space.

- **Goal LU-6:** Community Appearance - A scenic and beautiful urban environment that builds on the community's history and natural setting.
    - **Objective LU-6.1:** Maintain the natural beauty of the Santa Clarita Valley's hillsides, significant ridgelines, canyons, oak woodlands, rivers, and streams.
        - **Policy LU-6.1.1:** Designate ridgelines throughout the planning area, and preserve these ridgelines from development by encouraging a minimum distance for grading and development from these ridgelines of 50 feet, or more if determined preferable by the reviewing authority based on site conditions.
- **Goal LU-7:** Environmentally Responsible Development - Environmentally responsible development through site planning, building design, waste reduction, and responsible stewardship of resources.
    - **Objective LU-7.6:** Protect natural habitats through site design where reasonable and feasible.
        - **Policy LU-7.6.1:** Limit outdoor lighting levels to the minimum needed for safety and security, and encourage lower lighting levels when businesses are closed.

The Conservation Element provides the following goals, objectives, and policies relevant to aesthetics in consideration of the proposed initiative:

- **Goal CO-3:** Biological Resources - Conservation of biological resources and ecosystems, including sensitive habitats and species.
    - **Objective CO-3.6:** Minimize impacts of human activity and the built environment on natural plant and wildlife communities.
        - **Policy CO-3.6.1:** Minimize light trespass, sky-glow, glare, and other adverse impacts on the nocturnal ecosystem by limiting exterior lighting to the level needed for safety and comfort; reduce unnecessary lighting for landscaping and architectural purposes, and encourage reduction of lighting levels during non-business nighttime hours.

- **Goal CO-6:** Scenic Resources - Preservation of scenic features that keep the Santa Clarita Valley beautiful and enhance quality of life, community identity, and property values.
    - **Objective CO-6.1:** Protect the scenic character of local topographic features.
        - **Policy CO-6.1.1:** Protect scenic canyons (listed in *Existing Conditions*) from overdevelopment and environmental degradation.
        - **Policy CO-6.1.2:** Preserve significant ridgelines as a scenic backdrop throughout the community by maintaining natural grades and vegetation.
        - **Policy CO-6.1.3:** Protect the scenic quality of unique geologic features throughout the planning area, such as Vasquez Rocks, by including these features within park and open space land where possible.
    - **Objective CO-6.3:** Protect the scenic character of major water bodies.
        - **Policy CO-6.3.2:** Protect the banks of the Santa Clara River and its major tributaries (listed in *Existing Conditions*) through open space designations and property acquisitions, where feasible, to protect and enhance the scenic character of the river valley.
    - **Objective CO-6.4:** Protect the scenic character of oak woodlands, coastal sage, and other habitats unique to the Santa Clarita Valley.
    - **Objective CO-6.5:** Maintain the scenic character of designated routes, gateways, and vista points along roadways.
    - **Objective CO-6.6:** Limit adverse impacts by humans on the scenic environment.
        - **Policy CO-6.6.1:** Enhance views of the night sky by reducing light pollution through use of light screens, downward directed lights, minimized reflective paving surfaces, and reduced lighting levels, as deemed appropriate by the reviewing authority.
- **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-10.1.2:** The Santa Clara River corridor and its major tributaries shall be preserved as open space to accommodate storm water flows and protect critical plant and animal species, as follows: (Guiding Principle #6)
            - Designed to maximize the full range of river amenities, including views and recreational access, while minimizing adverse impacts to the river.
        - **Policy CO-10.1.5:** Maintain open space corridors along canyons and ridgelines as a way of delineating and defining communities and neighborhoods, providing residents with access to natural areas, and preserving scenic beauty.

Rural Outdoor Lighting District Ordinance

Approximately 284,949.2 acres of the 285,413.2-acre proposed initiative study area (99.8 percent) are located within the County's Rural Outdoor Lighting District and subject to restrictions in terms

of producing sources of light and glare at night (Figure 3.1.1-1, *County Rural Outdoor Lighting District and CSD Ordinance Boundaries*).[33] The Rural Outdoor Lighting District Ordinance, adopted in November 2012, is an amendment to Title 22 – Planning and Zoning of the Los Angeles County Code that established a rural outdoor lighting district, a supplemental district for the rural areas of the County within which outdoor lighting is regulated to maintain dark skies at night for the residents and wildlife in the District.[34] The ordinance also modified the community standards districts located within the District to be consistent with the dark skies ordinance. Under the ordinance, outdoor lighting shall be fully shielded on properties located in residential, agricultural, open space, or watershed zones. Drop-down lenses, mercury vapor light, ultraviolet lights, searchlights, laser lights, and other lighting that flashes, blinks, alternates, or moves are prohibited within the Rural Outdoor Lighting District.

In addition to compliance with the applicable provisions of the Building and Electrical Codes of Los Angeles County, outdoor lighting within the Rural Outdoor Lighting District, other than street lights, are subject to the following requirements under the Rural Outdoor Lighting District Ordinance relevant to the proposed initiative:

- For properties located in the Residential, Agricultural, Open Space, or Watershed Zones, outdoor light fixtures installed above 15 feet in height shall have a manufacturer's maximum output rating of no greater than 400 lumens.
- Outdoor lighting shall cause no unacceptable light trespass.
- Outdoor lighting shall be fully shielded.
- The maximum height for an outdoor light fixture, as measured from the finished grade to the top of the fixture, shall be 20 feet for a property located in the Residential, Agricultural, Open Space, or Watershed Zones.

In order to maintain the dark skies characteristic of the Rural Outdoor Lighting District, street lights in the district shall be prohibited except where necessary at urban cross-sections with sidewalks, curbs, and gutters, or at intersections and driveways on County roads, where the Director of Public Works finds that street lights will alleviate traffic hazards, improve traffic flow, and/or promote safety and security of pedestrians and vehicles based on Public Works' highway safety lighting standards. Where street lights are installed in the district, they shall:

1. Be placed at the maximum distance apart, with the minimum lumens allowable pursuant to Public Works' highway safety lighting standards, as determined by the Director of Public Works;
2. Utilize full-cutoff (flat glass lens) luminaries so as to deflect light away from adjacent parcels; and
3. Be designed to prevent off-street illumination and glare.

[33] Los Angeles County Department of Regional Planning. n.d. *Los Angeles County Rural Outdoor Lighting District*. PDF available online at: http://planning.lacounty.gov/assets/upl/data/map_t07-rural_outdoor_lighting_district.pdf

[34] Los Angeles County Department of Regional Planning. 28 September 2012. *Ordinance No. 2012-0047*. PDF available online at: http://planning.lacounty.gov/assets/upl/data/ord_outdoor-lighting.pdf Main website: http://planning.lacounty.gov/view/rural_outdoor_lighting_district_ordinance/

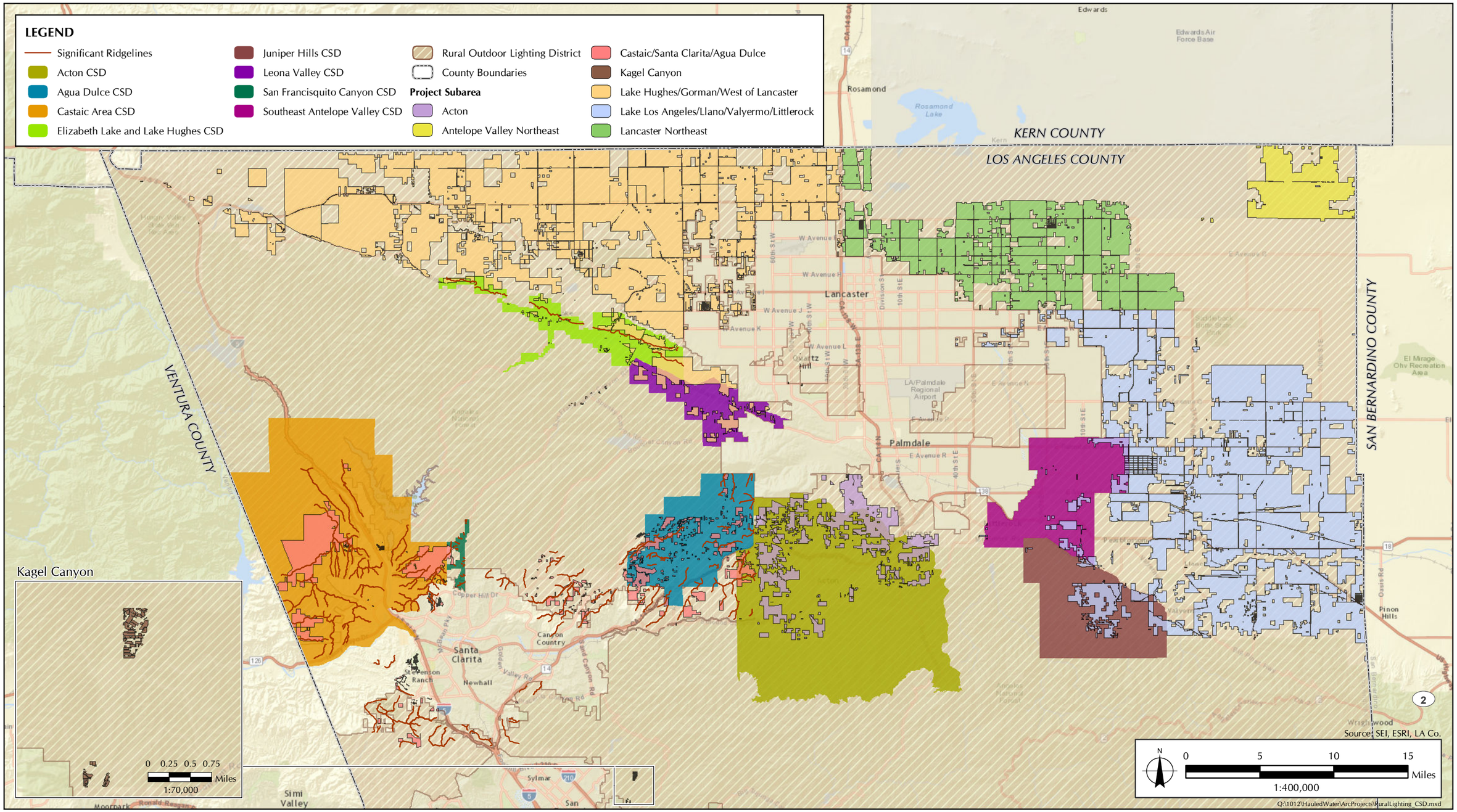

FIGURE 3.1.1-1

County Rural Outdoor Lighting District and CSD Ordinance Boundaries

Community Standards Districts Ordinances

Community standards districts (CSDs) are supplemental districts that are established to provide a means of implementing special development standards for neighborhoods and communities 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 County (Ord. 93-0047 § 1, 1993: Ord. 87-0130 § 1, 1987: Ord. 83-0065 § 5, 1983: Ord. 1494 Ch. 9 Art. 5 § 905.1, 1927.).[35] CSD regulations supplement the Countywide zoning and subdivision regulations.[36]

3.1.2 AFFECTED ENVIRONMENT

Scenic Vistas

Los Angeles County General Plan

The subject parcels are located within the viewshed of the following County-designated Vista Points and Roadside Rests identified in the 1965 Regional Recreation Areas Plan (Figure 3.1.2-1, *Scenic Resources*):

- **Vista Points:** the subject parcels are potentially visible from three (3) County-designated vista points:
  - **Reservoir Summit (12**): this scenic vista point, which was designated by the County for its panorama view of mountain landforms and landscapes, is located approximately 9.6 miles north-northwest of the Castaic/Santa Clarita/Agua Dulce subarea and approximately 6.0 miles south of the Lake Hughes/Gorman/West of Lancaster subarea.
  - **Inspiration Point (463):** this scenic vista point, which was designated by the County for its panorama view of the San Gabriel River watershed, is located approximately 4.5 miles south of the Lake Los Angeles/Llano/Valyermo/Littlerock subarea.
  - **Big Rock Canyon Vista Point (464):** this scenic vista point, which was designated by the County for its panorama view of Big Rock Canyon and the Antelope Valley, is located approximately 4.3 miles south of the Lake Los Angeles/Llano/Valyermo/Littlerock subarea.
- **Roadside Rests:** the subject parcels are potentially visible from one (1) County-designated roadside rest:
  - **State Roadside Rest #8 (379):** this roadside rest is located on Angeles Crest Highway, 6 miles east of San Gabriel Canyon Road and approximately 4.8 miles south of the Lake Los Angeles/Llano/Valyermo/Littlerock subarea. However, due to topography and existing trees, the nearest visible parcel

[35] County of Los Angeles Department of Regional Planning. Accessed 29 July 2014. *Community Standards Districts*. Website. Available online at: http://planning.lacounty.gov/view/community_standards_districts

[36] County of Los Angeles. n.d. *Los Angeles County, California, Code of Ordinances: Title 22 – Planning and Zoning: Division 1 – Planning and Zoning: Chapter 22.44 – Supplemental Districts: Part 2 Community Standards Districts*. Website. Available online at: https://library.municode.com/HTML/16274/level4/TIT22PLZO_DIV1PLZO_CH22.44SUDI_PT2COSTDI.html#TIT22PLZO_DIV1PLZO_CH22.44SUDI_PT2COSTDI_22.44.126ACCOSTDI

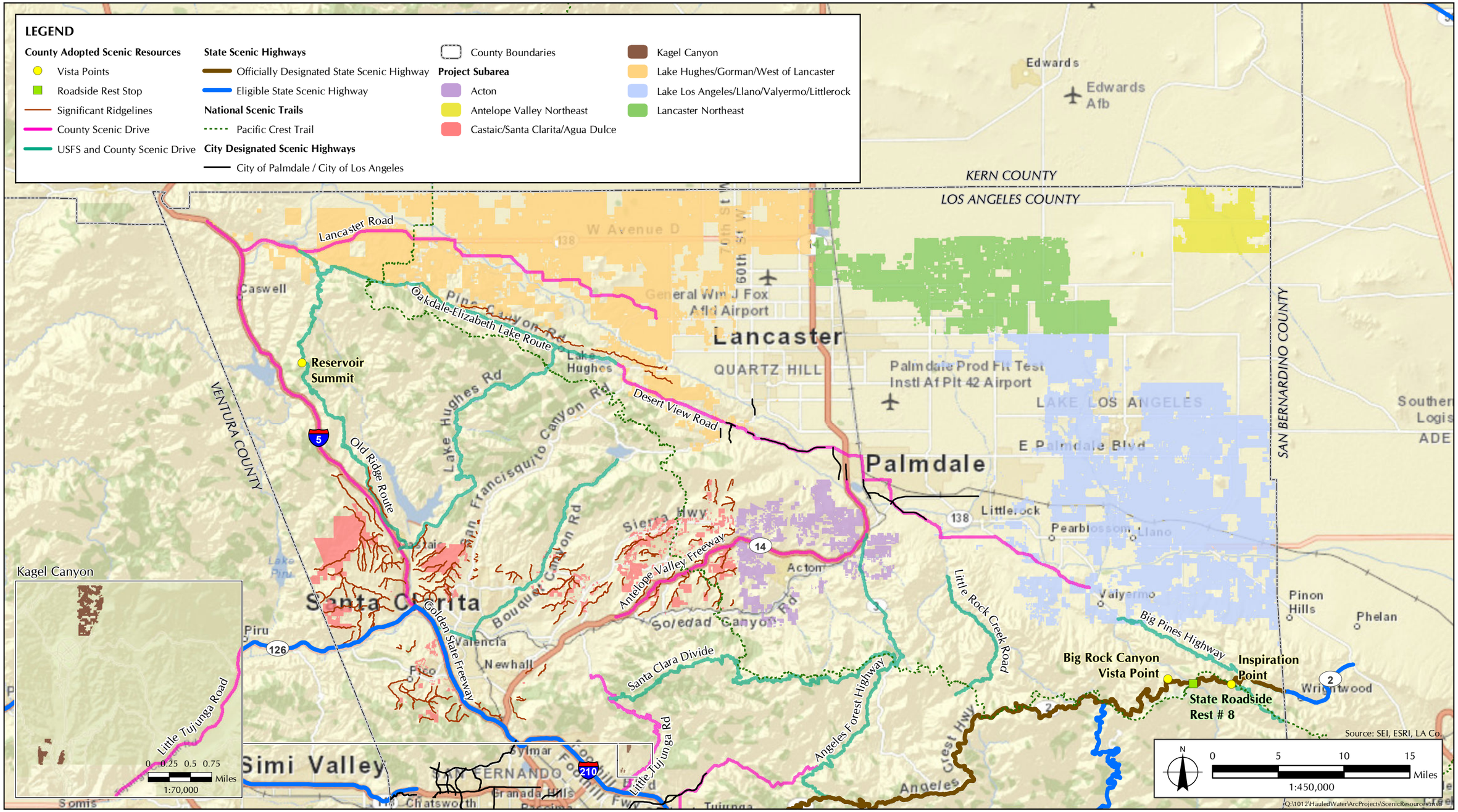

FIGURE 3.1.2-1

Scenic Resources

within the subarea is located approximately 7.0 miles northwest of the roadside rest.

State Scenic Highways

Officially Designated State Scenic Highways

The subject parcels are not directly adjacent to an officially designated State Scenic Highway. The nearest officially designated State Scenic Highway to the subject parcels is State Route 2 (Angeles Crest Highway), a 55-mile stretch of highway located approximately 3.4 miles south of the southernmost parcels within the Lake Los Angeles/Llano/Valyermo/Littlerock subarea (see Figure 3.1.2-1).[37] Although some of the subject parcels within this subarea are visible in the distance from portions of State Route 2, the parcels affected by the proposed initiative do not contain scenic resources that are essential to the scenic character of the State Route 2 scenic corridor.

The second nearest officially designated State Scenic Highway is State Route 33, which is located approximately 29.5 miles west of the westernmost parcels within the Castaic/Santa Clarita/Agua Dulce subarea in Ventura County. Due to distance and intervening topography, any residential or hauled water construction on the subject parcels would not be visible from this officially designated State Scenic Highway.

Eligible State Scenic Highways

The nearest eligible State Scenic Highways to the subject parcels are:

- **Interstate 5 (I-5):** Located approximately 0.2 mile southwest of the nearest parcel in the Castaic/Santa Clarita/Agua Dulce subarea, the subject parcels located on a County-designated significant ridgeline and within proximity to the I-5 within the Castaic/Santa Clarita/Agua Dulce subarea are visible from I-5. These subject parcels within the Castaic/Santa Clarita/Agua Dulce subarea contain scenic trees within the I-5 scenic corridor. Although the nearest parcel within the Kagel Canyon subarea is located approximately 6.5 miles east of I-5, the subject parcels within the Kagel Canyon subarea are not visible due to intervening topography.
- **State Route 126 (SR-126):** Located approximately 0.7 mile southeast of the nearest parcel within the Castaic/Santa Clarita/Agua Dulce subarea, the subject parcels on a County-designated significant ridgeline within this subarea are visible from SR-126. However, no scenic trees, rock outcroppings, or historic buildings are located on these parcels within the State Route 126 scenic corridor.
- **State Route 210 (SR-210):** Located approximately 1.2 miles south of the nearest parcel in the Kagel Canyon subarea and approximately 1.2 miles southeast of the nearest parcel in the Castaic/Santa Clarita/Agua Dulce subarea, the subject parcels within both subareas are not visible from SR-210 due to intervening topography.

[37] State of California Department of Transportation. 2014. *California Scenic Highway Program*. Website. Available online at: http://www.dot.ca.gov/hq/LandArch/scenic_highways/scenic_hwy.htm

Officially Designated County Scenic Highways

The subject parcels are not visible from the nearest officially designated County scenic highway, Malibu Canyon-Las Virgenes Road, which is located approximately 16.2 miles southwest of the nearest parcel in the Castaic/Santa Clarita/Agua Dulce subarea and approximately 22.0 miles southwest of the nearest parcel in the Kagel Canyon subarea.

Visual Character & Quality

The dominant land us, within and adjacent to a subarea, is a key factor in defining the visual character. In general, open space has a more spacious natural visual character; whereas, the visual character of an areas becomes increasingly more related to the built environment as development increases from rural/agricultural uses, to suburban, and urban uses. The seven subareas vary in visual character from predominantly open space in the Antelope Valley Northeast subarea to predominantly suburban with some visual connect to urban areas in the Castaic/Santa Clarita/Agua Dulce subarea (Table 3.1.2-1, *Visual Character in Relation to Land Uses in Vicinity of Subareas*).

TABLE 3.1.2-1
VISUAL CHARACTER IN RELATION TO LAND USES IN VICINITY OF SUBAREAS

Subarea	Urban	Suburban	Rural/Agricultural	Open Space
Acton	No	Adjacent to parcels	Adjacent to parcels	Adjacent to parcels
Castaic/Santa Clarita/Agua Dulce	At a distance from parcels	Adjacent to parcels	Adjacent to parcels	Adjacent to parcels
Antelope Valley Northeast	No	No	No	Surrounding parcels
Kagel Canyon	No	Adjacent to parcels	Adjacent to parcels	Surrounding parcels
Lake Hughes/Gorman/West of Lancaster	No	Sparse	On and adjacent to parcels	Surrounding parcels
Lake Los Angeles/Llano/ Valyermo/Littlerock	No	No	On and adjacent to parcels	Adjacent to parcels
Lancaster Northeast	No	No	On and adjacent to parcels	Adjacent to parcels

Pacific Crest National Scenic Trail

The Pacific Crest Trail, 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, was designated as a national scenic trail with the original establishment of the National Trails System Act. According to the National Trails System Act, "to the extent practicable, efforts shall be made to avoid activities incompatible with the purposes for

which such trails were established."[38] Pacific Crest Trail passes through easements between subject parcels and adjacent to subject parcels within the Lake Hughes/Gorman/West of Lancaster subarea and the Castaic/Santa Clarita/Agua Dulce subarea (see Figure 3.1.2-1). This national scenic trail is located approximately 0.5 miles southwest of the nearest parcels within the Acton subarea, approximately 3.1 miles south of the nearest parcels within the Lake Los Angeles/Llano/Valyermo/Littlerock subarea, approximately 8.3 miles northeast of the Kagel Canyon subarea, approximately 20.7 miles south of the Lancaster Northeast subarea, and approximately 26.3 miles south of the Antelope Valley Northeast subarea. The subject parcels within the Lake Hughes/Gorman/West of Lancaster subarea, the Castaic/Santa Clarita/Agua Dulce subarea, and the Acton subarea are clearly visible in the foreground and would have a high impact on views from Pacific Crest Trail. The subject parcels within the Lake Los Angeles/Llano/Valyermo/Littlerock subarea are visible in the middleground and would have a moderate impact on views from Pacific Crest Trail. The subject parcels within the Lancaster Northeast subarea and Antelope Valley Northeast subarea are visible in the distance/background and would have a low impact on views from Pacific Crest Trail. Due to intervening topography, the subject parcels within the Kagel Canyon subarea are not visible from Pacific Crest Trail.

Significant Ridgelines

Los Angeles County has designated significant ridgelines that intersect with 226 of the subject parcels: 185 parcels (approximately 5,522.9 acres) of the Castaic/Santa Clarita/Agua Dulce subarea and 41 parcels (approximately 1,292.5 acres) of the Lake Hughes/Gorman/West of Lancaster subarea (see Figure 3.1.2-1).

Community Standards Districts

Approximately 7.3 percent (3,129) of the subject parcels are located within Community Standards Districts (CSDs). The Acton, Agua Dulce, Castaic Area, Elizabeth Lake and Lake Hughes, and San Francisquito Canyon CSDs establish grading, building height, and setback standards for preserving significant ridgeline areas within the Castaic/Santa Clarita/Agua Dulce and Lake Hughes/Gorman/West of Lancaster subareas (see Figure 3.1.1-1 and Table 3.1.2-2, *Community Standards Districts*). As 3,084 of the 3,129 subject parcels within CSDs (98.6 percent) are located within the Rural Outdoor Lighting District, the Acton, Agua Dulce, Castaic Area, Elizabeth Lake and Lake Hughes, Juniper Hills, Leona Valley, San Francisquito Canyon, and Southeast Antelope Valley CSDs establish lighting standards consistent with the Rural Outdoor Lighting District Ordinance.

[38] National Park Service. Website last modified 12 July 2012. *The National Trails System Act*. Also found in United States Code, Volume 16, Sections 1241-1251. Available online at: http://www.nps.gov/nts/legislation.html Section 7. [16USC1246](c), Administration and Development.

TABLE 3.1.2-2
COMMUNITY STANDARDS DISTRICTS

Community Standards District (CSD)	Number of Parcels within Subareas	Purpose of CSD	Significant Ridgeline Protection Standards	Street Lighting Standards	Outdoor Lighting Standards
Acton CSD	913 parcels – Acton subarea 92 parcels – Castaic/Santa Clarita/Agua Dulce subarea	Protect and enhance the rural, equestrian and agricultural character of the community and its sensitive features including significant ecological areas, floodplains, hillsides, National Forest, archaeological resources, multipurpose trail system, and Western heritage architectural theme	Preserve to the greatest extent possible the natural silhouette in significant ridgeline areas. Significant ridgelines are the ridgelines that surround or visually dominate the Acton landscape either through their size in relation to the hillside or mountain terrain of which they are a part, or through their visual dominance as characterized by a silhouetting appearance against the sky, or through their visual dominance due to proximity and view from existing development, freeways and highways designated as Major, Secondary or Limited Secondary on the Highway Plan.		Outdoor lighting shall be provided in accordance with the applicable provisions of the Rural Outdoor Lighting District. Where outdoor lights are required, light fixtures in keeping with the Western frontier architectural style will be required.
Agua Dulce CSD	492 parcels – Castaic/Santa Clarita/Agua Dulce subarea	Preserve the secluded rural nature of the community; protect the equestrian, agricultural, historical, cultural, archaeological, and geological characteristics of the community; protect sensitive resources and areas, including Vasquez Rocks Natural Area Park, the Santa Clara River, and Angeles National Forest, and the various floodplains, hillsides, ridgelines, rock outcroppings, and significant ecological areas located within the CSD; and minimize the development of urban infrastructure that would alter the rural character of the community, including the development of sewer and water systems, paved local streets, street lights, concrete sidewalks, and concrete flood control systems	The highest point of any structure, excluding chimneys, rooftop antennas, amateur radio antennas, roof-mounted solar panels, and wind energy conversion systems, shall be located at least 50 vertical feet and 50 horizontal feet from a significant ridgeline. Any modification to the requirements shall require a conditional use permit, in accordance with the applicable provisions of Part 1 of Chapter 22.56 of the Los Angeles County, California, Code of Ordinances. In approving such conditional use permit, the hearing officer or Commission shall make the following findings, in addition to those required by Section 22.56.090: i. That alternative sites within the project site have been considered and rejected due to documented hazards for potentially greater damage to biota on the alternative sites than on the subject site, as determined by a biologist; and ii. That the overall development is designed so that grading will not occur uniformly across the project area and will be limited to the pads required for individual structures.	Street lights shall be provided in accordance with the applicable provisions of the Rural Outdoor Lighting District. Where installed, street lights shall be compatible in style and material with the poles on which they are mounted.	Outdoor lighting shall be provided in accordance with the applicable provisions of the Rural Outdoor Lighting District.

TABLE 3.1.2-2
COMMUNITY STANDARDS DISTRICTS, *Continued*

Community Standards District (CSD)	Number of Parcels within Subareas	Purpose of CSD	Significant Ridgeline Protection Standards	Street Lighting Standards	Outdoor Lighting Standards
Castaic Area CSD	275 – Castaic/Santa Clarita/Agua Dulce subarea	Protect the rural character, unique appearance, and natural resources of the Castaic Area communities.	For purposes of this CSD, significant ridgelines shall consist of primary and secondary ridgelines. Except as provided below, no development, grading, construction, or improvements shall be allowed on a significant ridgeline within a 50-foot radius from every point on the crest of a primary ridgeline or within a 25-foot radius from every point on the crest of a secondary ridgeline. **Significant Ridgeline Exemptions** Provided an approval is obtained for an exemption as described below, the following structures or uses may be permitted on significant ridgelines, or within the respective 50-foot and 25-foot restricted areas surrounding such significant ridgelines: i. Accessory buildings or structures; ii. Additions and/or modifications to an existing single-family residence; iii. New single-family residences where not more than one such residence is proposed to be built by the same person on contiguous parcels of land; iv. Open spaces, conservation areas, parks, recreation areas, and/or trails; v. Water tanks or transmission facilities; vi. Architecturally superior structures, other than new single-family residences, which maximize the aesthetic appeal of the hillsides and significant ridgelines, and minimize the disturbance of the natural setting; and vii. Roads providing access to any of the structures or uses described above. **Significant Ridgeline Exemption Approval** No exemption shall be allowed unless the applicant obtains: (A). A director's review and approval pursuant to subsection G, below, for structures or uses described in subsection i, ii, and iii; or (B). A conditional use permit, as provided in Part 1, Chapter 22.56, for structures or uses described in subsections iv, v, or vi. The application for the conditional use permit must contain the information either required by or described in Sections 22.56.030, 22.56.040 and, where applicable, subsections D and E of Section 22.56.215. ii. In addition to any information required for the director's approval and the conditional use permit, an application for a significant ridgeline exemption approval shall also demonstrate that the proposed use: (A). Is compatible with adjacent uses, the character of the neighboring community, and the goals and policies of the general plan; (B). Will leave the crest of the significant ridgeline in its natural state; (C). Is designed to minimize the amount of grading necessary and will use landscaping to minimize the visual impact of the project; (D). Will not be materially detrimental to the visual character of the neighborhood or the Castaic communities; (E). Will not impede the normal and orderly development of surrounding properties and will not promote encroachments on significant ridgelines; and (F). Will not degrade the visual integrity of the significant ridgeline, as verified through submission of a precise illustration and depiction.		Outdoor lighting shall be provided in accordance with the applicable provisions of the Rural Outdoor Lighting District.

TABLE 3.1.2-2
COMMUNITY STANDARDS DISTRICTS, *Continued*

Community Standards District (CSD)	Number of Parcels within Subareas	Purpose of CSD	Significant Ridgeline Protection Standards	Street Lighting Standards	Outdoor Lighting Standards
Elizabeth Lake and Lake Hughes CSD	278 parcels – Lake Hughes/Gorman/ West of Lancaster subarea	Enhance the quality of life in these communities by preserving and protecting their rural character and the beauty of their environmental setting	The highest point of a structure shall be located at least one hundred-fifty (150) vertical feet and one hundred-fifty (150) horizontal feet in a southerly direction from a significant ridgeline, excluding chimneys, rooftop antennas, amateur radio antennas, and wind energy conversion systems. No portion of any structure shall be located less than fifty (50) horizontal feet in a northerly direction from a significant ridgeline, excluding amateur radio antennas, chimneys, rooftop antennas, and wind energy conversion systems. Any modification to the requirements shall require a minor conditional use permit, as provided in Section 22.56.085. In approving such permit, the Hearing Officer or Commission shall make the following findings in addition to those required by Section 22.56.090: i. Alternative sites within the project site have been considered and eliminated from consideration due to their physical infeasibility or their potential for substantial habitat damage or destruction; and ii. The project maintains the maximum view of the applicable significant ridgeline through design features, including but not limited to, minimized grading; reduced structural height; use of shapes, materials, and colors that blend with the surrounding environment; and/or use of native drought-tolerant landscaping for concealment.	Street lights shall be provided in accordance with the applicable provisions of the Rural Outdoor Lighting District. Where installed, street lights shall be compatible in style and material with the poles on which they are mounted.	Outdoor lighting shall be provided in accordance with the applicable provisions of the Rural Outdoor Lighting District.
Juniper Hills CSD	474 parcels – Lake Los Angeles/Llano/ Valyermo/ Littlerock subarea	Maintain the low densities, secluded rural character, unique desert foothill appearance, and significant natural resources of the community		Street lights shall be provided in accordance with the applicable provisions of the Rural Outdoor Lighting District. Where installed, street lights shall be compatible in style and material with the poles on which they are mounted.	Outdoor lighting shall be provided in accordance with the applicable provisions of the Rural Outdoor Lighting District.
Leona Valley CSD	143 parcels – Lake Hughes/Gorman/ West of Lancaster subarea	Protect the community's unique appeal, including its rural agricultural character, the portion of the Ritter Ridge Significant Ecological Area within Leona Valley, and the floodplain and hillside management areas defined by the Antelope Valley Area Plan			Outdoor lighting, including street lights, shall be provided in accordance with the applicable provisions of the Rural Outdoor Lighting District.
San Francisquito Canyon CSD	7 parcels – Castaic/Santa Clarita/Agua Dulce subarea	Protect and enhance the community's secluded rural, equestrian, and agricultural character as well as its natural features, including ridgelines, significant ecological areas, and flood plains	The highest point of a structure shall be located at fifty (50) vertical feet and fifty (50) horizontal feet from a significant ridgeline, excluding chimneys, rooftop antennas, amateur radio antennas, and wind energy conversion systems. Any modification to the requirements shall require a minor conditional use permit, as provided in Section 22.56.085. In approving such permit, the Director, Hearing Officer, or Commission shall make the following findings in addition to those required by Section 22.56.090 i. Alternative sites within the project have been considered and eliminated from consideration due to their physical infeasibility or their potential for substantial habitat damage or destruction; and ii. The project maintains the maximum view of the applicable significant ridgeline through design features, including but not limited to, minimized grading; reduced structural height; use of shapes, materials, and colors that blend with the surrounding environment; and/or use of native drought-tolerant landscaping for concealment.	Street lights shall be provided in accordance with the applicable provisions of the Rural Outdoor Lighting District. Where installed, street lights shall be compatible in style and material with the poles on which they are mounted.	Outdoor lighting shall be provided in accordance with the applicable provisions of the Rural Outdoor Lighting District.

TABLE 3.1.2-2
COMMUNITY STANDARDS DISTRICTS, *Continued*

Community Standards District (CSD)	Number of Parcels within Subareas	Purpose of CSD	Significant Ridgeline Protection Standards	Street Lighting Standards	Outdoor Lighting Standards
Southeast Antelope Valley CSD	455 parcels – Lake Los Angeles/ Llano/Valyermo/ Littlerock subarea	Protect and enhance the community's rural, equestrian, and agricultural character as well as its natural features, including significant ecological areas, flood plains, and desert terrain		Street lights shall be provided in accordance with the applicable provisions of the Rural Outdoor Lighting District.	Outdoor lighting shall be provided in accordance with the applicable provisions of the Rural Outdoor Lighting District.

County Proposed or Designated Scenic Drives

The subject parcels are located within the viewshed of 7 Los Angeles County-designated and 6 proposed Scenic Drives identified in the 1965 Regional Recreation Areas Plan. These scenic drives have been proposed or designated in order to control the privately-owned properties adjacent to the scenic drive to maintain the intended scenic features, which would have design implications for single-family residences (Table 3.1.2-3, *County Scenic Drives*).

TABLE 3.1.2-3
COUNTY SCENIC DRIVES

Name of Scenic Drive	Existing Scenic Drives in 1965							Proposed Scenic Drives in 1965					
	Oakdale-Elizabeth Lake Route (4)	**Elizabeth Lake Canyon Route (17)**	**Bouquet Canyon Road and Old Ridge Route (92)**	**Little Tujunga Road (118)**	**Angeles Forest Highway (267)**	**Big Pines Highway (373)**	**Old Ridge Route (460)**	**Golden State Freeway (14)**	**Lancaster Road (70)**	**Desert View Route (84)**	**Antelope Valley Freeway (98)**	**Santa Clara Divide (108)**	**Blue Ridge Route (380)**
Description of Scenic Drive	17-mile stretch of Oakdale-Elizabeth Lake Route	20-mile stretch of Elizabeth Lake Hughes Road	17-mile stretch of Bouquet Canyon Road and Old Ridge Route	6-mile stretch of Little Tujunga Road	23-mile stretch of Angeles Crest Highway and Antelope Valley Freeway	16-mile stretch of Big Pines Highway	19-mile stretch of Old Ridge Route	44-mile stretch of Interstate 5	32-mile stretch of Lancaster Road	44-mile stretch of Desert View Route	25-mile stretch of Antelope Valley Freeway	17-mile stretch of Los Pinetos Road and Mt. Gleason Road	8-mile stretch of Blue Ridge
Purpose of Scenic Drive	Forested mountains and foothills	Mountain and forested canyon scenic vistas	Forested canyon scenic vistas	Mountain scenic vistas	Mountain and forest scenic views	Mountain and forest scenic vistas	Mountain and forest scenic vistas	Mountain, canyon and foothill scenic vistas	Desert scenic vistas	Desert and foothill scenic vistas	Canyon and foothill scenic vistas and view of the Vasquez Rocks area	Mountain and forest scenic vistas from ridges	Mountain and forest scenic vistas
Subarea	**Visibility of Subarea from Scenic Drive**												
Acton	No	No	No	No	Visible; passes through subarea	No	No	No	No	Visible	Visible	Visible in foreground,	No
Castaic/Santa Clarita/Agua Dulce	No	Visible	Visible	No	No	No	Visible	Visible	No	No	Visible	Visible in foreground	No
Antelope Valley Northeast	No	No	No	No	No	No	No	No	No	No	No	No	No
Kagel Canyon	No	No	No	Hidden	No	No	No	No	No	No	No	No	No
Lake Hughes/Gorman/West of Lancaster	Visible	Hidden by vegetation and topography	No	No	No	No	Visible	Visible	Visible	Visible	No	Visible in background	No
Lake Los Angeles/Llano/ Valyermo/Littlerock	No	No	No	No	No	Visible	No	No	No	Visible	No	Visible in background	Visible
Lancaster Northeast	No	No	No	No	No	No	No	No	No	No	No	Visible in background	

City Designated Scenic Highways

Although the subject parcels are located within unincorporated Los Angeles County, they are potentially within the visible range of city-designated scenic highways or highway corridors in the adjacent cities of Santa Clarita, Lancaster, Palmdale, and Los Angeles. The nearby cities of Santa Clarita and Lancaster have not designated city scenic highway corridors, and the subject parcels within the proposed initiative study area, including the Kagel Canyon subarea and Castaic/Santa Clarita/Agua Dulce subarea, are not visible from any of the nearby City of Los Angeles-designated City scenic highways due to topography and distance (see Figure 3.1.2-1).[39]

The nearby City of Palmdale has designated 8 City scenic highways, which have been designated in order to preserve the existing panoramic vistas of rugged mountains, steep canyon slopes covered with native chaparral, extensive areas of the Mojave Desert, and rural or small-town settings. Development has not yet significantly reduced scenic potential and the city has identified an opportunity for public investment to ensure the future maintenance of these 8 City scenic highways, which would have design implications or development restrictions for single-family residences (Table 3.1.2-4, *Visibility of Subject Parcels from Adjacent City Designated Scenic Highways*):[40]

1. **Barrel Springs Road:** The designated scenic highway portion of Barrel Springs Road within the City of Palmdale is located approximately 1.0 mile west of the nearest subject parcel within the Lake Los Angeles/Llano/Valyermo/Littlerock subarea, approximately 1.3 miles north of the nearest parcel within the Acton subarea, approximately 8.0 miles southeast of the nearest parcel within the Lake Hughes/Gorman/West of Lancaster subarea, approximately 8.5 miles east of the nearest parcel within the Castaic/Santa Clarita/Agua Dulce subarea, and approximately 10.6 miles south of the Lancaster Northeast subarea.
2. **Tierra Subida Avenue:** The designated scenic highway portion of Tierra Subida Avenue within the City of Palmdale is located approximately 0.5 miles northeast of the nearest parcels within the Acton subarea, approximately 5.1 miles southeast of the Lake Hughes/Gorman/West of Lancaster subarea, approximately 7.0 miles northwest of the nearest parcels within the Lake Los Angeles/Llano/Valyermo/Littlerock subarea, approximately 7.1 miles northeast of the Castaic/Santa Clarita/Agua Dulce subarea, and approximately 9.1 miles southwest of the Lancaster Northeast subarea.
3. **Sierra Highway, South of Avenue S:** The designated scenic highway portion of Sierra Highway within the City of Palmdale is located approximately 1.0 mile north of the Acton subarea, approximately 4.6 miles northwest of the Lake Los Angeles/Llano/Valyermo/Littlerock subarea, approximately 7.5 miles southeast of the Lake Hughes/Gorman/West of Lancaster subarea, approximately 8.4 miles northeast of the Castaic/Santa Clarita/Agua Dulce subarea, and approximately 10.1 miles south of the Lancaster Northeast subarea.
4. **Elizabeth Lake Road:** The designated scenic highway portion of Elizabeth Lake Road within the City of Palmdale is located adjacent to the nearest parcel within the

[39] City of Los Angeles Department of City Planning. *Map E: Transportation Element of the General Plan: Scenic Highways in the City of Los Angeles*. Website. Available online at: http://cityplanning.lacity.org/

[40] City of Palmdale. January 25, 1993. *General Plan*.PDF available online at: http://www.cityofpalmdale.org/departments/planning/general_plan/general_plan.pdf

Lake Hughes/Gorman/West of Lancaster subarea, approximately 1.8 miles north of the nearest parcels within the Acton subarea, approximately 3.6 miles north of the Castaic/Santa Clarita/Agua Dulce subarea, approximately 7.6 miles southwest of the nearest parcels within the Lake Los Angeles/Llano/Valyermo/Littlerock subarea, and approximately 9.5 miles southwest of the Lancaster Northeast subarea.

5. **Pearblossom Highway:** The designated scenic highway portion of Pearblossom Highway within the City of Palmdale is located approximately 1.4 miles southwest of the nearest parcel within the Lake Los Angeles/Llano/Valyermo/Littlerock subarea, approximately 1.8 miles northeast of the nearest parcels within the Acton subarea, approximately 9.7 miles southeast of the Lake Hughes/Gorman/West of Lancaster subarea, approximately 9.9 miles east of the Castaic/Santa Clarita/Agua Dulce subarea, and approximately 10.1 miles south of the Lancaster Northeast subarea.
6. **Bouquet Canyon Road:** The designated scenic highway portion of Bouquet Canyon Road within the City of Palmdale is located adjacent to the nearest parcel within the Lake Hughes/Gorman/West of Lancaster subarea, approximately 2.7 miles north of the Castaic/Santa Clarita/Agua Dulce subarea, approximately 5.3 miles northwest of the nearest parcels within the Acton subarea, approximately 10.8 miles southwest of the Lancaster Northeast subarea, and approximately 14.7 miles northwest of the nearest parcels within the Lake Los Angeles/Llano/Valyermo/Littlerock subarea.
7. **Godde Hill Road:** The designated scenic highway portion of Godde Hill Road within the City of Palmdale is located approximately 280 feet south of the nearest parcel within the Lake Hughes/Gorman/West of Lancaster subarea, approximately 2.6 miles northeast of the Castaic/Santa Clarita/Agua Dulce subarea, approximately 4.6 miles northwest of the nearest parcels within the Acton subarea, approximately 8.2 miles southwest of the Lancaster Northeast subarea, and approximately 10.3 miles west of the nearest parcels within the Lake Los Angeles/Llano/Valyermo/Littlerock subarea.
8. **Antelope Valley Freeway, south of Rayburn Road:** The designated scenic highway portion of Antelope Valley Freeway (SR 14) within the City of Palmdale is located approximately 1.0 miles northwest of the nearest parcels within the Acton subarea, approximately 6.0 miles southeast of the Lake Hughes/Gorman/West of Lancaster subarea, approximately 6.5 miles northwest of the nearest parcels within the Lake Los Angeles/Llano/Valyermo/Littlerock subarea, approximately 7.5 miles east of the Castaic/Santa Clarita/Agua Dulce subarea, and approximately 9.5 miles south of the Lancaster Northeast subarea.

TABLE 3.1.2-4
VISIBILITY OF SUBJECT PARCELS FROM ADJACENT CITY DESIGNATED SCENIC HIGHWAYS

Subarea	Barrel Springs Road	Tierra Subida Avenue	Sierra Highway, South of Avenue S	Elizabeth Lake Road	Pearblossom Highway	Bouquet Canyon Road	Godde Hill Road	Antelope Valley Freeway, South of Rayburn Road
Acton	Visible due to hilltop location	Visible due to hilltop location	Visible due to hilltop location	Not visible due to distance, topography, and vegetation in the foreground	Visible due to hilltop location	Not visible due to distance, topography, and vegetation in the foreground	Not visible due to distance, topography, and vegetation in the foreground	Visible due to hilltop location
Castaic/Santa Clarita/Agua Dulce	Not visible due to distance, topography, and vegetation in the foreground	Not visible due to distance, topography, and vegetation in the foreground	Not visible due to distance, topography, and vegetation in the foreground	Not visible due to distance, topography, and vegetation in the foreground	Not visible due to distance, topography, existing residences, and vegetation in the foreground	Not visible due to distance, topography, and vegetation in the foreground	Not visible due to distance, topography, and vegetation in the foreground	Not visible due to distance, topography, and vegetation in the foreground
Antelope Valley Northeast	Not visible	Not visible	Not visible	Not visible	Not visible	Not visible	Not visible	Not visible
Kagel Canyon	Not visible	Not visible	Not visible	Not visible	Not visible	Not visible	Not visible	Not visible
Lake Hughes/Gorman/West of Lancaster	Not visible due to distance, topography, and vegetation in the foreground	Not visible due to distance, topography, and vegetation in the foreground	Not visible due to distance, topography, and vegetation in the foreground	Visible due to proximity to the designated segment of the road and hilltop location	Not visible due to distance, topography, existing residences, and vegetation in the foreground	Visible due to proximity to the designated segment of the road and hilltop location	Visible due to proximity to the designated segment of the road and hilltop location	Not visible due to distance, topography, and vegetation in the foreground
Lake Los Angeles/Llano/ Valyermo/Littlerock	Barely visible due to topography and vegetation in the foreground	Not visible due to distance, topography, and vegetation in the foreground	Not visible due to distance, topography, and vegetation in the foreground	Not visible due to distance, topography, and vegetation in the foreground	Barely visible due to topography and vegetation in the foreground	Not visible due to distance, topography, and vegetation in the foreground	Not visible due to distance, topography, and vegetation in the foreground	Not visible due to distance, topography, and vegetation in the foreground
Lancaster Northeast	Not visible due to distance, topography, and vegetation in the foreground	Not visible due to distance, topography, and vegetation in the foreground	Not visible due to distance, topography, and vegetation in the foreground	Not visible due to distance, topography, and vegetation in the foreground	Not visible due to distance, topography, existing residences, and vegetation in the foreground	Not visible due to distance, topography, and vegetation in the foreground	Not visible due to distance, topography, and vegetation in the foreground	Not visible

Santa Clarita Valley Area Plan Designated Scenic Resources

The Conservation Element of the Santa Clarita Valley Area Plan has identified the following scenic resources within the Santa Clarita Valley planning area as significant resources to be maintained to preserve the visual character of the valley:

- **Scenic Canyons,** which have remained undeveloped and support a variety of natural habitats. Five of the seven scenic canyons identified by the Santa Clarita Valley Area Plan are located within the study area for the proposed initiative:
  - San Francisquito Canyon
  - Placerita Canyon
  - Bouquet Canyon
  - Pico Canyon
  - Tick Canyon
- **Scenic Woodlands,** which contribute to rural and scenic character; the Santa Clarita Valley Area Plan strives to protect existing oak woodland and cottonwood-willow riparian forest areas, several areas of which have been adopted by the County as Significant Ecological Areas. The Castaic/Santa Clarita/Agua Dulce subarea includes parcels located within the Santa Clarita Woodlands Park and subject parcels that intersect with a total of approximately 26.3 acres of valley oak woodland and approximately 6.8 acres of southern cottonwood willow riparian forest plant communities (see Section 3.4.2, *Affected Biological Issues*).
- **Scenic Water Bodies,** which provide scenic visual relief from urbanization as well as habitat for wildlife. Nine of the eleven scenic water bodies identified by the Santa Clarita Valley Area Plan are located within the study area for the proposed initiative:
  - Santa Clara River and its major tributaries:
    - San Francisquito Canyon
    - Oak Springs Canyon
    - Bouquet Canyon
    - Placerita Creek
    - Towsley Creek
    - Castaic Creek
    - Sand Canyon
    - Mint Canyon
- **Vasquez Rocks County Park,** which is both a visual and historic landmark in the community. The nearest subject parcel within the Castaic/Santa Clarita/Agua Dulce subarea is located within 200 feet of Vasquez Rocks County Park. Parcels within the Castaic/Santa Clarita/Agua Dulce subarea and Acton subarea are visible from this park. However, the nearby subject parcels to the north and west of the park are adjacent to existing rural residential development.
- **Significant Ridgelines,** which create a sense of place for each neighborhood

Light and Glare

All of the subject parcels within the Acton subarea; Antelope Valley Northeast subarea, Kagel Canyon subarea; Lake Hughes/Gorman/West of Lancaster subarea; Lake Los Angeles/Llano/Valyermo/Littlerock subarea; and Lancaster Northeast subarea are located within the County's Rural Outdoor Lighting District and subject to restrictions in terms of producing sources of light and glare at night (see Figure 3.1.2-1). A total of 1,213 of the 1,626 parcels (74.6 percent)

within the Castaic/Santa Clarita/Agua Dulce subarea are located within the Rural Outdoor Lighting District. The nighttime light levels in subject parcels within the Antelope Valley Northeast subarea; Lake Los Angeles/Llano/Valyermo/Littlerock subarea; Lake Hughes/Gorman/West of Lancaster subarea; and Lancaster Northeast subarea are very low, while the nighttime light levels in the Kagel Canyon subarea, Castaic/Santa Clarita/Agua Dulce subarea, and Acton subarea are moderate due to the nighttime glare from the adjacent cities of Los Angeles, Santa Clarita, Palmdale, and Lancaster (Figure 3.1.2-2, *City Lights at Night 2012*).[41] The relative levels of light and glare are summarized in Table 3.1.2-5, *Relative Levels of Light and Glare*.

TABLE 3.1.2-5
RELATIVE LEVELS OF LIGHT AND GLARE

Subarea	Nighttime Light Level[1]	Nighttime Glare Level	Daytime Glare Level
Acton	Low to Moderate	Low on parcels near the Angeles National Forest to Moderate near the Antelope Valley Freeway	Moderate due to the presence of paved roads, residential development and infrastructure, and high vehicle traffic levels on the Antelope Valley Freeway
Castaic/Santa Clarita/Agua Dulce	Moderate to High	Low in isolated rural areas to High near Santa Clarita and major freeways	Moderate to High due to the presence of paved roads, commercial and residential development and infrastructure, high vehicle traffic levels on major roads and freeways, and reflective water bodies
Antelope Valley Northeast	Very Low	Very Low throughout the subarea	Very Low due to the lack of paved roads, absence of large water bodies, low traffic levels, and low level of development and infrastructure
Kagel Canyon	Moderate	Moderate further north in the canyon to High near the southern edge of Angeles National Forest and the City of Los Angeles	Low due to the presence of both paved and dirt roads, sparse development and infrastructure, and trees
Lake Hughes/Gorman/West of Lancaster	Very Low	Very Low in rural areas to Low in the communities of Gorman, Lake Hughes, and Leona Valley and near Quartz Hill, Lancaster, and Palmdale	Low due to the presence of both paved and dirt roads, and sparse development and infrastructure
Lake Los Angeles/Llano/ Valyermo/ Littlerock	Low	Low in rural areas to moderate near the communities of Lake Los Angeles, Littlerock, and Pearblossom and the City of Palmdale	Low due to the presence of both paved and dirt roads, sparse development and infrastructure, and subgrade location of the aqueduct
Lancaster Northeast	Low	Low in rural areas to Moderate adjacent to the City of Lancaster	Low due to the presence of both paved and dirt roads, and sparse development and infrastructure

[1]**SOURCE:** NASA Earth Observatory/NOAA NGDC. April and October 2012. *Earth at Night 2012*. Available from Google Earth Maps Gallery.

[41] NASA Earth Observatory/NOAA NGDC. April and October 2012. *Earth at Night 2012*. Available from Google Earth Maps Gallery.

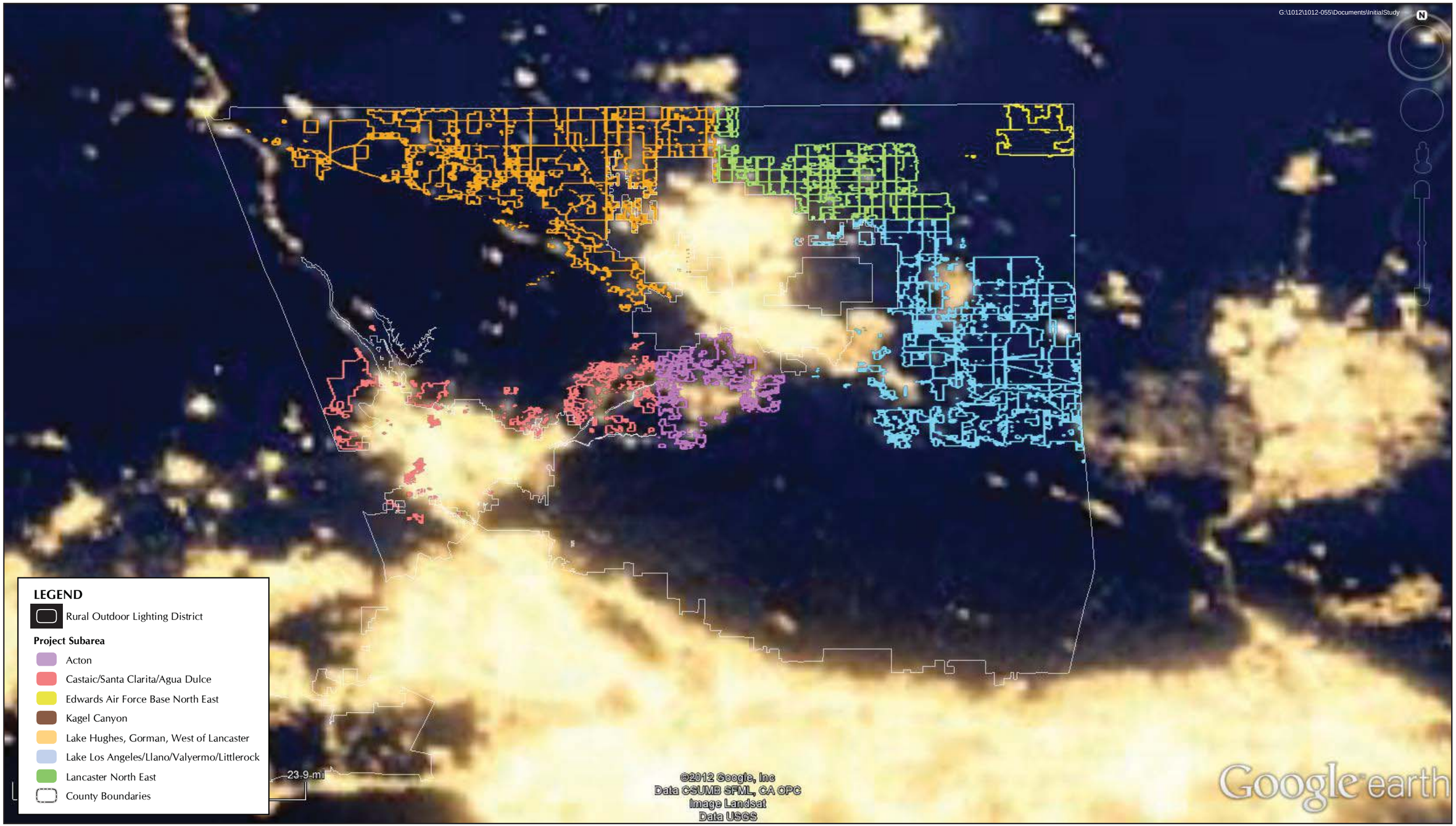

FIGURE 3.1.2-2
City Lights at Night 2012

3.1.3 IMPACT ANALYSIS

State CEQA Guidelines recommend the consideration of four questions when addressing the potential for significant impacts to aesthetics:

Would the proposed project have any of the following effects:

(a) Have a substantial adverse effect on a scenic vista?

The proposed initiative would be expected to result in significant impacts to aesthetics in relation to scenic vistas 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. The subject parcels within the Castaic/Santa Clarita/Agua Dulce subarea; Lake Hughes/Gorman/West of Lancaster subarea; and Lake Los Angeles/Llano/Valyermo/Littlerock subarea are potentially visible from three County-designated vista points and one County-designated roadside rest (Table 3.1.3-1, *Impacts to Scenic Vistas by Subarea*). Due to topographic conditions, only the construction of single-family residences on the subject parcels located on ridgelines within the western portion of the Lake Hughes/Gorman/West of Lancaster subarea would significantly impact the view from Reservoir Summit (12) from the north; the construction of single-family residences on the subject parcels within the Castaic/Santa Clarita/Agua Dulce subarea would not be expected to affect the view from Reservoir Summit (12). Similarly, due to topography obscuring the majority of the view of the subject parcels, the construction of single-family residences on the subject parcels within the Lake Los Angeles/Llano/Valyermo/Littlerock subarea would result in a less than significant impact to the view from Inspiration Point (463) towards the northeast and not impact the panorama view of the San Gabriel River watershed to the south for which the vista point was designated. Due to topographic conditions and existing trees, the construction of single-family residences on the subject parcels within the Lake Los Angeles/Llano/Valyermo/Littlerock subarea would result in a less than significant view of the view of the Antelope Valley from State Roadside Rest #8 (379). However, the construction of single-family residences on the subject parcels within the Lake Los Angeles/Llano/Valyermo/Littlerock subarea would potentially result in a significant impact to the view of the Antelope Valley from Big Rock Canyon Vista Point (464) towards the north by altering the existing rural character of the valley vista. Therefore, the potential to result in significant impacts to aesthetics in relation to scenic vistas warrants further evaluation in an environmental impact report (EIR), including the consideration of mitigation measures and alternatives.

TABLE 3.1.3-1
IMPACTS TO SCENIC VISTAS BY SUBAREA

Subarea	Visible from Reservoir Summit?	Visible from Inspiration Point?	Visible from Big Rock Canyon Vista Point?	Visible from Roadside Rest #8?
Acton	No	No	No	No
Castaic/Santa Clarita/Agua Dulce	Very low visibility	No	No	No
Antelope Valley Northeast	No	No	No	No
Kagel Canyon	No	No	No	No
Lake Hughes/Gorman/West of Lancaster	Moderate visibility	No	No	No
Lake Los Angeles/Llano/ Valyermo/Littlerock	No	Low visibility	Moderate visibility	Low visibility
Lancaster Northeast	No	No	No	No

(b) Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?

Impacts to aesthetics related to substantial damage to scenic resources within a state scenic highway resulting from the proposed initiative would be expected to be reduced to below the level of significance through the incorporation of mitigation measures. The Caltrans website was consulted, and the nearest officially designated State Scenic Highway to the subject parcels is State Route 2, located approximately 3.4 miles south of the subject parcels within the Lake Los Angeles/Llano/Valyermo/Littlerock subarea.[42] However, although some of the subject parcels within this subarea are visible in the distance from portions of State Route 2, the parcels affected by the proposed initiative do not contain scenic resources that are essential to the scenic character of the State Route 2 scenic corridor. At least nine of the subject parcels within the Castaic/Santa Clarita/Agua Dulce subarea are also visible from State-eligible portions of Interstate 5 and State Route 126. The subject parcels within the Castaic/Santa Clarita/Agua Dulce subarea that are visible from Interstate 5 encompass part of a County-designated significant ridgeline and contain at least 7 mature trees that could potentially be removed during the construction of single-family residences. The subject parcels within the Castaic/Santa Clarita/Agua Dulce subarea that are visible from State Route 126 are located on a County-designated significant ridgeline. Damage to these scenic resources as a result of construction of single-family residences on these subject parcels within the Castaic/Santa Clarita/Agua Dulce subarea through a ministerial permit approval process that does not evaluate potential impacts to the eligible scenic highway would adversely affect the scenic value of the two State-eligible scenic highways, thus requiring the consideration of mitigation measures. Mitigation measures that could be applied to reduce impacts to these two State-eligible highways to below the level of significance include requiring during the building permit approval process that the single-family residences be constructed on the opposite slope from the eligible scenic highways, below the elevation of the significant ridgelines, without removal of the mature

[42] State of California Department of Transportation. 2014. *California Scenic Highway Program*. Website. Available online at: http://www.dot.ca.gov/hq/LandArch/scenic_highways/scenic_hwy.htm

trees that are visible from the eligible scenic highways, and without compromising the health of the mature trees on the property. Therefore, impacts to aesthetics in relation to substantial damage to scenic resources within a State scenic highway would be reduced to below the level of significance by the incorporation of the specified mitigation measures.

(c) Substantially degrade the existing visual character or quality of the site and its surroundings?

The proposed initiative would be expected to result in significant impacts to aesthetics in relation to substantial degradation of the existing visual character or quality of the site and its surroundings 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. The adopted Los Angeles County General Plan, Los Angeles County General Plan 2035 Update, 1986 Antelope Valley Areawide General Plan,[43] and the 2012 Santa Clarita Valley Area Plan[44] were reviewed. Due to the presence of several of the subject parcels on County-designated significant ridgelines, adjacent to the Pacific Crest National Scenic Trail, within County-designated Significant Ecological Areas (SEAs), visible from County-designated scenic drives and City-designated scenic highways, and visible from Santa Clarita Valley Area Plan-designated scenic resources, the development of single-family residences on several of the subject parcels would be expected to adversely affect the existing visual character or quality of the area (Table 3.1.3-2, *Visual Character Impacts by Subarea*). The construction of single-family residences on the subject parcels, and related appurtenant structures, such as water tanks, and access roads and driveways , at locations identified as significant ridgelines within the Acton, Agua Dulce, Castaic Area, Elizabeth Lake and Lake Hughes, and San Francisquito Canyon CSDs, would be required to conform to the grading, building heights, and setbacks established by the community development standards as part of the building permit process. The construction of single-family residences and hauled water tanks on the 67 subject parcels within the Castaic/Santa Clarita/Agua Dulce subarea located on significant ridgelines that are not restricted by the standards of a CSD would have the potential to affect the visual character or quality of the significant ridgelines. Mitigation measures such as vegetative screening or siting the single-family residences and hauled water tanks below the ridgeline on each parcel where possible have the potential to reduce the visual effects of the proposed initiative on the existing visual character for some of the parcels; however, the extensive scale of visual impacts from development of a single-family residence, hauled water tank, and access road for all 42,677 parcels in proximity to these designated scenic resources would be expected to result in cumulative impacts to visual character and quality that would not be expected to be reduced to below the level of significance through the proposed mitigation measures. Therefore, the potential to result in significant impacts to aesthetics in relation to substantial degradation of the existing visual character of the proposed project site and its surroundings warrants further evaluation in an EIR, including the consideration of mitigation measures and alternatives.

[43] Los Angeles County Department of Regional Planning. December 4, 1986. *Antelope Valley Areawide General Plan: A Component of the Los Angeles County General Plan*. PDF available online at: http://planning.lacounty.gov/assets/upl/data/pd_antelope-valley.pdf

[44] Los Angeles County, Santa Clarita Valley Area Plan, 2012. PDF available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf

TABLE 3.1.3-2
VISUAL CHARACTER IMPACTS BY SUBAREA

Subarea	Visible from Pacific Crest Trail?	Located on County Significant Ridgeline?	Visible from County Scenic Drive?	Located Within County SEAs?[1]	Visible from City Designated Scenic Highway?[2]	Visible from Santa Clarita Valley Area Plan Designated Scenic Resources?
Acton	High visibility	No	#267, 84, 98, 108	132 parcels	Barrel Springs Road, Tierra Subida Avenue, Sierra Highway, Pearblossom Highway, Antelope Valley Freeway	Yes; Santa Clara River and Vasquez Rocks County Park
Castaic/Santa Clarita/Agua Dulce	High visibility	188 parcels; 121 are located within Acton, Agua Dulce, and Castaic Area CSDs	#17, 92, 118, 460, 14, 98, 108	196 parcels	No	Yes; Vasquez Rocks County Park and all Scenic Canyons, Woodlands, and Water Bodies listed in Section 3.1.2
Antelope Valley Northeast	Low visibility	No	No	1,256 parcels	No	No
Kagel Canyon	No	No	No	No	No	No
Lake Hughes/ Gorman/West of Lancaster	High visibility	40 parcels; 40 are located within Elizabeth Lake and Lake Hughes CSD	#4, 460, 14, 70, 84, 108	1,909 parcels	Elizabeth Lake Road, Bouquet Canyon Road, Godde Hills Road	No
Lake Los Angeles/ Llano/ Valyermo/ Littlerock	Moderate visibility	No	#373, 84, 108, 380	7,185 parcels	Barrel Springs Road, Pearblossom Highway	No
Lancaster Northeast	Low visibility	No	#108	3,949 parcels	No	No

NOTES: [1]SEA = Significant Ecological Area. See Section 3.4.2, *Affected Biological Issues*, for more information on SEAs.
[2]City of Palmdale Designated Scenic Highway

(d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The proposed initiative would be expected to result in significant impacts to aesthetics in relation to the creation of a new source of substantial light or glare that would adversely affect daytime or nighttime views in the proposed initiative study area that would require the consideration of mitigation measures, such as restrictions on reflective building materials that have the potential to

produce a source of daytime glare, or alternative to mitigate for the significant effects of the proposed initiative.

As approximately 99.8 percent of the 42,677 subject parcels are located within the County's Rural Outdoor Lighting District, which regulates outdoor lighting to maintain dark skies at night for residents and wildlife, four of the seven subareas have an existing very low level of nighttime light that is expected to be affected by the development of single-family residences and street lights in association with the development of the residences (see Figure 3.1.2-2). Pursuant to the 2012 Rural Outdoor Lighting District Ordinance, outdoor lighting must be fully shielded on properties located in residential zones, and drop-down lenses, mercury vapor light, ultraviolet lights, searchlights, laser lights, and other lighting that flashes, blinks, alternates, or moves are prohibited within the Rural Outdoor Lighting District.[45] The Rural Outdoor Lighting District Ordinance also limits outdoor lighting fixtures installed above 15 feet high to a manufacturer's maximum output rating or no greater than 400 lumens, restricts the maximum height for an outdoor light fixture to 20 feet from the finished grade, and establishes that outdoor lighting shall cause no unacceptable light trespass. Additionally, the Rural Outdoor Lighting District Ordinance prohibits street lights within the district, except where deemed necessary at urban cross sections by the Director of Public Works, and establishes standards to prevent off-street illumination and glare. Therefore, outdoor lighting on the subject parcels for single-family residences that would be constructed as a result of the proposed initiative would be required as part of the building permit process to reduce the levels of nighttime light and glare on the property to below the level of significance.

However, the Rural Outdoor Lighting District Ordinance and the building permit process do not restrict the use of reflective building materials, such as large spans of glass or metallic surfaces, which would have the potential to contribute to a source of daytime glare. The proposed initiative would have the potential to result in an indirect impact on daytime glare as a result of the construction of new single-family residences, which would require the consideration of mitigation measures to reduce impacts to daytime glare which would adversely affect daytime views in the area to below the level of significance. Metal hauled water tanks, in particular, have the potential to become an elevated source of daytime glare on the subject parcels. Therefore, the development of new single-family residence that could occur as a result of the proposed initiative has the potential to result in significant impacts to aesthetics related to the creation of a new source of substantial light or glare that would adversely affect daytime or nighttime views in the proposed project area warrants further evaluation in an EIR, including the consideration of mitigation measures, to reduce impacts to below the level of significance.

3.1.4 MITIGATION MEASURES

The proposed initiative would result in significant impacts to aesthetics, including contribution to cumulative impacts to scenic vistas, scenic highways, visual character, and light and glare, as a result of altering the rural community character and daytime glare level of the area, thus requiring the consideration of mitigation measures and alternatives in an EIR.

[45] Los Angeles County Department of Regional Planning. 28 September 2012. *Ordinance No. 2012-0047*. PDF available online at: http://planning.lacounty.gov/assets/upl/data/ord_outdoor-lighting.pdf Main website: http://planning.lacounty.gov/view/rural_outdoor_lighting_district_ordinance/

SECTION 3.2
AGRICULTURE AND FORESTRY RESOURCES

This analysis is undertaken to determine if the proposed Single-Family Residential Hauled Water Initiative for New Development (proposed initiative) may have a significant impact to agriculture and forestry resources, thus requiring the consideration of mitigation measures or alternatives, in accordance with Section 15063 of the State California Environmental Quality Act (CEQA) Guidelines.[1] Agriculture and forestry resources within the parcels that would be potentially eligible for the use of hauled water to support development of a single-family residence pursuant to the proposed initiative were evaluated with regard to the California Department of Conservation (CDC) Farmland Mapping and Monitoring Program (FMMP);[2,3] the Land Use Element and Conservation and Open Space Element of the existing adopted Los Angeles County General Plan;[4,5] the Land Use Element and Conservation and Natural Resources Element of the Los Angeles County General Plan 2035 Update;[6,7] and the Los Angeles County Code of Ordinances – Title 22 Planning and Zoning.[8]

Definitions

Farmland: §21060.1(a) of CEQA (Public Resources Code §§21000-21177) delineates the consideration of agricultural land to include "prime farmland, farmland of statewide importance, or unique farmland, as defined by the United States Department of Agriculture (USDA) land inventory and monitoring criteria, as modified for California," and is herein collectively referred to as "Farmland."

Forest: §12220(g) of CEQA defines forest land as "land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for

[1] *California Code of Regulations*. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

[2] California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, 2004. *Important Farmland in California, 2002*. Sacramento, CA.

[3] State of California. 2010. California Department of Conservation, Division of Land Resources Protection, Farmland Mapping and Monitoring Program. *Important Farmland in California, 2010*. Statewide map available online at: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/statewide/2010/fmmp2010_wallsize.pdf Countywide map Available online at: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2010/los10.pdf Main website Available online at: http://www.conservation.ca.gov/dlrp/FMMP/Pages/Index.aspx

[4] County of Los Angeles Department of Regional Planning. November 25, 1980. *County of Los Angeles General Plan Land Use Element*. Available online at http://planning.lacounty.gov/assets/upl/project/gp_web80-land-use.pdf

[5] County of Los Angeles Department of Regional Planning. November 25, 1980. *County of Los Angeles General Plan Conservation and Open Space Element*. Available online at http://planning.lacounty.gov/assets/upl/project/gp_web80-conservation-and-open-space.pdf

[6] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 6: Land Use Element*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter6_2014.pdf

[7] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 9: Conservation and Natural Resources Element*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter9_2014.pdf

[8] 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

management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits."[9]

Timberland: Public Resources Code §4526 defines Timberland as "land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees."[10]

Timberland Production Zone: California Government Code Section 51104(g) defines a Timberland Production Zone (TMZ) as "an area which has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h). With respect to general plans of cities and counties, 'timberland preserve zone' means 'timberland production zone.'"[11]

3.2.1 REGULATORY FRAMEWORK

The proposed initiative would allow hauled water as the primary source of potable water for development of a single-family residence in unincorporated areas of the County of Los Angeles that are not supported by a public or private purveyor, or potable groundwater. The regulatory framework for agricultural and forestry resources has been limited to the subject parcels in unincorporated areas of Los Angeles County that would be potentially eligible pursuant to the proposed initiative.

Federal

Angeles National Forest Land Management Plan

The Angeles National Forest land management plan was developed according to the National Forest Management Act (NFMA) of 1976, its implementing regulations at 36 Code of Federal Regulations (CFR) 219.14(e). Pursuant to Title 16 USC 1604(e) the forest plan describes the strategic direction that assures the coordination of multiple-uses (e.g., recreation and environmental education opportunities, forest health and management, air, soil and water quality, watershed, and wildlife) and the sustained yield of products and services.[12]

The goal of the forest plan is to meet obligations to the people of the United States and the national forest environment that surrounds them. The Forest Service understands its role or niche within the network of communities throughout Southern California. The Angeles National Forest is a unique regional feature with important resources that must be sustained over time. The maximum net

[9] State of California. Accessed 21 March 2014. *Public Resources Code Section 12220*. Available online at: http://www.leginfo.ca.gov/cgi-bin/displaycode?section=prc&group=12001-13000&file=12220

[10] State of California. Accessed 21 March 2014. *Public Resources Code Section 4521-4529.5*. Available online at: http://www.leginfo.ca.gov/cgi-bin/displaycode?section=prc&group=04001-05000&file=4521-4529.5

[11] State of California. Accessed 21 March 2014. *Government Code Section 51100-51104*. Available online at: http://www.leginfo.ca.gov/cgi-bin/displaycode?section=gov&group=51001-52000&file=51100-51104

[12] United States Department of Agriculture – Forest Service, Angeles National Forest. April 2006. *Record of Decision, Angeles National Forest Land Management Plan*. Available online at: http://www.fs.usda.gov/detail/angeles/landmanagement/planning/?cid=stelprdb5324056#I. Components of the Decision Decisions

public benefit of the forest plan (sustainability of social, economic, and ecological processes) meets current needs and allows options for future generations to continue to enjoy sustainable recreation opportunities, healthy forest systems, and appropriate community protection from wildland fire. These benefits are achieved through proven measures that protect, maintain, improve, and restore the health of the national forests and open lands; reduce risks from wildland fire, invasive species, insects, disease, and other threats; provide wildlife habitat; protect and restore unique vegetation and terrain; and perhaps most importantly, provide a diversity of recreation, environmental education opportunities, and monitoring requirements.

Federal Land Policy and Management Act, 1976 as Amended (FLPMA)

The United States Congress passed the Federal Land Policy and Management Act (FLPMA) in 1976. Title V, "Rights-of-Way," of the FLPMA establishes public land policy, guidelines for administration, provides for management, protection, development, and enhancement of public lands; and provides the Bureau of Land Management (BLM) authorization to grant right-of-way (ROW).[13] In addition, Section 503 specifically addresses "Right of Way Corridors" and requires common ROWs "to the extent practical."[14] FLPMA, Title V, Section 501(a)(6), states:

> The Secretary with respect to the public lands (including public lands, as defined in section 103(e) of this Act, which are reserved from entry pursuant to section 24 of the Federal Power Act and, the Secretary of Agriculture, with respect to lands within the National Forest System (except in each case land designated as wilderness), are authorized to grant, issue, or renew rights-of-way over, upon, under, or through such lands roads, trails, highways, railroads, canals, tunnels, tramways, airways, livestock driveways, or other means of transportation except where such facilities are constructed and maintained in connection with commercial recreation facilities on lands in the National Forest System.[15]

Although there are no parcels that would be affected by the proposed initiative located on lands administered by the BLM, there are 174 parcels located in six of the seven subareas that adjoin lands administered by the BLM.

State

Farmland Mapping and Monitoring Program

The FMMP was established in 1982 to assess the location, quality, and quantity of agricultural lands in the State of California and conversion of these lands over time.[16] The goal of the FMMP is to provide consistent and impartial data to decision makers for use in planning for the future of California's agricultural land resources.[17] The CDC applies the Natural Resources Conservation

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[13] *Federal Land Policy and Management Act.* (1976), 43 U.S.C., Title V.

[14] *Federal Land Policy and Management Act.* (1976), 43 U.S.C., Title V, § 503.

[15] *Federal Land Policy and Management Act.* (1976), 43 U.S.C., Title V, § 501(a)(6).

[16] State of California Department of Conservation. Accessed 21 March 2014. *Farmland Mapping and Monitoring Program*. Available online at: http://www.conservation.ca.gov/DLRP/FMMP/Pages/Index.aspx

[17] State of California Department of Conservation. Accessed 21 March 2014. *Farmland Mapping and Monitoring Program*. Available online at: http://www.conservation.ca.gov/DLRP/FMMP/Pages/Index.aspx

Service (NRCS) soil classifications to identify agricultural lands, and these agricultural designations are used in planning for the present and future of California's agricultural land resources. The CDC has a minimum mapping unit of 10 acres, with parcels that are smaller than 10 acres being absorbed into the surrounding classifications. The following are categories mapped by the CDC:[18]

- **Prime Farmland.** Farmland that has the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.

- **Farmland of Statewide Importance.** Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.

- **Unique Farmland.** Farmland of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the 4 years prior to the mapping date.

- **Farmland of Local Importance.** Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

- **Grazing Land.** Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres.

- **Urban and Built-Up Land.** Land occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel. This land is used for residential, industrial, commercial, institutional, public administrative purposes, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

- **Other Land.** Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines and borrow pits; and water bodies smaller than 40 acres. Vacant and non-agricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

[18] California Department of Conservation Division of Land Resource Protection. 2004. *A Guide to the Farmland Mapping and Monitoring Program*. PDF available online at:
http://www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp_guide_2004.pdf

California Land Conservation Act

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, is the State's primary program for the conservation of private land in agricultural and open space. The Williamson Act (California Government Code Section 51200-51297.4) enables local governments to enter into contracts with private landowners in order to restrict specific parcels of land to agricultural or related open space use in return for reduced property tax assessments.[19] The Williamson Act does not allow the development of non-agricultural-related single-family residences.

Farmland Security Zone Act

The Farmland Security Zone Act is similar to the Williamson Act and was passed by the California State Legislature in 1999 to ensure that long-term farmland preservation is part of public policy.[20] Farmland Security Zone Act contracts are sometimes referred to as "Super Williamson Act Contracts." Under the provisions of this act, a landowner already under a Williamson Act contract can apply for Farmland Security Zone status by entering into a contract with the county. Farmland Security Zone classification automatically renews each year for an additional 20 years. In return for a further 35 percent reduction in the taxable value of land and growing improvements (in addition to Williamson Act tax benefits), the owner of the property promises not to develop the property into non-agricultural uses. The Farmland Security Zone Act does not allow the development of single-family residences.

Local

County of Los Angeles General Plan

The areas that will be affected by the proposed initiative are located within the unincorporated areas of Los Angeles County and subject to the County of Los Angeles General Plan. The existing adopted County of Los Angeles General Plan and the Los Angeles County General Plan 2035 Update have both been referenced.[21,22]

1980 Adopted Los Angeles County General Plan

The Land Use Element of the existing adopted Los Angeles County General Plan identified Potential Agricultural Preserves for the protection of agricultural lands.[23] According to the adopted

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[19] State of California Department of Conservation. Accessed 21 March 2014. *Governing Statutes: California Land Conservation Act*. Available online at: http://www.conservation.ca.gov/dlrp/lca/lrcc/Pages/governing_statutes.aspx

[20] State of California. Accessed 21 March 2014. *Farmland Security Zones*. Available online at: http://www.conservation.ca.gov/dlrp/lca/farmland_security_zones/Pages/index.aspx#what is a farmland security zone

[21] County of Los Angeles Department of Regional Planning. 1980. *County of Los Angeles General Plan. Conservation and Open Space Element*. Available online at: *http://planning.lacounty.gov/assets/upl/project/gp_web80-conservation-and-open-space.pdf*

[22] County of Los Angeles Department of Regional Planning. 2014. *Draft Los Angeles County General Plan 2035. Conservation and Natural Resources Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter9_2014.pdf*

[23] County of Los Angeles Department of Regional Planning. November 25, 1980. *County of Los Angeles General Plan Land Use Element*. Available online at http://planning.lacounty.gov/assets/upl/project/gp_web80-land-use.pdf

Land Use Policy Map, the areas affected by the proposed initiative have been designated for non-urban residential (R) land use.[24]

The County's agricultural lands objective, found in the Conservation and Open Space Element of the General Plan, is to preserve and protect prime agricultural lands, forests, fisheries, significant ecological areas and other biotic resources.[25] Under this objective, the County has established the following policy:

- **Policy 6:** Preserve significant agricultural resource areas and encourage the expansion of agricultural activities into under-utilized lands such as utility rights-of-way and flood-prone areas.

Los Angeles County General Plan 2035 Update

The Land Use Element of the Los Angeles County General Plan 2035 Update has established the following goal and policy in regard to agricultural and forestry resources:[26]

- **Goal LU 1:** A General Plan that serves the constitution for development, and a Land Use Policy Map that implements the General Plan's Goals, Policies and Guiding Principles
    - **Policy LU 1.7**: In the review of a project-specific amendment(s) to convert lands within the Agricultural Resource Areas (ARAs), ensure that the project-specific amendment(s):
        - Is located on a parcel that adjoins another parcel with a comparable use, at a comparable scale and intensity; and
        - Will not negatively impact the productivity of neighboring agricultural activities.

The Conservation and Natural Resources Element of the Los Angeles County General Plan 2035 Update has established the following goals and policies in regard to Agricultural Resources:[27]

- **Goal C/NR 8:** Productive farmland that is protected for local food production, open space, public health, and the local economy.
    - **Policy C/NR 8.1:** Protect ARAs, and other land identified as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance by the CDC, from encroaching development, and discourage incompatible adjacent land uses.

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[24] County of Los Angeles Department of Regional Planning. November 25, 1980. *Land Use Policy*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_web80-land-use-policy-map-5.pdf

[25] County of Los Angeles Department of Regional Planning. November 25, 1980. *County of Los Angeles General Plan Conservation and Open Space Element*. Available online at http://planning.lacounty.gov/assets/upl/project/gp_web80-conservation-and-open-space.pdf

[26] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 6: Land Use Element*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter6_2014.pdf

[27] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 9: Conservation and Natural Resources Element*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter9_2014.pdf Page 146.

- **Policy C/NR 8.2:** Discourage land uses in ARAs, and other land identified as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance by the CDC, that is incompatible with agricultural activities.
- **Policy C/NR 8.3:** Encourage agricultural activities within ARAs.

- **Goal C/NR 9:** Sustainable agricultural practices.
  - **Policy C/NR 9.1:** Support agricultural practices that minimize and reduce soil loss, minimize pesticide use, and prevent water runoff from leaching pesticide and fertilizer into groundwater and affecting water, soil, and air quality.
  - **Policy C/NR 9.2:** Support innovative agricultural practices that conserve resources and promote sustainability, such as drip irrigation, hydroponics, organic farming, and the use of compost.
  - **Policy C/NR 9.3:** Support farmers markets, farm stands, and community-supported agriculture.
  - **Policy C/NR 9.4:** Support countywide community garden and urban farming programs.

3.2.2 AFFECTED ENVIRONMENT

Prime Farmland, Unique Farmland, or Farmland of Statewide Importance

The most recent mapping for Farmland by the CDC FMMP (2010) of the County of Los Angeles was reviewed for the subareas which may potentially be affected by the proposed initiative. The review of the CDC FMMP mapping resulted in the identification of 886 parcels mapped as Prime or Unique farmlands, or Farmlands of Statewide Importance, that would be potentially eligible for development that are located in areas that would be eligible for the use of hauled water to develop a single-family residence in the area affected by the proposed initiative (Table 3.2.2-1, *Parcels in Prime Farmland, Unique Farmland, or Farmland of Statewide Importance*).[28]

[28] California Department of Conservation. Farm Land Mapping and Monitoring Program. Accessed April 21, 2014. Available online at: http://www.consrv.ca.gov/dlrp/fmmp/Pages/Index.aspx

TABLE 3.2.2-1
PARCELS IN PRIME FARMLAND, UNIQUE FARMLAND, OR FARMLAND OF STATEWIDE IMPORTANCE

Subarea	Number of Parcels Designated as Prime Farmland	Number of Parcels Designated as Unique Farmland	Number of Parcels Designated as Farmland of Statewide Importance
Acton	1	0	0
Castaic/Santa Clarita/Agua Dulce	3	0	0
Antelope Valley Northeast	0	0	0
Kagel Canyon	0	0	0
Lake Hughes/Gorman/West of Lancaster	103	4	12
Lake Los Angeles/Llano/Valyermo/ Littlerock	196	1	11
Lancaster Northeast	544	0	11
TOTAL	**847**	**5**	**34**

A review of Figure 9.5, *Agricultural Resource Areas Policy Map*,[29] of the Los Angeles County General Plan 2035 shows that the County has designated ARAs in the following subareas adjacent to the Angeles National Forest:

- Lake Los Angeles/Llano/Valyermo/Littlerock
- Lancaster Northeast
- Acton
- Lake Hughes/Gorman/West of Lancaster
- Castaic/Santa Clarita/Agua Dulce

The Angeles National Forest (also the nearest designated forest land) is also designated by the County as an ARA.

Williamson Act Preserves

According to the Los Angeles County Williamson Act FY 2012/2013 map by the California Department of Conservation Division of Land Resource Protection, the potentially affected subareas are classified as non-enrolled land or urban and built-up land and therefore not enrolled in a Williamson Act contract.[30,31] There are no Williamson Act contract properties in the proposed initiative study area. The nearest Williamson Act contract property in Los Angeles County is located approximately 65 miles south of the Kagel Canyon subarea on Santa Catalina Island.

[29] Los Angeles County Department of Regional Planning. December 2013. 2014 Draft Los Angeles County General Plan 2035 Update. *Figure 9.5: Agricultural Resources Areas Policy Map*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_2014-FIG_9-5_agricultural_resource_policy.pdf

[30] California Department of Conservation, Division of Land Resource Protection. 2013. *Los Angeles County Williamson Act FY 2012/2013*. Map available online at: ftp://ftp.consrv.ca.gov/pub/dlrp/wa/LA_12_13_WA.pdf

[31] California Department of Conservation, Division of Land Resource Protection. 2013. *State of California Williamson Act Contract Land*. Map available online at: ftp://ftp.consrv.ca.gov/pub/dlrp/wa/2012%20Statewide%20Map/WA_2012_11x17.pdf

Forestry and Timberland

The unincorporated subareas are located in County-designated non-urban zones.[32] A total of 601 parcels out of 42,677 are within the administrative boundaries of the Angeles National Forest. All of the 498 parcels in the Kagel Canyon subarea are within the administrative boundaries of the Angeles National Forest. One hundred three of the 14,356 parcels in the Lake Hughes/Gorman/West of Lancaster subarea are within the administrative boundaries of the Angeles National Forest. To assess the forested lands, Sapphos Environmental, Inc. reviewed the plant communities on parcels. There are seven parcels with plant communities identified as a "Forest Alliance," riparian forests excluded. There are additional parcels listed as a "Woodlands" that are not included in this assessment because most woodland species are not suitable for timber andare sparse, or widely dispersed (e.g. Joshua tree or Juniper woodlands). Of the parcels with forest:

1) One parcel occurs in the Castaic/Santa Clarita/Agua Dulce area in the Santa Susanna Mountains (Bigcone Douglas Fir Forest)
2) One parcel occurs in the Lake Los Angeles/Llano/Valyermo/Littlerock area but occurs at the very edge of a plant community polygon identified as Forest Alliance (Bigcone Douglas Fir Forest),
3) Three parcels occur together on the north-facing slope of Porter Ridge southwest of Fairmont in the Lake Hughes/ Gorman/ West of Lancaster area (Canyon Live Oak Forest),
4) One parcel occurs on the north-facing slope of a canyon west of Three Points in the Lake Hughes/ Gorman/ West of Lancaster area (Canyon Live Oak Forest),
5) One parcel occurs in the foothills southeast of Quail Lake in the Lake Hughes/ Gorman/ West of Lancaster area (Canyon Live Oak Forest).

3.2.3 IMPACT ANALYSIS

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

(a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

The proposed initiative would have the potential to result in less than significant impacts to agricultural resources in relation to the conversion of Prime Farmland, Unique Farmland, and Farmland of Statewide Importance. A total of 886 parcels that would be eligible for the use of hauled water to support development of a single-family residence were designated, as of 2010, as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Prime Farmland, Unique Farmland, or Farmland of Statewide Importance are designated independently of current land use, but these resources cannot be areas of water or urban or built-up land as defined for the National Resource Inventories. The presence of a single-family residence would not render a parcel ineligible for designation as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Development of new single-family residences would be limited to those parcels where

[32] Los Angeles County Department of Regional Planning. Accessed 22 March 2014. *GIS-NET3 Public*. Available online at: http://rpgis.isd.lacounty.gov/GIS-NET3_Public_10-1/Viewer.html Main website: http://planning.lacounty.gov/

the land use and zoning provide for development of a single-family residence as an allowable use. The proposed initiative does not involve any change to land use designations or zoning; therefore, the potential development of a single-family residence on up to 866 parcels would not be expected to convert existing designations of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Therefore, the proposed initiative would have a less than significant impact on parcels designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. No further analysis is warranted.

(b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

The proposed initiative would not result in impacts to agricultural resources in relation to a conflict with existing zoning for agricultural use, or a Williamson Act contract. According to the Los Angeles County Williamson Act FY 2012/2013 map by the California Department of Conservation Division of Land Resource Protection, the potentially affected subareas are classified as non-enrolled land or urban and built-up land and therefore not enrolled in a Williamson Act contract.[33,34] Based on the review of the County of Los Angeles' zoning as non-urban and the status of Williamson Act contracts, there would be no impacts to agricultural resources related to a conflict with existing zoning for agricultural use or a Williamson Act contract. Therefore, further analysis is not warranted.

(c) Conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production?

The proposed initiative would not conflict with existing zoning for, or cause rezoning of, forest land or timberland or Timberland Zoned Timberland Production. A total of 601 parcels out of 42,677 are within the administrative boundaries of the Angeles National Forest. Four hundred ninety-eight parcels in the Kagel Canyon subarea and 103 parcels within the Lake Hughes/Gorman/West of Lancaster subarea are zoned A-1, Light Agricultural, R-1, Single Family Residences, A-2, Heavy Agricultural, and R-R, Resort and Recreation. All of the zones permit single-family residential development as a primary or assessor use.[35] These zoning designations allow for development of a single-family residence as a primary or secondary use, in accordance with the County's building permit process. The Angeles Forest Land Management Plan does not designate forest land, timberland, or timberlands zoned for Timberland Production on any private inholding located within Angeles Forest boundary.[36] The proposed initiative would allow hauled water as the primary source of potable water for new single-family residential construction for the 601 parcels located within the Angeles National Forest. The proposed initiative does not allow for development in conflict with the existing zoning, or facilitate rezoning. Therefore, further analysis is not warranted.

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[33] California Department of Conservation, Division of Land Resource Protection. 2013. *Los Angeles County Williamson Act FY 2012/2013*. Map available online at: *ftp://ftp.consrv.ca.gov/pub/dlrp/wa/LA_12_13_WA.pdf*

[34] California Department of Conservation, Division of Land Resource Protection. 2013. *State of California Williamson Act Contract Land*. Map available online at: ftp://ftp.consrv.ca.gov/pub/dlrp/wa/2012%20Statewide%20Map/WA_2012_11x17.pdf

[35] 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

[36] U.S. Department of the Agriculture, Forest Service, Pacific Southwest Region R5-MB-110. April 2006. *Angeles National Forest, Land Management Plan 2006 Revision*.

(d) Result in the loss of forest land or conversion of forest land to non-forest use?

A total of 601 parcels out of 42,677 are within the administrative boundaries of the Angeles National Forest. All of the 498 parcels in the Kagel Canyon subarea are within the administrative boundaries of the Angeles National Forest. One hundred three of the 14,356 parcels in the Lake Hughes/Gorman/West of Lancaster subarea are within the administrative boundaries of the Angeles National Forest. The Angeles Forest Land Management Plan does not designate forest land, timberland, or timberlands zoned for Timberland Production on any private inholding located within Angeles Forest boundary.[37] There are no forest lands or forest resources within the parcels that would be affected by the proposed initiative. Although seven parcels have either Canyon Live Oak Forest or Bigcone Douglas Fir Forest, some of these forests are at the boundary of a parcel and could have impacts avoided or are small compared to larger forests in close proximity. Therefore, the proposed initiative would not result in the loss of forest land or conversion of forest land to non-forest use affect forestry resources. Therefore, further analysis is not warranted.

(e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

The proposed initiative would not result in impacts to agriculture and forestry resources in relation to changes in the existing environment that, due to their location or nature, would result in conversion of Farmland to non-agricultural use. Based on the review of the most recent CDC FMMP mapping for Farmland of Los Angeles County, there are 943 parcels of Farmland on or adjacent to the parcels that would be eligible for development of a single-family residence as a result of the proposed initiative.[38] Approximately 890 parcels that would be eligible for the use of hauled water to support development of a single-family residence were designated, as of 2010, as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. There are an additional 53 parcels that are designated as farmland, immediately adjacent to the 890 parcels with Prime Farmland or Unique Farmland, or Farmland of Statewide Importance designation. The proposed initiative would not diminish the suitability of up to 53 parcels, in areas immediately adjacent to the area affected by the proposed initiative. There would not be the potential for significant impacts to agriculture and forestry resources related to changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use. The potential of conversion of Farmland to non-agricultural use, does not constitute a significant impact requiring further analysis in an environmental impact report, including the consideration of mitigation measures and alternatives to avoid or reduce impacts to below the level of significance. No further analysis is warranted.

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[37] U.S. Department of the Agriculture, Forest Service, Pacific Southwest Region R5-MB-110. April 2006. *Angeles National Forest, Land Management Plan 2006 Revision*.

[38] State of California. 2010. California Department of Conservation, Division of Land Resources Protection, Farmland Mapping and Monitoring Program. *Important Farmland in California, 2010*. Statewide map available online at: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/statewide/2010/fmmp2010_wallsize.pdf Countywide map Available online at: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2010/los10.pdf Main website Available online at: http://www.conservation.ca.gov/dlrp/FMMP/Pages/Index.aspx

3.2.4 MITIGATION MEASURES

The proposed initiative would not result in significant impacts related to agriculture and forestry resources. Therefore, the consideration of mitigation measures is not required.

SECTION 3.3
AIR QUALITY

This analysis is undertaken to determine if the Single-Family Residential Hauled Water Initiative for New Development (proposed initiative) may have a significant impact to air quality, thus requiring the consideration of mitigation measures or alternatives in accordance with Section 15063 of the State of California Environmental Quality Act Guidelines (State CEQA Guidelines).[1] Available air quality data from the California Air Resources Board and the South Coast Air Quality Management District was referenced for this analysis and evaluated with regards to federal, state, and regional standards and regulations.

Definitions

AAQS: Ambient air quality standards (AAQS) define the maximum amounts of a pollutant that can be present in outdoor air without causing harm to the public's health, as established by a public agency. This analysis references both the National AAQS (NAAQS) established pursuant to the federal Clean Air Act and the State of California (CAAQS) established pursuant to the State Clean Air Act.

AVAQMD: The Antelope Valley Air Quality Management District (AVAQMD) is the local agency with the primary responsibility for the control of non-vehicular sources of air pollution through the Antelope Valley.

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

CARB: California Air Resources Board (CARB) is a part of the California Environmental Protection Agency and is responsible for attaining and maintaining healthy air quality, conducting air pollution research, and systematically solving air quality issues throughout the state.

CO: Carbon monoxide (CO) is a colorless, odorless gas formed by the incomplete combustion of fossil fuels.

H_2S: Hydrogen sulfide (H_2S) is a colorless gas with the foul characteristic of rotten eggs, and is associated with geothermal activity, oil and gas production, refining, sewage treatment plants, and confined animal feeding operations.

MDAB: The Mojave Desert Air Basin (MDAB) is one of several geopolitical regional air basin areas designated by the state government of California, for the purpose of air quality management and air pollution control in Southern California. The MDAB is comprised of four air districts: the Kern County Air Pollution Control District, the Antelope Valley Air Quality Management District, the Mojave Desert Air Quality Management District, and the eastern portion of the South Coast Air Quality Management District.

[1] *California Code of Regulations*. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

N_2O: Nitrous oxide (N_2O) is a clear, colorless gas with a slightly sweet odor that is primarily produced by agricultural soil management including soil cultivation practices, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, and production of adipic and nitric acids.

NO_2: Nitrogen dioxide (NO_2) is a highly reactive, brownish-red gas that plays a major role in the formation of ground-level ozone and acid rain.

O_3: Ozone (O_3) is a colorless gas that is formed in the atmosphere when reactive organic gases react in the atmosphere in the presence of ultraviolet sunlight and is one of the main components of photochemical smog in urban areas.

$PM_{2.5}$: Particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) with primary sources that include fuel combustion from motor vehicles, power generation, industrial facilities, residential fireplaces, and wood stoves.

PM_{10}: Particulate matter less than 10 microns in diameter (PM_{10}) with primary sources that include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood-burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning activities; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions.

Pb: Lead (Pb) in the atmosphere occurs as particulate matter with primary sources that include leaded gasoline, battery manufacture, paint, ink, ceramics, ammunition, and secondary Pb smelters.

ROG: Reactive organic gases (ROGs), also known as volatile organic compounds (VOCs) are emitted from incomplete combustion of hydrocarbons or other carbon-based fuels.

SCAB: The Southern California Air Basin (SCAB) is one of several geopolitical regional air basin areas designated by the state government of California, for the purpose of air quality management and air pollution control in Southern California. The SCAB district was created in 1969 and includes all of Orange County and the non-desert regions of Los Angeles County, Riverside County, and San Bernardino County.

SCAG: The Southern California Association of Governments (SCAG) is the nation's largest metropolitan planning organization, representing sic 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.

SCAQMD: South Coast Air Quality Management District (SCAQMD) is the air pollution agency responsible for regulating stationary sources of air pollution in the South Coast Air Basin. The SCAQMD develops, adopts and implements an Air Quality Management Plan for bringing the area into compliance with the clean air standards established by national and state governmental legislation.

SO_2: Sulfur dioxide (SO_2) is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Generally, the highest levels of SO_2 are found near large industrial complexes where coal and oil are used in power plants and industries.

SO_4^{-2}: Sulfates (SO_4^{-2}) are particulate products of combustion of sulfur-containing fossil fuels.

TACs: Toxic air contaminants (TACs) are airborne pollutants that potentially pose a hazard to human health or may be expected to result in an increased rate of mortality or serious illness.

VOC: Volatile organic compounds (VOCs), also known as reactive organic gases (ROGs), are emitted from incomplete combustion of hydrocarbons or other carbon-based fuels.

U.S. EPA: U.S. Environmental Protection Agency (U.S. EPA) is an agency of the U.S. federal government that was created for the purpose of protecting human health and the environment by writing and enforcing regulations based on laws passed by Congress. The Clean Air Act requires the U.S. EPA to establish national ambient air quality standards for certain common and widespread pollutants based on the latest science.

3.3.1 REGULATORY FRAMEWORK

Federal

Federal Clean Air Act

The Clean Air Act (CAA) was enacted in 1970 to foster growth in the economy and industry while improving human health and the environment. The CAA is the comprehensive federal law that regulates air emissions from stationary and mobile sources. Among other things, the CAA authorizes the U.S. Environmental Protection Agency (U.S. EPA) to establish National Ambient Air Quality Standards (NAAQS) to protect public health and public welfare and to regulate emissions of hazardous air pollutants. The CAA requires the U.S. EPA to routinely review and update the NAAQS in accordance with the latest available scientific evidence. For example, the 1-hour standard for O_3 was revoked in 2005 in favor of a new 8-hour standard that is intended to better protect public health.

National Ambient Air Quality Standards

The NAAQS were established by the U.S. EPA per the requirements of the CAA (Table 3.3.1-1, *National Ambient Air Quality Standards*). The NAAQS are used to identify thresholds for specific pollutants. Two types of air quality standards were established by the CAA: (1) primary standards and (2) secondary standards. Primary standards define limits for the intention of protecting public health, which includes sensitive populations such as asthmatics, children and elderly. Secondary standards define limits to protect public welfare to include protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

TABLE 3.3.1-1
NATIONAL AMBIENT AIR QUALITY STANDARDS

Pollutant		Primary/Secondary	Averaging Time	Level
Carbon Monoxide		Primary	8-hour	9 ppm
			1-hour	35 ppm
Lead		Primary and Secondary	Rolling 3 month average	0.15 $\mu g/m^3$
Nitrogen Dioxide		Primary	1-hour	100 ppb
		Primary and Secondary	Annual	53 ppb
Ozone		Primary and Secondary	8-hour	0.075 ppm
Particle Matter	$PM_{2.5}$	Primary	Annual	12 $\mu g/m^3$
		Secondary	Annual	15 $\mu g/m^3$
		Primary and Secondary	24-hour	35 $\mu g/m^3$
	PM_{10}	Primary and Secondary	24-hour	150 $\mu g/m^3$
Sulfur Dioxide		Primary	1-hour	75 ppb
		Secondary	3-hour	0.5 ppm

NOTE: As of October 2011.
SOURCE: U.S. Environmental Protection Agency. December 2012. *National Ambient Air Quality Standards (NAAQS)*. Washington, DC.

Environmental Protection Agency

To reduce emissions from off-road diesel equipment, the U.S. EPA established a series of increasingly strict emission standards for new engines. Locomotives and marine vessels are exempt from this rule. Manufacturers of off-road diesel engines would be required to produce engines with certain emission standards under the following compliance schedule:

- Tier 1 standards were phased in from 1996 to 2000 (year of manufacture), depending on the engine horsepower category
- Tier 2 standards were phased in from 2001 to 2006
- Tier 3 standards were phased in from 2006 to 2008
- Tier 4 standards, which likely will require add-on emissions control equipment to attain them, will be phased in from 2008 to 2015

In 2000, the U. S. EPA moved forward with its regulation to make heavy-duty trucks and buses run cleaner. The Highway Diesel Rule (the "2007 Highway Rule") was finalized in January 2001. Beginning with the 2007 model year, the harmful pollution from heavy-duty highway vehicles will be reduced by more than 90 percent. U.S. EPA will require a 97 percent reduction in the sulfur content of highway diesel fuel from its current level of 500 parts per million (low sulfur diesel, or LSD) to 15 parts per million (ultra-low sulfur diesel, or ULSD).

State Implementation Plans

Federal clean air laws require areas with unhealthy levels of ozone, inhalable particulate matter, carbon monoxide, nitrogen dioxide, and sulfur dioxide to develop plans, known as State Implementation Plans (SIPs). SIPs are comprehensive plans that describe how an area will attain NAAQS. The 1990 amendments to the federal CAA set deadlines for attainment based on the severity of an area's air pollution problem.

SIPs are a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, state regulations, and federal controls. Many of California's SIPs rely on the same core set of control strategies, including emissions standards for cars and heavy trucks, fuel regulations, and limits on emissions from consumer products. State law makes CARB the lead agency for all purposes related to the SIP. CARB forwards SIP revisions to the U. S. EPA for approval and publication in the *Federal Register*. The Code of Federal Regulations Title 40, Chapter I, Part 52, Subpart F, Section 52.220, lists all of the items included in the California SIP.

Conformity Rule

Section 176(c) of the CAA states that a federal agency cannot issue a permit for or support an activity unless the agency determines it would conform to the most recent EPA-approved SIP. This means that projects using federal funds or requiring federal approval must not (1) cause or contribute to any new violation of a NAAQS, (2) increase the frequency or severity of any existing violation, or (3) delay the timely attainment of any standard, interim emission reduction, or other milestone.

Based on the present NAAQS attainment status of the Southern California Air Basin (SCAB), a federal action would conform to the State Implementation Plan if its annual emissions remain below 100 tons of CO and $PM_{2.5}$, 70 tons of PM_{10}, and 10 tons of NOX or VOCs. These de minimis thresholds apply to the proposed construction and operation activities pertaining to the federal action. If the proposed action exceeds one or more of the de minimis thresholds, a more rigorous conformity determination is the next step in the conformity evaluation process. SCAQMD Rule 1901 adopts the guidelines of the General Conformity Rule.

State

Heavy-Duty Diesel Truck Idling Regulation

Beginning in 2008, CARB implemented the Heavy-Duty Diesel Truck Idling Regulation, requiring that heavy-duty trucks be equipped with a non-programmable engine system that shuts down the engine after 5 minutes to prevent long idling times or, as an alternative, meet a stringent NO_x idling emissions standard. Additionally, CARB has established diesel fuel regulations that limit sulfur emissions to 15 ppm for diesel sold in California for use in on-road and off-road motor vehicles.

Statewide Portable Equipment Registration Program

The CARB Statewide Portable Equipment Registration Program (PERP) establishes a uniform program to regulate portable engines and portable engine-driven equipment units. Once registered in this program, engines and equipment units may operate throughout California without the need to obtain individual permits from local air districts. The portable equipment, however, cannot reside at the same location for more than 12 months. Some construction-related equipment may be registered under PERP. Equipment would not reside at the same location for more than 12 months.

On-Road Heavy-Duty Diesel Vehicle Regulation

On December 12, 2008, CARB approved the on-road heavy-duty diesel vehicle (in use) regulation to significantly reduce PM and NO_x emissions from existing diesel vehicles operating in California. The regulation applies to nearly all diesel-fueled trucks and buses with a gross vehicle weight rating

(GVWR) greater than 14,000 pounds that are privately or federally owned and for privately and publicly owned school buses. Starting January 1, 2012, the regulation would phase-in requirements for heavier trucks to reduce PM emissions with exhaust retrofit filters that capture pollutants before they are emitted to the air or by replacing vehicles with newer vehicles that are originally equipped with PM filters. Starting on January 1, 2015, lighter trucks with a GVWR of 14,001 to 26,000 pounds with engines that are 20 years or older would need to be replaced with newer trucks. Starting January 1, 2020, all remaining trucks and buses would need to be replaced so that they would all have 2010 model year engines or equivalent emissions by 2023. Heavier trucks and buses with a GVWR greater than 26,000 pounds would have two ways to comply. Fleets could comply with a compliance schedule by engine model year or use a phase-in option where engine replacement could be delayed by installing a PM filter on the existing engine.

Airborne Toxic Control Measure

Effective February 19, 2011, diesel-fueled portable engines with a rated brake horsepower of 50 or greater are subject to the CARB's Airborne Toxic Control Measure (ATCM). The ATCM imposes fuel and diesel particulate matter (DPM) emission requirements for in-use and new portable diesel engines. Diesel fleets are required to meet certain DPM standards by set compliance dates. By January 1, 2020, new emergency standby diesel engines will need to be certified to Tier 4 emission standards.

California Clean Air Act

The California Clean Air Act of 1988 requires all air pollution control districts in the state to aim to achieve and maintain state ambient air quality standards for O_3, CO, and NO_2 by the earliest practicable date and to develop plans and regulations specifying how the districts will meet this goal. There are no planning requirements for the state PM_{10} standard. The CARB, which became part of the CalEPA in 1991, is responsible for meeting state requirements of the federal CAA, administering the California Clean Air Act, and establishing the CAAQS. The California Clean Air Act, amended in 1992, requires all air districts in the state to endeavor to achieve and maintain the CAAQS. The CAAQS are generally stricter than national standards for the same pollutants, but there is no penalty for nonattainment. California has established standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles, for which there are no national standards.

California Ambient Air Quality Standards

The federal CAA permits states to adopt additional or more protective air quality standards if needed. California has set standards for certain pollutants, such as particulate matter and ozone, which are more protective of public health than respective federal standards (Table 3.3.1-2, *California Ambient Air Quality Standards*). California has also set standards for some pollutants that are not addressed by federal standards.

TABLE 3.3.1-2
CALIFORNIA AMBIENT AIR QUALITY STANDARDS

Pollutant		Averaging Time	Level
Carbon Monoxide		8-hour	9 ppm
		1-hour	20 ppm
Lead		30 day average	1.5 μg/m^3
Nitrogen Dioxide		1-hour	0.18 ppm
		Annual	0.03 ppm
Ozone		8-hour	0.07 ppm
		1-hour	20 ppm
Particle Matter	$PM_{2.5}$	Annual	12 μg/m^3
	PM_{10}	24-hour	50 μg/m^3
		Annual	20 μg/m^3
Sulfur Dioxide		1-hour	0.25 ppm
		24-hour	0.04 ppm
Sulfates		24-hour	25 μg/m^3
Hydrogen Sulfide		1-hour	0.03 ppm
Vinyl Chloride		24-hour	0.01 ppm

NOTE: As of June 2012.
SOURCE: California Air Resources Board. November 2009. *California Ambient Air Quality Standards*. Sacramento, CA.

Regional

AQMD Rule 403, Fugitive Dust

The SCAQMD and AVAQMD have adopted Rule 403, *Fugitive Dust*, which requires the implementation of best available fugitive dust control measures during construction and operational activities capable of generating fugitive dust emissions from on-site earth-moving activities, construction/demolition activities, and mobile equipment traveling on paved and unpaved roads.

SCAQMD CEQA Air Quality Handbook

Although the SCAQMD is responsible for regional air quality planning efforts, it does not have the authority to directly regulate air quality issues associated with new development projects within the SCAB. Instead, the SCAQMD published the *CEQA Air Quality Handbook* in 1993 to assist lead agencies, as well as consultants, project proponents, and other interested parties, in evaluating potential air quality impacts of projects proposed in the SCAB. The SCAQMD *CEQA Air Quality Handbook* provides standards, methodologies, and procedures for conducting air quality analyses in Environmental Impact Reports (EIRs) and was used extensively in the preparation of this analysis.

South Coast Air Quality Management Plan

The Castaic/Santa Clarita subarea, the Kagel Canyon subarea, and the western portion of the Acton/Agua Dulce subarea are located within the SCAQMD boundary, and are therefore subject to the SCAQMD Air Quality Management Plan (AQMP). The most recent update to the AQMP was

adopted in 2012 by the SCAQMD Board and the CARB.[2] The AQMP demonstrates attainment of the federal 24-hour $PM_{2.5}$ standard by 2014 in the SCAB through adoption of all feasible measures. The current AQMP also updates the U. S. EPA-approved 8-hour ozone control plan with new measures designed to reduce reliance on the CAA Section 182(e)(5) long-term measures for NO_x and VOC reductions. In addition, the AQMP addresses several state and federal planning requirements, incorporating new scientific information, primarily in the form of updated emissions inventories, ambient measurements, and new meteorological air quality models.

Antelope Valley Air Quality Management District Attainment Plan

The Lake Hughes/Gorman/West of Lancaster subarea; the Lancaster Northeast subarea; the Antelope Valley Northeast subarea; the Lake Los Angeles/Llano/Valyermo/Littlerock subarea; and the eastern portion of the Acton subarea are all located within the AVAQMD, and are therefore subject to the AVAQMD Attainment Plan. The AVAQMD has adopted a single attainment plan for ozone. The AVAQMD Federal 8-hour Ozone Attainment Plan, adopted in May 2008, demonstrates that the AVAQMD will meet the primary required federal ozone planning milestones by June 2021, presents the progress the AVAQMD will make towards meeting all required ozone planning milestones, and discusses the newest 0.075 part per million 8-hour ozone NAAQS.[3]

County of Los Angeles General Plan

The proposed initiative subareas are located within unincorporated Los Angeles County and subject to the County of Los Angeles General Plan (General Plan). The previously adopted General Plan does not include an Air Quality Element; therefore, for the purposes of addressing air quality goals and policies, the Los Angeles County General Plan 2035 Update was the primary planning document referenced for the County. The Air Quality Element summarizes the air quality issues and outlines the goals and policies in the General Plan that will improve air quality and reduce greenhouse gas emissions. Of the 12 policies outlined in the Air Quality Element, the following 5 policies are applicable to the proposed initiative:[4]

<u>Goal AQ 1:</u> Protection from exposure to harmful air pollutants.

- Policy AQ 1.1: Minimize the health risks to people from industrial toxic or hazardous air pollutant emissions, with an emphasis on local hot spots, such as existing point sources affecting immediate sensitive receptors.

- Policy AQ 1.3: Reduce particulate inorganic and biological emissions from construction, grading, excavation, and demolition to the maximum extent feasible.

- Policy AQ 1.4: Work with local air quality management districts to publicize air quality warnings, and to track potential sources of airborne toxics from identified mobile and stationary sources.

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[2] South Coast Air Quality Management District. 2012. *Final 2012 Air Quality Management Plan*. Diamond Bar, CA.

[3] Antelope Valley Air Quality Management District. 20 May 2008. *AVAQMD Federal 8-Hour Ozone Attainment Plan*.

[4] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 8: Air Quality Element*.

Goal AQ 2: The reduction of air pollution and mobile source emissions through coordinated land use, transportation and air quality planning.

- Policy AQ 2.1: Encourage the application of design and other appropriate measures when siting sensitive uses, such as residences, schools, senior centers, daycare centers, medical facilities, or parks with active recreational facilities within proximity to major sources of air pollution, such as freeways.

- Policy AQ 2.2: Participate in, and effectively coordinate the development and implementation of community and regional air quality programs.

3.3.2 AFFECTED ENVIRONMENT

Regional Climate

Southern California Air Basin

The regional climate significantly influences the air quality in the SCAB. Temperature, wind, humidity, precipitation, and the amount of sunshine influence the quality of the air. In addition, the SCAB is frequently subjected to an inversion layer that traps air pollutants. Temperature has an important influence on basin wind flow, pollutant dispersion, vertical mixing, and photochemistry.

Annual average temperatures throughout the SCAB vary from the low to middle 60 degrees Fahrenheit (°F). However, due to decreased marine influence, the eastern portion of the SCAB shows greater variability in average annual minimum and maximum temperatures. January is the coldest month throughout the SCAB, with average minimum temperatures of 47 °F in downtown Los Angeles and 36 °F in San Bernardino. All portions of the SCAB have recorded maximum temperatures above 100 °F.

Although the climate of the SCAB can be characterized as semiarid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of SCAB climate. Humidity restricts visibility in the SCAB, and the conversion of SO_2 to SO_4 is heightened in air with high relative humidity. The marine layer is an excellent environment for that conversion process, especially during the spring and summer months. The annual average relative humidity is 71 percent along the coast and 59 percent inland. Because the ocean effect is dominant, periods of heavy early morning fog are frequent, and low stratus clouds are a characteristic feature. These effects decrease with distance from the coast.

More than 90 percent of the SCAB's rainfall occurs from November through April. Annual average rainfall varies from approximately 9 inches in Riverside to 14 inches in downtown Los Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thundershowers near the coast and slightly heavier shower activity in the eastern portion of the region and near the mountains. Rainy days comprise 5 to 10 percent of all days in the SCAB with the frequency being higher near the coast. The influence of rainfall on the contaminant levels in the SCAB is minimal. Although some washout of pollution would be expected with winter rains, air masses that bring precipitation of consequence are very unstable and provide excellent dispersion that masks wash-out effects. Summer thunderstorm activity affects pollution only to a

limited degree. If the inversion is not broken by a major weather system, high contaminant levels can persist even in areas of light showers.

Mojave Desert Air Basin

The MDAB is an assemblage of mountain ranges interspersed with long broad valleys that often contain dry lakes. Many of the lower mountains which dot the vast terrain rise from 1,000 to 4,000 feet above the valley floor. Prevailing winds in the MDAB are out of the west and southwest. These prevailing winds are due to the proximity of the MDAB to coastal and central regions and the blocking nature of the Sierra Nevada mountains to the north; air masses pushed onshore in Southern California by differential heating are channeled through the MDAB. The MDAB is separated from the Southern California coastal and central California valley regions by mountains (highest elevation approximately 10,000 feet), whose passes form the main channels for these air masses. The Antelope Valley is bordered in the northwest by the Tehachapi Mountains, separated from the Sierra Nevadas in the north by the Tehachapi Pass (3,800 feet). The Antelope Valley is bordered in the south by the San Gabriel Mountains, bisected by Soledad Canyon (3,300 feet).

During the summer the MDAB is generally influenced by a Pacific Subtropical High cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. The MDAB is rarely influenced by cold air masses moving south from Canada and Alaska, as these frontal systems are weak and diffuse by the time the reach the desert. Most desert moisture arrives from infrequent warm, moist and unstable air masses from the south. The MDAB averages between three and seven inches of precipitation per year (from 16 to 30 days with at least 0.01 inches of precipitation). The MDAB is classified as a dry-hot desert climate (BWh), with portions classified as dry-very hot desert (BWh), to indicate at least three months have maximum average temperatures over 100.4° F.

Temperature Inversion

The vertical dispersion of air pollutants in the SCAB and MDAB is frequently restricted by the presence of a persistent temperature inversion in the atmospheric layers near the earth's surface. Normally, the temperature of the atmosphere decreases with altitude. However, when the temperature of the atmosphere increases with altitude, the phenomenon is termed an inversion. An inversion condition can exist at the surface or at any height above the ground. The bottom of the inversion, known as the mixing height, is the height of the base of the inversion.

In general, inversions in the SCAB and MDAB are lower before sunrise than during the daylight hours. As the day progresses, the mixing height normally increases as the warming of the ground heats the surface air layer. As this heating continues, the temperature of the surface layer approaches the temperature of the base of the inversion layer. When these temperatures become equal, the inversion layer's lower edge begins to erode, and if enough warming occurs, the layer breaks up. The surface layers are gradually mixed upward, diluting the previously trapped pollutants. The breakup of inversion layers frequently occurs during mid to late afternoon on hot summer days. Winter inversions usually break up by midmorning.

Regional Air Quality

Air quality in Southern California does not meet the state and federal standards. The American Lung Association consistently gives the County failing grades in the amount of ozone and particulate pollution in the air. Although smog levels are impacted by seasons and weather patterns, smog is visible in the air on most days.

The County is situated within a large basin with the Pacific Ocean to the west and several mountain ranges with 11,000-foot peaks to the east and south. Frequent sunny days and low rainfall contribute to O_3 formation, as well as high levels of fine particles and dust. In addition, the County is home to many diverse industries and the largest goods movement hub on the West Coast. In spite of emission controls that are among the most stringent in the country, power generation and petroleum refining continue to be among the County's largest stationary sources of air pollution.

The determination of whether a region's air quality is healthy or unhealthy is determined by comparing contaminant levels in ambient air samples to national and state standards. These standards were established to protect exposed sensitive receptors from adverse health effects with a margin of safety. Air quality of a region is considered to be in attainment/nonattainment of the state standards.

For the SCAB, the maximum pollutant concentrations measured at SCAQMD monitoring stations in 2011 exceeded the levels of the federal standards for ozone (O_3), $PM_{2.5}$, nitrogen dioxide (NO_2), and lead (Pb) (Table 3.3.2-1, *NAAQS Attainment Status South Coast Air Basin*). In 2011, a total of 125 days exceeded the levels of current short-term (24-hour average or less) federal standards for 8-hour O_3 or 24-hour $PM_{2.5}$ at one or more SCAB locations. The more stringent state 8-hour O_3 or 24-hour PM_{10} standards were exceeded on 137 days. While the SCAB exceeded the state annual and 24-hour PM_{10} standards, it did not exceed the 24-hour federal standard. The federal and state annual $PM_{2.5}$ standards were exceeded in the SCAB in 2011, with only one station exceeding the federal standard. While the state PM_{10} annual standard was exceeded, the revoked federal annual PM_{10} standard was not. The other criteria pollutants, sulfur dioxide (SO_2), carbon monoxide (CO), and sulfate (SO_4), did not exceed federal or state standards.[5]

[5] South Coast Air Quality Management District. 2012 AQMP. Appendix II, *Current Air Quality*. February 2013. Available online at: http://www.aqmd.gov/aqmp/2012aqmp/Final-February2013/AppII.pdf

TABLE 3.3.2-1
NAAQS ATTAINMENT STATUS SOUTH COAST AIR BASIN

Criteria Pollutant	Standard	Designation
Ozone	1-Hour (0.12 ppm)	Nonattainment (Extreme)
	1997 8-Hour (0.08 ppm)	Nonattainment (Extreme)
	2008 8-Hour (0.075 ppm)	Nonattainment (Extreme)
Carbon Monoxide	1-Hour (35 ppm)	Attainment
	8-Hour (9 ppm)	Attainment
Nitrogen Dioxide	1-Hour (100 ppb)	Attainment
	Annual (0.053 ppm)	Attainment
Sulfur Dioxide	1-Hour (75 ppb)	Designation pending
	24-Hour (0.14 ppm)	Designation pending
	Annual (0.03 ppm)	Attainment
PM_{10}	24-Hour (150 $\mu g/m^3$)	Nonattainment (Serious)
$PM_{2.5}$	24-Hour (35 $\mu g/m^3$)	Nonattainment
	Annual (15.0 $\mu g/m^3$)	Nonattainment
Lead	3-Months Rolling (0.15 $\mu g/m^3$)	Nonattainment (Partial)

SOURCE: South Coast Air Quality Management District. 2012 AQMP. Appendix II, Current Air Quality. February 2013. Available online at: http://www.aqmd.gov/aqmp/2012aqmp/Final-February2013/AppII.pdf

Furthermore, as shown in Table 3.3.2-2, *Attainment Status for AVAQMD*, the AVAQMD portion of the MDAB is classified as non-attainment for the federal and state ozone standards and the state PM_{10} standard. All other criteria pollutants have been designated as attainment for the AVAQMD portion of the MDAB.

TABLE 3.3.2-2
ATTAINMENT STATUS FOR AVAQMD

Criteria Pollutant	Standard	Designation
Ozone	8-Hour (Federal 84 ppb)	Nonattainment (Severe)
	8-Hour (Federal 75 ppb)	Nonattainment
	State	Nonattainment (Extreme)
Carbon Monoxide	Federal	Attainment
	State	Attainment
Nitrogen Dioxide	Federal	Attainment
	State	Attainment
Sulfur Dioxide	Federal	Attainment
	State	Attainment
PM_{10}	Federal	Unclassified
	State	Nonattainment
$PM_{2.5}$	Federal	Unclassified/attainment
	State	Unclassified
Lead	Federal	Attainment
	State	Attainment

SOURCE: Antelope Valley Air Quality Management District. *AVAQMD Designations and Classifications*. Retrieved May 29, 2014 from http://www.avaqmd.ca.gov/index.aspx?page=289.

Southern California does not meet either the federal or state standards for ambient air quality. The Health and Safety Code (H&SC) section 39607(e) requires CARB to periodically review area designation criteria for CAAQS. These designation criteria provide the basis for CARB to designate areas of California as attainment, nonattainment, or unclassified for the State standards. CARB made the first area designations for CAAQS in 1989, and since then, has reviewed the designations each year, making changes as needed. As of 2012, the County has been designated as nonattainment for O_3, $PM_{2.5}$, PM_{10}, NO_2, and Pb (Table 3.3.2-3, *CAAQS Attainment Status Los Angeles County*).

TABLE 3.3.2-3
CAAQS ATTAINMENT STATUS LOS ANGELES COUNTY

Pollutant	Designation
Ozone	Nonattainment
PM_{10}	Nonattainment
$PM_{2.5}$	Nonattainment
Carbon Monoxide	Attainment
Nitrogen Dioxide	Nonattainment
Sulfur Dioxide	Attainment
Sulfates	Attainment
Lead	Nonattainment
Hydrogen Sulfide	Unclassified
Visibility Reducing Particles	Unclassified

SOURCE: California Environmental Protection Agency, Air Resources Board. 2013. 2012 State Area Designations. Available online at: http://www.arb.ca.gov/desig/adm/adm.htm

Sensitive Receptors

Land uses identified to be sensitive receptors by SCAQMD in the Air Quality Handbook include residences, schools, playgrounds, child care centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes.

Residential Parcels

The area that would be subject to the proposed initiative consists of 42,677 parcels in the unincorporated area of Los Angeles County, all of which could potentially be developed into single-family residences. As these parcels are vacant and have yet to be developed, all 42,677 parcels shall be considered sensitive receptors.[6]

Schools

There are 24 elementary schools, middle schools, and high schools located adjoining or in the vicinity of the parcels within all the proposed initiative subareas with the exception of the Antelope Valley Northeast subarea and the Kagel Canyon subarea (Figure 3.3.2-1, *Schools within One-Quarter Mile of Proposed Initiative Subarea Parcels*). Table 3.3.2-4, *Schools in Vicinity of Proposed*

[6] The term vacant is used as identified by the County Assessor.

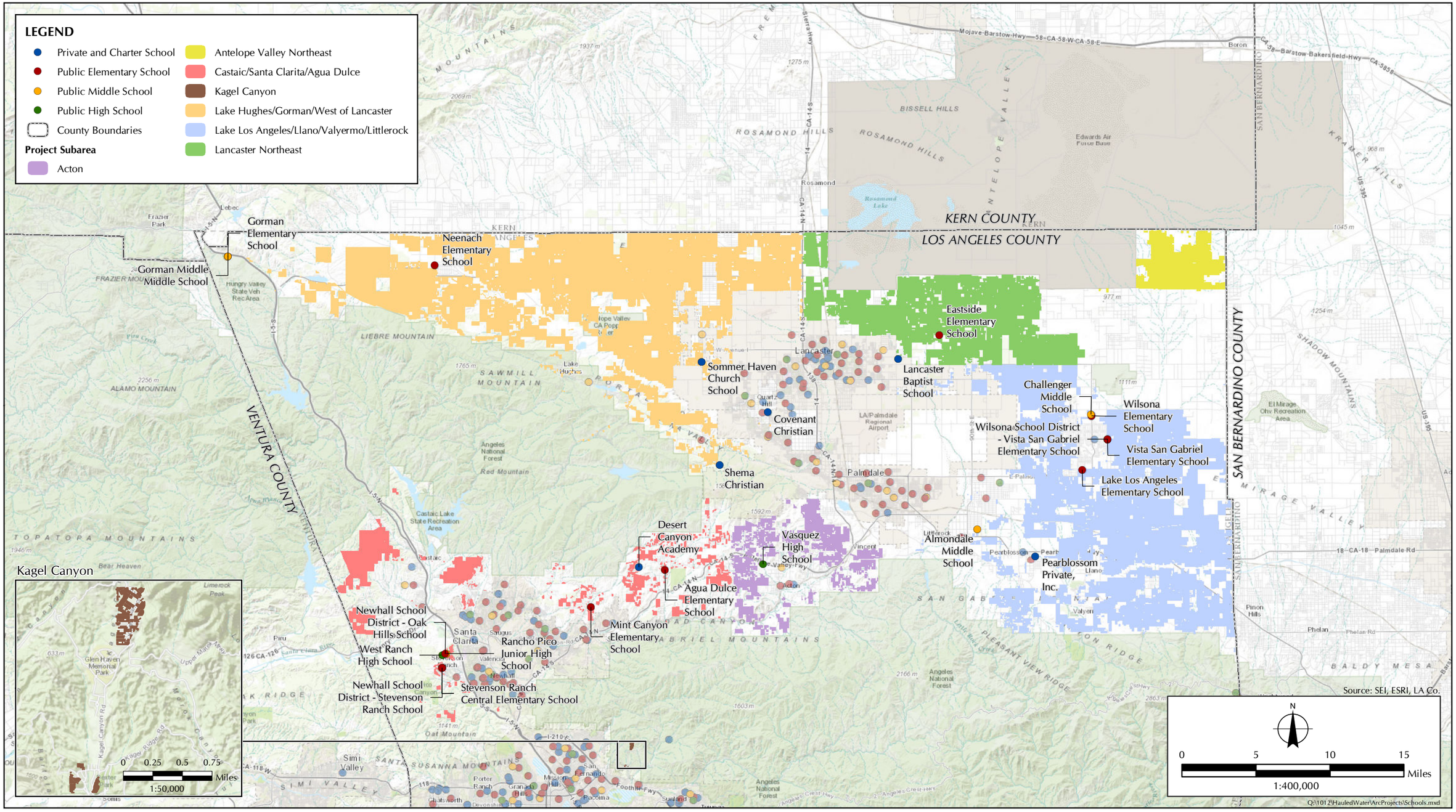

FIGURE 3.3.2-1

Schools within One-Quarter Mile of Proposed Initiative Subarea Parcels

Initiative Subareas, indicates which schools are located adjacent to or in the vicinity of the proposed initiative subareas.

TABLE 3.3.2-4
SCHOOLS IN VICINITY OF PROPOSED INITIATIVE SUBAREAS

Subarea	School	Public/Private
Acton	Vasquez High School	Public
Castaic/Santa Clarita/Agua Dulce	Agua Dulce Elementary School	Public
	Desert Canyon Academy	Private
	Mint Canyon Elementary School	Public
	Newhall School District - Oak Hills School	Public
	Newhall School District - Stevenson Ranch School	Public
	Rancho Pico Junior High School	Public
	Stevenson Ranch Central Elementary School	Public
	West Ranch High School	Public
Lake Hughes/Gorman/West of Lancaster	Covenant Christian	Private
	Gorman Elementary School	Public
	Gorman Middle School	Public
	Neenach Elementary School	Public
	Sommer Haven Church School	Private
	Shema Christian	Private
Lake Los Angeles/Llano/Valyermo/Littlerock	Almondale Middle School	Public
	Lake Los Angeles Elementary School	Public
	Pearblossom Private, Inc.	Private
	Vista San Gabriel Elementary School	Public
	Wilsona School District - Vista San Gabriel Elementary School	Public
	Wilsona Elementary School	Public
	Challenger Middle School	Public
Lancaster Northeast	Eastside Elementary School	Public
	Lancaster Baptist School	Private

Medical Centers

There are 13 medical centers located adjoining or in the vicinity of the parcels within all the proposed initiative subareas with the exception of the Antelope Valley Northeast subarea (Figure 3.3.2-2, *Medical Centers in Vicinity of Proposed Initiative Subareas*). Table 3.3.2-5, *Medical Centers in Vicinity of Proposed Initiative Subareas*, indicates which medical centers are located adjoining or in the vicinity of the proposed initiative subareas.

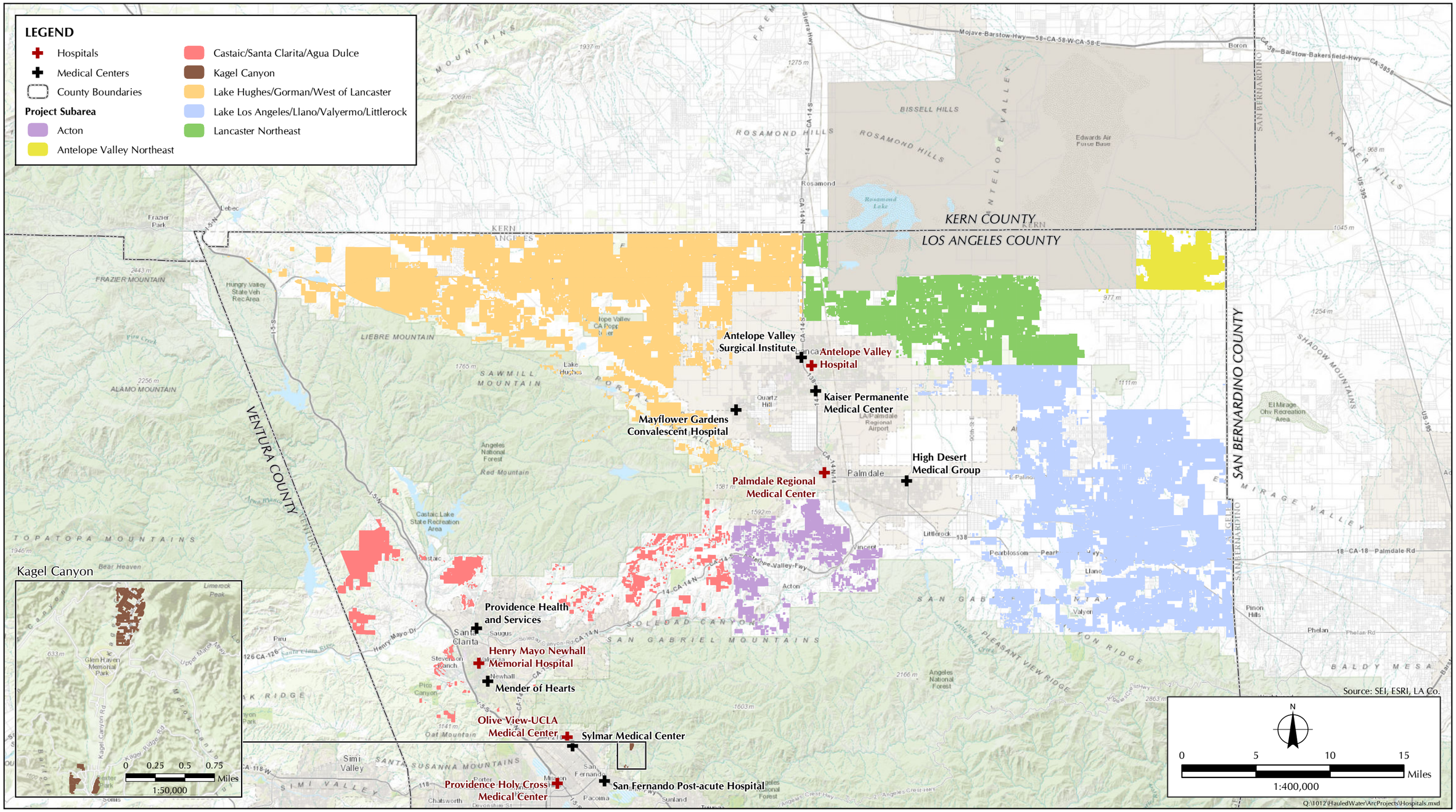

FIGURE 3.3.2-2

Medical Centers in Vicinity of Proposed Initiative Subareas

TABLE 3.3.2-5
MEDICAL CENTERS IN VICINITY OF PROPOSED INITIATIVE SUBAREAS

Subarea	Health Center	Address
Acton	Palmdale Regional Medical Center	38600 Medical Center Dr Palmdale, CA 93551
Castaic/Santa Clarita/Agua Dulce	Providence Health and Services	24035 Newhall Ranch Rd, Santa Clarita, CA 91355
	Henry Mayo Newhall Memorial Hospital	23845 McBean Pkwy, Valencia, CA 91355
	Mender of Hearts	24868 Apple St, Newhall, CA 91321
	Olive View-UCLA Medical Center Neurology	14445 Olive View Dr, Sylmar, CA 91342
	Sylmar Medical Center	14124 Foothill Boulevard #100 Sylmar, California 91342
Kagel Canyon	San Fernando Post-acute Hospital	12260 Foothill Blvd Sylmar, CA 91342
	Providence Holy Cross Medical Center	5031 Rinaldi St Mission Hills, CA 91345
Lake Los Angeles/Llano/Valyermo/Littlerock	High Desert Medical Group	38209 47th St E Palmdale, CA 93552
Lancaster Northeast	Kaiser Permanente Medical Center	43112 15th Street West Lancaster, CA 93534
	Antelope Valley Hospital	1600 W Avenue J Lancaster, CA 93534
Lake Hughes/Gorman/West of Lancaster	Antelope Valley Surgical Institute	44830 Valley Central Way # 108 Lancaster, CA 93536
	Mayflower Gardens Convalescent Hospital	6705 Columbia Way Lancaster, CA 93536

Parks

In addition to residential parcels, schools, and hospitals, parks are often considered sensitive receptors due to the likely presence of children. There are seven neighborhood parks (approximately 42.6 acres) located within a half-mile radius of the proposed initiative subareas and 17 community parks (approximately 232.0 acres) located within a 2-mile radius of the proposed initiative subareas (Figure 3.3.2-3, *Neighborhood and Community Parks*). Furthermore, there are 200 community regional parks (approximately 9,264.5 acres) located within a 20-mile radius of the proposed initiative subareas and 192 regional parks (approximately 141,499.5 acres) located within 25 miles of the proposed initiative subareas (Figure 3.3.2-4, *Community Regional and Regional Parks*).

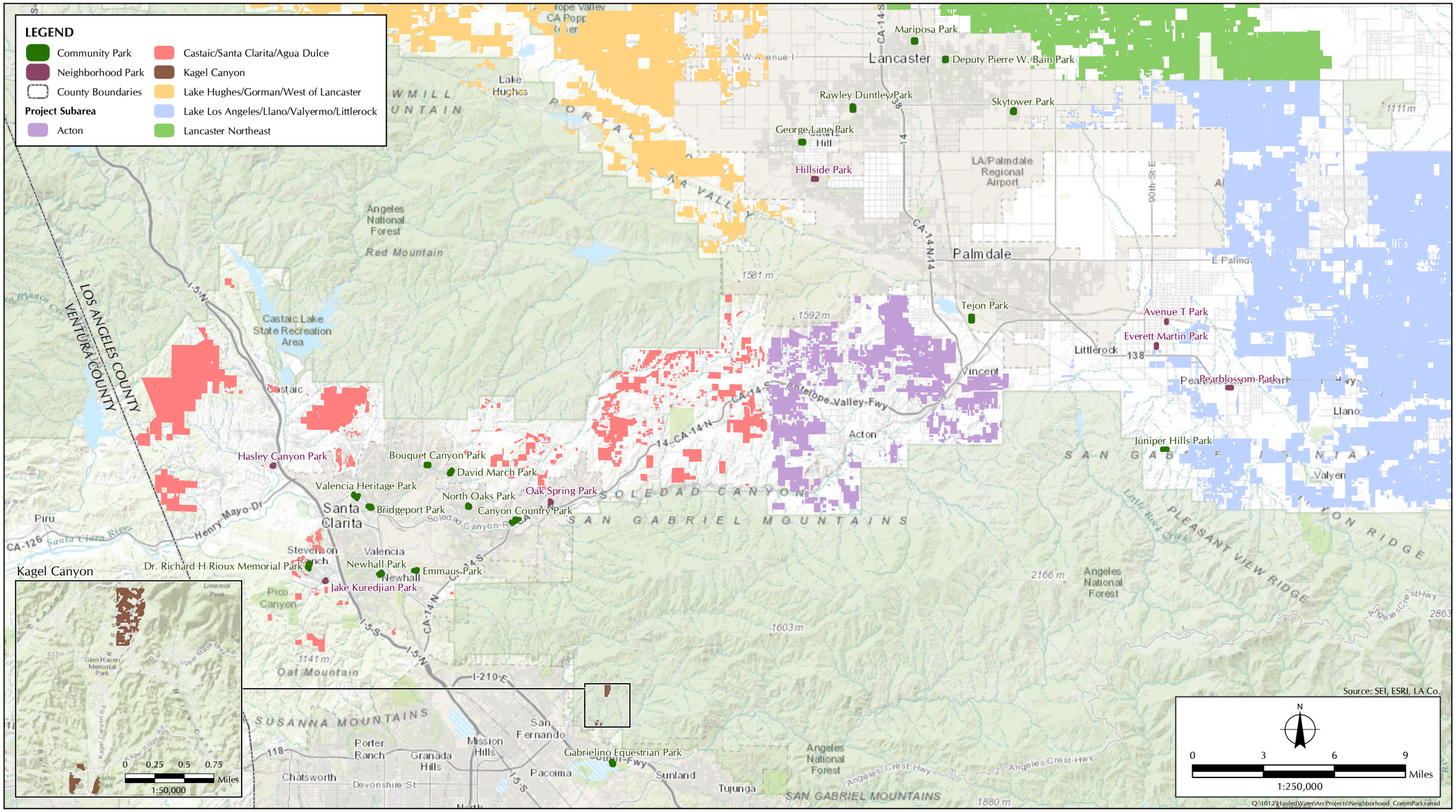

FIGURE 3.3.2-3

Neighborhood and Community Parks

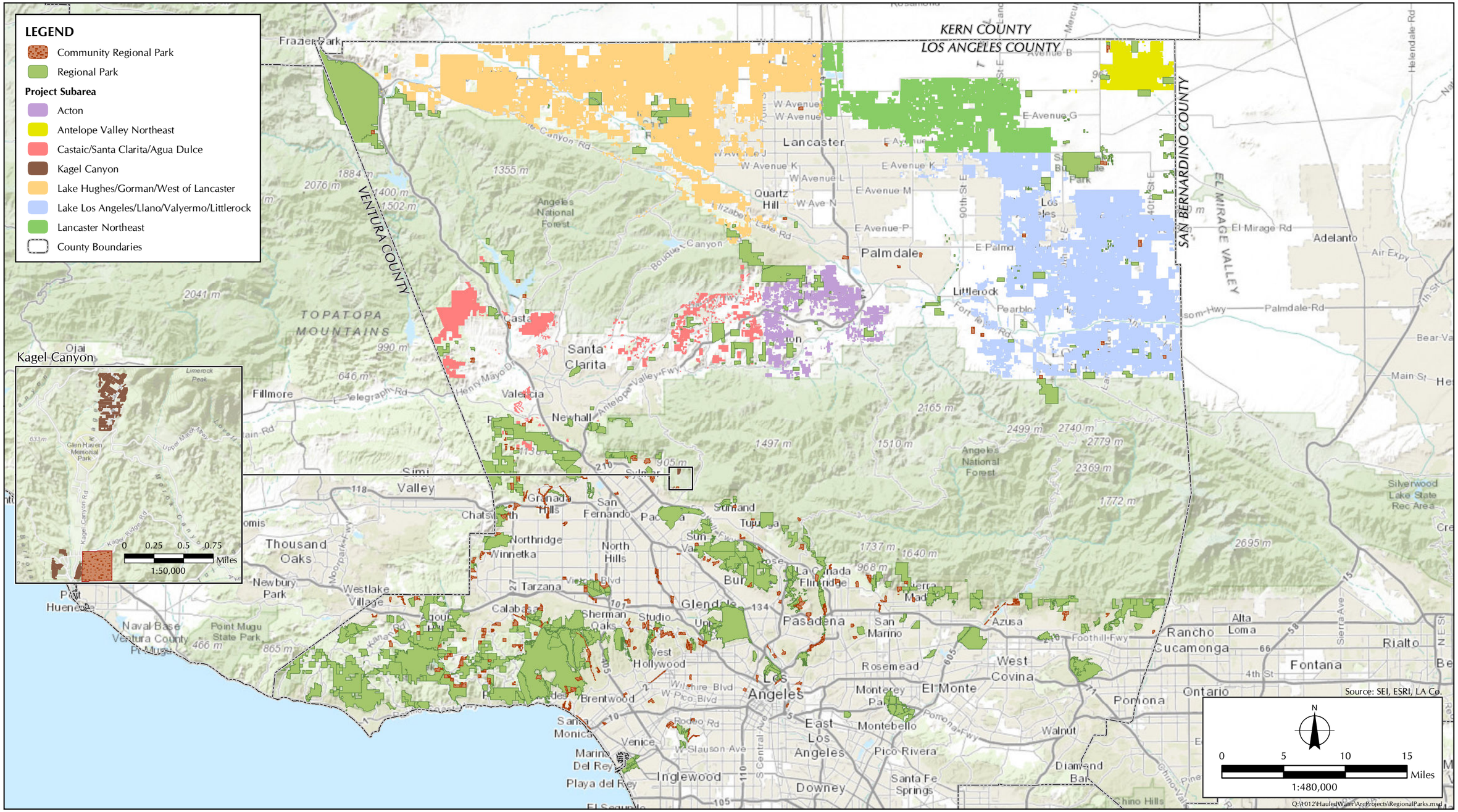

FIGURE 3.3.2-4

Community Regional and Regional Parks

3.3.3 IMPACT ANALYSIS

The State CEQA Guidelines recommend the consideration of five questions when addressing the potential for significant impacts to air quality.

Would the proposed initiative:

(a) Conflict with or obstruct implementation of the applicable air quality plan?

The proposed initiative is expected to result in significant impacts to air quality in relation to conflicting with or obstructing implementation of the applicable air quality plans. The proposed initiative subareas are located within the County of Los Angeles, within the SCAQMD portion of the SCAB and the AVAQMD portion of the MDAB. The proposed initiative is therefore subject to the SCAQMD AQMP that was adopted in 2012, which demonstrates attainment of the federal 24-hour $PM_{2.5}$ standard by 2014 and implements the adopted 8-hour O_3 control plan, and the AVAQMD Federal 8-hour Ozone Attainment Plan that was adopted in 2008. The SCAQMD is currently classified as nonattainment for the federal 24-Hour $PM_{2.5}$ standard and nonattainment (extreme) for the federal 8-Hour O_3 standard, and the AVAQMD is currently classified as nonattainment (severe) for the federal 8-hour O_3 standard.

Since 2003, building permits have not been issued, for the construction of new single-family residences, on properties that are not served by groundwater or a public or private water purveyor. The subject vacant parcels in the proposed initiative subareas would not be eligible for development in the absence of the proposed initiative or a comparable action.[7] Therefore, assuming a worst-case scenario, the proposed initiative has the potential to result in 384 building permits per year for residential development. 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 building permits would be allowed based on the use of hauled water. Operational emissions associated with the proposed initiative would include delivery of hauled water to and from residential developments within the proposed initiative subareas from designated water purveyors. As a result of construction and operational activities, the proposed initiative would have the potential to increase emissions for criteria pollutants for which the proposed initiative subareas are not in attainment. In particular, operational emissions will cause a substantial increase in $PM_{2.5}$ and O_3 precursors such as nitrogen oxides (NO_x) and VOCs. As such, impacts to air quality in relation to consistency with the SCAQMD AQMP and the AVAQMD Federal 8-hour Ozone Attainment Plan should be carried forward for detailed analysis to quantitatively and qualitatively characterize the anticipated impacts of the proposed initiative. Therefore, this issue warrants further analysis in an environmental impact report, including the consideration of mitigation measures and alternatives capable of avoiding or reducing impacts to below the level of significance.

(b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

As shown above in Table 3.3.2-3, the County is currently designated as nonattainment for California's O_3, PM_{10}, $PM_{2.5}$, NO_2, and Pb standards. It is anticipated that construction and operational activities associated with the proposed initiative would have the potential to contribute

[7] The term vacant refers to parcels identified as such by the County Assessor.

to existing air quality violations. In particular, the increased truck traffic from delivering hauled water to and from residential developments within the proposed initiative subareas from designated water purveyors would be expected to substantially increase the amounts of O_3 precursors, PM_{10}, $PM_{2.5}$, and NO_2. As such, impacts to air quality in relation to violating air quality standards, particularly for California's O_3, PM_{10}, $PM_{2.5}$, NO_2, and Pb standards, should be carried forward for a more detailed analysis to quantitatively and qualitatively characterize the anticipated impacts of the proposed initiative. Therefore, this issue warrants further analysis in an environmental impact report, including the consideration of mitigation measures and alternatives capable of avoiding or reducing impacts to below the level of significance.

(c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

It is anticipated that the emissions from construction and operational activities, as a result of the proposed initiative, would have the potential to result in a cumulatively considerable net increase of criteria pollutants for which the County is nonattainment under an applicable federal or state ambient air quality standard. If the proposed initiative is determined to result in a net increase in emissions of O_3, PM_{10}, $PM_{2.5}$, NO_2, and Pb, it would also have the potential to contribute to cumulative impacts on air quality from related projects in the vicinity of the proposed initiative subareas. As shown in Table 3.3.2-1, the proposed initiative subareas located within the SCAQMD portion of the SCAB are designated as nonattainment (Extreme) for the federal 8-Hour O_3 standard, nonattainment (serious) for the federal 24-Hour PM_{10} standard, nonattainment for both the federal 24-Hour and Annual $PM_{2.5}$ standard, and nonattainment (partial) for the 3-Month Rolling Pb standard. Table 3.3.2-2 indicates that the AVAQMD portion of the MDAB is nonattainment (Severe) for the federal 8-hour ozone standard, nonattainment (extreme) for the state ozone standard, and nonattainment for the state PM_{10} standard. Additionally, the County as a whole is designated as nonattainment for the California's ozone, PM_{10}, $PM_{2.5}$, nitrogen dioxide, and lead standards.

The proposed initiative is therefore subject to the SCAQMD AQMP that was adopted in 2012, which demonstrates attainment of the federal 24-hour $PM_{2.5}$ standard by 2014 and implements the adopted 8-hour O_3 control plan, and the AVAQMD Federal 8-hour Ozone Attainment Plan that was adopted in 2008. As mentioned above for questions (a) and (b), construction and operational emissions associated with the proposed initiative would be expected to substantially increase the amounts of O_3 precursors, PM_{10}, $PM_{2.5}$, and NO_2. As such, cumulative impacts to air quality in relation to SCAQMD, AVAQMD, and County attainment statuses for criteria pollutants should be carried forward for detailed analysis to quantitatively and qualitatively characterize the anticipated effects of the proposed initiative. Therefore, this issue warrants further analysis in an environmental impact report, including the consideration of mitigation measures and alternatives capable of avoiding or reducing impacts to below the level of significance.

(d) Expose sensitive receptors to substantial pollutant concentrations?

It is anticipated that the emissions from construction and operational activities, as a result of the proposed initiative, would have the potential to expose sensitive receptors to substantial pollutant concentrations. There are 42,677 vacant parcels within the proposed initiative subareas that would be subject to the proposed initiative, and therefore shall be considered sensitive receptors.

As discussed above for questions (a) – (c), construction and operational activities are anticipated to increase levels of O_3, PM_{10}, $PM_{2.5}$, NO_2, and Pb within the proposed initiative subareas, in the vicinity of sensitive receptors. As such, impacts to air quality in relation to sensitive receptors should be carried forward for detailed analysis to quantitatively and qualitatively characterize the anticipated effects of the proposed initiative. Therefore, this issue warrants further analysis in an environmental impact report, including the consideration of mitigation measures and alternatives capable of avoiding or reducing impacts to below the level of significance.

(e) Create objectionable odors affecting a substantial number of people?

The proposed initiative would result in less than significant impacts to air quality in relation to objectionable odors. Odors associated with the proposed initiative would include diesel emissions from on-site construction equipment during the construction phase of the project. Odors associated with the proposed initiative would include diesel emissions from truck trips between the point of sale of the hauled water and single-family residences that would utilize hauled water sources. However, the use of diesel-powered equipment would only occur in the short-term for construction, and once a month for water delivery to residential developments within the proposed initiative subareas. Therefore, the proposed initiatives impact related to objectionable odors would be expected to be below the level of significance. No further analysis is required.

3.3.4 MITIGATION MEASURES

The proposed initiative would result in impacts related to exposing persons to or generation of criteria pollutant emissions in violation of established federal and state standards for which the proposed initiative subareas are not in attainment. Therefore, there is the need for consideration of mitigation measures and alternatives in an environmental impact report to avoid or reduce impacts in relation to air quality to below the level of significance.

SECTION 3.4
BIOLOGICAL RESOURCES

This analysis is undertaken to determine if the proposed Los Angeles County Single-Family Residential Hauled Water Initiative for New Development (proposed initiative) may have a significant impact to biological resources, thus requiring the consideration of mitigation measures or alternatives in accordance with Section 15063 of the State California Environmental Quality Act (CEQA) Guidelines.[1] Biological resources within the parcels that would be potentially eligible for the use of hauled water to support development of a single-family residence pursuant to the proposed initiative were evaluated with regard to the Conservation and Open Space Element of the existing adopted Los Angeles County General Plan,[2] the Conservation and Natural Resources Element of the Los Angeles County General Plan 2035 Update,[3] a query of the California Natural Diversity Database (CNDDB)[4] for the parcels in the proposed initiative, and a review of published and unpublished literature germane to single-family development projects and hauled water efforts.

Definitions

Waters of the United States are defined as surface waters such as navigable waters and their tributaries, all interstate waters and their tributaries, natural lakes, all wetlands adjacent to other waters, and all impoundments of these waters. On April 21, 2014, the United States Environmental Protection Agency (EPA) proposed to refine the definition of waters of the United States to include all tributaries of traditional navigable waters, interstate waters, territorial seas, and impoundments of such tributaries; wetlands adjacent to the foregoing; and waters other than wetlands that are adjacent to other jurisdictional waters.[5]

Listed and Sensitive Species include those species listed as rare, threatened, or endangered pursuant to the federal and state Endangered Species Acts (ESAs). This also includes: 1) species of Special Concern (SSC) that have been designated by the California Department of Fish and Wildlife (CDFW) and 2) locally important species.

Species of Special Concern are species, subspecies, or distinct population of an animal (bird, mammal, fish, reptile, and amphibian) native to California that currently satisfies one or more of the following criteria: a) is extirpated from the State or, in the case of birds, in its primary seasonal or breeding role; b) is listed as federally-, but not State-, threatened or endangered; c) meets the State definition of threatened or endangered but has not formally been listed; d) is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status; e) has

[1] *California Code of Regulations*. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

[2] County of Los Angeles Department of Regional Planning. November 25, 1980. *County of Los Angeles General Plan Conservation and Open Space Element*. Available online at http://planning.lacounty.gov/assets/upl/project/gp_web80-conservation-and-open-space.pdf

[3] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 9: Conservation and Natural Resources Element*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter9_2014.pdf

[4] California Department of Fish and Wildlife. 2014. *Rarefind 5: A Database Application for the Use of the California Department of Fish and Game Natural Diversity Data Base*. Sacramento, CA

[5] *Federal Register*. Vol. 79, No. 76, Monday April 21, 2014. Proposed Rules. Available online at: http://www.gpo.gov/fdsys/pkg/FR-2014-04-21/pdf/2014-07142.pdf

naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for State threatened or endangered status.

Locally Important species include those not listed pursuant to the State or federal ESA or designated as SSC by CDFW, but otherwise identified as sensitive species that should be considered in assessing the potential effects of proposed projects. These include those plant species designated as rare by the California Native Plant Society (Rare Plant Rank 1A, 1B, 2A, 2B, 3, or 4) [6] This designation includes those species listed on the California Special Animals list that are not otherwise covered by other regulations.[7] It also includes species afforded protection by the County General Plan, such as some native oak trees.

Sensitive Plant Community is a native plant community listed on CDFW Natural Communities List as being rare within California or threatened by human actions.

Nursery Site is considered habitat in which native wildlife may establish nests, maternity roosts, dens, or otherwise engage in breeding and/or the rearing of offspring.

Wildlife Movement Corridors are characterized as areas of habitat that are used by wildlife for the purpose of moving between locations.

Natural Community Conservation Plan (NCCP) is defined by CDFW as a plan for the conservation of natural communities that identifies and provides for the regional or areawide protection and perpetuation of plants, animals, and their habitats.

Habitat Conservation Plans (HCPs) are required by the USFWS as part of an application for an incidental take permit for species listed pursuant to the federal ESA. 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.

3.4.1 REGULATORY FRAMEWORK

Federal

Federal Endangered Species Act

The federal ESA defines listed species as "endangered" or "threatened" and provides regulatory protection for listed species. The federal ESA provides a program for conservation and recovery of threatened and endangered species; it also ensures the conservation of designated critical habitat that the USFWS has determined is required for the survival and recovery of these listed species. Section 9 of the federal ESA prohibits the "take" of species listed by USFWS as threatened or endangered. Take is defined as follows: "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in such conduct." In recognition that take cannot always be avoided, Section 10(a) of the federal ESA includes provisions for take that is incidental to, but not

[6] California Native Plant Society (CNPS). 2014. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society. Sacramento, CA. *http://www.rareplants.cnps.org*.

[7] California Department of Fish and Game, Biogeographic Data Branch. Accessed December 2014. *Rarefind 5: A Database Application for the Use of the California Department of Fish and Game Natural Diversity Database*. Sacramento, CA.

the purpose of, otherwise lawful activities. 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.[8]

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) makes it unlawful to pursue, capture, kill, or possess any migratory bird or part, nest, or egg of any such bird listed in wildlife protection treaties between the United States, Great Britain, Mexico, Japan, and Russia (and the other countries of the former Soviet Union). Similar to the federal ESA, the MBTA authorizes the Secretary of the Interior to issue permits for incidental take. Due to documented presence of resident and migratory birds within the proposed initiative area, compliance with the MBTA was considered in this evaluation.

Clean Water Act, Section 404

Section 404 of the federal Clean Water Act, which is administered by the U.S. Army Corps of Engineers (USACOE), regulates the discharge of dredged and fill material into waters of the United States, which include surface waters such as navigable waters and their tributaries, all interstate waters and their tributaries, natural lakes, all wetlands adjacent to other waters, and all impoundments of these waters. USACOE has established a series of nationwide permits that authorize certain activities in waters of the United States, provided that a proposed activity can demonstrate compliance with standard conditions. Projects that result in the loss of less than the acreage specified by the applicable nationwide permit can normally be conducted pursuant to one of the nationwide permits, if consistent with the standard permit conditions. If the conditions of a nationwide permit cannot be met, or the project results in more than minimal adverse environmental impact, an individual permit may be required.

West Mojave Plan

The West Mojave Plan is an amendment to BLM's California Desert Conservation Area Plan. The West Mojave Plan also has a proposed Habitat Conservation Plan (HCP) component that, if and when finalized, would provide a program for complying with the federal ESA on private lands within the West Mojave Plan area. Together, the West Mojave Plan and the proposed HCP component would cover over 9 million acres north of the Los Angeles metropolitan area with a purpose of creating a comprehensive strategy to conserve and protect almost 100 sensitive desert species and natural communities. Several parcels for the proposed initiative fall within the West Mojave Plan (i.e., BLM's California Desert Conservation Area Plan amendment) planning area. Therefore, the West Mojave Plan will be considered in the evaluation of the proposed initiative.

[8] U.S. Fish and Wildlife Service. Accessed July 2009. Federal Endangered Species Act. Available online at: http://www.fws.gov/Endangered/pdfs/esaall.pdf

State

California Fish and Game Code Sections 1600 through 1603—Lake or Streambed Alteration

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California are subject to the regulatory authority of the CDFW pursuant to Sections 1600 through 1603 of the California Fish and Game Code and require preparation of a Streambed Alteration Agreement (SAA). Pursuant to the Code, a stream is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel having banks and supporting fish or other aquatic life. Based on this definition, a watercourse with surface or subsurface flows that support or have supported riparian vegetation is a stream and is subject to CDFW jurisdiction. Altered or artificial waterways valuable to fish and wildlife are subject to CDFW jurisdiction. The CDFW must be contacted for an SAA for any project that may impact a streambed or wetland. The CDFW has maintained a "no net loss" policy regarding potential impact and has required replacement of lost habitats on at least an acre-for-acre ratio.

California Fish and Game Code Sections 1900–1913—Native Plant Protection Act

The Native Plant Protection Act includes measures to preserve, protect, and enhance rare and endangered native plants. The list of native plants afforded protection pursuant to the Native Plant Protection Act includes those listed as rare and endangered under the California ESA. The Native Plant Protection Act provides limitations that no person would import into this state—or take, possess, or sell within the State of California—any rare or endangered native plant, except in compliance with provisions of the Act. Where individual landowners have been notified by the CDFW that rare or native plants are growing on their land, the landowners are required to notify the CDFW at least 10 days in advance of changing land uses to allow the CDFW to salvage any rare or endangered native plant material.

California Fish and Game Code Sections 2080 and 2081—California Endangered Species Act

The California ESA (California Fish and Game Code §§ 2050 et seq.) prohibits the take of listed species, except as otherwise provided in state law. The *take* for the California ESA is defined as it is in the federal ESA; however, unlike the federal ESA, the California ESA also applies the take prohibitions to species petitioned for listing as state candidates rather than only those listed species. State lead agencies are required to consult with CDFW to ensure that any actions undertaken by the lead agency are not likely to jeopardize the continued existence of any state-listed species or result in destruction or degradation of required habitat. CDFW is authorized to enter into Memoranda of Understanding (MOUs) with individuals, public agencies, universities, zoological gardens, and scientific or educational institutions to import, export, take, or possess listed species for scientific, educational, or management purposes. Permits for incidental take of species protected pursuant to the California ESA are available under certain circumstances as described in Sections 2080 and 2081 of the California Fish and Game Code described below.

Section 2080 of the California ESA states:

> No person shall import into this state [California], export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission [State Fish and Game Commission] determines to be an endangered species or threatened species, or attempt any of those acts, except as

> otherwise provided in this chapter, or the Native Plant Protection Act, or the California Desert Native Plants Act.

Pursuant to Section 2081 of the Fish and Game Code, CDFW may authorize individuals or public agencies to import, export, take, or possess, any state-listed endangered, threatened, or candidate species. These otherwise prohibited acts may be authorized through permits or MOUs as follows: (1) if the take is incidental to an otherwise lawful activity, (2) if impacts of the authorized take are minimized and fully mitigated, (3) if the permit is consistent with any regulations adopted pursuant to any recovery plan for the species, and (4) if the applicant ensures adequate funding to implement the measures required by CDFW. CDFW shall make this determination based on available scientific information and shall include consideration of the ability of the species to survive and reproduce.

California Fish and Game Code Sections 3503 and 3503.5—Resident and Migratory Birds

Sections 3503 and 3503.5 of the California Fish and Game Code provide regulatory protection to resident and migratory birds and all birds of prey within the state of California, including the prohibition of the taking of nests and eggs, unless otherwise provided for by the Fish and Game Code. Specifically, these sections of the Fish and Game Code make it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code.

California Fish and Game Code Section 3511—Fully Protected Species

The state of California classifies certain animals as "Fully Protected." This classification was the state's initial effort in the 1960s to identify and provide additional protection to certain species that were rare or faced possible extinction. Lists were made for fish, mammals, amphibians and reptiles, birds, and mammals. Most of the species on these lists have subsequently been listed under the state and/or federal ESAs. Sections 3511, 4700, 5050 and 5515 of the Fish and Game Code state that Fully Protected species (birds, mammals, fish, reptiles, amphibians) or parts thereof may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

California Fish and Game Code Section 4150—Non-Game Mammal or Furbearing Mammal

All mammals occurring naturally in California which are not game mammals, fully protected mammals, or fur-bearing mammals, are nongame mammals. Nongame mammals or parts thereof may not be taken or possessed except as provided in this code or in accordance with regulations adopted by the commission. The regulations of take of furbearing mammals are established within the California Code of Regulations (CCR), Title 14, Division 1 (Subdivision 2), Chapter 5. Take is prohibited for several furbearing mammals under Title 14, § 460 of the CCR, including but not limited to desert kit fox (*Vulpes macrotis arsipus*), coyote (*Canis latrans*), and American badger (*Taxidea taxus*). Title 14 § 460 is supported by Sections 200, 202, 203, and 4009.5 of the Fish and Game Code. Due to the potential presence of furbearing mammals within parcels, Title 14, § 460 of the CCR was considered in the evaluation of the project initiative.

California Oak Woodlands Conservation Act

The Act mandates the Wildlife Conservation Board to establish a grant program designed to protect and restore oak woodlands using conservation easements, cost-share and long-term agreements,

technical assistance and public education and outreach. The Program provides incentives designed to foster the conservation of oak woodlands in a manner that promotes local priorities while sustaining the economic viability of farming and ranching operations.

California Water Code Section 13000 et seq.-- Porter-Cologne Water Quality Control Act

Water quality in California is further regulated under the Porter-Cologne Water Quality Control Act. This law assigns responsibility for protection of water quality to the State Water Resources Control Board (SWRCB), which is divided into nine statewide Regional Water Quality Control Boards (RWQCBs) that enforce water quality standards. The area affected by the proposed initiative is subject to the jurisdiction of the Lahontan RWQCB and Los Angeles RWQCB.

Waters of the State are defined in Section 13050 of the Porter-Cologne Water Quality Control Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." Water quality criteria include the identification of beneficial uses, narrative and numerical water quality standards, and implementation procedures.

Local

County of Los Angeles General Plan

The area that would be subject to the proposed initiative consists of 42,677 parcels in the unincorporated territory of Los Angeles County (Figure 1.4-1).[9] The combined proposed initiative study area consists of approximately 285,500 acres or approximately 450 square miles. The existing adopted County of Los Angeles General Plan and the Los Angeles County General Plan 2035 Update have both been referenced due to the scheduled consideration of the General Plan Update by the County of Los Angeles Board of Supervisors in 2014. Elements of the Los Angeles County General Plan 2035 Update may be subject to change prior to the adoption of the plan after Board consideration.

An important component of the Los Angeles County General Plan Conservation and Open Space Element is the Significant Ecological Area (SEA) Program. 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.

Given the proposed initiative has a number of SEAs present on or near parcels, policies relating to SEAs within the Los Angeles County General Plan were considered in the evaluation of the proposed initiative.

1980 Adopted Los Angeles County General Plan

The County's biological resources objective, found in the Conservation and Open Space Element of the General Plan, is to preserve and protect prime agricultural lands, forests, fisheries, significant

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

ecological areas and other biotic resources.[10] Under this objective, the County has established the three relevant policies applicable to the proposed initiative:

Policy 7: Preserve significant ecological areas and habitat management areas by appropriate measures, including preservation, mitigation, and enhancement.

Policy 12: Protect watersheds, streams, and riparian vegetation to minimize water pollution, soil erosion and sedimentation, maintain natural habitats, and aid in ground water recharge.

Policy 35: Support preservation of heritage trees. Encourage tree planting programs to enhance the beauty of urban landscaping.

Los Angeles County General Plan 2035 Update

The Conservation and Natural Resources Element of the Los Angeles County General Plan 2035 Update has established two goals and 13 policies related to biological resources. Of those, 10 of the 13 policies in regard to Biological Resources are relevant to the consideration of the proposed Amendment.[11] The two goals and 10 supporting policies that apply to the proposed initiative are:

Goal C/NR 3: Permanent, sustainable preservation of genetically and physically diverse biological resources and ecological systems including: habitat linkages, forests, coastal zone, riparian habitats, streambeds, wetlands, woodlands, and SEAs

Policy C/NR 3.1: Conserve and enhance the ecological function of diverse natural habitats and biological resources.

Policy C/NR 3.3: Restore significant riparian resources, such as degraded streams, rivers, and wetlands to maintain ecological function—acknowledging the importance of incrementally restoring ecosystem values when restoration is not feasible.

Policy C/NR 3.6: Assist state and federal agencies and other agencies, as appropriate, with the preservation of special status species and their associated habitat and wildlife movement corridors through the administration of the SEAs and other programs.

Policy C/NR 3.7: Participate in inter-jurisdictional collaborative strategies that protect biological resources.

Policy C/NR 3.8: Discourage development in areas with identified significant biological resources, such as SEAs.

[10] County of Los Angeles Department of Regional Planning. November 25, 1980. *County of Los Angeles General Plan Conservation and Open Space Element.* Available online at http://planning.lacounty.gov/assets/upl/project/gp_web80-conservation-and-open-space.pdf

[11] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 9: Conservation and Natural Resources Element.* Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter9_2014.pdf Page 146.

Policy C/NR 3.9: Consider the following in the design of a project that is located within an SEA, 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 to maintain the ecological function of riparian habitats; and
- Placement of the development in the least biologically sensitive areas on the site.
- Watershed sensitivity by capturing, treating, retaining, and/or infiltrating storm water flows on site.

Policy C/NR 3.10: Require that development mitigate 'in-kind' for unavoidable impacts on biologically sensitive areas—onsite or nearby as feasible, but allow flexible off-site application to the benefit of other County SEAs or connectivity among them if onsite is not feasible, and permanently preserve mitigation sites.

Policy C/NR 3.11: Discourage new development from increasing the urban-wildland interface in undisturbed natural areas through compact design.

Policy C/NR 3.12: Discourage development to maintain and support the preservation of riparian habitats, streambeds, and wetlands in a natural state, unaltered by grading, fill, or diversion activities.

Goal C/NR 4: Preserved and restored oak woodlands that are conserved in perpetuity with no net loss of existing woodlands.

Policy C/NR 4.1: Conserve and sustainably manage oak woodlands.

Santa Clarita Valley Area Plan

All parcels located within the Santa Clarita Valley are situated within the 2012 Santa Clarita Valley Area Plan. The Santa Clarita Valley Area Plan has a Conservation and Open Space Element that covers biological resources. There are 7 objectives and 32 policies related to Biological Resources but 5 objectives and 12 policies are relevant directly to the consideration of the proposed initiative:

Objective CO-3.2: Identify and protect areas which have exceptional biological resource value due to a specific type of vegetation, habitat, ecosystem, or location.

Policy CO-3.2.1: Protect wetlands from development impacts, with the goal of achieving no net loss (or functional reduction) of jurisdictional wetlands within the planning area.

Policy CO-3.2.2: Ensure that development is located and designed to protect oak and other significant indigenous woodlands. (Guiding Principle #9)

Policy CO-3.2.3: Ensure protection of any endangered or threatened species or habitat, in conformance with State and federal laws.

Policy CO-3.2.4: Protect biological resources in the designated Significant Ecological Areas (SEAs) through the siting and design of development which is highly compatible with the

SEA resources. Specific development standards shall be identified to control the types of land use, density, building location and size, roadways and other infrastructure, landscape, drainage, and other elements to assure the protection of the critical and important plant and animal habitats of each SEA. In general, the principle shall be to minimize the intrusion and impacts of development in these areas with sufficient controls to adequately protect the resources. (Guiding Principle #10)

Objective CO-3.3: Protect significant wildlife corridors from encroachment by development that would hinder or obstruct wildlife movement.

Policy CO-3.3.1: Protect the banks and adjacent riparian habitat along the Santa Clara River and its tributaries, to provide wildlife corridors.

Policy CO-3.3.3: Identify and protect one or more designated wildlife corridors linking the Los Padres and Angeles National Forests through the Santa Clarita Valley (the San Gabriel-Castaic connection).

Policy CO-3.3.4: Support the maintenance of Santa Clarita Woodlands Park, a critical component of a cross-mountain range wildlife habitat corridor linking the Santa Monica Mountains to the Angeles and Los Padres National Forests.

Objective CO-3.4: Ensure that development in the Santa Clarita Valley does not adversely impact habitat within the adjacent National Forest lands.

Policy CO-3.4.2: Consider principles of forest management in land use decisions for projects adjacent to the National Forest, including limiting the use of invasive species, discouraging off-road vehicle use, maintaining fuel modification zones and fire access roads, and other measures as appropriate, in accordance with the goals set forth in the Angeles National Forest Land Management Plan.

Policy CO-3.4.3: On the Land Use Map, maintain low density rural residential and open space uses adjacent to forest land, and protect the urban-forest interface area from overdevelopment.

Policy CO-3.4.4: Participate as a stakeholder in planning efforts by the United States Forest Service for land uses within the National Forest, providing input as appropriate.

Objective CO-3.5: Maintain, enhance, and manage the urban forest throughout developed portions of the Santa Clarita Valley to provide habitat, reduce energy consumption, and create a more livable environment.

Policy CO-3.5.3: Pursuant to the requirements of the Zoning Ordinance, protect heritage oak trees that, due to their size and condition, are deemed to have exceptional value to the community.

Objective CO-3.6: Minimize impacts of human activity and the built environment on natural plant and wildlife communities.

Policy CO-3.6.5: Ensure revegetation of graded areas and slopes adjacent to natural open space areas with native plants (consistent with fire prevention requirements).

Antelope Valley Areawide General Plan

Parcels located near Lancaster within the Antelope Valley are potentially situated within the 1986 Antelope Valley Areawide General Plan. The Antelope Valley Areawide General Plan has an Environmental Sensitivities section that that covers biological resources. There are six policies related to biological resources, three of which are relevant directly to the consideration of the proposed initiative:

> 18. Direct future growth away from areas exhibiting high environmental sensitivity to land use development unless appropriate mitigating measures can be implemented.
>
> 19. Minimize disruption and degradation of the environment as land use development occurs, integrating land uses so that they are compatible with natural environmental systems.
>
> 20. Prohibit expansion of urban uses into areas of rare and endangered species.

Los Angeles County Oak Tree Ordinance – Municipal Code Sections 22.56.2050 – 22.56.2260

The Los Angeles County Oak Tree Ordinance requires a permit prior to the cutting, removing, destroying, relocating, inflicting damage on, or encroaching into a protected zone of any tree within the oak genus.[12] The ordinance regulates only oak trees (genus *Quercus*) located within unincorporated areas of Los Angeles County. In addition, the circumference of an oak tree with one trunk must be 25 inches (8 inches in diameter) or more. For oak trees with multiple trunks, any two trunks must have a circumference of 38 inches (12 inches in diameter) or more. Measurements must be recorded at 4.5 feet above mean natural grade.

3.4.2 AFFECTED ENVIRONMENT

The biological resources were addressed within each sub parcel, including: (1) areas located north and east of the San Gabriel Mountains in the Antelope Valley, (2) areas located northeast of the City of Santa Clarita, north and south of California State Route 14, (3) areas that are southwest of the City of Palmdale in the communities of Agua Dulce and Acton, (4) and in the Kagel Canyon area in the Angeles National Forest. The subject parcels have been categorized into seven subareas; Acton, Castaic/Santa Clarita/Agua Dulce, Antelope Valley Northeast, Kagel Canyon, Lake Hughes/Gorman/West of Lancaster, Lake Los Angeles/Llano/Valyermo/Littlerock, and Lancaster Northeast (Figure 1.4-1).

Candidate, Sensitive, or Special Status Species and Designated Critical Habitat

A record search of all sensitive flora and fauna was conducted using the California Natural Diversity Database (CNDDB).[13] Records for listed and sensitive species were searched for on USGS 7.5 minute quadrangles containing the parcels proposed in the initiative, and all neighboring USGS

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[12] Los Angeles County Department of Regional Planning. Accessed 27 March 2014. *Los Angeles County, California, Code of Ordinances – Title 22 Planning and Zoning*. Available online at: http://library.municode.com/index.aspx?clientId=16274

[13] California Department of Fish and Wildlife. 2014. *Rarefind 5: A Database Application for the Use of the California Department of Fish and Game Natural Diversity Data Base*. Sacramento, CA

7.5 minute quadrangles. Generally, all species within the CNDDB are either listed species under the federal or State ESAs or are species of special concern and plants have a California Rare Plant Ranking (CRPR); only ESA status and CRPR is presented in subsequent tables given that the other species reported by CNDDB are species of special concern (SOC). To assess potential impacts the proposed initiative may have, CNDDB records were classified into five categories:

1) Present: A recent, valid CNDDB record occurs within a parcel and/or Sapphos Environmental, Inc. biologists know of other records of this species on a parcel.

2) Presumed Present: Nearby recent CNDDB records to a parcel and habitat likely on parcels and/or may be directly affected by proposed initiative if parcels are developed.

3) Potentially Present: Generally species have a paucity of records because of difficulty in detecting the species but habitat present in the vicinity of parcels and/or habitat present. More data would be required to determine if these species are present on parcels.

4) Presumed Absent: Generally habitat may occur but the records are old, records without definite locational data, paucity of records given known problems in detecting the species, and/or occurs far away from any impacts that may occur as a result of implementing the proposed initiative.

5) Absent: No habitat present, records distant from parcels, or species has been extirpated.

The CNDDB query for this Initial Study returned 181 listed and sensitive species (91 plant and 90 animal species) located with all quads where parcels occur and adjacent surrounding quads (Appendix A, *Listed and Sensitive Species within Topographic Quadrangles and Surrounding Topographic Quadrangles of Proposed Initiative Parcels*). Records from quadrangles are large and not based on distance from parcels, resulting in inclusion of species that would not occur. One hundred twelve of these species could be removed from further consideration based on the criteria (outlined above) and the lack of available habitat. For example, may of the species are high mountain or pine forest associated species that occur in the San Gabriel Mountains and would not be found at lower elevations and plant communities found on the parcels in the proposed initiative area.

Listed and sensitive species have been documented within all seven subareas (Table 3.4.2-1, *Taxa within Each Subarea*). Of the listed and sensitive species potential to occur, there were 20 species determined to be present, 14 species that were presumed to be present, and 35 species that are potentially present; these 69 plant and animal species would require further consideration within an EIR. Of the species present, presumed present, or potentially present, 8 species were threatened or endangered pursuant to the federal and/or State ESAs.

The remaining 112 plant and animal species were presumed to be absent (24 species) or determined to be absent (88 species) based on available data and habitat requirements; therefore, these species would not be analyzed further in the EIR (Appendix A).

TABLE 3.4.2-1
TAXA WITHIN EACH SUBAREA

Taxa	General Description of Locates/Habitats	CSCAD	A	LHGWL	LLALVL	AVNE	LNE	KC
Plants	Generally occurs throughout the subareas but vary by species. Cruzan Mesa has three species of rare plants including two listed pursuant to ESAs. Rare plants records clustered within the foothills, along riparian areas, in alkali playas, and within washes.	X	X	X	X	X	X	X
Invertebrates	No special status invertebrate species are expected to be present within the parcels affected by the proposed initiative.							
Amphibians	CNDDB records of Amphibians are primarily within the mountainous areas near existing water bodies, such as the Santa Clara River and tributaries, Castaic Lake, Lake Piru, and ephemeral ponds on Cruzan Mesa.	X	X	X	X			X
Reptiles	Water favoring reptiles are generally concentrated around lakes and riparian areas, such as Quail Lake, Elizabeth Lake, Castaic Lake, and the Santa Clara River and tributaries. More upland species within chaparral and desert species concentrate near Lake Los Angeles and the Shadow Mountains.	X	X	X	X	X		
Fish	Fish are primarily within the Santa Clara River and tributaries, but also occurring upstream of Hansen Dam.	X	X					
Birds	Chaparral and riparian birds primarily around Santa Clarita and Acton, grassland birds near Santa Clarita and Gorman, and desert birds throughout Mojave Desert. Agricultural areas in the Mojave Desert are well known wintering habitat for several species of concern although some listed birds breed near these fields too.	X	X	X	X	X	X	
Mammals	Bats are generally tied to roosts, which are expected in areas with water or rocky outcroppings. Small mammals are generally underrepresented in CNDDB but habitat occurs in the foothills and within the Mojave Desert.	X		X	X	X		

NOTE:
CSCAD = Castaic/Santa Clarita/Agua Dulce subarea
A = Acton subarea
LHGWL = Lake Hughes.Gorman/West of Lancaster subarea
LLALVL = Lake Los Angeles/Llano/Valleymero/Littlerock subarea
AVNE = Antelope Valley Northeast subarea
LNE = Lancaster Northeast subarea
KC = Kagel Canyon subarea

Designated Critical Habitat for four federally listed threatened and endangered species occurs on or in proximity to of parcels within the three of the seven subareas.

1) Spreading Navarretia Critical Habitat: Critical Habitat overlaps parcels on Cruzan Mesa and near parcels above Plum Canyon.

2) Arroyo Toad Critical Habitat: Critical Habitat occurs primarily within the Santa Clara watershed and near Littlerock Reservoir. Parcels within Soledad Canyon overlap Critical Habitat and parcels near Val Verde are upstream from Critical

Habitat at the junction of Castaic Creek and the Santa Clara River.

3) Desert Tortoise Critical Habitat: All but two parcels of the Antelope Valley Northeast subarea are within Desert Tortoise Critical Habitat.

4) California Gnatcatcher Critical Habitat: Two parcels in Placerita Canyon and several parcels in the Santa Susanna Mountains overlap California Gnatcatcher Critical Habitat; however, the area has few to no records of this species and occurs adjacent to the developed Golden Oak Ranch, a popular filming location.

Sensitive Plant Communities

Plant communities for parcels potential affected by the proposed initiative were evaluated using existing plant community data. Characterization of the plant communities are based on *A Manual of California Vegetation*, 2nd edition (*Manual*).[14] These communities are favored by CDFW and the California Native Plant Society (CNPS) and have a State sensitivity ranking. However, available existing data does not use the *Manual*'s classification system. Further, no one data set is available that incorporates all parcels. To standardize the plant communities for all parcels and match the existing data to the *Manual*, Sapphos Environmental, Inc. will determine what are the corresponding communities listed within the *Manual* by using the appropriate Appendices and Indexes within the *Manual*; the *Manual* was developed so that communities from other data sets had corresponding communities within the *Manual*.

Sapphos Environmental, Inc. used data from Classification and Assessment with LANDSAT of Visible Ecological Groupings (CalVeg) downloaded from the United States Department of Agriculture, Forest Service website.[15] The data was from the South Coast region, which covers parcels within the Traverse Ranges but not within the Mojave Desert. Therefore, other sources of data had to be obtained for the Mojave Desert. Rather than obtain CalVeg data from a different region, Sapphos Environmental, Inc. downloaded data from the Desert Renewable Energy Conservation Plan (DRECP). Plant communities from these data sets where intersected with the parcel data using GIS.

Generally, DRECP data is preferred because the plant communities used by this data follow the U.S. National Vegetation Classification System (NVCS) because NVCVS communities more closely match the communities within the *Manual* than CalVeg data; indeed, one goal of the *Manual* is to standardize the communities in California, which in turn will help standardize plant communities for the entire United States and the NVCS database. Little work was required on DRECP data to determine the corresponding *Manual* plant communities because of the similarities in the classification systems. CalVeg data required more work to determine the corresponding plant communities because CalVeg data often lumps together a broad range of Manual communities, some of the corresponding communities do not occur within the vicinity, and the CalVeg for the South Coast region combines several plant communities into one designated community, therefore, requiring review of the plant community descriptions.[16] For CalVeg communities with no

[14] Sawyer, John O., Todd Keeler-Wolf, and Julie M. Evans. 2009. *A Manual of California Vegetation, 2nd edition*. Sacramento, CA: California Native Plant Society.

[15] www.fs.usda.gov/detail/r5/landmanagement/resourcemanagement/?cid=stelprdb5347188

[16] http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsbdev3_045405.pdf

corresponding *Manual* community in the region, the South Coast descriptions were used to assume the corresponding *Manual* community.

After the DRECP and CalVeg communities were corresponded to a *Manual* community, the plant communities were able to be referenced against the CDFW Natural Communities List to determine the presence of any State-designated sensitive plant communities. State-designated sensitive plant communities are those that have a ranking of S1, S2 or S3 as defined by the CDFW Natural Communities List. Only plant communities designated as sensitive are shown from data extracted from DRECP (Table 3.4.2-2, *Potential Sensitive Plant Communities on Parcels Based on DRECP and CalVeg Data*).

Based on the DRECP and CalVeg data, there were 36 State sensitive plant communities that may potentially occur within the parcels potentially affected for the proposed initiative. Although not all these communities are likely to occur, these correspond to a community listed in the existing data. Many times, designated communities within the existing data have several corresponding common communities and one rare community; for example, Ceanothus Mixed Chaparral, a CalVeg community, corresponds to the following communities in the *Manual*: cup leaf ceanothus chaparral (sensitive), chaparral white thorn chaparral (non-sensitive), big pod ceanothus chaparral (non-sensitive), hairy leaf ceanothus chaparral (sensitive), and greenbark ceanothus chaparral (non-sensitive). Therefore, if parcels were developed as a result of accepting the proposed initiative, surveys would need to be conducted on parcels where at CalVeg/DRECP data indicates a State sensitive community may be present; for example, a parcel with "Ceanothus Mixed Chaparral" would need the plant communities to be evaluated in order to determine if the scrub community is State sensitive or common and not State sensitive.

TABLE 3.4.2.2
POTENTIAL SENSITIVE PLANT COMMUNITIES ON PARCELS
BASED ON DRECP AND CALVEG DATA

DRECP/NVCS Community Name	CalVeg Community Name	Corresponding Sensitive *Manual* Community*	Rarity Ranking	Riparian	CSCAD	A	LHGWL	LLALVL	AVNE	LNE	KC
Woodland Alliances											
Aesculus californica	NA	*A. californica* California buckeye scrub	G3 S3	No			X				
Juniperus californica	California Juniper (shrub) / California Juniper (shrub)	*J. californica* California juniper woodland	Some associations rare	No	X	X	X	X			
Platanus racemosa	California Sycamore	*P. racemosa* California sycamore woodland	G3 S3	Yes			X	X			
Populus fremontii	Fremont Cottonwood	*P. fremontii* Fremont cottonwood forest	G4 S3.2	Yes	X	X	X	X			
Prosopis glandulosa	NA	*P. glandulosa* Mesquite thicket	G5 S3.2	Yes						X	
Pseudotsuga macrocarpa	Bigcone Douglas-Fir	*P. macrocarpa* Bigcone Douglas fir forest	G3 S3.2	No		X	X	X			
Quercus lobata	Valley Oak	*Q. lobata* Valley oak woodland	G3 S3	No			X				
Salix laevigata	NA	*S. laevigata* Red willow thicket	G3 S3	Yes			X	X			
NA	Willow	*S. laevigata* Red willow thicket / *S. gooddingii* Black willow thicket	G3 S3 / G4 S3	Yes		X	X				
NA	Riparian Mixed Hardwood	*S. laevigata* Red willow thicket / *Sambucus nigra* Blue elderberry stand	G3 S3 / G3 S3	Yes	X		X				
NA	Riparian Mixed Shrub	No corresponding *Manual* community; assumed same as riparian mixed hardwood	G3 S3 / G3 S3	Yes			X				
Yucca brevifolia	Joshua tree	*Y. brevifolia* Joshua tree woodland	G4 S3.2	No		X	X	X		X	
Shrubland Alliances											
Adenostoma fasciculatum	Chamise	*A. fsciculatum* Chamise chaparral	Some associations rare	No	X	X	X				
Atriplex spinifera		*A. spinfera* Spinescale scrub	G3 S3.2	No			X		X	X	
NA	Ceanothus Mixed Chaparral	*Ceanothus greggii* Cup leaf ceanothus chaparral / *C. oliganthus* Hairy leaf ceanothus chaparral	G4 S3 / G3 S3	No	X	X					
Madrean Warm Semi-Desert Wash Woodland/Scrub	NA	*Ephedra california* California joint fir scrub / *Ericameria paniculata* Black-stem rabbitbush scrub / *Lepidospartum squamatum* Scale broom scrub / *Prunus fasciculata* Desert almond scrub	G3 S3.3 / G4 S3 / G3 S3 / G4 S3.3	Yes			X	X	X	X	
Lycium cooperi	Desert Mixed Shrub	**E. california* California joint fir scrub / *E. paniculata* Black-stem rabbitbush scrub / *Grayia spinosa* Spiny hop sage scrub / *Lycium andersonii* Anderson's boxthorn scrub	G3 S3.3 / G4 S3 / G5 S3.3 / G4 S3	Yes, for some alliances		X		X			
Ericameria linearifolia	NA	*E. linearifolia* Narrowleaf goldenbush scrub	G3 S3	No			X				
Forestiera pubescens	NA	*F. pubescens* Desert olive patches	G3 S2.2	No			X	X		X	
Fremontodendron californicum	NA	No corresponding *Manual* community; assumed *C. greggii* Cup leaf ceanothus chaparral	G4 S3 / G3 S3	No				X			
Lepidospartum squamatum	Riversidean Alluvial Scrub / Scalebroom	*L. squamatum* Scale broom scrub	G3 S3	Yes		X		X			
Prunus fasciculata		*P. fasciculata* Desert almond scrub	G4 S3.3	Yes				X			
	Lower Montane Mixed Chaparral	*Prunus ilicifolia* Holly leaf cherry chaparral	G3/S3	No	X	X	X				X
Purshia tridentata		*Purshia tridentata* Bitter brush scrub	G4 S3	No				X			
Quercus chrysolepis tree	Canyon Live Oak	*Q. chrysolepis* Canyon live oak chaparral	G3/S3	No		X	X	X			
NA	Interior Mixed Hardwood	No corresponding Manual community; assumed canyon live oak chaparral	G3/S3	No			X				
Ribes quercetorum	NA	*R. quercetorum* Oak gooseberry thickets	G2 S2	No			X				
Suaeda moquinii	NA	*S. moquinii* Bush seepweed scrub	G5 S3.2	No						X	

TABLE 3.4.2.2
POTENTIAL SENSITIVE PLANT COMMUNITIES ON PARCELS
BASED ON DRECP AND CALVEG DATA, *Continued*

DRECP/NVCS Community Name	CalVeg Community Name	Corresponding Sensitive *Manual* Community*	Rarity Ranking	Riparian	CSCAD	A	LHGWL	LLALVL	AVNE	LNE	KC
Herbaceous Alliances											
Achnatherum hymenoides	NA	*A. [Stipa] hymenoides* Indian rice grass grassland	G4 S1.2	No				X			
Warm Desert Alkaline Scrub and Herb Playa and Wet Flat	NA	***Schoenoplectus americanus* / American bulrush marsh / *Sporobolus airoides* Alkali sacaton grassland	G5/ S3.2 / G4 S2.2	No						X	
NA	Wet Meadows	*Carex (aquatilis, lenticularis)* Water sedge and Lakeshore sedge meadows / *C. jonesii* Jones's sedge turf / *C. simulate* Short-beaked sedge meadow / *Hordeum brachyantherum* Meadow barley patches / *Juncus (oxymeris, xiphioides)* Iris-leaf rush seeps / *Muhlenbergia rigens* Deer grass beds	G5 S3 / G4 S3 / G4 S3 / G4 S3 / G2 S2 / G3 S2	Yes			X				

NOTE:
* Some DRECP and CalVeg plant communities have multiple corresponding *Manual* plant communities, both common and sensitive, but only sensitive communities shown.
CSCAD = Castaic/Santa Clarita/Agua Dulce subarea
A = Acton subarea
LHGWL = Lake Hughes.Gorman/West of Lancaster subarea
LLALVL = Lake Los Angeles/Llano/Valleymero/Littlerock subarea
AVNE = Antelope Valley Northeast subarea
LNE = Lancaster Northeast subarea
KC = Kagel Canyon subarea

Wetlands

Sapphos Environmental, Inc. reviewed current National Wetland Inventory[17] for potential wetlands subject to protection under Section 404 of the Clean Water Act. There are fourteen wetland and/or watercourses identified on or near parcels affected by the proposed initiative:

1) Sheep Creek originates near Wrightwood but the alluvial fan from this creek occurs on parcels north of Black Butte. Further, the alluvial fan continues north of Lake Los Angeles and ends at Rogers Dry Lake and Rosamond Dry Lake on Edwards Air Force Base.

2) East of Llano is a series of washes within alluvial fans that end east of Lake Los Angeles. The alluvial fans originate from the San Gabriel Mountains within Mescal Creek, LeMontaine Creek, and the following canyons: Boneyard, Puzzle, Jesus, Boulder, and Grandview Canyons. Although the waterways end east of Lake Los Angeles, the water likely becomes sheet flow and connects to the Sheep Creek alluvial fan north of Lake Los Angeles. The flow from these washes likely ends at Rogers Dry Lake and Rosamond Dry Lake.

3) Big Rock Creek and two tributaries, Sandrock Creek and Pallett Creek, originate in the San Gabriel Mountains south of Valyermo. Wetlands occur within parcels south of Valyermo and from Valyermo to Llano. From Llano to Lake Los Angeles, Big Rock Creek becomes a wash/alluvial fan with the largest channels on the eastern edge of the alluvial fan. Part of Big Rock Wash alluvial fan feeds playas near Alpine and Puite Buttes west of Lake Los Angeles; however, the sheet flow likely continues into a series of playas east of agricultural farms and eventually ends at Rogers Dry Lake and Rosamond Dry Lake. Another part of the Big Rock Wash alluvial fan is channelized and diverted into the agricultural fields; north of the agricultural fields are a series of playas that eventually lead to Rogers Dry Lake and Rosamond Dry Lake.

4) A large number of playas exist within the Lancaster Northeast subarea, north of existing agricultural fields. These playas are likely supplied with water primarily from the washes, alluvial fans, and creeks listed above.

5) Desert washes occur throughout the Antelope Valley Northeast parcels. These washes generally originate within the hills present on these parcels. Water then either flows north into Rogers Dry Lake or south through El Mirage Valley into El Mirage Dry Lake.

6) Man-made drainages/ponds occur on parcels near the Lancaster Water Reclamation Plant. Similar features occur north of Fairmont Reservoir on parcels near the California Aqueduct.

7) Little Rock Wash, originate in the San Gabriel Mountains south of Littlerock. The wash crosses only a few parcels and drains into agricultural fields.

[17] U.S. Fish and Wildlife Service. 13 May 2013. *National Wetlands Inventory Map*. Arlington, VA. Available online at: http://www.fws.gov/wetlands/Wetlands-Mapper.html

8) Two emergent wetlands occur on parcels near Myrick Canyon, south of the Poppy Preserve.

9) Around Neenach and Three Points are many man-made water features/ponds, springs, and wells. These features contribute to small wetlands on a number of parcels. One naturally-occurring emergent wetland is located in Oakgrove Canyon west of Hidden Lake and another wetland near the base of Liebre Mountain in Richardson Canyon.

10) Several freshwater emergent wetlands occur on parcels near Quail Lake and Gorman Creek, which feeds into Quail Lake.

11) Freshwater emergent wetlands occur on parcels throughout Leona Valley, east of Lake Elizabeth and along Amargosa Creek.

12) Few wetlands occur on parcels in the Acton subarea and wetlands are within the Santa Clara River. Likewise, parcels within Santa Clarita Valley generally do not have wetlands but are close to wetland of the Santa Clara River and tributaries.

13) A few parcels located in the Santa Susana Mountains have water flow through the canyons and are listed in the NWI database. These are part of the Santa Clara River watershed.

14) An ephemeral pond occurs on the Cruzan Mesa adjacent to parcels.

Movement Corridors

Movement corridors generally occur within washes and river bottoms for terrestrial movement, and avian stopover habitat and ridgelines are generally important for raptors and migrating birds. Important migration routes for terrestrial movement usually occur away from urban areas but localized movement may occur, such as mammals using the Santa Clara River to pass through Santa Clarita.

Potential migration corridors or nursery sites are as follows:

1) The Big Rock Wash, Little Rock Wash, and other small washes that feed into Rogers and Rosamond Dry Lakes are known migration routes for wildlife. Such washes allow could allow wildlife to move between the foothills of the San Gabriel Mountains and Rogers/Rosamond Dry Lakes and between Rogers/Rosamond Dry Lakes and El Mirage Dry Lake. Further, the dry lakes on Edwards Air Force Base are considered a globally significant area for wintering and migrating birds.

2) Gorman is expected to be an important area for migrating birds because species migrating into the Central Valley have to pass through Tejon Pass in Gorman. Further, the area is at the convergence of the Tehachapi Mountains (northeast), Sierra Pelona Mountains (southeast), San Emigdio Mountains (northwest), and Topatopa Mountains (southwest). Condors may move through the area given that populations have been reintroduced into the Topatopa and Tehachapi Mountains.

3) Portal Ridge and Leona Valley are expected to be important for local movement and bird migration. Portal Ridge separates the Mojave Desert from the Sierra Pelona Mountains. The Leona Valley is situated along the San Andrea Fault and is bordered by Portal Ridge to the north and the Sierra Pelona Mountains to the south. Together, the valley and ridgeline allow wildlife movement between the San Gabriel Mountains and Acton to the east and Quail Lake and Gorman to the west. Further, wildlife can move through the lush vegetation of the Leona Valley rather than the more arid Antelope Valley and Mojave Desert north of Portal Ridge.

4) The Santa Clarita River and tributaries such as Castaic Creek, Mint Canyon, San Francisquito Canyon, and Bouquet Canyon are expected to be a wildlife movement corridor for wildlife moving between the Santa Susana Mountains, the Sierra Pelona Mountains, and the San Gabriel Mountains. Further movement can occur for wildlife moving from Soledad Canyon and Acton area to downstream areas, such as the flood plains around Fillmore. Soledad Canyon between Acton and Santa Clarita, at the convergence of the Santa Clarita River and Castaic Creek, and in the San Fransquito Canyon near the old dam site all have been designated as a Southern California Threespine Stickleback Stream, meaning that movement for fish species likely occurs in these areas.

Significant Ecological Areas

The following Los Angeles County Significant Ecological Areas (SEAs) occur on or in proximity to parcels subject to the proposed initiative:

1) Antelope Valley SEA: Designated to protect wildlife movement from the San Gabriel Mountains to the dry lakes on Edwards Air Force Base. Also protects nesting raptors on buttes migrating birds, and overlaps Desert Tortoise Critical Habitat. Further, it protects sensitive upland plant communities, riparian plant communities, and alkali plants and communities. Indeed, areas on Edwards Air Force Base are the most pristine desert habitat in the Antelope Valley area.

2) Joshua Tree Woodland SEA: Primarily designated to protect the Joshua tree woodland, a State sensitive community. Through protection of the woodlands, it allow migration stopover for migrating birds, potential nesting habitat for raptors, including State threated Swainson's Hawk.

3) San Andreas SEA: Designated as an SEA because of the area's importance for wildlife movement and plant communities that are only found in Los Angeles County within these areas. The slopes along Portal Ridge are designated by the National Audubon Society as an Important Bird Area (IBA).

4) Santa Clara River SEA: Important for a large number of sensitive wildlife, especially for fish, amphibians, and riparian birds. Large number of protect plant communities, including riparian communities and areas with bigcone Douglas fir. Overlaps California Gnatcatcher Critical Habitat and Arroyo Toad Critical Habitat. Migration corridor is especially important because wildlife can safely cross under Highway 14. The area is designated as an IBA.

5) Cruzan Mesa Vernal Pools SEA: Primarily designated to protect the vernal pools, a rare ecosystem in southern California, and to overlap Spreading Navarretia Critical Habitat. The SEA also protects sensitive amphibians and birds, including grassland and chaparral species.

6) Valley Oak Savannah SEA: Designated to protect the valley oak plant community and the species itself, both are rare in Los Angeles County. The SEA is one of the last areas in Santa Clarita Valley where these species occur.

7) Santa Susana Mountains/Simi Hills SEA; Generally important to wildlife because it serves as a corridor for wildlife movement, protects a number of sensitive plant communities, and has potential habitat for a number of rare plants.

8) Santa Felicia SEA: Protects native plant communities, including areas considered nearly pristine that are uncommon within Los Angeles County. Further protects the tributaries of Piru Creek, and import source of water for the Santa Clara River.

3.4.3 IMPACT ASSESSMENT

The State CEQA Guidelines recommend the consideration of six questions when addressing the potential for significant impacts to biological resources. The CEQA questions address whether the proposed initiative has any effects on the following questions:

(a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

The proposed initiative is expected to have substantial adverse effects on listed and sensitive species because it would potentially allow for significant reduction of habitat if parcels were developed. If all parcels within the proposed initiative were developed, several wildlife species could be extirpated from the County, such as several desert species. Parcels are less likely to affect listed and sensitive wildlife occurring adjacent to existing suburban areas; however, indirect effects on adjacent habitat are expected if rural and suburban areas increase in size as a result of accepting the proposed initiative. One potential consideration within the EIR is to identify which sensitive species are most likely to occur within each subarea (Figure 1.4-1) to identify areas more likely to impact sensitive wildlife, for example, subareas with streams may require mitigation measures to protect riparian areas downstream whereas desert areas may not need the same mitigation measure. Generally, species within the following taxa could be affected:

1) Plants: Impacts are likely to occur through the direct loss of habitat if development occurs and is allowed if the proposed initiative is accepted. All subareas are likely to impact rare plants, but Kagel Canyon has the least likely possibility of encountering rare plants.

2) Invertebrates: No species will be impacted.

3) Amphibians: Impacts are expected to be minimal if the proposed initiative is passed; impacts would occur if waterways were affected by development allowed if

the proposed initiative is accepted. Subareas where listed and sensitive amphibians are most likely to occur and be impacted are Acton, Kagel Canyon, and Castaic/Santa Clarita/Agua Dulce.

4) Reptiles: Direct impacts likely for some species and indirect, habitat loss effects expected for many species. All subareas are likely to affect listed and sensitive reptiles, with the exception of Kagel Canyon and Lancaster Northeast, but species affected varies depending on location and habitats within the subarea.

5) Fish: Impacts expected to be minimal and connected to any impacts to hydrology, given most of the fish habitat is downstream of parcels. Castaic/Santa Clarita/Agua Dulce is the only subarea with listed and sensitive fish considerations.

6) Birds: All subareas are likely to affect listed and sensitive birds, with the exception of Kagel Canyon, but species affected varies depending on location and habitats within the subarea.

7) Mammals: All subareas are likely to affect listed and sensitive birds, with the potential exceptions of Kagel Canyon, Acton, and Lancaster Northeast, but species affected varies depending on location and habitats within the subarea.

Critical Habitat for Spreading Navarretia, Arroyo Toad, and California Gnatcatcher could be impacted within the Castaic/Santa Clarita/Agua Dulce subarea, because parcels occur on the Cruzan Mesa, within the Santa Clara River, and on the slopes of the Santa Susanna and San Gabriel Mountains. Additionally, parcels in the Acton subarea could impact Arroyo Toad Critical Habitat and nearly all the parcels in the Antelope Valley Northeast subarea could impact Desert Tortoise Critical Habitat.

(b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or the U. S. Fish and Wildlife Service?

The proposed initiative is expected to have substantial adverse effects on riparian or other sensitive natural communities because it would potentially allow for significant loss of these communities if parcels were developed. Subareas with the greatest number of potential sensitive plant communities were Lake Hughes/Gorman/West of Lancaster and Lake Los Angeles/Llano/Valyermo/Littlerock. Although the Initial Study focused only on plant communities on parcels, indirect effects could occur on riparian communities downstream or to adjacent plant communities; for example, housing is often associated with a degradation of surrounding plant communities because of increased trash, human movement, and invasive species. One potential consideration within the EIR is to identify parcels with potential sensitive plant communities and also determine if potential sensitive plant communities occur within 500 meters of the parcels.

(c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

The proposed initiative is expected to have substantial adverse effects on wetlands and waterways protected under Section 404 of the Clean Water Act. Specifically, wetlands are likely to be affected in all subareas except Kagel Canyon. If the proposed initiative is accepted, direct impacts could

occur if development occurs on parcels with wetlands, if roads need to be constructed and cross washes/alluvial fans, and if playas are developed over. Indirect impacts could occur if development changes flow or wetlands downstream or runoff affects nearby, adjacent wetlands. Wetlands will be further analyzed in the EIR.

(d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The proposed initiative is expected to have substantial adverse effects on wildlife movement. If the proposed initiative is accepted, development of parcels located near Lake Los Angeles, Gorman, Leona Valley, and the Santa Clara River are likely to directly or indirectly impact on wildlife movement. No nurseries are known, but the Santa Clara River is assumed to be important to fish spawning in areas designated as Southern California Threespine Stickleback Stream. Therefore, all of the subareas are likely to affect wildlife movement corridors, except Kagel Canyon, but Antelope Valley Northeast would need further evaluation regarding potential wildlife movement. Nurseries may only be affected in the Action and Castaic/Santa Clarita/Agua Dulce subareas. Wildlife movement and nurseries will be analyzed further in the EIR.

(e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The USFWS 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.[18] 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 sub areas are outside of the DRECP

The DRECP is currently in the process of being prepared as a joint Federal and State effort involving the U.S. Bureau of Land Management, the U.S. Fish and Wildlife Service, the California Energy Commission, and the California Department of Fish and Wildlife. The CEQA Notice of Preparation was released on July 28, 2014. It is anticipated that the Draft EIR/EIS will be available in the fall of 2014.

The DRECP is a proposed multi-species 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. The DRECP will comprehensively address how participating entities with jurisdiction over renewable energy and transmission projects and related facilities in the desert of California will conserve natural communities and species pursuant to the California Natural Community Conservation Planning Act (NCCP Act), FESA, and the Federal Land Policy and Management Act (FLPMA).

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

The DRECP is intended to serve as a Natural Community Conservation Plan (NCCP) under Section 2800 et seq. of the California Fish and Game Code and a multiple - species HCP pursuant to Section 10(a)(1)(B) of FESA. 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.[19]

The proposed initiative is expected to conflict with local polices and ordinances protecting biological resources. If the proposed initiative is accepted and development occurs, it may conflict with the polices within the West Mohave Plan, the Santa Clarita Valley Area Plan, the Antelope Valley Areawide General Plan, the DRECP, and the Los Angeles County General Plan, and the provisions of the Los Angeles County Oak Tree Ordinance,. Given the potential for conflicts with these plans and provisions, local policies and ordinances will be analyzed further in the EIR.

3.4.4 MITIGATION MEASURES

The proposed initiative may result in significant impacts to biological resources. Therefore, mitigation measures or alternatives may be required. At minimum, alternatives should include a "No Project" alternative where no parcels are allowed to be developed or an alternative plan where some development is allowed; some development may need to follow certain criteria and conditions of approval to be permitted.

[19] California Energy Commission. Website accessed June 1, 2014. Available online at http://www.energy.ca.gov/2011publications/DRECP-1000-2011-001/DRECP-1000-2011-001.pdf

SECTION 3.5
CULTURAL RESOURCES

This analysis is undertaken to determine if the proposed Los Angeles County Single-Family Residential Hauled Water Initiative for New Development (proposed initiative) may have a significant impact to cultural resources, thus requiring the consideration of mitigation measures or alternatives in accordance with Section 15063 of the State California Environmental Quality Act (CEQA) Guidelines.[1] Cultural resources within the general areas of the County where the parcels that would potentially be eligible for the use of hauled water to support development of a single-family residence pursuant to the proposed initiative were assessed with regard to the Land Use Element and Conservation and Open Space Element of the existing adopted Los Angeles County General Plan;[2,3] the Conservation and Natural Resources Element of the Los Angeles County General Plan 2035 Update;[4,5] and the Los Angeles County Code of Ordinances – Title 22 Planning and Zoning.[9]

Definitions

Alluvium is an unconsolidated accumulation of stream-deposited sediments, including sands, silts, clays or gravels.

Archaeological site is defined by the National Register of Historic Places (NRHP) as the place or places where the remnants of a past culture survive in a physical context that allows for the interpretation of these remains. Archaeological remains usually take the form of artifacts (e.g., fragments of tools, vestiges of utilitarian, or non-utilitarian objects), features (e.g., remnants of walls, cooking hearths, or midden deposits), and ecological evidence (e.g., pollen remaining from plants that were in the area when the activities occurred). These can include prehistoric (pre-European contact), historic (post-contact), or combination thereof.

B.P. stands for "before present," which is defined as before 1950 and is used by archaeologists in conjunction with the commonly used term, AD.

Cretaceous is defined as an interval of time relating to, or denoting the last period of the Mesozoic era, between the Jurassic and Tertiary periods.

Formation is defined as a laterally continuous rock unit with a distinctive set of characteristics that make it possible to recognize and map from one outcrop or well to another. The basic rock unit of stratigraphy.

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[1] *California Code of Regulations*. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

[2] County of Los Angeles Department of Regional Planning. November 25, 1980. *County of Los Angeles General Plan Land Use Element*. Available online at http://planning.lacounty.gov/assets/upl/project/gp_web80-land-use.pdf

[3] County of Los Angeles Department of Regional Planning. November 25, 1980. *County of Los Angeles General Plan Conservation and Open Space Element*. Available online at http://planning.lacounty.gov/assets/upl/project/gp_web80-conservation-and-open-space.pdf

[4] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 6: Land Use Element*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter6_2014.pdf

[5] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 9: Conservation and Natural Resources Element*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter9_2014.pdf

Holocene is defined as an interval of time relating to, or denoting the present epoch, which is the second epoch in the Quaternary period, including the time period from approximately 11,000 years ago to the present time.

Historic period is defined as the period that begins with the arrival of the first nonnative population and thus varies by area. In 1769, Gaspar de Portolá became the first European to enter the San Fernando Valley, initiating the historic period in the project study area.

Historical resource is defined by CEQA as any object, building, structure, site (including archaeological sites), area, place, record, or manuscript that is listed in, or is eligible for listing in, the California Register of Historical Resources (CRHR); officially designated or recognized as historically significant by a local government pursuant to a local ordinance or resolution; or identified as significant in a historic resource survey conducted in accordance with the requirements of the CRHR statute (Public Resources Code Section 5024.1(g)). Properties listed in, or determined eligible for listing in, the NRHP are automatically listed in the CRHR and are therefore historical resources under CEQA.

Isolate is defined as an isolated artifact or small group of artifacts that appear to reflect a single event, loci, or activity. It may lack identifiable context but has the potential to add important information about a region, culture, or person. Isolates are not considered under the California Environmental Quality Act (CEQA) to be significant and, thus, do not require avoidance or mitigation under CEQA. All isolates located during the field effort, however, are recorded, and the data are transmitted to the appropriate CHRIS Information Center.

Miocene is defined as an interval of time relating to or denoting the fourth epoch of the Tertiary period, between the Oligocene and Pliocene epochs, from approximately 23 to 5.5 million years ago.

Native American sacred site is defined as an area that has been, and often continues to be, of religious significance to Native American peoples, such as an area where religious ceremonies are practiced or an area that is central to their origins as a people. They also include areas where Native Americans gather plants for food, medicinal, or economic purposes.

Oligocene is defined as an interval of time relating to or denoting the third epoch of the Tertiary period, between the Eocene and Miocene epochs, from approximately 34 to 23 million years ago.

Outcrop is defined as a rock formation that is visible on earth's surface.

Paleocene is defined as an interval of time, relating to, or denoting the earliest epoch of the Tertiary period, between the Cretaceous period and the Eocene epoch.

Phase I archaeological resources survey consists of a literature review (background research), consultation with the Native American Heritage Commission, and fieldwork. Fieldwork consists of a physical inspection of the cultural resources survey area, generally through pedestrian surveys, or by other means when appropriate. The purpose of the Phase I survey is to identify the cultural resources known or likely to be present in the project's impact area and in the immediate vicinity.

Phase II archaeological investigation, consisting of testing and evaluation, is conducted when the results of a Phase I investigation indicate the presence of potentially significant cultural resources.

Phase II investigations are intended to evaluate the historical significance of historic and prehistoric archaeological sites and require a comprehensive and detailed scope of work, a research design, and fieldwork. Surface and subsurface testing is conducted during Phase II investigations to collect the data necessary to establish historical significance of archaeological sites.

Phase III data recovery is implemented on those archaeological sites that are determined to be significant as a result of the Phase II investigations and that cannot feasibly be avoided or preserved with project implementation. Phase III efforts typically involve the collection of data intended to answer scientific or research questions that have been formulated during Phase II testing and formalized by a comprehensive Phase III research design. Most commonly, Phase III data collections are implemented on sites determined to be significant as a means of mitigating the effects of a project through salvage, recordation, and archiving of scientific data associated with the site.

Pleistocene is defined as an interval of time, relating to or denoting the first epoch of the Quaternary period, between the Pliocene and Holocene epochs, from approximately 2.6 million years ago to 11,000 years ago.

Pliocene is defined as an interval of time, relating to or denoting the last epoch of the Tertiary period, between the Miocene and Pleistocene epochs, from approximately 5.5 to 2.6 million years ago.

Plutonic igneous rocks are igneous rocks that have crystallized beneath the earth's surface.

Prehistoric period is defined as the era prior to AD 1769. The later part of the prehistoric period (post–AD 1542) is also characterized as the protohistoric period in some areas, which marks a transitional period during which native populations began to be influenced by European presence resulting in gradual changes to their lifeways.

Quaternary is defined as the most recent Period in geological time; includes the Pleistocene and Holocene Epochs.

Unique geologic feature is defined as an important and irreplaceable geological formation. Such features may have scientific and/or cultural values.

Unique paleontological resource is defined as a fossil that meets one or more of the following criteria:

- It provides information on the evolutionary relationships and developmental trends among organisms, living or extinct.
- It provides data useful in determining the age(s) of the rock unit or sedimentary stratum, including data important in determining the depositional history of the region and the timing of geologic events therein.
- It provides data regarding the development of biological communities or interaction between plant and animal communities.
- It demonstrates unusual or spectacular circumstances in the history of life.

- The fossils are in short supply and/or in danger of being depleted or destroyed by the elements, vandalism, or commercial exploitation, and are not found in other geographic locations.

3.5.1 REGULATORY FRAMEWORK

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.

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[6] *United States Code*, 16 USC 470.

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

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

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; 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[9]

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.[10]

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:[11]

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

[9] *California Public Resources Code*, Division 13, Sections 21083.2, 21084.1.

[10] *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).

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

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.

California Register of Historical Resources

The National Historic Preservation Act (NHPA) created the National Historic Preservation Program, requiring each state to establish a State Historic Commission and a State Historic Preservation Officer (SHPO) in order to receive funding under the act. The California Register of Historical Resources was established by the State Legislature 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.

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

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

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

[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 online at: www.ohp.parks.ca.gov

has lapsed to obtain a scholarly perspective on the events or individuals associated with the resource.[15]

California Historical Landmarks[16]

The *California Historical Landmark Registration Program* was established in 1931 with the passage of Assembly Bill 171 which provided for the designation of privately and publicly-owned properties. 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[17]

In 1965, the State Legislature gave the Historical Landmarks Advisory Committee responsibility for evaluating applications for a new program entitled *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 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.

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[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 online at: www.ohp.parks.ca.gov

[16] Office of Historic Preservation, Department of Parks and Recreation, State of California. n.d. "California Historical Landmarks Registration Programs." Available online at: www.ohp.parks.ca.gov

[17] Office of Historic Preservation, Department of Parks and Recreation, State of California. n.d. "California Points of Historical Interest Registration Programs." Available online at: www.ohp.parks.ca.gov

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 Public Resource Code (PRC) established the Native American Heritage Commission (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 disturbances 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.

Local

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."[18]

County of Los Angeles General Plan

The areas that will be affected by the proposed initiative are located within seven subareas in the unincorporated areas of Los Angeles County and subject to the County of Los Angeles General Plan. The existing adopted 1980 County of Los Angeles General Plan and the Los Angeles County General Plan 2035 Update have both been referenced below.[19,20]

1980 Adopted Los Angeles County General Plan

The Conservation, Open Space, and Recreation element of the County General Plan[21] establishes goals and policies for conservation of cultural resources in Los Angeles County. The General Plan recognizes that the County has numerous archaeological and historical sites from the Native American, Hispanic, and American periods of California's history, as well as paleontological sites and important geological formations that predate human occupation, and are nonrenewable and irreplaceable.

- **Policy 20** states the County's intention to "protect cultural heritage resources, including historical, archaeological, paleontological, and geological sites, and significant architectural structures."[22]

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

[19] County of Los Angeles Department of Regional Planning. 1980. *County of Los Angeles General Plan. Conservation and Open Space Element*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_web80-conservation-and-open-space.pdf

[20] County of Los Angeles Department of Regional Planning. 2014. *Draft Los Angeles County General Plan 2035. Conservation and Natural Resources Element*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter9_2014.pdf

[21] County of Los Angeles Department of Regional Planning. January 1993. *County of Los Angeles Streamlined General Plan*, CA2. Los Angeles, CA.

[22] County of Los Angeles Department of Regional Planning. January 1993. *County of Los Angeles Streamlined General Plan,* page OS-11. Los Angeles, CA.

Los Angeles County General Plan 2035 Update

The County's cultural resources objective, found in the Conservation and Natural Resources Element of the General Plan 2035 Update, is to preserve and protect cultural resources including historic, archaeological, and paleontological resources.[23] Under this objective, the County has established the following policies:[24]

- **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.

Los Angeles County Historical Landmarks and Records Commission

The Los Angeles County Board of Supervisors established and has maintained the Los Angeles County Historical Landmarks and Records Commission (Commission) pursuant to Los Angeles County Code Chapter 3.30. Pursuant to Section 26490 of the California Government Code, the Commission is designated as a historical records commission to foster and promote the preservation of historical records. The Los Angeles County Historical Landmarks and Records Commission (Commission) considers and recommends to the Board of Supervisors local historical landmarks defined to be worthy of registration by the State of California, either as California Historical Landmarks or as Points of Historical Interest. The Commission may also comment for the Board on applications relating to the NRHP. The Commission is also charged with fostering and promoting the preservation of historical records. In its capacity as the memorial plaque review committee of the County of Los Angeles, the Commission screens applications for donations of historical memorial plaques and recommends to the Board plaques worthy of installation as County property.[25]

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[23] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 9: Conservation and Natural Resources Element*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter9_2014.pdf

[24] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 9: Conservation and Natural Resources Element*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter9_2014.pdf

[25] County of Los Angeles Department of Auditor-Controller (J. Tyler McCauley, Auditor-Controller). 21 October 2002. "Sunset Review for the Los Angeles County Historical Landmarks and Records Commission." Accessed 17 July 2006. Available online at: http://auditor.co.la.ca.us/cms1_003345.pdf

3.5.2 AFFECTED ENVIRONMENT

Historical Resources

An abbreviated literature review and records search was conducted at the South Central Coastal Information Center (SCCIC) on April 29, 2014. The abbreviated records search included a review of only spatial data and basic information for all known relevant previous investigation and previous reported cultural resources within the seven subareas of the proposed initiative (Figure 1.4-1, *Proposed Initiative Study Area*). No investigation reports or cultural resource site records were obtained 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 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 collected there are no listed or eligibly for listing NRHP properties within the subareas of the proposed initiated. However, there are approximately 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 3.5.2-1, *California Register Eligible and Listed Resources within the Proposed Initiative Subareas*).

TABLE 3.5.2-1
CALIFORNIA REGISTER ELIGIBLE AND LISTED RESOURCES WITHIN THE PROPOSED INITIATIVE SUBAREAS

Project 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
Kagel Canyon	0

Archaeological Resources

An abbreviated literature review and archaeological records search was conducted at the 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. No investigation reports or cultural resource site records were obtained for 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. Based on the information obtained there have been approximately 659 previous cultural resources investigations conducted within the 7 subareas, and approximately 637 cultural resources identified within these seven subareas. Based on the record search results, no historic period built environment resources were identified as listed or eligible

for listing on the CRHR within the seven subareas. Table 3.5.2-2, *Documented Cultural Resources and Reports within the Proposed Initiative Subareas*, provides a breakdown of the reports and resources identified within each subarea.

TABLE 3.5.2-2
DOCUMENTED CULTURAL RESOURCES AND REPORTS WITHIN THE PROPOSED INITIATIVE SUBAREAS

Project Subarea	Investigations	Cultural Resources
Antelope Valley Northeast	2	1
Lancaster Northeast	79	44
Lake Hughes/Gorman/West of Lancaster	213	433
Castaic/Santa Clarita/Agua Dulce	159	86
Acton	108	23
Lake Los Angeles/Llano/Valyermo/Little Rock	97	49
Kagel Canyon	1	1

Paleontological Resources

An abbreviated review of published and unpublished literature pertaining to paleontological and geological information was consulted to determine the degree of paleontological sensitivity within the proposed initiative. The literature and records search was abbreviated due to the large size of the combined subareas for the proposed initiative. The abbreviated 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 3.5.2-3, *Geologic Units with the Potential to Yield Paleontological Resources*).

TABLE 3.5.2-3
GEOLOGIC UNITS WITH THE POTENTIAL TO YIELD PALEONTOLOGICAL RESOURCES

Project 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
Kagel Canyon	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 by Dibblee (1996,[26] 1997,[27] 2001[28]). 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 (Jefferson 1991[29]). Holocene Quaternary alluvium, Quaternary landslide deposits, the Vasquez Formation, plutonic igneous rocks, and metamorphic rocks are considered to have low paleontological sensitivity.

[26] 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.

[27] 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.

[28] 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.

[29] 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 (1991,[30] 1992,[31] 1993,[32] 1996a,[33] 1996b,[34] 1997a,[35] 1997b[36]). 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 ((Jefferson 1991[37]); the Saugus Formation (Jefferson 1991[38]), the Pliocene marine, Pico Formation (Squires et al. 2006;[39] Fierstine et al. 2012[40]); the Towsley Formation (Kern 1973[41]); the Ridge Basin Group; the Sisquoc Formation; the Castaic Formation (Kellogg 1925,[42] 1929[43]; Repenning and Tedford 1977[44]) the Monterey Formation; the Mint Canyon Formation (Maxson 1930[45]; Axelrod 1940[46]; Mount 1971[47]) and the Tick Canyon

[30] 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

[31] 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

[32] 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

[33] 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

[34] 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

[35] 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

[36] 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

[37] 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.

[38] 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.

[39] 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.

[40] 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.

[41] 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.

[42] 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.

[43] Kellogg, R., 1929. *A new cetothere from southern California*. University of California Publications, Bulletin of the Department of Geological Sciences 18: 449-457.

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

[45] Maxson, J. H. 1930. *A Tertiary mammalian fauna from the Mint Canyon Formation of southern California*. Carnegie Institution of Washington Publications 404:77-112.

[46] Axelrod, D. I. 1940. *The Mint Canyon flora of southern California: a preliminary statemen*t. American Journal of Science 238: 577-585.

Formation (Whistler 1967[48]). Igneous 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 (1953[49]) and Dixon and Ward (2002[50]). 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 (Jefferson 1991[51]). 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.

Kagel Canyon. The geology of the Kagel Canyon subarea was mapped by Dibblee (1991[52] and 1991a[53]). 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 (1959,[54] 1959a,[55] 1997c,[56] 2006,[57] 2008[58]), Dibblee

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[47] 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.

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

[49] 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.

[50] 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.

[51] 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.

[52]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

[53] 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

[54] 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

[55] 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

[56] 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

[57] 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

and Minch (2002,[59] 2002a,[60] 2002b[61]), Hernandez and Lancaster (2012[62]), and Lancaster and Holland (2011[63]). 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 (Jefferson 1991[64]), fine-grained sedimentary units (Dibblee (1997c[65]), the Pliocene Anaverde Formation (Axelrod 1950[66]), and the Santa Margarita Formation (Durham and Addicot 1964[67]; Boessenecker 2011[68]). 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 (1959a[69]; 1960[70]; 1960a[71]) and Dibblee and

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[58] 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

[59] 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

[60] 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

[61] Dibblee, T. W., Jr. 2002b. G*eologic 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

[62]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

[63] 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

[64] 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

[65] 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

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

[67] 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.

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

[69] 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

[70] 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

[71] 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

Minch (2002,[72] 2002a,[73] 2002b[74]). 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, (Jefferson 1991, 1991a), the Anaverde Formation (Axelrod 1950[75]), the Punchbowl Formation (Pagnac 2009[76]), the Crowder Formation (Reynolds et al. 2008[77]), 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 (1959,[78] 1959a,[79] and 1960[80]), and Ward and Dixon (2002[81]). 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.

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. Concomitantly,

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[72] 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

[73] 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

[74] 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

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

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

[77] 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.

[78] 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

[79] 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

[80] 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

[81] 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/

coordination was initiated with the Native American Heritage Commission (NAHC) in association with the proposed initiative on April 21, 2014.[82] The NAHC was requested to conduct a records search from their Sacred Lands File (SLF) for the presence of Native American traditional cultural properties, sacred sites, or human remains within each of the seven subareas. Written responses on three subareas were received by Sapphos Environmental, Inc. on May 7, 2014.[83] The responses indicated that although one subarea had resources nearby, the SLF failed to indicate the presence of Native American cultural resources within the proposed initiative.

The records searches and consultation revealed known cemeteries or burial sites within the record search area (Table 3.5.2-4, *NAHC Results and Known Burial or Cemeteries within the Subareas Affected by the Proposed Initiative*).

TABLE 3.5.2-4
NAHC RESULTS AND KNOWN BURIAL OR CEMETERIES WITHIN THE SUBAREAS AFFECTED BY THE PROPOSED INITIATIVE

Project Subarea	NAHC SLF Results (positive/negative)	Known Burial or Cemetery
Antelope Valley Northeast	To be supplied by the NAHC	Negative
Lancaster Northeast	Negative	Negative
Lake Hughes/Gorman/ West of Lancaster	Negative	Positive
Castaic/Santa Clarita/Agua Dulce	To be supplied by the NAHC	Positive
Acton	To be supplied by the NAHC	Positive
Lake Los Angeles/Llano/ Valyermo/Little Rock	Negative (resources located nearby)	Positive
Kagel Canyon	To be supplied by the NAHC	Negative

3.5.3 IMPACT ANALYSIS

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:

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

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 3.5.2-1) 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 some of these areas may not have not been previously surveyed and/or the existing cultural resources present may not been evaluated for significance pursuant to CEQA. Although the current zoning allows for

[82] Thomas, Roberta, Sapphos Environmental, Inc., Pasadena, CA. 21 April 2014. Letter to Dave Singleton, Native American Heritage Commission, Sacramento, CA.

[83] Singleton, Dave, Native American Heritage Commission, Sacramento, CA. 7 May 2014. Letter response to Roberta Thomas, Sapphos Environmental, Inc., Pasadena, CA.

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 projects. As such, the potential for the proposed initiative to impact historical resources (known and unknown) exists, and constitutes a significant impact requiring further analysis in an environmental impact report, including the consideration of mitigation measures and alternatives to avoid or reduce impacts to below the level of significance.

(b) 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 identified 637 previously recorded archaeological resources within all seven subareas of the proposed initiative (Table 3.5.2-2). Six of these were identified in the record search as being listed or eligible for listing on the CRHR (Table 3.5.2-1). Additionally, because not all areas have been previously surveyed for archaeological resources, there is the potential for additional archaeological resources to be present. 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 projects. As such, the potential for the proposed initiative to impact archaeological resources (known and unknown) does exists, and constitutes a significant impact requiring further analysis in an environmental impact report, including the consideration of mitigation measures and alternatives to avoid or reduce impacts to below the level of significance.

(c) 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 that could contain significant paleontological 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 projects. As such, the potential for the proposed initiative to impact paleontological resources (known and unknown) does exist, and constitutes a significant impact requiring further analysis in an environmental impact report, including the consideration of mitigation measures and alternatives to avoid or reduce impacts to below the level of significance.

(d) 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 remains a possibility for human remains to exist. 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 projects. As such the potential for the proposed initiative to impact human remains (known and unknown) does exist, and constitutes a significant impact requiring further analysis in an environmental impact report, including the consideration of mitigation measures and alternatives to avoid or reduce impacts to below the level of significance.

3.5.4 MITIGATION MEASURES

The proposed initiative would potentially result in significant impacts to historical resources, archaeological resources, paleontological resources, and human remains. Therefore, there is need for the consideration of mitigation measures and alternatives to avoid or reduce impacts to below the level of significance.

SECTION 3.6
GEOLOGY AND SOILS

This analysis is undertaken to determine if the Single Family Residential Hauled Water Initiative for New Development (proposed initiative) may have a significant impact to geology and soils, thus requiring the consideration of mitigation measures or alternatives in accordance with Section 15063 of the State California Environmental Quality Act (CEQA) Guidelines.[1] Geology and soils, within the general areas of Los Angeles County where the parcels that would potentially be eligible for the use of hauled water to support development of a single-family residence pursuant to the proposed initiative are located, were evaluated with regard to the Land Use Element and Conservation and Open Space Element of the existing adopted Los Angeles County General Plan;[2,3] the Land Use Element and Conservation and Natural Resources Element of the Los Angeles County General Plan 2035 Update;[4,5] the Safety Element of the 2035 Update to the Los Angeles County General Plan;[8] and the Los Angeles County Code of Ordinances – Title 22 Planning and Zoning.[9]

Definitions

Alluvium: An unconsolidated accumulation of stream deposited sediments, including sands, silts, clays or gravels.

Extrusive Igneous Rocks: Rocks that crystallize from molten magma on earth's surface.

Fault: A fracture or fracture zone in rock along which movement has occurred.

Formation: A laterally continuous rock unit with a distinctive set of characteristics that make it possible to recognize and map from one outcrop or well to another. The basic rock unit of stratigraphy.

Holocene: An interval of time relating to, or denoting the present epoch, which is the second epoch in the Quaternary period, from approximately 11,000 years ago to the present time.

Miocene: An interval of time relating to, or denoting the fourth epoch of the Tertiary period, between the Oligocene and Pliocene epochs, from approximately 23 to 5.5 million years ago.

Oligocene: An interval of time relating to, or denoting the third epoch of the Tertiary period, between the Eocene and Miocene epochs, from approximately 34 to 23 million years ago.

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[1] *California Code of Regulations*. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

[2] Los Angeles County Department of Regional Planning. November 25, 1980. *Los Angeles County General Plan Land Use Element.* Available online at http://planning.lacounty.gov/assets/upl/project/gp_web80-land-use.pdf

[3] Los Angeles County Department of Regional Planning. November 25, 1980. *Los Angeles County General Plan Conservation and Open Space Element.* Available online at http://planning.lacounty.gov/assets/upl/project/gp_web80-conservation-and-open-space.pdf

[4] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 6: Land Use Element*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter6_2014.pdf

[5] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 9: Conservation and Natural Resources Element.* Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter9_2014.pdf

Outcrop: A rock formation that is visible on earth's surface.

Paleocene: An interval of time, relating to, or denoting the earliest epoch of the Tertiary period, between the Cretaceous period and the Eocene epoch.

Paleozoic: An interval of time relating to, or denoting the era between the Precambrian eon and the Mesozoic era.

Pleistocene: An interval of time relating to, or denoting the first epoch of the Quaternary period, between the Pliocene and Holocene epochs, from approximately 2.6 million years ago to 11,000 years ago.

Pliocene: An interval of time relating to, or denoting the last epoch of the Tertiary period, between the Miocene and Pleistocene epochs, from approximately 5.5 to 2.6 million years ago.

Plutonic Igneous Rocks: Igneous rocks that have crystallized beneath the earth's surface.

Quaternary: The most recent period in geological time; includes the Pleistocene and Holocene Epochs.

3.13.1 REGULATORY FRAMEWORK

The regulatory framework for geology and soils has been limited to the regulations that would govern construction of residential structure and the requisite appurtenant facilities on parcels in unincorporated areas of Los Angeles County that would be potentially eligible pursuant to the proposed initiative to use hauled water as the primary source of potable water for development of a single-family residence.

Federal

Uniform Building Code

The Uniform Building Code (UBC) is published by the International Conference of Building Officials and forms the basis for California's building code, as well as approximately 50 percent of the state building codes in the United States. It has been adopted by the California Legislature to address the specific building conditions and structural requirements for California, and to provide guidance on foundation design and structural engineering for different soil types. The UBC defines and ranks regions of the United States according to their seismic hazard potential. There are four types of regions defined by Seismic Zones 1 through 4, with Zone 1 having the least seismic potential and Zone 4 the highest. The subject parcels in the proposed initiative are located within Seismic Zone 4.

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) provides policies and criteria to assist cities, counties, and state agencies in the development of structures for human occupancy across the trace of active faults. The Alquist-Priolo Act was intended to provide the citizens of the

State of California with increased safety and to minimize the loss of life during and immediately following earthquakes by facilitating seismic retrofitting to strengthen buildings, including historical buildings, against ground shaking.

Seismic Hazards Mapping Act of 1990

In order to address the effects of strong ground shaking, liquefaction, landslides, and other ground failures due to seismic events, the State of California passed the Seismic Hazards Mapping Act of 1990. Under the Seismic Hazards Mapping Act, the State Geologist is required to delineate "seismic hazard zones." Cities and counties must regulate certain development projects within these zones until the geologic and soil conditions of the Community Plan Area (CPA) are investigated and appropriate mitigation measures, if any, are incorporated into development plans. The State Mining and Geology Board provides additional regulations and policies to assist municipalities in preparing the Safety Element of their General Plan and encourage land use management policies and regulations to reduce and mitigate those hazards to protect public health and safety. Under Public Resources Code Section 2697, cities and counties shall require, prior to the approval of a project located in a seismic hazard zone, a geotechnical report defining and delineating any seismic hazard Each city or county shall submit one copy of each geotechnical report, including mitigation measures, to the State Geologist within 30 days of project approval.

California Building Code

California Building Code (CBC) Title 24 is a compilation of building standards, including seismic safety standards for new buildings. CBC standards are based on building standards that have been adopted by state agencies without change from a national model code; building standards based on a national model code that have been changed to address particular California conditions; and building standards authorized by the California legislature but not covered by the national model code. Given the state's susceptibility to seismic events, the seismic standards within the CBC are among the strictest in the world. The CBC applies to all occupancies in California, except where stricter standards have been adopted by local agencies.

Regional

Los Angeles County General Plan

The Los Angeles County General Plan provides growth and development policies by providing a comprehensive long-range view of the County as a whole. The General Plan also provides a comprehensive strategy for accommodating long-term growth should it occur as projected. Applicable goals and policies that apply to all development within the County include a balanced distribution of land uses, adequate housing for all income levels, and economic stability.

The intent of the Conservation Element is the conservation and preservation of natural resources. Policies of the Conservation Element address the effect of erosion on such natural resources as beaches, watersheds, and watercourses. The Conservation Element cites erosion of hillsides resulting in loss of natural watersheds and features, flooding, and endangerment to structures and people as a continuing issue.

The applicable policy of the adopted 1980 Conservation and Open Space Element[6] is provided below:

- **Policy No. 24:** Manage development in hillside areas to protect their natural and scenic character and to reduce risks from fire, flood, mudslides, erosion and landslides.

The adopted 1980 Safety Element of the General Plan addresses the issues of protection of people from unreasonable risks associated with seismic activity and earthquakes. The Safety Element provides a contextual framework for understanding the relationship between hazard mitigation, response to a natural disaster, and initial recovery from a natural disaster.

The applicable seismic and geologic goals and policies of the adopted 1980 Safety Element[7] are provided below:

- **Seismic Hazards Goal:** Minimize injury and loss of life, property damage, and the social, cultural, and economic impacts caused by earthquake hazards.
  - **Policy No. 1:** Encourage the use of nonurbanized segments of active fault zones for rural and open space purposes.
  - **Policy No. 3:** Continue enforcement of stringent site investigations (such as seismic, geologic, hydrologic and soils investigation) and implementation of adequate hazard mitigation measures for development projects in areas of high earthquake hazard, especially those involving critical facilities. Do not approve proposals and projects which cannot mitigate safety hazards to the satisfaction of responsible agencies.
  - **Policy No. 4:** Promote the development of seismically resistant major lifelines serving Los Angeles County and connecting it to surrounding regions and the rest of the nation.

- **Geologic Hazards Goal:** Protect public safety and minimize the social and economic impacts from geologic hazards.
  - **Policy No. 8:** Review proposals and projects proposing new development and expansion of existing development in areas susceptible to landsliding, debris flow, and rockfalls, and in areas where collapsible or expansive soils are a significant problem; and disapprove projects which cannot mitigate these hazards to the satisfaction of responsible agencies.
  - **Policy No. 9:** Continue to improve and enforce stringent slope investigation and design standards, and to apply innovative hazard mitigation and maintenance plans for development in hillside areas.
  - **Policy No. 10:** Upgrade maintenance measures and improve emergency response capability in hillside areas.

[6] Los Angeles County Department of Regional Planning. 6 December 1990. *Los Angeles County General Plan, Safety Element*.

[7] Los Angeles County Department of Regional Planning. 6 December 1990. *Los Angeles County General Plan, Safety Element*.

The applicable seismic and geologic goals and policies of the draft 2014 Safety Element[8] are provided below:

- **Goal S 1:** An effective regulatory system that prevents or minimizes personal injury, loss of life and property damage due to seismic and geotechnical hazards.
  - **Policy S 1.1:** Discourage development in Seismic Hazard and Alquist-Priolo Earthquake Fault Zones.
  - **Policy S 1.2:** Prohibit the construction of most structures for human occupancy adjacent to active faults until a comprehensive geotechnical study that addresses the potential for fault rupture has been completed.
  - **Policy S 1.3:** Require developments to mitigate geotechnical hazards, such as soil instability and landsliding, in Hillside Management Areas through siting and development standards.
  - **Policy S 1.4:** Support the retrofitting of unreinforced masonry structures to help reduce the risk of structural and human loss due to seismic hazards.

3.6.2 AFFECTED ENVIRONMENT

Topography

The topography of the proposed initiative 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 MSL in the Kagel Canyon and southern portions of the Castaic/Santa Clarita/Agua Dulce subareas respectively. The topography is defined by two geomorphic provinces: the Transverse Ranges and the Mojave Desert. The Transverse Ranges are an anomalous east-west-trending group of mountain ranges (most California mountain ranges trend approximately northwest to southeast) that divide the Los Angeles Basin from the Mojave Desert. The anomalous east-west orientation of the Transverse Ranges is due to rotation along the San Andreas Fault System during the Miocene.[9] The Mojave Desert Geomorphic Province is located north of the Transverse Ranges Geomorphic Province and is bounded on the east by the Colorado River and Nevada-California border, on the north by the Garlock Fault, and the Los Angeles Basin on the south.

Earthquakes and Faults

The Transverse Ranges (represented by the San Gabriel Mountains in Angeles National Forest, the Santa Susana Mountains, and mountains of the southern Los Padres National Forests in the proposed initiative area) are an anomalous west-trending geological province of deformation associated with relative movement of the North American and Pacific Tectonic Plates. The majority of the Los Angeles Basin (south of the mountains) lies within the northwest-trending Peninsular Ranges Geomorphic Province, which represents the prevailing structural orientation of California. Associated northwest-trending surface faults are the San Andreas, San Jacinto, Whittier-Elsinore, Palos Verdes, and Newport-Inglewood faults (Figure 3.6.2-1, *Geomorphic Provinces and Faults*).

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[8] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan 2035, Public Review Draft: Safety Element.*

[9] Harden, Deborah R. 2004. *California Geology*. 2nd Edition. New Jersey: Pearson Education, Inc.

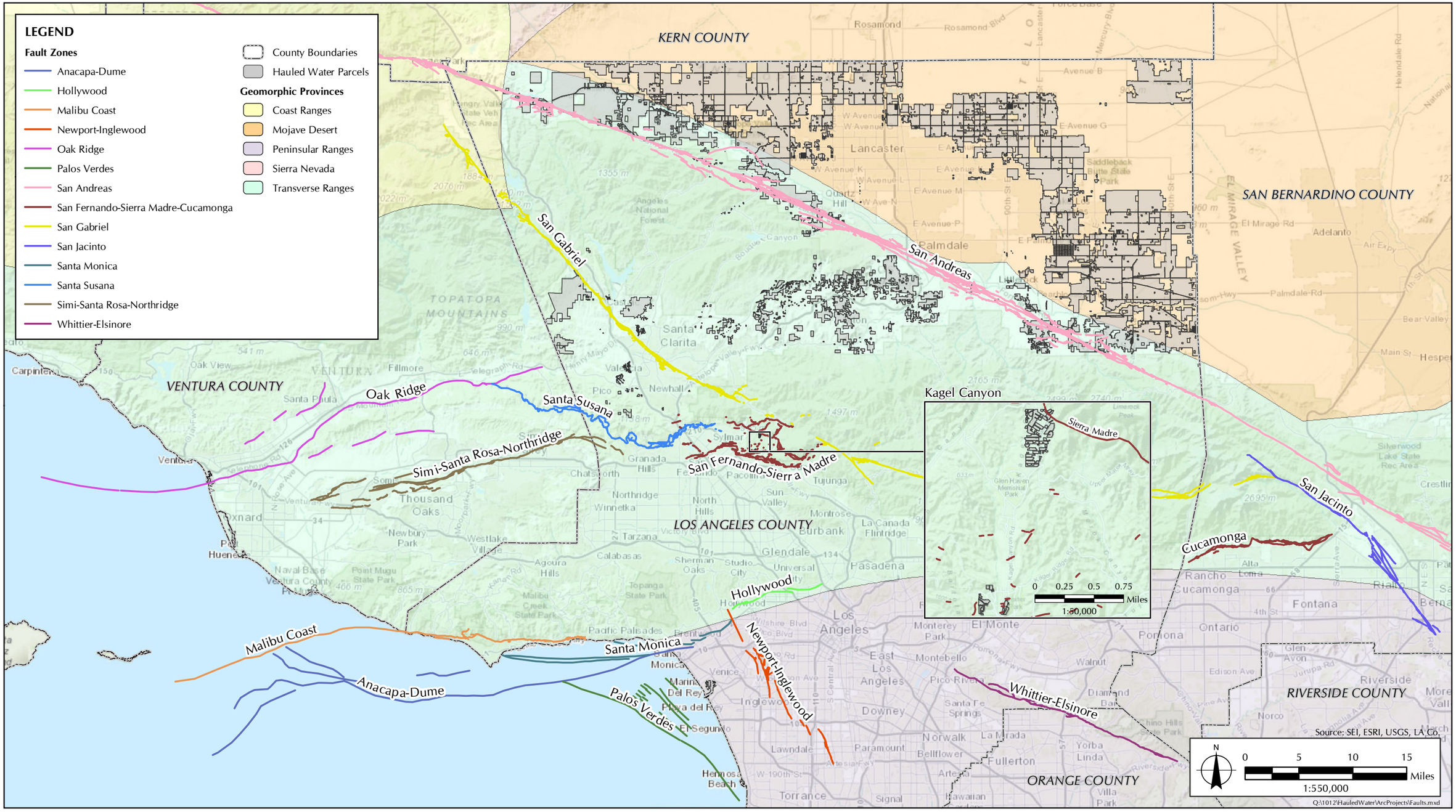

FIGURE 3.6.2-1

Geomorphic Provinces and Faults

Major surface faults and fault zones associated with the Transverse Ranges generally parallel the Province and include: the Malibu Coast, Anacapa-Dume, Oak Ridge, Santa Monica, Hollywood, Santa Susana, Simi-Santa Rosa-Northridge, San Fernando-Sierra Madre-Cucamonga, and San Gabriel faults. Some earthquake faults are not exposed at the surface; these faults are buried (blind) thrusts. Faults such as these were responsible for the 1971 San Fernando (Sylmar), 1987 Whittier, and 1994 Northridge earthquakes (Figure 3.6.2-1).

Surficial Geologic Units

Surficial geological units within the proposed initiative area vary greatly due to the immense geographical area represented and the complex geology found along tectonic plate boundaries like Southern California and are described in relation to the seven subareas that the proposed initiative is divided into. These seven subareas include Acton; Castaic/Santa Clarita/Agua Dulce; Antelope Valley Northeast; Kagel Canyon; Lake Hughes/Gorman/West of Lancaster; Lake Los Angeles/Llano/Valyermo/Littlerock; and Lancaster Northeast. The surficial geology has been discussed within the context of these subareas.

Acton

Surficial geology within the Acton subarea was mapped by Dibblee (1996,[10] 1997,[11] and 2001[12]). Sedimentary geological units include the Holocene and Pleistocene Quaternary alluvium, Quaternary landslide deposits, and the Oligocene to Early Miocene Vasquez Formation. Plutonic igneous rocks are represented by the Lowe Granodiorite, hornblende diorite gabbro, anorthite gabbro complex rocks, granitic rocks, and syenite. Metamorphic rocks include the Pelona Schist and scattered gneissic outcrops.

Castaic/Santa Clarita/Agua Dulce

The surficial geology of the Castaic/Santa Clarita/Agua Dulce subarea was mapped by Dibblee (1991,[13] 1992,[14] 1993,[15] 1996a,[16] 1996b,[17] 1997a,[18] and 1997b[19]). Sedimentary deposits include

[10] 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. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[11] 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. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[12] 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. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[13] 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

[14] 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

[15] 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

Quaternary alluvial and older alluvial deposits and landslide deposits; the Pleistocene Saugus Formation; the Pliocene marine, Pico Formation; the Late Miocene to Early Pliocene marine, Towsley Formation; the Late Miocene marine, Ridge Basin Group; the Late Miocene marine, Sisquoc Formation; the Middle to Late Miocene marine, Castaic Formation; the Middle to Late Miocene marine, Monterey Formation; the Middle Miocene Mint Canyon Formation; the early to Middle Miocene Tick Canyon Formation; and the Oligocene to Early Miocene Vasquez Formation (contains sedimentary and igneous sequences). Plutonic Igneous rocks represented in the Castaic/ Santa Clarita/Agua Dulce subarea include granite, syenite, and rocks of the anorthosite-gabbro complex. Metamorphic rocks are represented by the Pelona Schist and Precambrian Augen Gneiss.

Antelope Valley Northeast

The geology included within the Antelope Valley Northeast subarea of the proposed initiative has been mapped by Dibblee (1960[20]) and Dixon and Ward (2002[21]). The surficial geological units mapped within the Antelope Valley Northeast subarea range from modern alluvial sediments to Cretaceous, plutonic igneous rocks.

Kagel Canyon

The geology of the Kagel Canyon subarea was mapped by Dibblee (1991[22] and 1991a[23]). Sedimentary units include Quaternary older alluvium, Quaternary landslide deposits, and Plio-Pleistocene Saugus Formation. Igneous rocks represented in the subarea are quartz, hornblende diorite, and granite, while gneiss represents the metamorphic rocks in the subarea.

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[16] 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

[17] 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

[18] 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

[19] 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

[20] 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. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[21] 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/

[22] 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

[23] 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

Lake Hughes/Gorman/West of Lancaster

The Lake Hughes/Gorman/West of Lancaster subarea contains sedimentary, igneous, and metamorphic rocks, and the surficial geology was mapped by Dibblee (1959,[24] 2006,[25] and 2008[26]), Dibblee (1997c[27]), Dibblee and Minch (2002,[28] 2002a,[29] and 2002b[30]), Hernandez and Lancaster (2012[31]), and Lancaster and Holland (2011[32]). Sedimentary deposits range from Quaternary alluvial and older alluvial deposits and landslide deposits (near the town of Gorman) to the Middle to Late Miocene Quail Lake Formation and Miocene Fiss Fanglomerate. Southeast of Lake Hughes, within the San Andreas Rift Zone, are outcrops of the Pliocene Anaverde Formation. Igneous outcrops include Cretaceous plutonic granitic rocks and Tertiary extrusive igneous rocks of the Neenach Volcanic Formation. Metamorphic rocks are represented by small linear outcrops along the San Andreas Fault System, near the town of Gorman and the Pelona Schist and gneiss southeast and south of Lake Hughes, respectively.

Lake Los Angeles/Llano/Valyermo/Littlerock

The geology of the Lake Los Angeles/Llano/Valyermo/Littlerock subarea was mapped by Dibblee (1959a,[33] 1960,[34] and 1960[35]) and Dibblee and Minch (2002,[36] 2002a,[37] and 2002b[38]). Sedimentary

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[24] 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

[25] 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

[26] 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

[27] 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

[28] 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

[29] 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

[30] Dibblee, T. W., Jr. 2002b. G*eologic 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

[31] 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

[32] 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

[33] 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

[34] 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

rocks within the proposed initiative boundaries are represented by Holocene and Pleistocene alluvium; the Pleistocene Harold Formation; the Miocene to Pliocene Crowder Formation; the Pliocene Anaverde Formation; the late Miocene Punchbowl Formation; and the Paleocene, marine, San Francisquito Formation. Plutonic igneous rocks include quartz monzonite, granite, hornblende diorite, and the Lowe Granodiorite. Metamorphic Paleozoic marble is found in small areas on the north slope of the San Gabriel Mountains.

Lancaster Northeast

The geology within Lancaster Northeast subarea was mapped by Dixon and Ward (2002[39]) and Dibblee (1953a, 1959[40], 1959a, and 1960[41]). The youngest sediments within the Lancaster Northeast subarea consist of unconsolidated alluvial deposits, playa clays, and eolian sands that are recent while the oldest are Pleistocene channel deposits.

Soils Engineering Characteristics

Expansiveness

The siltstone, claystone, shale, sandstone, and conglomerate units of the surficial sediments and formations have expansion potential that is variable. These units are generally moderately to highly expansive for shale, siltstone, and claystone beds and are non-expansive to slightly expansive for sandstone and conglomerate beds. Surficial deposits of young and older alluvium, playa clays, and colluvium/soil can be fine-grained due to the nature of the surrounding bedrock formations, and are therefore generally moderately to highly expansive, depending on the clay content. In areas where the surficial young and older alluvial alluvial deposits have higher gravel content and less clay, they are more often than not non-expansive to slightly expansive.

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[35] 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

[36] Dibblee, T.W., and Minch, J.A. 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

[37] 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

[38] 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

[39] 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/

[40] 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

[41] 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

Erosion

Erosion of earth materials is the process of wearing away and transport due to concentrated water, wind, or gravitational forces. Harder, denser, and more cemented bedrock formations (usually older) will erode much less than softer, uncemented alluvium under the same forces. Erosion by water and gravity is usually more severe on steep terrain/slopes than on relatively flat ground, and in seismically active (uplifting) areas. The shale, siltstone, and claystone bedrock formations will generally have low erosion potential due to their higher density and some cementation. Sandstones and conglomerates with a sandy matrix will generally have low to moderate erosion potential due to the presence of some cementation. Holocene alluvium and colluvium/soil are softer and less dense than the other deposits and, therefore, will have a moderate to high erosion potential where exposed. New cut slopes or newly graded fill slopes will have relatively high to low erosion potential for Holocene alluvium, artificial fill, and bedrock, respectively.

Dynamic (Earthquake) Considerations

The primary effects of an earthquake are fault rupture and ground shaking. Earthquake shaking can generate secondary affects as these ground motions permanently deform and dislocate some near-surface earth materials. Ground failure can include affects ranging from simple ground cracking to complex lateral spreading landslides. Failures may be associated with saturated deposits (liquefaction) or unsaturated deposits (densification). The various considerations under these two topics are discussed below.

Liquefaction

The three key factors that indicate whether an area is potentially susceptible to liquefaction are severe ground shaking, shallow groundwater, and cohesionless sands. In addition to having ground-shaking parameters, quantitative estimates of liquefaction potential require specific data from geotechnical borings and groundwater level information. Although there is some potential for deep liquefaction deeper than approximately 50 feet below ground surface (bgs), liquefaction potential is substantially higher where water has historically been found less than 30 to 50 feet bgs. The potential for liquefaction to occur in the separate subareas is evaluated below in Table 3.6.2-1, *Liquefaction Potential by Proposed Initiative Subarea*. The data is taken from the California Geological Survey, Seismic Hazard Maps.

TABLE 3.6.2-1
LIQUEFACTION POTENTIAL BY PROPOSED INITIATIVE SUBAREA

Subarea	Liquefaction Potential (Y/N)	Location	Notes
Acton	Y	Numerous liquefaction zones indicated	
Castaic/Santa Clarita/Agua Dulce	Y	Numerous liquefaction zones indicated	Warm Springs Mountain Quadrangle unavailable
Antelope Valley Northeast	No seismic hazard maps available		
Kagel Canyon	Y	On canyon bottom	
Lake Hughes/Gorman/West of Lancaster	Y	Numerous liquefaction zones indicated	Fairmont Buttes, Neenach, La Liebre Ranch, Lebec, Liebre Mountain, Green Valley, and Burnt Peak Quadrangles unavailable
Lake Los Angeles/Llano/ Valyermo Little Rock	Y	Numerous liquefaction zones indicated	Mescal Creek, El Mirage, and Adobe Mountain Quadrangles unavailable
Lancaster Northeast	Y	Along Armagosa Creek and sewage disposal ponds; Little Rock Wash	Rosamond Lake and Redman Quadrangles unavailable

Earthquake-Induced Slope Instability

Static slope instability can arise for many reasons (e.g., adverse geologic bedding, overly steep slopes, saturation of weak materials) in hillside areas. Earthquake shaking can destabilize earth materials, which under static conditions may be stable or marginally stable. The California Division of Mines and Geology (CDMG) maps such areas for planning purposes, primarily considering slope angle, seismic intensity, and material type. The landslide potential for the proposed initiative is presented below in Table 3.6.2-2, *Landslide Potential by Proposed Initiative Subarea*.

TABLE 3.6.2-2
LANDSLIDE POTENTIAL BY PROPOSED INITIATIVE SUBAREA

Project Subarea	Landslide Potential (Y/N)	Location	Notes
Acton	Y	Numerous landslide zones indicated	
Castaic/Santa Clarita/Agua Dulce	Y	Numerous landslide zones indicated	Warm Springs Mountain Quadrangle unavailable
Antelope Valley Northeast	No seismic hazard maps available		
Kagel Canyon	Y	On slopes surrounding canyon	
Lake Hughes/Gorman/West of Lancaster	Y	Numerous landslide zones indicated	Fairmont Buttes, Neenach, La Liebre Ranch, Lebec, Liebre Mountain, Green Valley, and Burnt Peak Quadrangles unavailable
Lake Los Angeles/Llano/Valyermo/Little Rock	Y	Numerous landslide zones indicated, especially on north slope of San Gabriel Mountains and adjacent buttes	Mescal Creek, El Mirage, and Adobe Mountain Quadrangles unavailable
Lancaster Northeast	Y	In elevated areas on Buttes	Rosamond Lake and Redman Quadrangles unavailable

Settlement

Dry to partially saturated sediments that may not be susceptible to liquefaction may be susceptible to dynamic consolidation and local ground subsidence during strong earthquake shaking. This consolidation or densification occurs in loose, cohesionless sediments as the void spaces are diminished due to grain-to-grain compaction from the intense seismic shaking. Hazard maps are not normally created for this condition, and there are no specific analyses available that cover the proposed initiative area.

As noted above, bedrock has a low potential for dynamic consolidation, engineered artificial fill has a moderate potential, and the younger alluvium has the highest potential. Variations in vertical subsidence may occur within a small area, such as an individual lot or beneath an individual structure. This is particularly important at the cut-to-fill transition lines within the landfill grading area where differential settlement can cause substantially more damage than if the structure were to settle evenly throughout. Settlements of 5 to 30 centimeters (2 to 12 inches) can occur during strong earthquake shaking, as was the case during in the 1994 Northridge event. The amount of dynamic consolidation and subsidence would not be consistent from location to location throughout the proposed initiative area.

Seismicity and Faulting

The type and style of faulting has an influence on the potential for fault rupture and the intensity of ground shaking. The three principal seismic hazards to properties in Southern California are (1) surface rupturing of earth materials along fault traces, (2) damage to structures and foundations due to strong ground motions generated during earthquakes, and (3) liquefaction.

Fault Rupture

Under the Alquist-Priolo Earthquake Fault Zoning Act, the State Geologist is required to delineate "earthquake zones" (formerly called "special studies" zones) along known active faults. An active fault is one that has demonstrated offset of Holocene materials (less than 11,000 years ago) or significant seismic activity. Potentially active faults have demonstrated movement within Pleistocene time (approximately 1.6 million years ago). According to the CDMG, active and potentially active faults must be considered as potential sources of fault rupture. Cities or counties affected by the zones must regulate development within the designated zones. Approval of building permits for sites within State-designated zones must be withheld until geologic investigation demonstrates that a proposed development is not threatened by surface displacement from future seismic activity. Active or potentially active faults are mapped within the proposed initiative boundaries (see Table 3.6.2-3, *Potentially Governing Faults, Estimates of Mw, Distance to Nearest Subarea, and Approximate Fault Length, Hauled Water Initiative, Los Angeles County, California*).

TABLE 3.6.2-3
POTENTIALLY GOVERNING FAULTS, ESTIMATES OF Mw, DISTANCE TO NEAREST SUBAREA, AND APPROXIMATE FAULT LENGTH, HAULED WATER INITIATIVE, LOS ANGELES COUNTY, CALIFORNIA

Fault	Predominant Style of Faulting	M_w [1]	Site-to-Source Distance to Nearest Subarea[2]	Approximate Fault Length
Alamo Thrust	Thrust	*	7.9 mi (12.2 km) Lake Hughes/Gorman/West of Lancaster	20 km
Chatsworth	Reverse	6.8[4]	5.1 mi (8.2 km) Castaic/Santa Clarita/Agua Dulce	20 km
Clearwater	Reverse	*	3.86 mi (6.21 km) Castaic/Santa Clarita/Agua Dulce	32 km
Garlock	Left Lateral Strike-Slip	7.6[4]	1.5 mi (2.4 km) Lake Hughes/Gorman/West of Lancaster	250 km
Hollywood	Left-Reverse	6.5[4]	13.5 mi (21.7 km) Kagel Canyon	15 km
Llano	Reverse	*	<1.0 mi (1 km) (Lake Los Angeles/Llano/Valyermo/ Littlerock)	7 km
Malibu Coast Fault	Reverse	*	20.0 mi (32.2 km) Castaic/Santa Clarita/Agua Dulce and Kagel Canyon	34 km
Mirage Valley	Right Lateral Strike-Slip	*	5.0 mi (8.1 km) (Lake Los Angeles/Llano/Valyermo/ Littlerock)	37 km
Mission Hills Fault	Reverse	*	3.6 miles (5.8) Castaic/Santa Clarita/Agua Dulce	10 km
Northridge Hills	Reverse	6.9[4]	5.8 mi (9.3 km) Castaic/Santa Clarita/Agua Dulce	25 km
1994 Northridge Earthquake [7]	Reverse	6.7[4]	8.8 mi (14.2 km) Castaic/Santa Clarita/Agua Dulce	Earthquake epicenter
Oak Ridge (Onshore)	Reverse	7.5[4]	7.3 mi (11.8 km) Castaic/Santa Clarita/Agua Dulce	90 km
Pine Mountain	Reverse	*	8.9 mi (14.3 km) Castaic/Santa Clarita/Agua Dulce	59 km
San Andreas	Right Lateral Strike-Slip	8.0[4]	<1mi (<1 km)	1200 km

TABLE 3.6.2-3
POTENTIALLY GOVERNING FAULTS, ESTIMATES OF Mw, DISTANCE TO NEAREST SUBAREA, AND APPROXIMATE FAULT LENGTH, HAULED WATER INITIATIVE, LOS ANGELES COUNTY, CALIFORNIA, *Continued*

Fault	Predominant Style of Faulting	M_w [1]	Site-to-Source Distance to Nearest Subarea[2]	Approximate Fault Length
San Cayetano	Reverse (Thrust)	7.3[4]	<1.0 mi (<1.0 km) mi (29 km) Castaic/Santa Clarita/Agua Dulce	45 km
San Fernando	Reverse (Thrust)	6.8[4]	<1.0 mi (<1.0 km) Kagel Canyon	17 km
San Gabriel	Primarily Right Lateral Strike Slip	7.0[5]	3.4 mi (5.5 km) Kagel Canyon	140 km
Santa Monica Fault	Left-Reverse	7.0[4]	14 mi (22.5 km) Kagel Canyon	24 km
Santa Susana	Reverse (Thrust)	7.3 [4]	< 1 mi (<1 km) Castaic/Santa Clarita/Agua Dulce	38 km
Santa Ynez	Left Reverse	7.5[4]	8.5 mi (13.7 km) Castaic/Santa Clarita/Agua Dulce	130 km
Simi	Reverse	6.7[4]	6.6 mi (10.6 km) Castaic/Santa Clarita/Agua Dulce	40 km

NOTES: 1. Maximum Credible Earthquake (MCE) Moment Magnitude (Mw).
2. Shortest (map) distance from the nearest subarea to the inferred fault plane.
4. Data from the Southern California Earthquake Data Center. Available online at: http://www.data.scec.org
5. MCE Moment Magnitude from Impact Sciences, Inc. (2008).
*Data unavailable or fault considered to be inactive

3.6.3 IMPACT ANALYSIS

The State CEQA Guidelines recommend the consideration of five questions when addressing the potential for significant impact to geology and soils:

Would the proposed initiative:

(a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

(i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

The proposed initiative would not result in impacts from exposing people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault. There are Alquist-Priolo Earthquake Fault Zones or other active or potentially active faults within, near or projecting toward the proposed initiative study area. However, the current zoning allows for development of single-family residences, in accordance with the

County's building permit process. 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, where land use designation and zoning allow for development of a single-family residence. The proposed initiative does not allow for development in conflict with the California Building Code or the Safety Element of the Los Angeles County General Plan. Therefore, further analysis is not warranted.

(ii) Strong seismic ground shaking?

The proposed initiative would not result in impacts from exposing people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking. Regional faults have been analyzed relative to the specifications of the proposed initiative. The current zoning allows for development of single-family residences, in accordance with the County's building permit process. The proposed initiative would allow hauled water as the primary source of potable water for new single-family residential construction in unincorporated areas of the Los Angeles County, where land use designation and zoning allow for development of a single-family residence. The proposed initiative does not allow for development in conflict with the existing zoning, or facilitate rezoning. Therefore, further analysis is not warranted.

(iii) Seismic-related ground failure, including liquefaction?

The proposed initiative would not result in impacts from exposing people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction. The current zoning allows for development of single-family residences, in accordance with the County's building permit process. 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, where land use designation and zoning allow for development of a single-family residence. The proposed initiative does not allow for development in conflict with the existing zoning, or facilitate rezoning. Therefore, further analysis is not warranted.

(iv) Landslides?

The proposed initiative would not result in impacts from exposing people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides. The proposed initiative study area is situated on a variety of ground surfaces including relatively level ground and steep mountain/canyon slopes that could be potentially susceptible to slope instability. According to the CDMG, areas within the proposed initiative are situated within a Seismic Hazard Zone. However, the current zoning allows for development of single-family residences, in accordance with the County's building permit process. 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, where land use designation and zoning allow for development of a single-family residence. The proposed initiative does not allow for development in conflict with the existing zoning, or facilitate rezoning. Therefore, further analysis is not warranted.

(b) Result in substantial soil erosion or the loss of topsoil?

The proposed initiative would not result in impacts to geology and soils in relation to substantial soil erosion and loss of topsoil. The use of trucks to haul water on unpaved roads could result in substantial soil erosion, especially if done at high frequencies over a long span of time. However, the current zoning allows for development of single-family residences, in accordance with the County's building permit process. 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, where land use designation and zoning allow for development of a single-family residence. The California Building Code and the Safety Element of the Los Angeles County General Plan include requirements to preserve slope stability and provide erosion control. The proposed initiative does not allow for development in conflict with the California Building Code or the Safety Element of the Los Angeles County General Plan. The proposed initiative does not allow for development in conflict with the existing zoning, or facilitate rezoning. Therefore, further analysis is not warranted.

(c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

The proposed initiative would not result in impacts to geology and soils in relation to location on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. The current zoning allows for development of single-family residences, in accordance with the County's building permit process. 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, where land use designation and zoning allow for development of a single-family residence. The proposed initiative does not allow for development in conflict with the existing zoning, or facilitate rezoning. Therefore, further analysis is not warranted.

(d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

The proposed initiative would result in no impacts to geology and soils in relation to location on expansive soil creating substantial risks to life or property. Expansive surficial materials are found within the proposed initiative area; however, the current zoning allows for development of single-family residences, in accordance with the County's building permit process. 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, where land use designation and zoning allow for development of a single-family residence. The proposed initiative does not allow for development in conflict with the existing zoning, or facilitate rezoning. Therefore, further analysis is not warranted.

(e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

The proposed initiative would not result in impacts to geology and soils in relation to being located on soils that are incapable of adequately supporting the use of onsite wastewater treatment systems (OWTS) or alternative wastewater disposal systems where a public sewers system is not available for the disposal of wastewater. Existing surficial conditions in parts of the proposed initiative study area

are those of cohesionless alluvial sands and gravels; however, poor surficial conditions do not necessarily preclude the placement of OWTS or wastewater disposal systems. Approval of building permits for sites within State-designated zones must be withheld until geologic investigation demonstrates that a proposed development is not threatened by surface displacement from future seismic activity. Active or potentially active faults occur within portions of the proposed initiative study area (Table 3.6.2-3). 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, where land use designation and zoning allow for development of a single-family residence. The proposed initiative does not allow for development in conflict with the California Building Code or the Safety Element of the Los Angeles County General Plan. The proposed initiative does not allow for development in conflict with the existing zoning, or facilitate rezoning. Therefore, further analysis is not warranted.

3.6.4 MITIGATION MEASURES

The proposed initiative would not result in significant impacts to geology and soils; therefore, mitigation measures are not required.

SECTION 3.7
GREENHOUSE GAS EMISSIONS

This analysis is undertaken to determine if the proposed Single-Family Residential Hauled Water Initiative for New Development (proposed initiative) may have a significant impact to greenhouse gas emissions, thus requiring the consideration of mitigation measures or alternatives in accordance with Section 15063 of the State of California Environmental Quality Act Guidelines (State CEQA Guidelines).[1] Available greenhouse gas emissions data from the California Air Resources Board was 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.

Definitions

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

CEQ: The Council on Environmental Quality (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.

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

GHG: Greenhouse gases trap heat in the Earth's atmosphere, leading to an increase in global warming.

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

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

SCAG: The Southern California Association of Governments (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] *California Code of Regulations*. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

3.7.1 REGULATORY FRAMEWORK

Federal

Corporate Average Fuel Economy Standards

On April 1, 2010, the USEPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced a new national program to reduce greenhouse gas emissions and improve fuel economy for new cars and trucks sold in the U.S. The USEPA 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 greenhouse gas emissions and improve fuel economy. The USEPA finalized the national greenhouse gas emissions standards under the CAA, and the NHTSA finalized the Corporate Average Fuel Economy standards under the Energy Policy and Conservation Act.

Furthermore, on August 9, 2011, the USEPA and the NHTSA announced a new national program to reduce greenhouse gas emissions and improve fuel economy for new medium- and heavy-duty engines and vehicles sold in the U.S. The USEPA 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 CO_2 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 Council on Environmental Quality (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

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 (Table 3.7.1-1, *California Business-as-Usual Greenhouse Gas Emissions and Targets*).[2,3] The executive order directs the California Environmental Protection Agency (CalEPA)

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

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] strategies are implemented, those underway and those needed to meet the Governor's targets, the economy will benefit."[4]

TABLE 3.7.1-1
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 greenhouse gas 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 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.

Clean Car Standards (Assembly Bill 1493)

AB 1493 (Pavley), enacted on July 22, 2002, required the California Air Resources Board (CARB) to develop and adopt regulations that reduce greenhouse gases emitted by passenger vehicles and

[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.

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 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.

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 a 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

[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

- 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 Los Angeles County and are subject to the County of Los Angeles General Plan (General Plan). The existing adopted General Plan and the Los Angeles County General Plan 2035 Update have both been referenced.

The previously adopted General Plan does not include an Air Quality Element; therefore, for the purposes of addressing greenhouse gas emission goals and policies, the Los Angeles County General Plan 2035 Update was the primary planning document referenced for the County. The Air Quality Element summarizes the greenhouse gas emissions issues and outlines the goals and policies in the General Plan that will reduce greenhouse gas emissions. Of the 12 policies outlined in the Air Quality Element, the following 6 policies are applicable to the proposed initiative for the purpose of reducing greenhouse gas emissions: [6]

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

- 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.
- Policy AQ 3.6: Support and expand urban forest programs within the unincorporated areas.

Community Climate Action Plan

Climate action plans include an inventory of greenhouse gas emissions and measures for reducing future emissions to achieve a specific reduction target. Los Angeles County is currently preparing a Climate Change Action Plan (CCAP) to mitigate and avoid greenhouse gas emissions associated with community activities in unincorporated Los Angeles County. The CCAP will address emissions from building energy, land use and transportation, water consumption, and waste

[6] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 8: Air Quality Element.*

generation. The measures and actions outlined in the CCAP will tie together the County's existing climate change initiatives and provide a blueprint for a more sustainable future. Ultimately, the CCAP and associated greenhouse gas reduction measures will be incorporated into the Air Quality Element of the Los Angeles County General Plan 2035.

The CCAP will identify emissions related to community activities, establish a greenhouse gas reduction target consistent with AB 32, and provide a roadmap for successfully implementing greenhouse gas reduction measures selected by the County. Importantly, the CCAP will recognize the County's leadership and role in contributing to statewide greenhouse gas emissions reductions. Actions undertaken as part of the CCAP will also result in important community co-benefits including improved air quality, energy savings, and increased mobility, as well as will enhance the resiliency of the community in the face of changing climatic conditions.

3.7.2 AFFECTED ENVIRONMENT

California Greenhouse Gas Emissions

The State of California Greenhouse Gas Inventory performed by CARB compiled statewide anthropogenic greenhouse gas 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 1990 to 2004, and is summarized in Table 3.7.2-1, *State of California Greenhouse Gas Emissions by Sector*.

TABLE 3.7.2-1
STATE OF CALIFORNIA GREENHOUSE GAS EMISSIONS BY SECTOR

Sector	Total 1990 Emissions ($MMTCO_{2e}$)	Percentage of Total 1990 Emissions	Total 2004 Emissions ($MMTCO_{2e}$)	Percentage of Total 2004 Emissions
Agriculture	23.4	5 percent	27.9	6 percent
Commercial	14.4	3 percent	12.8	3 percent
Electricity generation	110.6	26 percent	119.8	25 percent
Forestry (excluding sinks)	0.2	<1 percent	0.2	<1 percent
Industrial	103.0 percent	24 percent	96.2	20 percent
Residential	29.7	7 percent	29.1	6 percent
Transportation	150.7	35 percent	182.4	38 percent
Forestry sinks	(6.7)		(4.7)	

KEY: $MMTCO_{2e}$ = million metric tons of CO_2 equivalent.
SOURCE: California Air Resources Board. Revised 2 December 2009. Facts about California Greenhouse Gas Emissions Inventory. Available online at: http://www.arb.ca.gov/cc/factsheets/ghginv.pdf

Data sources used to calculate this greenhouse gas inventory include California and federal agencies, international organizations, and industry associations. The calculation methodologies are consistent with guidance from the IPCC. The 1990 emissions level is the sum total of sources and sinks from all sectors and categories in the inventory. The inventory is divided into seven broad categories in the inventory. These sectors include agriculture, commercial, electricity generation, forestry, industrial, residential, and transportation. 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).

3.7.3 IMPACT ANALYSIS

State CEQA Guidelines recommend the consideration of two questions when addressing the potential for significant impacts to greenhouse gas emissions.

Would the proposed initiative:

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

The proposed initiative has the potential to result in significant impacts to GHG emissions in relation to generating GHG emissions, either directly or indirectly, that may have a significant impact on the environment. 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 in the proposed initiative subareas would not be eligible for development in the absence of the proposed initiative or a comparable action.[7] Assuming a reasonable worst-case scenario, the proposed initiative has the potential to result in 384 building permits a year for residential development, or a total of 7,680 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 building permits would be allowed based on the use of hauled water. Operational emissions associated with the proposed initiative would include delivery of hauled water via diesel-powered trucks to and from residential developments within the proposed initiative subareas from water haulers.

Based on the suggested thresholds proposed by the CAPCOA,[8,9] the proposed initiative would have the potential to result in significant impacts related to GHG emissions if the proposed initiative resulted in the emission of more than 25,000 metric tons of CO_{2e} per year. As a result of construction and operational activities, particularly the delivery of hauled water, the proposed initiative has the potential to increase GHG emissions in the vicinity of the proposed initiative subareas above the CAPCOA-suggested threshold for GHG emissions, and should be carried forward for detailed analysis to quantitatively and qualitatively characterize the anticipated impacts of the proposed initiative. Therefore, this issue warrants further analysis in an environmental impact report, including the consideration of mitigation measures and alternatives capable of avoiding or reducing impacts to below the level of significance.

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[7] The term vacant refers to parcels identified as such by the County Assessor.

[8] 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.

[9] 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/

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

It is anticipated that the proposed initiative would have the potential to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. The proposed initiative subarea is located within unincorporated land in Los Angeles County, and is therefore subject to the County's General Plan and Community Climate Action Plan. The proposed initiative would have the potential to result in increased GHG emissions as a result of constructing single-family residences and delivering hauled water via diesel-powered trucks to and from the proposed initiative subareas. As a result of the construction and operational activities, it is anticipated that the proposed initiative would have the potential to substantially increase GHG emissions in the vicinity of the proposed initiative subareas, thus conflicting with the County's General Plan and Community Climate Action Plan by increasing GHG emissions associated with community activities in unincorporated areas of Los Angeles County. Therefore, this issue warrants further analysis in an environmental impact report, including the consideration of mitigation measures and alternatives capable of avoiding or reducing impacts to below the level of significance.

3.7.4 MITIGATION MEASURES

The proposed initiative is anticipated to result in impacts related to generating substantial emissions of GHGs in the vicinity of the proposed initiative subareas. Therefore, there is the need for consideration of mitigation measures and alternatives in an environmental impact report to avoid or reduce impacts in relation to GHG emissions to below the level of significance.

SECTION 3.8
HAZARDS AND HAZARDOUS MATERIALS

This analysis is undertaken to determine if the proposed Single-Family Residential Hauled Water Initiative for New Development (proposed initiative) may have a significant impact related to hazards or hazardous materials, thus requiring the consideration of mitigation measures or alternatives, in accordance with Section 15063 of the State California Environmental Quality Act (CEQA) Guidelines.[1] The potential for the proposed initiative to result in the routine transport of hazardous materials within Los Angeles County that might result in a risk or hazard to residents was evaluated in light of the Safety Element[2] of the adopted 1980 Los Angeles County (County) General Plan and the Safety Element[3] of the County General Plan 2035 Update; and review of available public records, literature, and relevant environmental regulatory databases.[4] The scope of this analysis is also based on publicly available databases and records for the regions that provide a relative characterization of the parcels that would be potentially eligible for the use of hauled water to support development of a single-family residence, as a result of the proposed initiative.[5] The information used in the characterization of the proposed initiative area does not constitute a Phase I Environmental Site Assessment pursuant to the ASTM standards; nor should it be used by an individual property owner as the basis for determining presence or absence of hazards, hazardous materials, or risk on or in the vicinity of an individual parcel that would be potentially eligible for the use of hauled water pursuant to the proposed initiative.

Definitions

Hazard: An event or physical condition that has the potential to cause fatalities, injuries, property damage, infrastructure damage, agricultural loss, damage to the environment, interruption of business, or other types of harm or loss.[6]

Hazardous Waste: Hazardous wastes are by-products of society that can pose a substantial or potential risk or hazard to human health or the environment when improperly managed. Hazardous wastes possess at least one of four characteristics: ignitability, corrosivity, reactivity, or toxicity. In addition, this analysis considers those materials classified as hazardous material on lists maintained by the U.S. Environmental Protection Agency (EPA).[7]

Risk: The estimated impact that a hazard would have on people, services, facilities, and structures in a community; the likelihood of a hazard event resulting in an adverse condition that causes injury or damage.

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[1] *California Code of Regulations*. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

[2] Los Angeles County General Plan. 25 November 1980. *Safety Element*.

[3] Los Angeles County General Plan 2035, Public Review Draft. January 2014. *Safety Element*.

[4] California Environmental Protection Agency. Department of Toxic Substances Control. Envirostor Database. Available at: http://www.envirostor.dtsc.ca.gov/public/

[5] Los Angeles County. Location Management System. Available at: http://egis3.lacounty.gov/lms/

[6] Wayne Blanchard, Ph.D., CEM. 22 January 2008. Guide to Emergency Management and Related Terms, Definitions, Concepts, Acronyms, Organizations, Programs, Guidance and Legislation: A Tutorial on Emergency Management, Broadly Defined, Past, Present, and Future.

[7] Title 40, Code of Federal Regulations (CFR), Chapter 1, Part 261.

3.8.1 REGULATORY FRAMEWORK

Federal

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, also known as the Superfund Act, outlines the potential liability related to the cleanup of hazardous substances, available defenses to such liability, appropriate inquiry into site status under Superfund, which is the federal government's program to clean up the nation's uncontrolled hazardous waste sites, statutory definitions of hazardous substances and petroleum products, and the petroleum product exclusion under CERCLA.[8]

Superfund Amendment and Reauthorization Act, Title III

The Superfund Amendment and Reauthorization Act (SARA), Title III of 1986 is the Emergency Planning and Community Right-to-Know Act.[9] Facilities are required to report the following items on U.S. EPA Form R, the Toxic Chemical Release Inventory Reporting Form: facility identification, off-site locations where toxic chemicals are transferred in wastes, chemical-specific information, and supplemental information.

Form R requires a facility to list the hazardous substances that are handled onsite and to account for the total aggregate releases of listed toxic chemicals for the calendar year. Releases to the environment include emissions to the air, discharges to surface water, and on-site releases to land and underground injection wells.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) of 1976 was the first major federal act regulating the potential health and environmental problems associated with hazardous and non-hazardous solid waste.[10] RCRA and the implementation regulations developed by the U.S. EPA provide the general framework for the national hazardous and non-hazardous waste management systems. This framework includes the determination of whether hazardous wastes are being generated, techniques for tracking wastes to eventual disposal, and the design and permitting of hazardous waste management facilities.

RCRA amendments enacted in 1984 and 1986 began the process of eliminating land disposal as the principal hazardous waste disposal method. Hazardous waste regulations promulgated in 1991 address site selection, design, construction, operation, monitoring, corrective action, and closure of disposal facilities. Additional regulations addressing solid waste issues are contained in 40 CFR, Part 258.

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[8] *United States Code*, Title 42, Chapter 103, Subchapter I: "Hazardous Substances Releases, Liability, Compensation." Available at: http://www.law.cornell.edu/uscode/html/uscode42/usc_sup_01_42_10_103.html

[9] *United States Code*, Title 42, Chapter 116 et. seq: "Emergency Planning and Community Right-to-Know Act." Available at: http://www.law.cornell.edu/uscode/html/uscode42/usc_sup_01_42_10_116.html

[10] *United States Code*, Title 42, Chapter 82, Subchapter I, §§ 6901 et. seq.: "Solid Waste Disposal Act, Resource Conservation and Recovery Act of 1986." Available at: http://www.law.cornell.edu/uscode/html/uscode42/usc_sup_01_42_10_82.html

State

Hazardous Waste Control Law of 1972

The Hazardous Waste Control Law of 1972 is the original hazardous waste control law in California. This law initiated programs that track hazardous waste generators, their hazardous waste streams, and their hazardous waste handling practices.

Title 22 and Title 23 of the California Code of Regulations

In California, Titles 22 and 23 of the California Code of Regulations (CCR) address hazardous materials and wastes. Title 22 defines, categorizes, and lists hazardous materials and wastes. Title 23 identifies public health and safety issues related to hazardous materials and wastes, and specifies disposal options.

Hazardous Materials Release Response Plans and Inventory Law of 1986

The Hazardous Materials Release Response Plans and Inventory Law of 1986 (Business Plan Act)[11] governs hazardous materials handling, reporting requirements, and local agency surveillance programs.

Hazardous Substances Account Act (State Superfund)

Chapter 6.8 of the California Health and Safety Code requires the Department of Toxic Substances Control (DTSC) to include "the largest manageable number" of potentially responsible parties (PRPs) in any cleanup order that applies to a multiple PRP site after considering certain factors, including the adequacy of the evidence of each PRP's liability, the financial viability of each PRP, and the degree to which each PRP contributed to the release of hazardous substances at the site.

Local

Los Angeles County General Plan

The parcels affected by the proposed initiative are located within the unincorporated areas of Los Angeles County and subject to the goals and policies of the Safety Element[12] of the adopted 1980 Los Angeles County General Plan and the Safety Element[13] of the County General Plan 2035 Update. The purpose of the Safety Element of the County's General Plan is to reduce the potential risk of death, injuries, and economic damage resulting from natural and man-made hazards. The General Plan addresses the protection of the community from any unreasonable risks associated with the effects of, among other safety-related issues, wildland fires.

The Safety Element works in conjunction with the All-Hazard Mitigation Plan prepared by the Chief Executive Office, Office of Emergency Management (CEO OEM), which sets strategies for

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[11] *California Health and Safety Code*, Chapter 6.8, §25500 et seq. (1985, as amended). Available at: http://www.aroundthecapitol.com/code/code.html?sec=hsc&codesection=25404-25404.9

[12] Los Angeles County General Plan. 25 November 1980. *Safety Element*.

[13] Los Angeles County General Plan 2035, Public Review Draft. January 2014. *Safety Element*.

natural and man-made hazards in Los Angeles County. The All-Hazard Mitigation Plan, which has been approved by the Federal Emergency Management Agency (FEMA) and the California Emergency Management Agency (CalEMA), includes a compilation of known and projected hazards in Los Angeles County.

The Safety Element of the adopted 1980 County General Plan has established three goals and nine policies that are relevant to consideration of hazards and hazardous materials:[14]

- **Goal:** Reduce threats to public safety and protect property from wildland and urban fire hazards.
  - **Policy 15:** Maintain and strengthen the review of projects and development proposals; and upgrade County fire prevention standards and mitigation measures in areas of high wildland (mainly Fire Zone 4) and urban fire hazard.
  - **Policy 16:** Continue to coordinate firefighting efforts with State, Federal and local agencies in fire hazard areas; and review and update mutual and automatic aid agreements between the County and other fire protection agencies.
  - **Policy 18:** Expand and improve vegetation management efforts in wildland fire hazard areas.

The Safety Element of the Los Angeles County General Plan 2035 has established the following goals and policies relevant to hazards:[15]

- **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 VHFHSZs, particularly in areas with significant biological resources.
  - **Policy S 3.4:** Reduce the risk of wildland fire hazards through the use of regulations and performance standards, such as fire resistant building materials and vegetation.
  - **Policy S 3.5:** Encourage the use of fire resistant vegetation that is compatible with the area's natural vegetative habitats in fuel modification activities.
  - **Policy S 3.6:** Ensure adequate infrastructure, including ingress, egress, and peak load water supply availability for all projects located in VHFHSZs.
  - **Policy S 3.7:** Consider siting and design for developments located within VHFHSZs, particularly in areas located near ridgelines and on hilltops, to reduce the wildfire risk.

- **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.

[14] Los Angeles County General Plan. 25 November 1980. *Safety Element*.

[15] Los Angeles County General Plan 2035, Public Review Draft. *Safety Element*. January 2014.

3.8.2 AFFECTED ENVIRONMENT

Routine Transport, Use or Disposal of Hazardous Materials

The proposed initiative affects 42,677 vacant parcels in unincorporated areas of Los Angeles County that do not have access to private or public potable water distribution systems.[16] As these parcels are largely currently vacant, other than limited agricultural activities within selected properties, these properties do not involve the routine transport, use, or disposal of hazardous materials. Evaluation of 35 randomly selected parcels, including five parcels from each of the seven subareas, within the proposed initiative area was conducted for the hazardous waste sites analysis. These parcels were exported from ArcGIS to Google Earth KML files, and U.S. Geological Survey topographic quadrangle and aerial photographic analyses were conducted using Google Earth to determine the presence/absence of potential hazards or hazardous sites within the parcels. The evaluation indicated that there is no surface evidence of the routine transport, use, or disposal of hazardous material; nor were any of the sample properties listed on a government list for such activities. It should be noted that this was a very small sample size. This analysis does not constitute a Phase I ESA, which is commonly done, by the funding institution, at the point of financing purchase of a property for development of a single-family residence. Typically there is no routine transport, use, or disposal of hazardous materials involved in the development of a single-family residence.

Hazardous materials may be transported via highway or railway through the study area. State Highways 14, 18, and 138 pass through the Castaic/Santa Clarita/Agua Dulce, Acton, Lake Hughes/Gorman/West of Lancaster, and Lancaster Northeast subareas. Interstate 5 passes through the Castaic/Santa Clarita/Agua Dulce subarea.

The following subareas within the study area have parcels within one-quarter mile of highways:

- Acton (63 parcels)
- Castaic/Santa Clarita/Agua Dulce (42 parcels)
- Lake Hughes/Gorman/West of Lancaster (119 parcels)
- Lancaster Northeast (98 parcels)

Railways pass through the Acton, Castaic/Santa Clarita/Agua Dulce, and Lake Los Angeles/Llano/Valyermo/Littlerock subareas. The following subareas within the study area have parcels within one-quarter mile of railways:

- Acton (39 parcels)
- Castaic/Santa Clarita/Agua Dulce (6 parcels)
- Lake Los Angeles/Llano/Valyermo/Littlerock (474 parcels)
- Lancaster Northeast (277 parcels)

Release of Hazardous Materials in the Environment

The proposed initiative area currently consists of 42,677 vacant parcels where the land use designation in the County General Plan allows a single-family residence as an allowable use. A

[16] The term "vacant" refers to parcels identified as such by the County Assessor.

review of the EnviroStor database maintained by DTSC identified four hazardous waste sites within the study area. Less than 0.009 percent of the properties are known to have had past exposure to hazardous materials. These sites are (1) the Avenue N School, (2) the Banning Park CP, (3) the Llano Barrels, and (4) the Phase V School. The status of these sites is as follows:

- Avenue N School (Lancaster Northeast subarea) – No further action required
- Phase V School (Castaic/Santa Clarita/Agua Dulce subarea) – No further action required
- Banning Park CP (Lake Hughes/Gorman/West of Lancaster subarea) – Needs evaluation
- Llano Barrels (Lake Los Angeles/Llano/Valyermo/Littlerock subarea) – Certified

Hazardous Emissions within One-Quarter Mile of a School Site

There are 24 elementary, middle, and high schools adjoining or in the vicinity of parcels within the proposed initiative study area, including all the subareas except the Antelope Valley Northeast subarea and the Kagel Canyon subarea.[17] Table 3.8.2-1, indicates which specific schools are located adjacent to or in the vicinity of the initiative subareas. Please refer to Figure 3.3.2-1, *Schools within One-Quarter Mile of Proposed Initiative Subarea Parcels*, for the locations of each school within the proposed initiative area. The review the EnviroStor database maintained by DTSC did not indicate that there are any documented sources of hazardous emissions within one-quarter mile of any school site.

[17] Los Angeles County. Location Management System. Available at: http://egis3.lacounty.gov/lms/

TABLE 3.8.2-1
SCHOOLS WITHIN ONE-QUARTER MILE OF PROPOSED INITIATIVE SUBAREA PARCELS

Subarea	School	Public/Private
Acton	Vasquez High School	Public high schools
Castaic/Santa Clarita/Agua Dulce	Agua Dulce Elementary School	Public elementary schools
	Desert Canyon Academy	Private and charter schools
	Mint Canyon Elementary School	Public elementary schools
	Newhall School District - Oak Hills School	Public elementary schools
	Newhall School District - Stevenson Ranch School	Public elementary schools
	Rancho Pico Junior High School	Public middle schools
	Stevenson Ranch Central Elementary School	Public elementary schools
	West Ranch High School	Public high schools
Lake Hughes/Gorman/West of Lancaster	Covenant Christian	Private and charter schools
	Gorman Elementary School	Public elementary schools
	Gorman 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
	Pearblossom Private, Inc.	Private and charter schools
	Vista San Gabriel Elementary School	Public elementary schools
	Wilsona School District - Vista San Gabriel Elementary School	Public elementary schools
	Wilsona Elementary School	Public elementary schools
	Challenger Middle School	Public middle schools
Lancaster Northeast	Eastside Elementary School	Public elementary schools
	Lancaster Baptist School	Private and charter schools

Properties Included on a List of Hazardous Materials Sites Pursuant to Government Code Section 65962.5

The review of readily available information maintained by the DTSC indicates that four hazardous waste/substances sites are located within the proposed initiative area.[18] Table 3.8.2-2, *Number of Parcels within Subareas on or Adjacent to Hazardous Waste Sites*, indicates one parcel each is located on or adjacent to parcels within the proposed initiative subareas. Please refer to Figure 3.8.2-1, *Hazardous Waste / Substances Sites within Proposed Initiative Area*.

[18] California Environmental Protection Agency. Department of Toxic Substances Control. Envirostor Database. Available at: http://www.envirostor.dtsc.ca.gov/public/

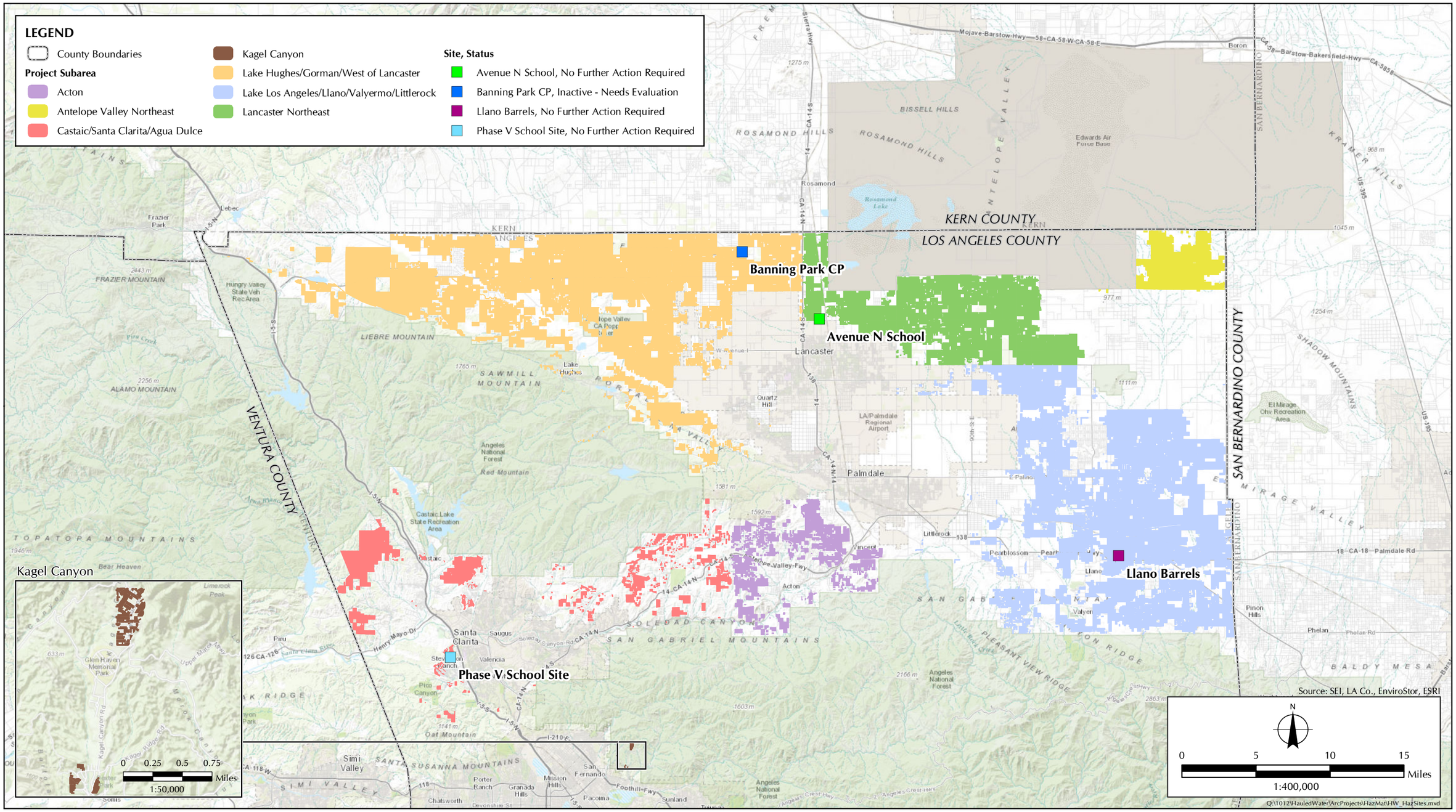

FIGURE 3.8.2-1

Hazardous Waste/Substance Sites within Proposed Initiative Study Area

TABLE 3.8.2-2
NUMBER OF PARCELS WITHIN SUBAREAS ON OR ADJACENT TO HAZARDOUS WASTE SITES

Subarea	Hazardous Waste Site	Number of Parcels on or Adjacent to Hazardous Waste Site
Castaic/Santa Clarita/Agua Dulce	Phase V School Site	1
Lake Hughes/Gorman/West of Lancaster	Banning Park CP	1
Lake Los Angeles/Llano/Valyermo/Littlerock	Llano Barrels	1
Lancaster Northeast	Avenue N School	1

Properties Located within Two Miles of a Public Airport or Public Use Airport

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 3.8.2-3, *Public/Private Airports Located 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*).[19] There are a total of 275 parcels located within two miles of a public airport in the Castaic/Santa Clarita/Agua Dulce subarea. There are a total of 104 parcels located within two miles of a public airport in the Lake Hughes/Gorman/West of Lancaster subarea.

TABLE 3.8.2-3
PUBLIC/PRIVATE AIRPORTS WITHIN TWO MILES OF PROPOSED INITIATIVE SUBAREA PARCELS

Subarea	Public Airport	Private Airport	Number or Parcels within 2 miles
Castaic/Santa Clarita/Agua Dulce	Agua Dulce Airport	-	275
Lake Hughes/Gorman/West of Lancaster	-	Bohunk's Airpark	787
	General William J. Fox Airfield	-	104
	-	Little Buttes Antique Airfield	1,486
	-	Quail Lake Sky Park	60
	-	Skyotee Ranch	181
Lake Los Angeles/Llano/Valyermo/ Littlerock	-	Brian Ranch Airport	811
	-	Crystal Airport	559
	-	Gray Butte Field	326
		Nichols Farms Airport	608

[19] Los Angeles County. Location Management System. Available at: http://egis3.lacounty.gov/lms/

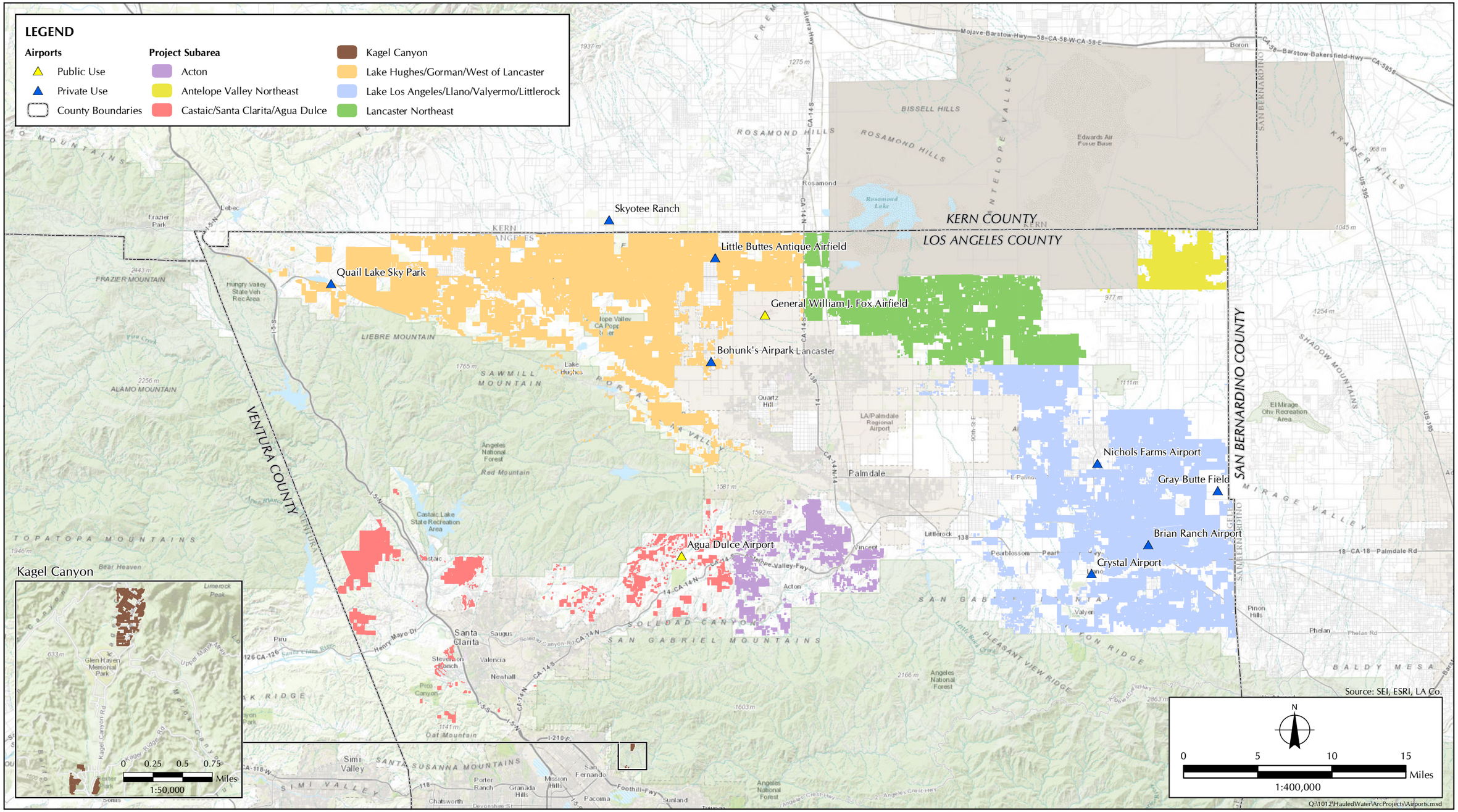

FIGURE 3.8.2-2

Public or Private Use Airports within Two Miles of Proposed Initiative Subarea Parcels

Properties Located within Two Miles of a Private Airport

There are eight private airports located within two miles of parcels located in two of the subareas being evaluated in relation to the proposed initiative: Lake Hughes/Gorman/West of Lancaster and Lake Los Angeles/Llano/Valyermo/Littlerock (Table 3.8.2-3 and Figure 3.8.2-2).[20] There are a total of 2,514 parcels located within two miles of a private airport in the Lake Hughes/Gorman/West of Lancaster subarea. There are a total of 2,304 parcels located within two miles of a private airport in the Lake Los Angeles/Llano/Valyermo/Littlerock subarea.

Emergency Response Plan / Emergency Evacuation Plan

Water haulers from outside of the proposed initiative area would use established regional and local transportation networks. The primary access to the initiative study area would be included in any emergency response plan or any emergency evacuation plan.

Wildland Fires

Based on the review of fire severity hazard zone maps developed by CalFire, there are 8,685 parcels within the subareas in the proposed initiative area that are located within High or Very High Fire Hazard Severity Zones.[21,22] Table 3.8.2-4, *High or Very High Fire Hazard Severity Zones Located within or in the Vicinity of Initiative Subareas*, indicates which fire hazard safety zones are located adjoining, or in the vicinity of, the initiative subareas. Please refer to Figure 3.8.2-3, *Fire Hazard Severity Zones*, for the locations of fire hazard severity zones in the proposed initiative area.

[20] Los Angeles County. Location Management System. Available at: http://egis3.lacounty.gov/lms/

[21] Cal Fire. September 2011. Very High Fire Hazard Severity Zones in LRA Map, Los Angeles County, CA.

[22] Cal Fire. 6 November 2007. Very High Fire Hazard Severity Zones in SRA Map, Los Angeles County, CA.

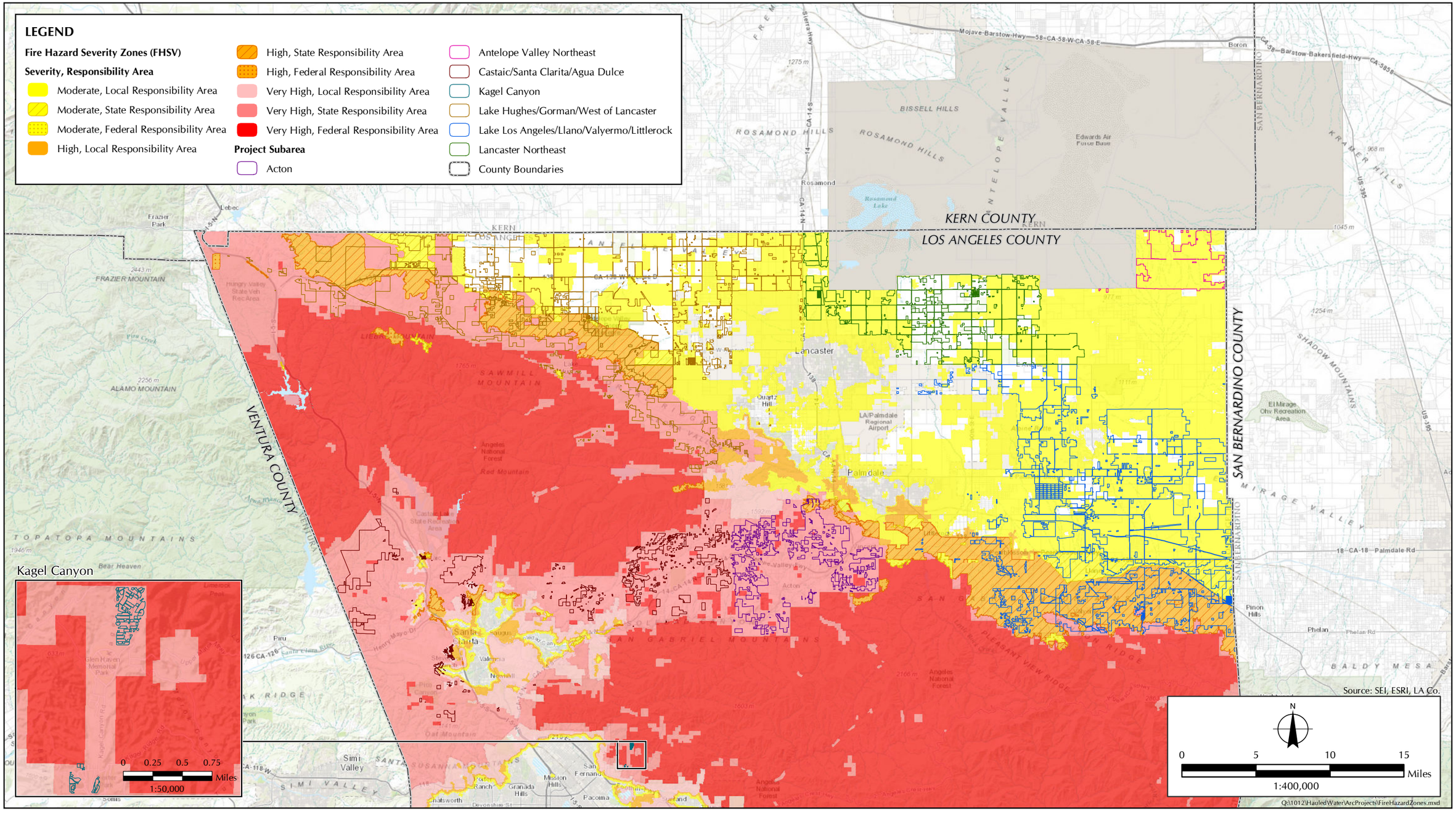

FIGURE 3.8.2-3

Fire Hazard Severity Zones

TABLE 3.8.2-4
HIGH OR VERY HIGH FIRE HAZARD SEVERITY ZONES LOCATED WITHIN OR IN THE VICINITY OF INITIATIVE SUBAREAS

Subarea	Severity	Local, State or Federal Responsibility Area	Parcel Count within Responsibility Area
Acton	High	SRA	78
	High total		**78**
	Very high	FRA	14
		SRA	1,087
	Very high total		**1,101**
Castaic/Santa Clarita/Agua Dulce	High	LRA	55
		SRA	2
	High total		**57**
	Very high	FRA	15
		LRA	143
		SRA	1,450
	Very high total		**1,608**
Kagel Canyon	Very high	SRA	498
	Very high total		**498**
Lake Hughes/Gorman/West of Lancaster	High	LRA	51
		SRA	1,203
	High total		**1,254**
	Very high	FRA	13
		SRA	952
	Very high total		**965**
Lake Los Angeles/Llano/Valyermo/ Littlerock	High	FRA	15
		LRA	19
		SRA	2,594
	High total		**2,628**
	Very high	FRA	4
		SRA	492
	Very high total		**496**
Grand Total			**8,685**

NOTES:
LRA = Local Responsibility Area
SRA = State Responsibility Area
FRA = Federal Responsibility Area

3.8.3 IMPACT ANALYSIS

The State CEQA Guidelines recommend the consideration of eight questions when addressing the potential for significant impact to hazards and hazardous materials:

Would the proposed initiative have any of the following effects:

(a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

The proposed initiative would not result in impacts from hazards and hazardous materials with respect to creating a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. The proposed initiative affects 42,677 vacant single-family residential parcels in unincorporated areas of the Los Angeles County that do not have access to private or public potable water distribution systems. The proposed initiative may result in the construction of new single-family residences and the development of adequate roadway infrastructure for water delivery. The water hauling activities will not involve the routine transport, use, or disposal of hazardous materials within the proposed initiative area.

More specifically, the proposed initiative would result in the routine transport and use of potable water, which is not a hazardous material. Therefore, there are no impacts from hazards and hazardous materials related to the proposed initiative that could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. No further analysis is warranted.

(b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous material?

The proposed initiative would result in less than significant impacts from hazards and hazardous materials with respect to creating a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous material. There is the potential for indirect impacts from the routine transport of hazardous materials unrelated to the proposed initiative that may be transported along highways. State Highways 14, 18, and 138 pass through the Castaic/Santa Clarita/Agua Dulce, Acton, Lake Hughes/Gorman/West of Lancaster, and Lancaster Northeast subareas. Interstate 5 passes through the Castaic/Santa Clarita/Agua Dulce subarea. There are a total of 322 parcels, within four subareas of the study area, that are located within one-quarter mile of a highway that would have the potential to be exposed to indirect impacts from hazardous materials, if an accident occurred during the transport of hazardous materials:

- Acton (63 parcels)
- Castaic/Santa Clarita/Agua Dulce (42 parcels)
- Lake Hughes/Gorman/West of Lancaster (119 parcels)
- Lancaster Northeast (98 parcels)

The California Highway Patrol has the responsibility to minimize exposure of the public to unsafe conditions resulting from emergency incidents on state highways.[23] The California Highway Patrol immediately takes on the Incident Command responsibility after an emergency incident, and has a goal of resolving incidents within 90 minutes.

Railways pass through the Acton, Castaic/Santa Clarita/Agua Dulce, and Lake Los Angeles/Llano/Valyermo/Littlerock subareas. There are a total of 796 parcels, within four subareas of the study area, that are located within one-quarter mile of an active railway that would have the potential to be exposed to indirect impacts from hazardous materials, if an accident occurred during the transport of hazardous materials:

- Acton (39 parcels)
- Castaic/Santa Clarita/Agua Dulce (6 parcels)
- Lake Los Angeles/Llano/Valyermo/Littlerock (474 parcels)
- Lancaster Northeast (277 parcels)

The California Office of Emergency Services, Hazardous Materials (HazMat) Section, under the Fire and Rescue Division, coordinates statewide implementation of hazardous materials accident prevention and emergency response programs for all types of hazardous materials incidents and threats. In response to any hazardous materials emergency, the Section staff is called upon to provide state and local emergency managers with emergency coordination and technical assistance.[24] The California Office of Emergency Services immediately takes on the Incident Command responsibility after an emergency incident involving transport on the railways, and has a goal of resolving incidents within 90 minutes.

Up to 322 parcels (approximately one percent of the parcels in the study area), if developed with a single-family residence, would have the potential to be exposed to hazardous materials during an accidental release on a highway. Up to 796 parcels (approximately two percent of the parcels in the study area), if developed with a single-family residence, would have the potential to be exposed to hazardous materials during an accidental release during transport on the railways. However, the California Highway Patrol and California Office of Emergency Services have emergency response procedures for dealing with such incidents, such that the proposed initiative does not represent a significant hazard to people or property.

While the proposed initiative does not involve the transport, use, or disposal of hazardous materials, up to 322 (approximately one percent of the parcels in the study area) and 796 parcels (approximately two percent of the parcels in the study area) are located within one-quarter mile of a highway or railway, respectively, where the routine transport of hazardous materials occurs. There are an estimated 1.66 to 5.22 highway spills and 0.52 to 0.83 rail spills per 10,000 people in California.[25] Therefore, there is a very low probability of the parcels that are located within one-quarter mile of the highways or railways to be exposed to a significant hazard through a reasonably foreseeable upset and accident condition involving the release of hazardous material. Therefore, the proposed initiative is considered to result in a less than significant impact, due to low numbers

[23] California Highway Patrol, Enforcement and Planning Division, Special Projects Section. January 2014. *California Highway Patrol Strategic Plan 2014-2015*.

[24] State of California. 2011. http://www.calema.ca.gov/hazardousmaterials/pages/hazardous-materials.aspx

[25] Cutter, Susan L., and Minhe Ji. 1997. "Trends in U.S. Hazardous Materials Transportation Spills." *Professional Geographer* 49(3): 318-331.

of parcels and low probability for incident to occur, in relation to the potential to create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous material. No further analysis is warranted.

(c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

The proposed initiative involves the routine transport of potable water to designated vacant parcels that have been zoned for the development of single-family residences within the proposed initiative area. There are 24 schools within one-quarter mile of parcels where development of single-family residences would be facilitated by the proposed initiative. Water would be expected to be hauled by licensed on-road vehicles on existing roads. However, the proposed initiative is limited to facilitation of the use of hauled water to support residential development that would not involve hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. Therefore, the proposed initiative would not result in impacts from hazards and hazardous materials with respect to the emission of hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. No further analysis is warranted.

(d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment?

The review of the CalEPA EnviroStor database indicates that areas in the vicinity of the proposed initiative area are included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Figure 3.8.2-2). However, the status of these sites either requires (1) further evaluation; (2) no action or no further action; or (3) have been confirmed to exist but have not been assessed to date. It is not anticipated that these sites would cause the proposed initiative area to become exposed to significant contamination resulting from hazardous wastes or hazardous substances as defined by the Government Code. No further analysis is warranted.

(e) 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 result in a safety hazard for people residing or working in the project area?

The proposed initiative may result in impacts from hazards and hazardous materials in relation to the proximity of airports and the safety hazard for people residing or working in the proposed initiative area. Six parcels within the Lake Los Angeles/Gorman/West of Lancaster subarea intersect the Palmdale Airport influence area, three parcels within the Castaic/Santa Clarita/Agua Dulce subarea are within the Agua Dulce Airport influence area, 462 parcels within the Lancaster Northeast subarea are within the Fox Airfield airport influence area, and 1,361 parcels within the Lake Hughes/Gorman/West of Lancaster subarea are within the Fox Airfield airport influence area. A total of 1,826 parcels are within an airport influence area. However, according to data obtained from the Federal Aviation Administration (FAA) regarding the general aviation fatal accident rate, as of March 2014 the rate of fatal accidents in the United States was 0.75 per 100,000 hours of flight time.[26] The FAA data also indicates that no more than 1.05 fatal accidents occurred per 100,000

[26] Federal Aviation Administration. 2014. *General Aviation Fatal Accident Rate – Fiscal Year 2014 2nd Quarter Performance.*

flight hours during the fiscal year 2014. This equates to 84 actual fatal accidents nationwide during fiscal year 2014. There have been 158 fatalities nationwide for the year which is considered a less than significant impact for the proposed initiative study area. It is not anticipated that the proposed initiative area will become exposed to significant risk resulting from the proximity to airports. Therefore, less than significant impacts may occur from hazards and hazardous materials in relation to the proximity from an airport to the safety hazard for people residing in the proposed initiative area. No further analysis is warranted.

(f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

The proposed initiative may result in impacts from hazards and hazardous materials in relation to the proximity of private airstrips and the safety hazard for people residing or working in the proposed initiative area. The proposed initiative area is located in the vicinity of eight private airstrips. There are a total of 2,514 parcels located within two miles of a private airport in the Lake Hughes/Gorman/West of Lancaster subarea. There are a total of 2,304 parcels located within two miles of a private airport in the Lake Los Angeles/Llano/Valyermo/Littlerock subarea. However, according to data obtained from the Federal Aviation Administration (FAA) regarding the general aviation fatal accident rate, as of March 2014 the rate of fatal accidents in the United States was 0.75 per 100,000 hours of flight time.[27] The FAA data also indicates that no more than 1.05 fatal accidents occurred per 100,000 flight hours during the fiscal year 2014. This equates to 84 actual fatal accidents nationwide during fiscal year 2014. There have been 158 fatalities nationwide for the year, which is considered a less than significant impact for the proposed initiative study area. It is not anticipated that the proposed initiative area will become exposed to significant risk resulting from the proximity to airports. Therefore, less than significant impacts may occur from hazards and hazardous materials in relation to the proximity from an airport to the safety hazard for people residing in the proposed initiative area. No further analysis is warranted.

(g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The proposed initiative involves the transport of potable water to designated vacant parcels in unincorporated areas of Los Angeles County which have been zoned for single-family residential use. Development of the parcels for residential use would include the construction of private roadways which 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 Update,[28] 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. It is not anticipated that the proposed initiative would result in impacts from hazards and hazardous materials from impairing the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. No further analysis is warranted.

[27] Federal Aviation Administration. 2014. *General Aviation Fatal Accident Rate – Fiscal Year 2014 2nd Quarter Performance*.

[28] Los Angeles County General Plan 2035, Public Review Draft. *Mobility Element*. January 2014.

(h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

The proposed initiative would allow for the development of designated vacant parcels for single-family residential use in areas that have been designated as High or Very High Fire Hazard Severity Zones. Based on the review of fire severity hazard zone maps developed by CalFire,[29] portions of the proposed initiative are situated in High or Very High Fire Hazard Severity Zones (Figure 3.8.2-3). There is a total of 8,685 parcels (approximately 20 percent) within the study area that have High to Very High Fire Hazard Severity Zone designations. The following subareas have parcels within High to Very High Fire Hazard Severity Zones:

- Acton (1,179 parcels)
- Castaic/Santa Clarita/Agua Dulce (1,665 parcels)
- Kagel Canyon (498 parcels)
- Lake Hughes/Gorman/West of Lancaster (2,219 parcels)
- Lake Los Angeles/Llano/Valyermo/Littlerock (3,124 parcels)

The proposed initiative would allow development of up to 8,685 parcels in areas that have been designated as High or Very High Fire Hazard Severity Zones, where there is the potential for exposure of people or structures to a significant risk of loss, injury or death involving wildland fires. However, the County building permit process reduces the potential exposure of people and structures to significant loss, injury, or death involving wildland fires to below the level of significance, through the requirement to use fire-resistant construction materials such as for roofs and design features such as enclosing eaves, and through the requirement for submittal and approval of a fuel modification plan, prior to issuance of a Certificate of Occupancy.[30] No further analysis is warranted.

3.8.4 MITIGATION MEASURES

The proposed initiative would not result in significant impacts related to exposure of people and property to hazards and hazardous materials. Therefore, the consideration of mitigation measures is not required.

[29] California Department of Forestry and Fire Protection. Fire and Resources Assessment Program. Available at: http://www.fire.ca.gov/fire_prevention/fhsz_maps_losangeles.php

[30] Los Angeles County Fire Department, Prevention Services Bureau, Forestry Division, Brush Clearance Section. 2011. *Fuel Modification Plan Guidelines: A Firewise Landscape Guide for Creating and Maintaining Defensible Space.*

SECTION 3.9
HYDROLOGY AND WATER QUALITY

This analysis is undertaken to determine if the Single-Family Residential Hauled Water Initiative for New Development (proposed initiative) may have a significant impact to hydrology and water quality, thus requiring the consideration of mitigation measures or alternatives, in accordance with Section 15063 of the State California Environmental Quality Act Guidelines (State CEQA Guidelines).[1] Hydrology and water quality at the proposed initiative study area were evaluated with regard to the Los Angeles Regional Water Quality Control Board (RWQCB), the Lahontan RWQCB, Water and Waste Management Element of the adopted Los Angeles County General Plan,[2] the Public Services and Facilities Element of the Los Angeles County General Plan 2035 Update,[3] the 1986 Antelope Valley Areawide General Plan,[4] and the 2012 Santa Clarita Valley Area Plan,[5] The State Water Resources Control Board OWTS Policy[6], National Flood Insurance Program Flood Insurance Rate Maps for Los Angeles and Kern Counties, the USGS 7.5-minute topographic quadrangles where the proposed initiative study area is located, and a review of published and unpublished literature.

In this analysis, local groundwater is not expected to be available as a water supply source. Due to the lack of available potable water, development within the proposed initiative area will depend on hauled water as its primary water source. Water haulers may obtain their water from providers that use local ground water. However, individual single-family residential units will not be able to extract ground water for direct supply.

Definitions

Acre-Foot: An acre-foot represents the amount of water it would take to cover an acre of land 12 inches deep. The term is commonly used in irrigation and water resource management to allocate water resources and to calculate the volume of water in reservoirs and other bodies of water.

Ephemeral Drainages: An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

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[1] *California Code of Regulations*. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

[2] County of Los Angeles Department of Regional Planning. November 25, 1980. *County of Los Angeles General Plan: Water and Waste Management Element*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_web80-water-and-waste-management-element.pdf

[3] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 13: Public Services and Facilities Element*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter13_2014.pdf

[4] Los Angeles County Department of Regional Planning. December 4, 1986. *Antelope Valley Areawide General Plan: A Component of the Los Angeles County General Plan*. PDF available online at: http://planning.lacounty.gov/assets/upl/data/pd_antelope-valley.pdf

[5] Los Angeles County, Santa Clarita Valley Area Plan, 2012. PDF available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf

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

General Construction Activity Storm Water Permit: Where EPA is the permitting authority, or in California acting through the State Water Resources Control Board and Regional Water Quality Control Boards, construction stormwater discharges are almost all regulated under the General Construction Activity Storm Water Permit, that requires compliance with effluent limits and other permit requirements, such as the development of a Storm Water Pollution Prevention Plan. Construction operators intending to seek coverage under General Construction Activity Storm Water Permit must submit a Notice of Intent (NOI) certifying that they have met the permit's eligibility conditions and that they will comply with the permit's effluent limits and other requirements.

Impaired Waters: Under section 303(d) of the Clean Water Act, states, territories, and authorized tribes are required to develop lists of impaired waters. These are waters that are too polluted or otherwise degraded to meet the water quality standards set by states, territories, or authorized tribes. The law requires that these jurisdictions establish priority rankings for waters on the lists and develop Total Maximum Daily Loads for these waters.

Imported Water: Water that originates from one hydrologic region and is transferred to another hydrologic region. The Los Angeles County Department of Public Works states that its primarily water is obtained from the State Water Project, Los Angeles Aqueduct, and Colorado River.

Non-Point Source Runoff: Runoff that occurs on surfaces before reaching a channel is also called a nonpoint source. If a nonpoint source contains man-made contaminants, the runoff is called nonpoint source pollution. A land area which produces runoff that drains to a common point is called a drainage basin. When runoff flows along the ground, it can pick up soil contaminants including, but not limited to petroleum, pesticides, or fertilizers that become discharge or nonpoint source pollution.

Runoff: Runoff is the water flow that occurs when the soil is infiltrated to full capacity and excess water from rain, meltwater, or other sources flows over the land. This is a major component of the water cycle, and the primary agent in water erosion. In addition to causing water erosion and pollution, surface runoff in urban areas is a primary cause of urban flooding which can result in property damage, damp and mold in basements, and street flooding.

Lahontan Regional Water Quality Control Board (LRWQCB): The LRWQCB is one of nine statewide regional boards. The jurisdiction of the California Regional Water Quality Control Board, Lahontan Region (Regional Board) extends from the Oregon border to the northern Mojave Desert and includes all of California east of the Sierra Nevada crest. In order to carry out its mission "to preserve and enhance water quality in the Lahontan Region for the benefit of present and future generations," the LRWQCB conducts a broad range of activities to protect ground and surface waters under its jurisdiction.

Los Angeles Regional Water Quality Control Board (LARWQCB): The LARWQCB is one of nine statewide regional boards. The LARWQCB protects ground and surface water quality in the Los Angeles Region, including the coastal watersheds of Los Angeles and Ventura Counties, along with very small portions of Kern and Santa Barbara Counties. In order to carry out its mission "to preserve and enhance water quality in the Los Angeles Region for the benefit of present and future generations," the LARWQCB conducts a broad range of activities to protect ground and surface waters under its jurisdiction.

Mudflow: Mudflows result from the downslope movement of soil and/or rock under the influence of gravity.

Perennial Drainages: A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

Safe Yield Limits: Safe yield limits define the amount of groundwater that can be extracted from a basin without causing negative long-term effects on the basin.

Seiche: A seiche is an oscillation of a body of water in an enclosed or semi-enclosed basin, such as a reservoir, harbor, lake, or storage tank.

State Water Project (SWP): The California State Water Project (SWP) is a water management project in California under the supervision of the California Department of Water Resources. The SWP is the world's largest publicly built and operated water and power development and conveyance system, providing drinking water for more than 23 million people and generating an average of 6,500 gigawatt hours (GWh) of hydroelectricity annually.

State Water Resources Control Board (SWRCB): The federal Clean Water Act (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.

Storm Water and Stormwater: In layman's terms, stormwater is defined as an abnormal amount of surface water due to a heavy rain or snowstorm. The term *storm water* is used when employed by the cited source of information. In all other instances, *stormwater* is used, consistent with the provision of Appendix G of the State CEQA Guidelines and as defined by the U.S. Environmental Protection Agency. Stormwater runoff is generated when precipitation from rain and snowmelt events flows over land or impervious surfaces and does not percolate into the ground. As the runoff flows over the land or impervious surfaces (e.g., paved streets, parking lots, and building rooftops), it accumulates debris, chemicals, sediment or other pollutants that could adversely affect water quality if the runoff is discharged untreated.

Stormwater Best Management Practices (BMPs): As defined by the California Stormwater Quality Association (CASQA), Stormwater Best Management Practices (BMPs) include schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent, eliminate, or reduce the pollution o of the receiving waters. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Stormwater Pollution Prevention Plan (SWPPP): A plan created by developers to show their plans for sediment and erosion control. Typically these plans are part of an overall design that details procedures to be followed during various phases of construction. This is required by a federal regulation governing stormwater runoff from active construction sites that are more than one acre in area.

Total Maximum Daily Loads (TMDL): Under section 303(d) of the Clean Water Act, states, territories, and authorized tribes are required to develop Total Maximum Daily Loads which

calculate the maximum amount of a pollutant that a water body can receive and still safely meet water quality standards.

Tsunami: A tsunami is a great sea wave produced by a significant undersea disturbance.

Urban Water Management Plan: As defined by the State Water Resources Control Board, Urban Water Management Plans (UWMP) are prepared by California's urban water suppliers to support their long-term resource planning and ensure adequate water supplies are available to meet existing and future water demands. Every urban water supplier that either provides over 3,000 acre-feet of water annually or serves more than 3,000 or more connections is required to assess the reliability of its water sources over a 38-year planning horizon considering normal, dry, and multiple dry years. This assessment is to be included in its UWMP, which are to be prepared every five years and submitted to the Department of Water Resources (DWR). DWR then reviews the submitted plans to make sure they have completed the requirements identified in the Urban Water Management Planning (UWMP) Act (Division 6 Part 2.6 of the Water Code §10610 - 10656).

Waters of the United States: Surface waters such as navigable waters and their tributaries, all interstate waters and their tributaries, natural lakes, all wetlands adjacent to other waters, and all impoundments of these waters.

Water Resources Plans (WRP): A Water Resources Plan (WRP) provides a comprehensive overview of water resources and demands in the region; an overview of the water resources portfolio, or available resources; the approach used for forecasting water demand; recommendations for demand management and strategy for meeting long-term resources needs, including a plan of action for times of declared shortages. A Water Resources Plan will normally include a discussion of the environmental issues that will influence future supply and demand.

3.9.1 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. The regulatory framework for hydrology and water quality has been limited to the combined study area, which consists of 42,677 parcels in unincorporated Los Angeles County with an area totaling approximately 285,500 acres, or approximately 450 square miles.

The proposed initiative is limited to the use of vacant undeveloped parcels whose zone permits single-family residential use. [7]

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 U.S. 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 industries and surface waters. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters,

[7] The term vacant refers to parcels identified as such by the County Assessor.

unless a permit were 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 an Onsite Wastewater Treatment System (OWTS), 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.

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. Responsibility for administering and enforcing Section 404 is shared by the U.S. Army Corps of Engineers (USACE) and EPA. USACE administers the day-to-day program, including individual permit decisions and jurisdictional determinations; develops policy and guidance; and enforces Section 404 provisions.

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.

Executive Order 11988, Flood Plain 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 USACE 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
- Restore and preserve the natural and beneficial values of the base floodplain

Development under 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.

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 will:

- 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 will be prepared. The Agreement includes reasonable conditions necessary to protect those resources and must comply with CEQA. The entity may proceed with the activity in accordance with the final Agreement.

California Water Code Section 13000 et seq.—Porter-Cologne Water Quality Control Act

Water quality in California is further regulated under the Porter-Cologne Water Quality Control Act. This law assigns responsibility for protection of water quality to the SWRCB, which is divided into nine statewide RWQCBs that enforce water quality standards. The area affected by the proposed initiative is subject to the jurisdiction of the Lahontan RWQCB and Los Angeles RWQCB.

Waters of the State are defined in Section 13050 of the Porter-Cologne Water Quality Control Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." Water quality criteria include the identification of beneficial uses, narrative and numerical water quality standards, and implementation procedures.

Section 13260 of the California Water Code states that persons discharging or proposing to discharge waste that could affect the quality of the waters of the State, other than into a community sewer system, shall file a Report of Waste Discharge (ROWD) with the appropriate RWQCB. Following the filing of a ROWD, if applicable, the RWQCB adopts Waste Discharge Requirements (WDR) specifying water quality limitations for the reported waste discharge. Pursuant to California Water Code 13267, a Monitoring and Reporting Program may be required by the RWQCB as a condition of the WDR.

The RWQCBs are authorized to issue WDRs specifying conditions for protection of water quality in Section 13263.

Urban Water Management Planning Act, Division 6 Part 2.6 of the Water Code §10610–10656

The California Urban Water Management Planning Act of 1983 (UWMP Act) requires all publicly or privately owned entities that serve water for municipal purposes to more than 3,000 service connections or serve more than 3,000 acre-feet of water per year to prepare an updated UWMP once every five years—either at the beginning or midpoint of each decade—to support long-term resource planning.

Regional

Water Quality Control Plan for the Lahontan Region

The LRWQCB 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 which 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 Basin 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 CWA.

- **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 for nonpoint 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 instream uses, such as recreation and fish habitat.
- **Enforcement**
  The Lahontan RWQCB and the nine Regional Water Quality Control Boards are responsible for swift and fair enforcement when the laws and regulations protecting our waterways are violated. The State Water Board 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 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 LARWQCB 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 stormwater control efforts
- Enforces water quality laws and regulations
- Authorizes Notices of Applicability pursuant to the General Construction Activity Storm Water Discharges

Stormwater discharges that are composed entirely of runoff from qualifying construction activities may be subject to regulation pursuant to the General Construction Activity Storm Water Permit issued by the SWRCB (Water Quality Order 99-08-DWQ).

Construction activities that are regulated pursuant to the General Construction Storm Water Permit include:

- Any construction or demolition activity, including, but not limited to: clearing, grading, grubbing, or excavation, or any other activity that results in a land disturbance of equal to or greater than one acre.
- Construction activity related to residential, commercial, or industrial development on lands currently used for agriculture including, but not limited to, the construction of buildings related to agriculture that are considered industrial pursuant to USEPA regulations, such as dairy barns or food processing facilities.
- Stormwater discharges from dredge spoil placement that occur outside of U.S. Army Corps of Engineers jurisdiction (upland sites) and that disturb one or more acres of land surface from construction activity.
- Construction projects that intend to disturb one or more acres of land that are subject to the jurisdiction of the USACE, pursuant to Section 404 of the CWA.

The evaluation of the proposed initiative would generate the need for compliance with the Construction General Permit, if the development of single-family residences would disturb greater than one acre of land.

Additionally, the proposed initiative would require the consideration of a Standard Urban Stormwater Management Plan (SUSMP) as part of compliance with the NPDES General Construction Activity Storm Water Permit to reduce water quality impacts to the maximum extent practicable. A SUSMP is a report that includes one or more site maps, an identification of construction activities that could cause pollutants to enter the stormwater, and a description of measures or BMPs to control these pollutants to the maximum extent practicable.

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;[8] the provisions of the element were updated, revised, combined, and included in the Public Facilities Chapter in the County Streamlined General Plan

[8] County of Los Angeles Department of Regional Planning. 1980. *County of Los Angeles General Plan, Water and Waste Management Element.* Los Angeles, CA.

(General Plan).[9] The Water Supply and Distribution section provides policy direction for water resources of the County.

Specifically, the General Plan[10] includes goals and policies to conserve water and protect water quality. Those that are relevant to the proposed project include:

Policy 1	Program water and sewer services extensions to be consistent with General Plan policies and to mitigate situations that pose immediate health and safety hazards.
Policy 16	Encourage development and application of water conservation, including recovery and reuse of storm and waste water.
Policy 21	Protect public health and prevent pollution of ground water through the use of whatever alternative is necessary.
Policy 24	Design flood control facilities to minimize alteration of natural stream channels.

1986 Antelope Valley Areawide General Plan

The Planning Area of the Antelope Valley Areawide General Plan, 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.[11]

Chapter V, *Policy Statements*, establishes the following policy relevant to utilities in consideration of the proposed initiative:

- **Policy 101.** Develop and use groundwater sources to their safe yield limits.
- **Policy 102.** Use imported water, when available, to relieve overdrafted groundwater basins and maintain their safe yield for domestic uses outside of urban areas.
- **Policy 103.** Encourage utilization of flood waters and re-claimed wastewater for groundwater recharge.
- **Policy 104.** Require a public or private sewerage system for land use densities which, if unsewered, would threaten nitrate pollution of groundwater, or where otherwise required by County regulations.
- **Policy 107.** Continue to use land use planning and control as a tool in Water Quality Management.

[9] County of Los Angeles Department of Regional Planning. January 1993. *County of Los Angeles Streamlined General Plan*. Los Angeles, CA.

[10] County of Los Angeles Department of Regional Planning. January 1993. *County of Los Angeles Streamlined General Plan*. Los Angeles, CA.

[11] Los Angeles County Department of Regional Planning. December 4, 1986. *Antelope Valley Areawide General Plan: A Component of the Los Angeles County General Plan*. PDF available online at: http://planning.lacounty.gov/assets/upl/data/pd_antelope-valley.pdf

- **Policy 109.** Prohibit expansion of existing structures (other than checkdams or other flood control facilities) in floodways.
- **Policy 110.** Require that all newly constructed residences and public facilities located in the flood fringe be suitably flood-proofed.
- **Policy 112.** Identify alignments and other needed improvements on the Antelope Valley Comprehensive Plan of Flood Control and Water Conservation for future flood control and water conservation facilities in urban areas.
- **Policy 114.** As an interim policy, pending construction of regional drainage facilities, require installation of appropriate systems and facilities to retain the increase in storm runoff due to development on the project site or equivalent mitigation measure.
- **Policy 133.** Protect the viability of surface water since it provides a habitat for fish and other water-related organisms, as well as being an important environmental component for land-based plants and animals.
- **Policy 148.** Protect and manage watershed areas to maximize water yield in combination with public needs for fire protection, maintenance of habitat and recreation.

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 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.

  None of the single-family residential parcels included in the proposed initiative will have access to treated wastewater systems. As a result, recycling of treated wastewater will not be applicable.

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.

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

- 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.

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.

3.9.2 AFFECTED ENVIRONMENT

Water Quality

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 Castaic Lake Water Agency (CLWA) is a public water wholesaler that provides about half of the water that Santa Clarita households and businesses use. CLWA operates three treatment plants, three pump stations, three storage facilities, and over 45 miles of transmission pipelines. The Santa Clarita Valley's available sources of drinking water include rivers, lakes, streams, ponds, reservoirs, springs, and wells. CLWA supplements local groundwater supplies with State Water Project water from Northern California. This water 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. The Castaic Lake Water Agency (CLWA) is a public water wholesaler that provides about half of the water that Santa Clarita households and businesses use. CLWA operates three treatment plants, three pump stations, three storage facilities, and over 45 miles of transmission pipelines. The Santa Clarita Valley's available sources of drinking water include rivers, lakes, streams, ponds, reservoirs, springs and wells. CLWA supplements local groundwater supplies with State Water Project water from Northern California. This water 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. Pollutants of concern include chloride, coliform, ammonia, nitrates, nitrites, and various organics. 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). The use of residential self-regenerating water softeners installed prior to 2003 is the most significant controllable source of chloride entering the community sewer system, accounting for approximately 30 percent of all chloride in the discharge.

Perchlorate contamination emanating from the former Whittaker-Bermite site in the central portion of the Valley has been detected in the Saugus formation, and to a lesser extent, in the Alluvium formation in the East Subbasin. In the 2005 Urban Water Management Plan (UWMP) for the Castaic Lake Water Agency, Chapter 5 and Appendix D, there has been extensive investigation of the extent of perchlorate contamination, which, in combination with groundwater modeling, has led to the current plan for integrated control of contamination migration and restoration of impacted pumping (well) capacity. USACE and Castaic Lake Water Agency (CLWA) performed a groundwater study in which multiple samples were collected from points around the basin and tested for contaminants. Results from this sampling aided USACE in determining the extent of the contaminant plume. Additionally, CLWA is planning to implement single-pass ion exchange to remove perchlorate from the impacted wells.

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 Santa Clara River Groundwater basin was not found to be in overdraft in the Groundwater Management Plan. The groundwater levels within this basin fluctuate due to the natural composition of the basin; therefore, the safe yield for this basin varies by season.

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 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 California Regional Water Quality Control Board, Los Angeles Region (Regional Board) has developed the Lake Elizabeth, Lake Hughes and Munz Lake Trash TMDL to attain the water quality standards for trash in Lake Elizabeth, Munz Lake, and Lake Hughes in the Santa Clara River Watershed (see Figure 3.9.2-1, *Blue Lines and Impaired Water Bodies*; Figure 3.9.2-2, *Blue-Line Drainages with 303(d) Water Bodies within the Vicinity of the Lake Hughes/Gorman/West of Lancaster Subarea*, Figure 3.9.2-3, *Blue-Line Drainages with 303(d) Water Bodies within the Vicinity of Castaic/Santa Clarita/Agua Dulce Subarea*). 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.

LA County's SUSMP was used to determine the proposed initiative study area water quality impact. The rainfall depth for the Palmdale Federal Aviation Administration Airport, Gage 750, was used to estimate the 85th percentile storm depth, per LA County's Spatial Distribution Analysis of the 85th Percentile 24-hr Rainfall. A total depth of 0.48 inches is used as the 85th percentile 24-hour rainfall depth for the parcels. The total runoff volume as required by LA County's SUSMP is listed in Table 3.9.2-1, *Hydrology Results for 85th Percentile of Storm Event*.

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

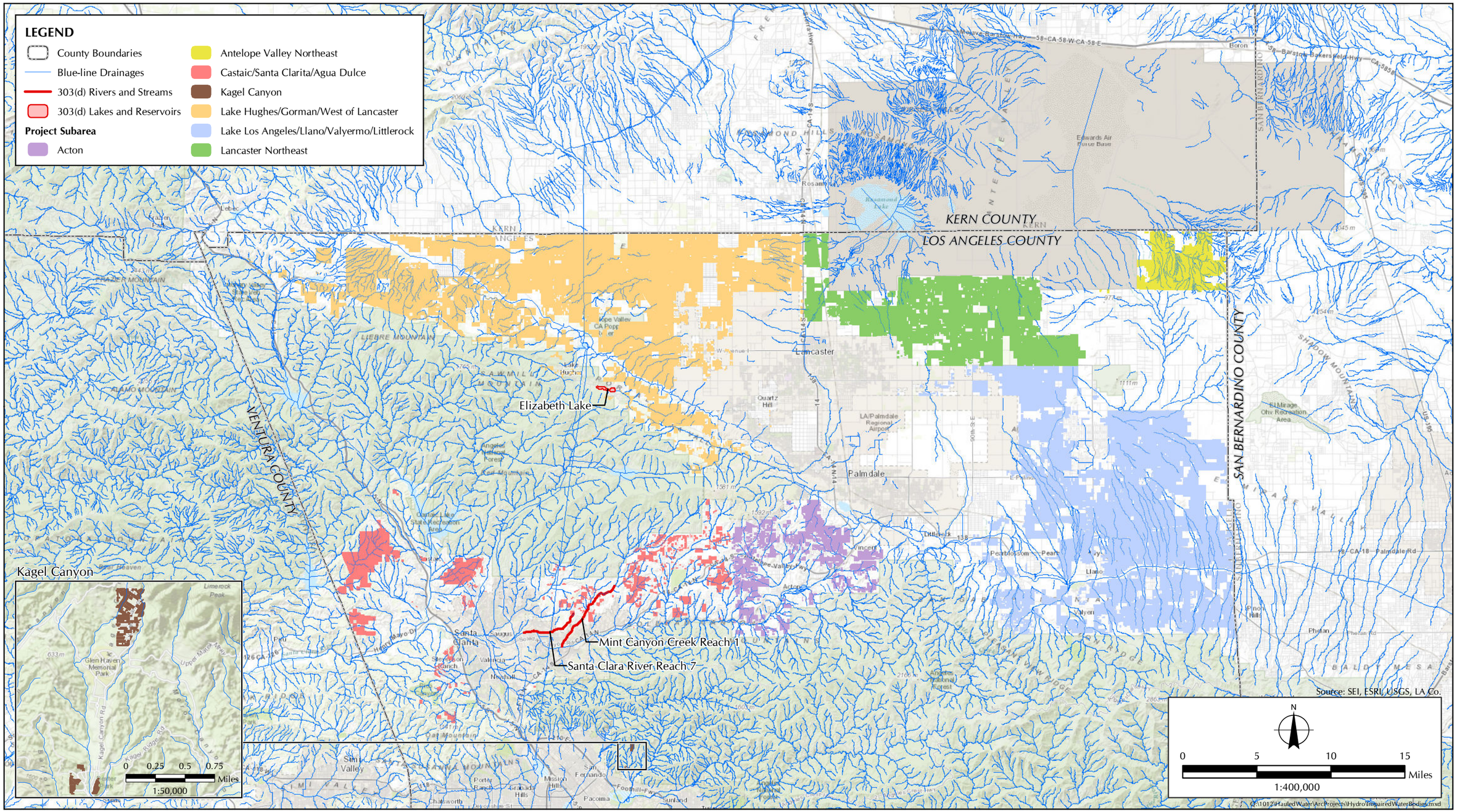

FIGURE 3.9.2-1

Blue-line Drainages and Impaired Water Bodies

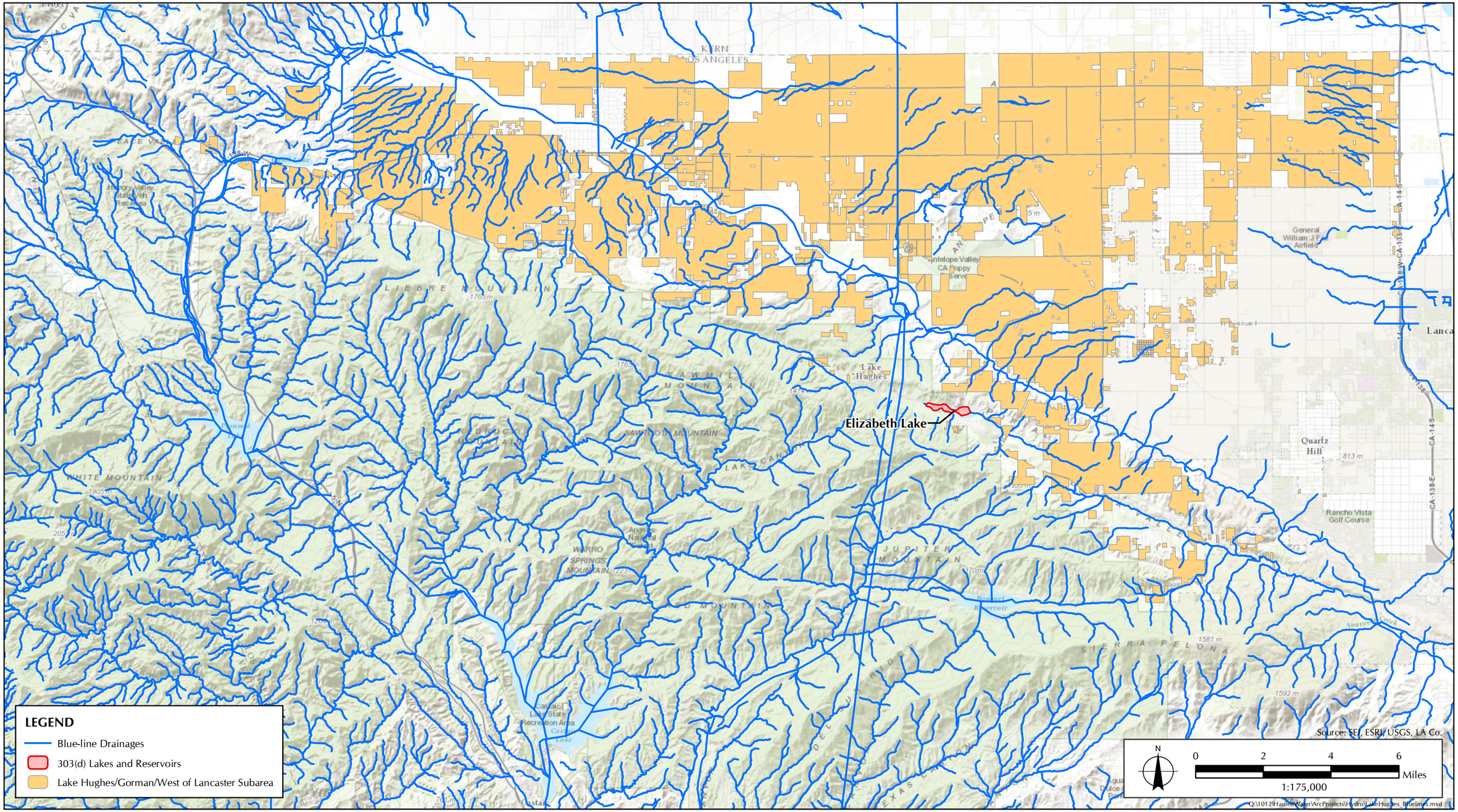

FIGURE 3.9.2-2

Blue-line Drainages with 303(d) Water Bodies within the Vicinity of the Lake Hughes/Gorman/West of Lancaster Subarea

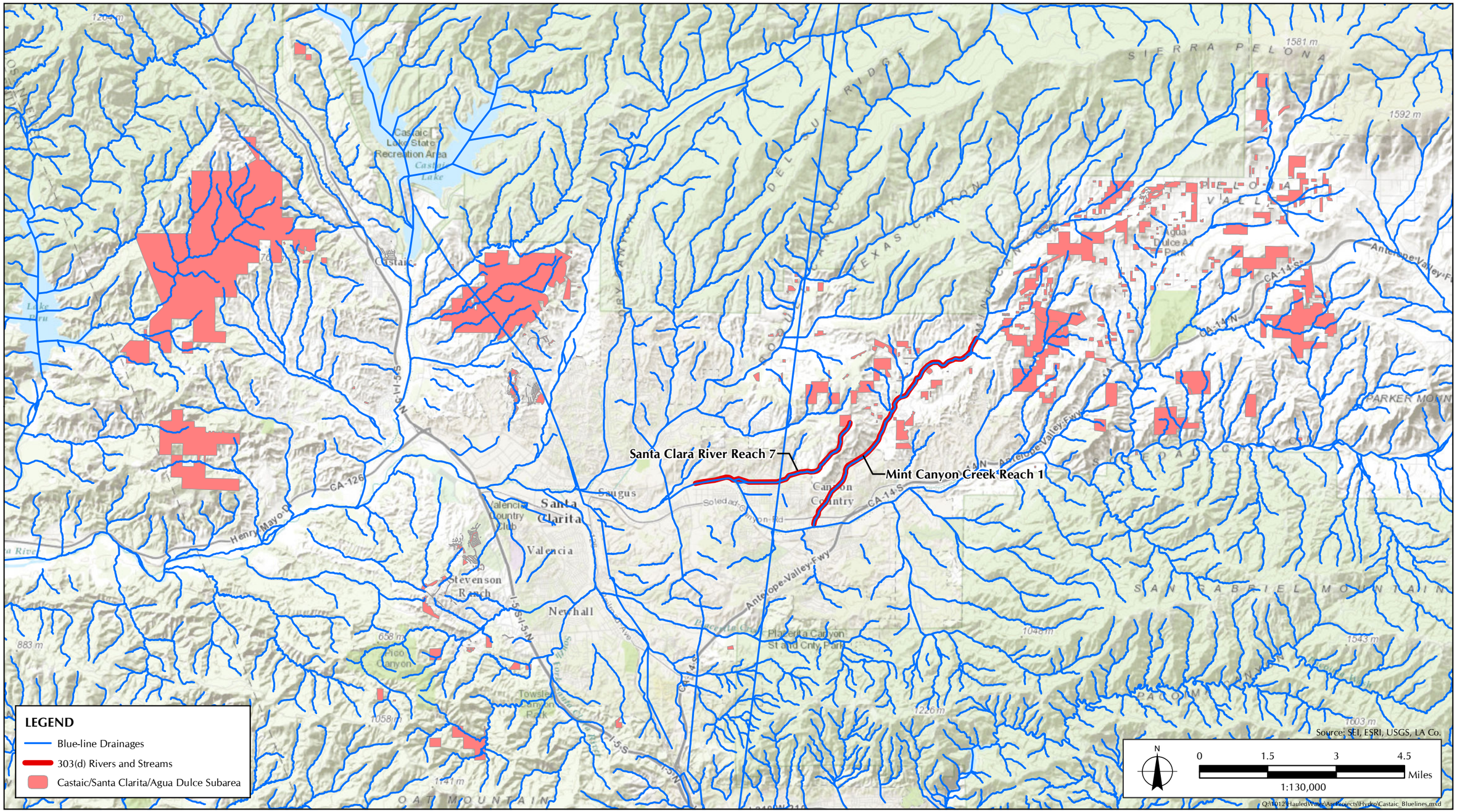

FIGURE 3.9.2-3

Blue-line Drainages with 303(d) Water Bodies within the Vicinity of the Castaic/Santa Clarita/Agua Dulce Subarea

TABLE 3.9.2-1
HYDROLOGY RESULTS FOR 85TH PERCENTILE OF STORM EVENT

	Storm	Rainfall Depth (in)	Time of Concentration (min)	Peak Flow Rate cfs	24-Hour Runoff Volume ac-ft
Pre-Development	85th Percentile	0.48	30	0.14	0.05
Post-Development			30	0.22	0.07

In general, the development of a single-family residence in the unincorporated territory of Los Angeles County will increase a parcel's runoff volume by 0.02 ac-ft. Increased runoff from individual properties combined with typical pollutants generated on residential land uses could result in water quality impacts.

Groundwater

There are three major groundwater basins underlying the Santa Clarita planning area; the Santa Clara River Valley Groundwater Basin, East Subbasin, the Acton Valley Groundwater Basin, and the Antelope Valley Groundwater Basin. The East Subbasin encompasses the upper Santa Clara River Valley and is comprised 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 OWTS, and treated effluent from water reclamation plants. As stated in the Groundwater Management Plan in Appendix G of Santa Clarita's 2010 UWMP, East Subbasin is not in overdraft.

Table 3-6 of the 2010 Santa Clarita UWMP shows that groundwater production increased between 2005 and 2009. A total of 45,101 acre-feet (AF) of groundwater was pumped from the basin in 2005 and a total of 47,664 AF was extracted in 2009. The historical groundwater production volumes are within the planned volumes for a normal year. For a normal year, the groundwater production volume is expected to be between 37,500 and 55,000 AF.

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 Acton Valley Groundwater 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 OWTS. 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 Upper Santa Clara River Integrated Regional Water Master Plan does not state that this basin is in overdraft, but groundwater levels have been in decline since the 1980s.

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 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.

Runoff in Big Rock and Little Rock Creeks from the San Gabriel Mountains and in Cottonwood Creek from the Tehachapi Mountains flows toward a closed basin at Rosamond Lake. Rogers Lake is a closed basin in the northern part of Antelope Valley that collects ephemeral runoff from surrounding hills. Average annual rainfall ranges from 5 to 10 inches.

From 1975 through 1998, groundwater level changes ranged from an increase of 84 feet to a decrease of 66 feet. The parts of the Antelope Valley Groundwater Basin with declining water levels are along the Highway 14 corridor from Palmdale through Lancaster to Rosamond and surrounding Rogers Lake on Edwards Air Force Base. Historically, groundwater in the Antelope Valley Groundwater Basin flowed north from the San Gabriel Mountains and south and east from the Tehachapi Mountains toward Rosamond Lake, Rogers Lake, and Buckhorn Lake. These dry lakes are places where groundwater can discharge by evaporation. Because of recent groundwater pumping, groundwater levels and flow have been altered in urban areas such as Lancaster and Edwards Air Force Base. Groundwater pumping has caused subsidence of the ground surface as well as earth fissures to appear in Lancaster and on Edwards Air Force Base. By 1992, 292 square miles of Antelope Valley had subsided more than one foot. This subsidence has permanently reduced aquifer-system storage by about 50,000 acre-feet. As a result of land subsidence, a maximum yield of 110,000 acre-feet per year has been established for this basin.[14] Fifty thousand acre-feet is approximately 16.29 billion gallons of water. Impact to an average household based on 50,000 acre-feet: According to the EPA, WaterSense; an average American family of four uses about 400 gallons a day and about 146,000 gallons of water per year. A 50,000 acre-foot reduction in the Antelope Valley Groundwater Basin would significantly impact approximately 110,000 homes dependent on this aquifer.

The proposed initiative study does not account for the construction of new groundwater pumping wells within the study area, as the proposed initiative does not authorize the construction or development of groundwater wells. Although the proposed initiative does not authorize the development of new wells, the proposed initiative may create a demand that would result in the development of wells by public or private entities, the approval of which would be subject to environmental review pursuant to the California Environmental Quality Act. Commercial water purveyors are regulated by the State Water Resources Control Board, and a conditional use permit is required by Los Angeles County. Development of groundwater for sale constitutes a commercial water purveyor that is subject to State and County regulation. Development of groundwater wells in Los Angeles County for on-site use is also subject to a permit by the County of Los Angeles Department of Public Health. Under the proposed initiative 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

[14] Antelope Valley-East Kern Water Agency, 2010. *2010 Urban Water Management Plan.*

groundwater use projections in their 2010 UWMPs and none of the water districts rely solely on groundwater as its main water supply.

LA County Water Works District (LACoWWD) 40 pumps groundwater from Antelope Valley Groundwater Basin, which is in the process of being adjudicated. LACoWWD 40 plans to have a consistent groundwater supply of 23,200 acre-feet per year (AFY) that accounts for 28 percent of its total water supply. The majority of LACoWWD 40's water supply is obtained through imports from the State Water Project (SWP).

Groundwater accounts for approximately 40 percent of Metropolitan Water District's (MWD) local water supply. In MWD's 2010 UWMP, it describes programs to increase groundwater recovery. It is projected that the supply during an average weather year from groundwater recovery will increase from between 2015 and 2035.

Palmdale Water District (PWD) pumps groundwater from the Antelope Valley Groundwater Basin, but does not have entitlements to the basin since it is not adjudicated. Claims were filed to have the basin adjudicated in 2004, but full adjudication of the basin has not yet occurred. PWD projects to increase its groundwater pumping from 8,000 AFY to 12,000 AFY by 2015. The Los Angeles Department of Water and Power is also a major landowner in the northern part of the Hydrologic Region and controls rights to much of the water draining the eastern Sierra Nevada. According to 2000 census data, the South Lahontan HR is home to about 530,000 people, or 1.6 percent of the state's population. The major population centers are in the southern part of the HR and include Palmdale, Lancaster, Victorville, Apple Valley, and Hesperia. The EPA lists 13 sites of contamination in this HR. Of these, three military installations in the Antelope Valley and Mojave River Valley groundwater basins are federal Superfund sites because of VOCs and other hazardous contaminants.

Given that the proposed initiative will increase overall water demand, and Antelope Valley-East Kern Water Agency (AVEK) projects shortages in SWP water deliveries during dry years, it is possible that groundwater extraction could be increased by one or more districts to sell that water to the water haulers. This impact can be mitigated if the Project's water supplies are obtained from water agencies with water supply surpluses other than groundwater.

Based on review of 2010 UWMPs of Antelope Valley, the Los Angeles County Department of Waterworks District Number 40 indicates a possible overdraft of the Antelope Valley Groundwater Basin due to unresolved ground water rights adjudication process.
Since the Antelope Valley Groundwater Basin is in the process of adjudication, its 2010 UWMP projected groundwater supplies are based on existing entitlements. The projected amount of available groundwater is subject to change once the basin adjudication is complete and could impact the water districts' projected supplies. Some agencies, such as MWD, in 2010, were predicting surplus water supplies. Others, such as AVEK, were predicting shortages. Contracts with surrounding water districts could potentially be developed by water haulers to include development in the proposed initiative study area.

Drainage Patterns and Erosion and Siltation

The proposed initiative area is located in a dry area and experiences minimal rainfall throughout the year. A total of 4.0 inches and a monthly average of 0.61 inches of rainfall were recorded at the Palmdale Central weather station from June 2013 to May 2014. The Santa Clarita weather station recorded a total rainfall of 3.7 inches and an average rainfall of 0.31 inches from August 2013 to

July 2014.The proposed initiative study area is comprised of a distributed development pattern of generally non-adjoining parcels. Therefore, increases in impervious surface will be distributed throughout the Project Area and not concentrated in one location. Therefore, increases in peak flow due to increased imperviousness will not be concentrated in a single stream or location.

The parcel data provided to HDR by Sapphos Environmental was used to determine the characteristics of a general parcel. Additional data on impervious percentage, rainfall depth, and soil type were found from Los Angeles County Hydrology Manual. Assumptions reflected in the hydrology calculations presented in Table 3.9.2-2, *Hydrology Calculations Input* and Table 3.9.2-3, *Rainfall* Depth, are provided below:

- Average size of a parcel within the Project is 6.69 acres
- Average length of a parcel is 1,899 feet (ft)
- Slope of 0.02 ft/ft was used as the average flow slope of a parcel
- Soil Type of 120 for Antelope Valley was used, per Appendix C of LA County Hydrology Manual
- Impervious Percentage, per Appendix D of LA County Hydrology Manual
  - Pre-Development: Vacant Undifferentiated 10%
  - Post-Development: Low Density Residential 21%

TABLE 3.9.2-2
HYDROLOGY CALCULATIONS INPUT

	Area	Length (ft)	Slope (ft/ft)	Soil Type	Impervious Percentage	Fire Factor
Pre-Development	6.69	1,899	0.1	120	10	1
Post-Development	6.69	1,899	0.1	120	21	1

TABLE 3.9.2-3
RAINFALL DEPTH

Storm	Rainfall Depth (in)
2 year/ 24 hour	1.00
5 year/ 24 hour	1.90
10 year/ 24 hour	2.20
25 year/ 24 hour	2.80
50 year/ 24 hour	3.00

NOTE: Rainfall depths obtained from LA County Hydrology Rainfall Data.

LA County's Modified Rational Method was used to calculate the peak flow rate and runoff volume for a generic parcel pre- and post-development. The results of the hydrologic analysis are presented in Table 3.9.2-4, *Hydrology Calculations Results*.

TABLE 3.9.2-4
HYDROLOGY CALCULATIONS RESULTS

	Storm	Time of Concentration (min)	Peak Flow Rate (cfs)	24-Hour Runoff Volume (ac-ft)
Pre-Development	2 year	30	0.31	0.10
Post-Development		30	0.47	0.15
Pre-Development	5 year	30	0.59	0.19
Post-Development		30	0.89	0.28
Pre-Development	10 year	30	0.69	0.22
Post-Development		30	1.03	0.33
Pre-Development	25 year	30	1.06	0.28
Post-Development		30	1.45	0.42
Pre-Development	50 year	30	1.29	0.30
Post-Development		30	1.70	0.45

Based on the analysis, there will be increased peak flows from each parcel due to the proposed initiative. This can result in increased soil erosion in undeveloped areas and increased sedimentation of local receiving waters. This impact could be potentially significant in the absence of mitigation. Typical mitigation measures to reduce this impact could include 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. Further analysis is recommended to assess the cumulative effect of development within the proposed initiative study area and the mitigation measures that could be implemented.

There are approximately 6,567 parcels within the proposed initiative study area that would intersect existing drainage patterns (see Figure 3.9.2-1; Table 3.9.2-5, *Parcels with Blue-Line Drainages*).

TABLE 3.9.2-5
PARCELS WITH BLUE-LINE DRAINAGES

Subarea	Number of Parcels Intersected by Blue-lines
Acton	352
Castaic/Santa Clarita/Agua Dulce	481
Antelope Valley Northeast	1,109
Kagel Canyon	43
Lake Hughes/Gorman/West of Lancaster	1,711
Lake Los Angeles/Llano/Valyermo/Littlerock	2,432
Lancaster Northeast	439
Total	**6,567**

Existing or Planned Stormwater Conveyance Systems

There are no existing stormwater drainage facilities in the initiative study area. 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 384 building permits per year, the

proposed initiative would likely result in 1,344 additional people per year over an estimated 20-year period of time, or up to 26,880 additional people total from the single-family residential development over the 20-year planning period It is estimated that 3,441acre-feet will be developed based on a potential for 7,680 building permits to be issued over 20 years. 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

The National Flood Insurance Program administered by the Federal Emergency Management Agency (FEMA) has grouped the subareas according to Flood Hazards (see Table 3.9.2-6, *FEMA Flood Insurance Hazard Zones*; Figure 3.9.2-4, *100-Year Flood Zones;* Figure 3.9.2-5, *Flood Zones within the Vicinity of the Acton Subarea;* Figure 3.9.2-6, *Flood Zones within the Vicinity of the Castaic/Santa Clarita/Agua Dulce Subarea;* Figure 3.9.2-7, *Flood Zones within the Vicinity of the Antelope Valley Northeast Subarea;* Figure 3.9.2-8, *Flood Zones within the Vicinity of the Kagel Canyon Subarea;* Figure 3.9.2-9, *Flood Zones within the Vicinity of the Lake Hughes/Gorman/West of Lancaster Subarea;* Figure 3.9.2-10, *Flood Zones within the Vicinity of the Lake Los Angeles/Llano/Valyermo/Little Rock Subarea;* Figure 3.9.2-11, *Flood Zones within the Vicinity of the Lancaster Northeast Subarea*). 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).

Seiche, Tsunami, or Mudflows

The proposed initiative study area does not fall within a County of Los Angeles inundation and tsunami hazard area (Figure 3.9.2-12, *Tsunami Inundation within Los Angeles County*).[15] 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 mean sea level (MSL) in the Kagel Canyon and southern portions of the Castaic / Santa Clarita subareas respectively (Figure 1.4-10, *Topographic Map*). The Castaic Reservoir is within the initiative study area, and approximately 34 parcels are downslope from the Castaic reservoir, which is capable of creating a seiche[16] (Figure 3.9.2-13, *Seiche Inundation within the Vicinity of the Castaic/Santa Clarita/Agua Dulce Subarea*). Some parcels within the initiative study area are located in an area of potential mudflow (Figure 3.9.2-14, *Landslide Incident and Susceptibility*; Table 3.9.2-7, *Landslide Incidence and Susceptibility by Subarea*).

[15] City of Los Angeles, General Plan Safety Element, Inundation and Tsunami Hazard Areas,, Exhibit G, March 1994.

[16] U.S. Geological Survey. 1981. *7.5-Minute Series, Los Angeles, California, Topographic Quadrangle*. Reston, VA

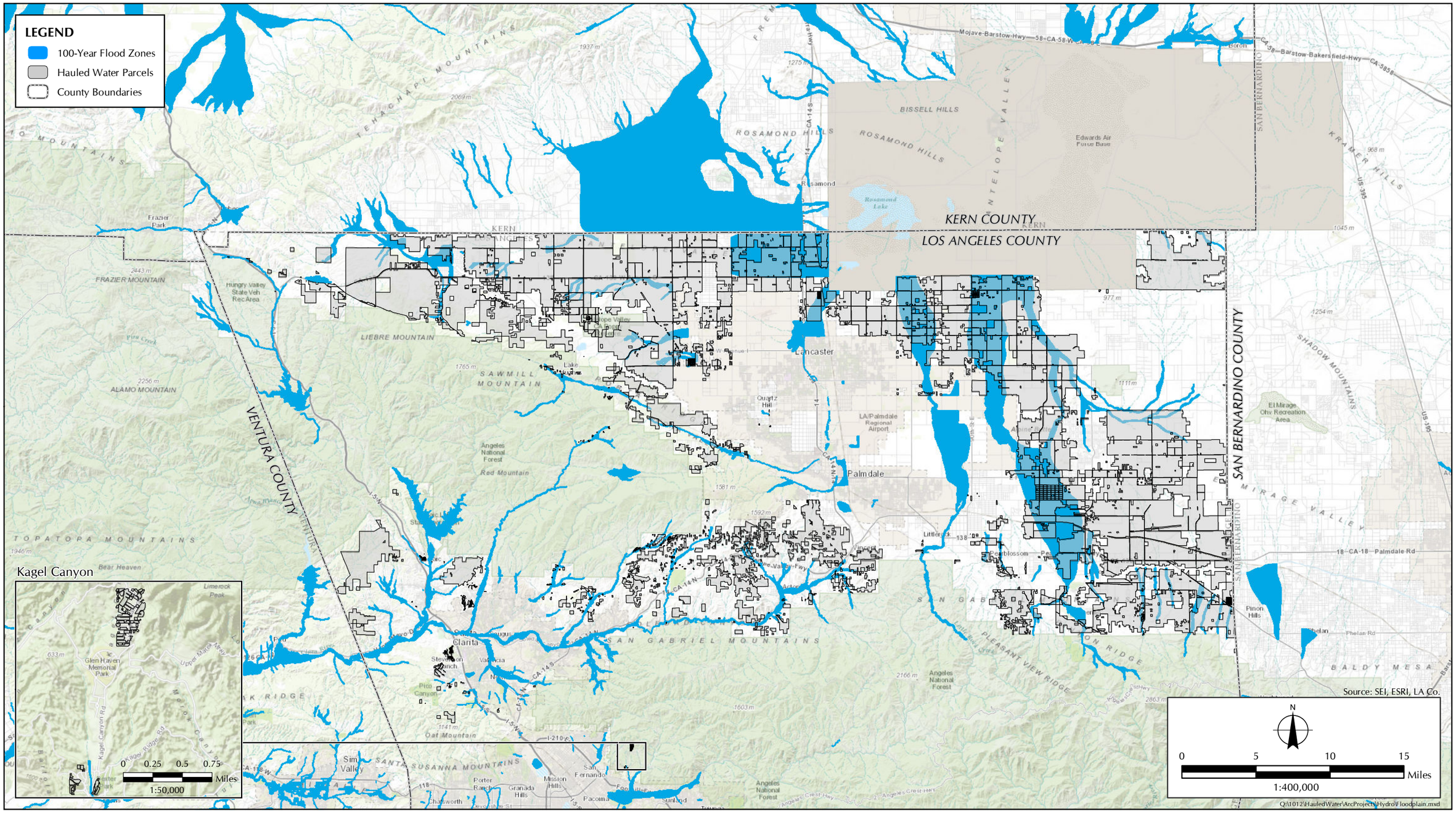

FIGURE 3.9.2-4

100-Year Flood Zones

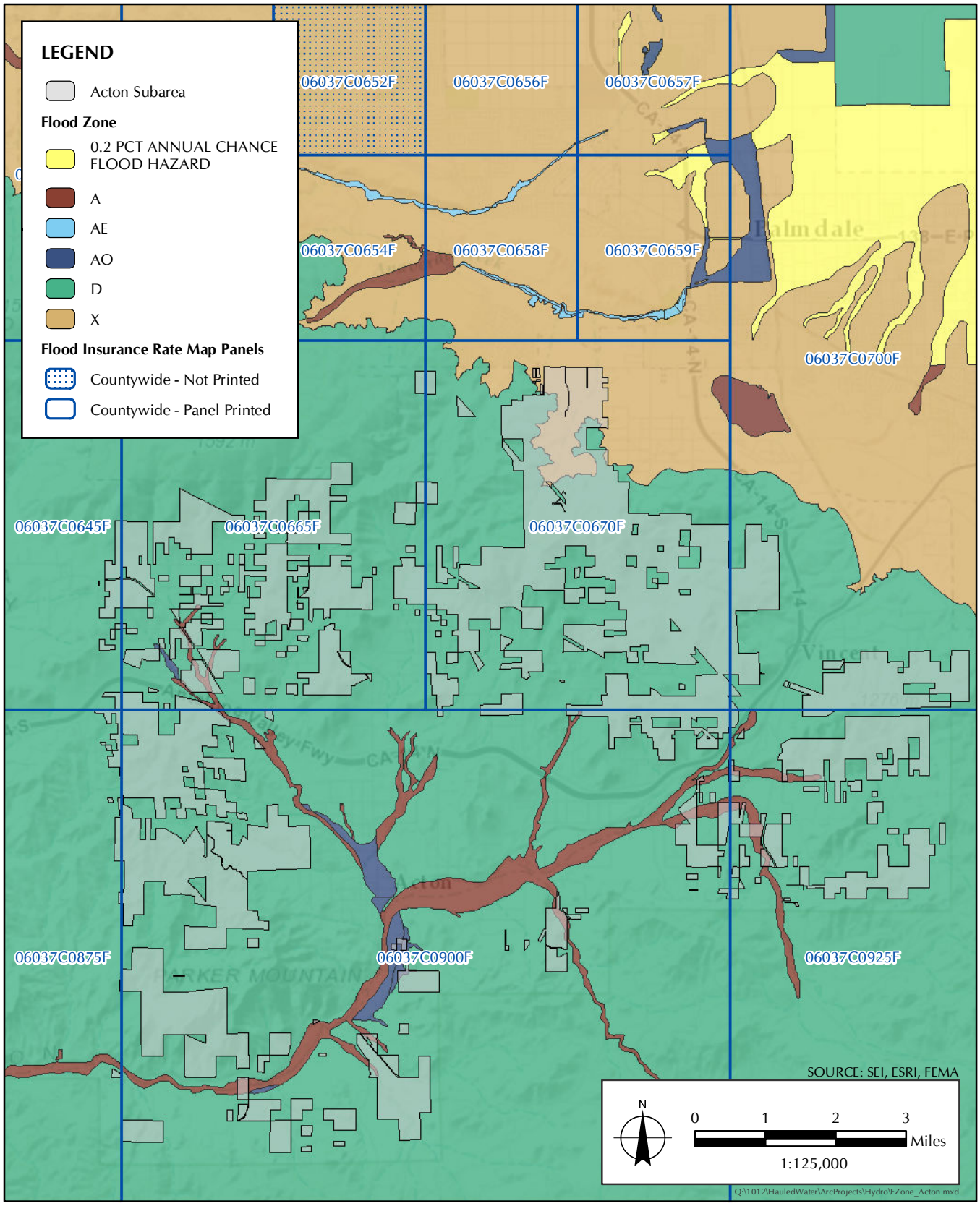

FIGURE 3.9.2-5

Flood Zones within the Vicinity of the Acton Subarea

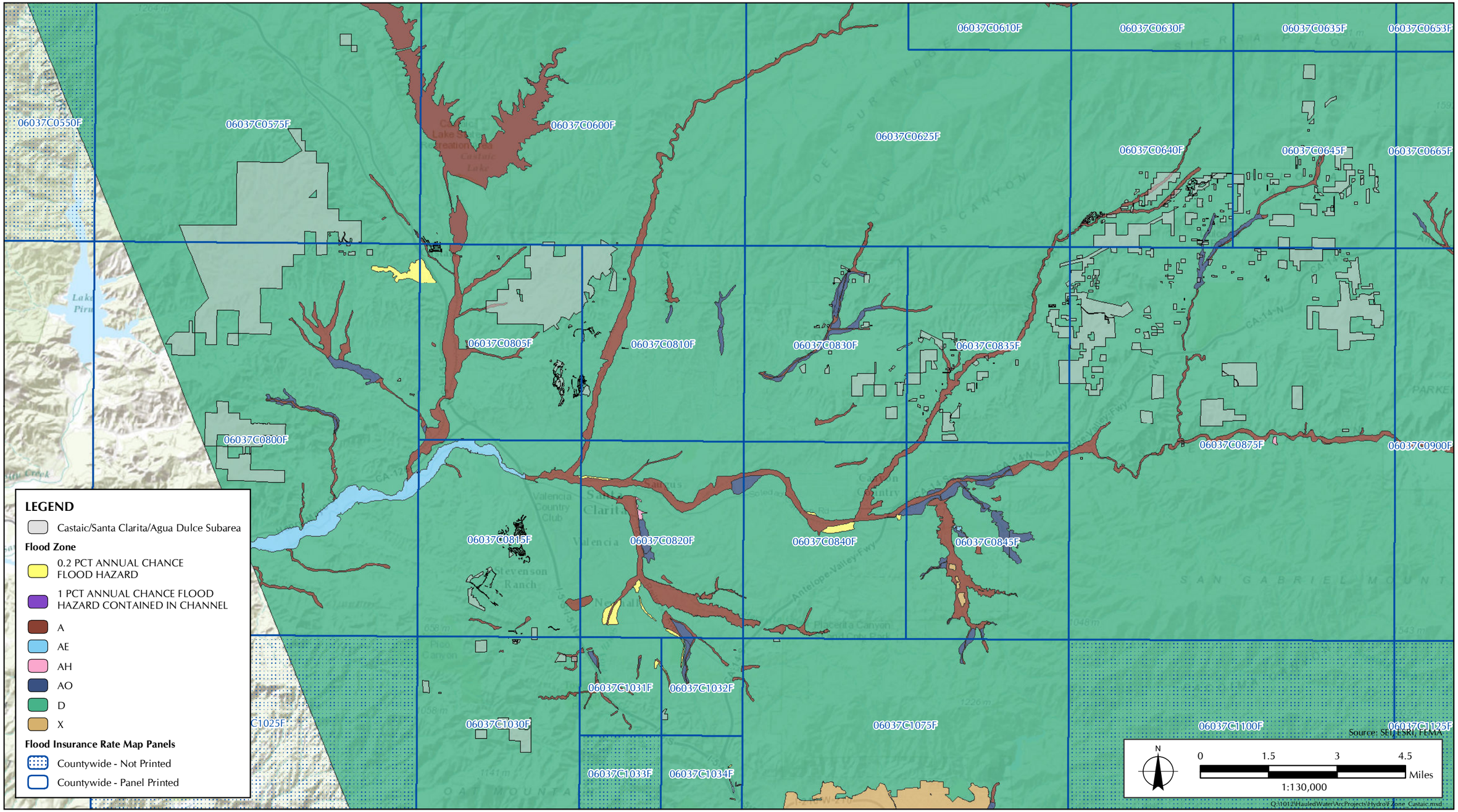

FIGURE 3.9.2-6

Flood Zones within the Vicinity of the Castaic/Santa Clarita/Agua Dulce Subarea

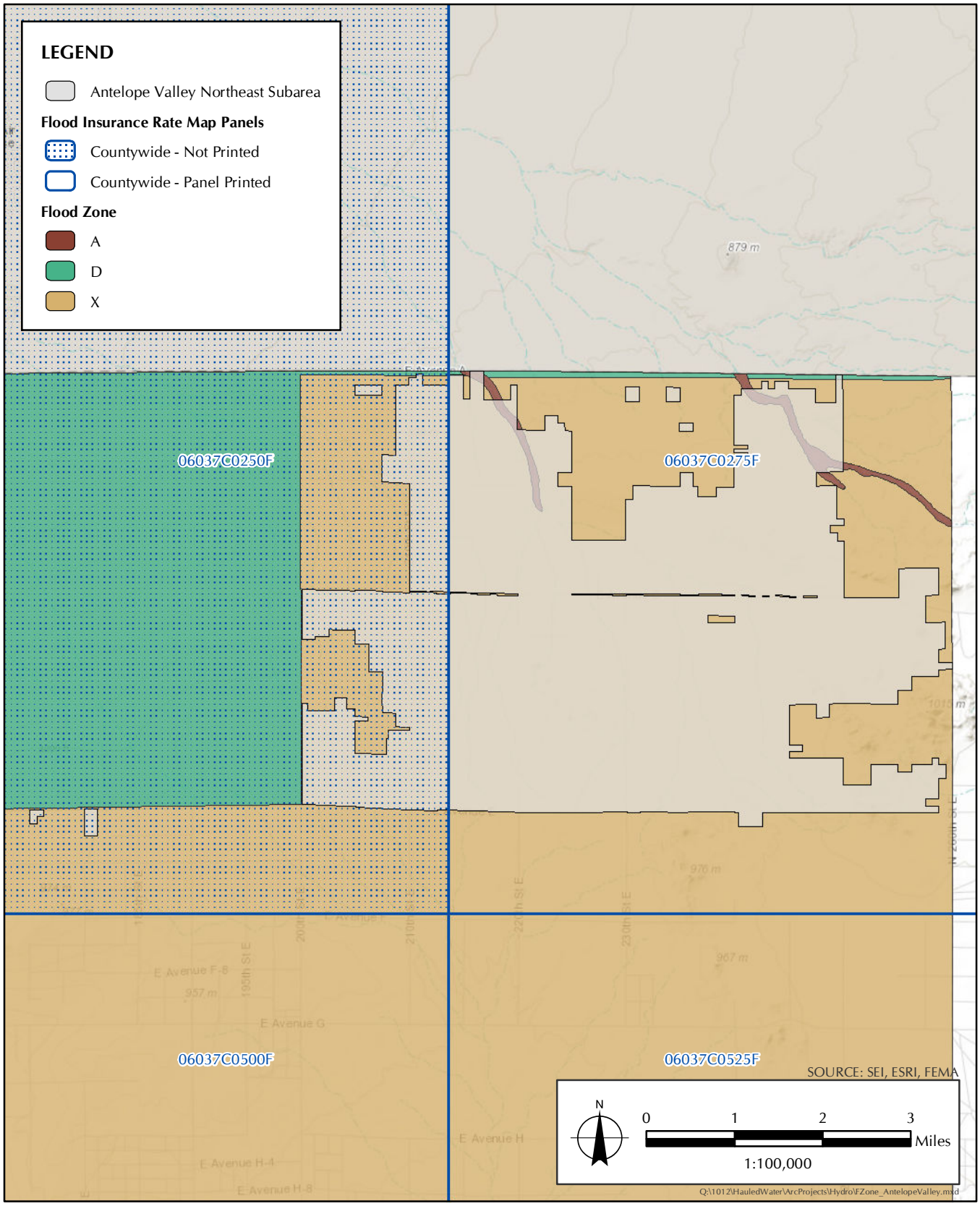

FIGURE 3.9.2-7

Flood Zones within the Vicinity of the Antelope Valley Northeast Subarea

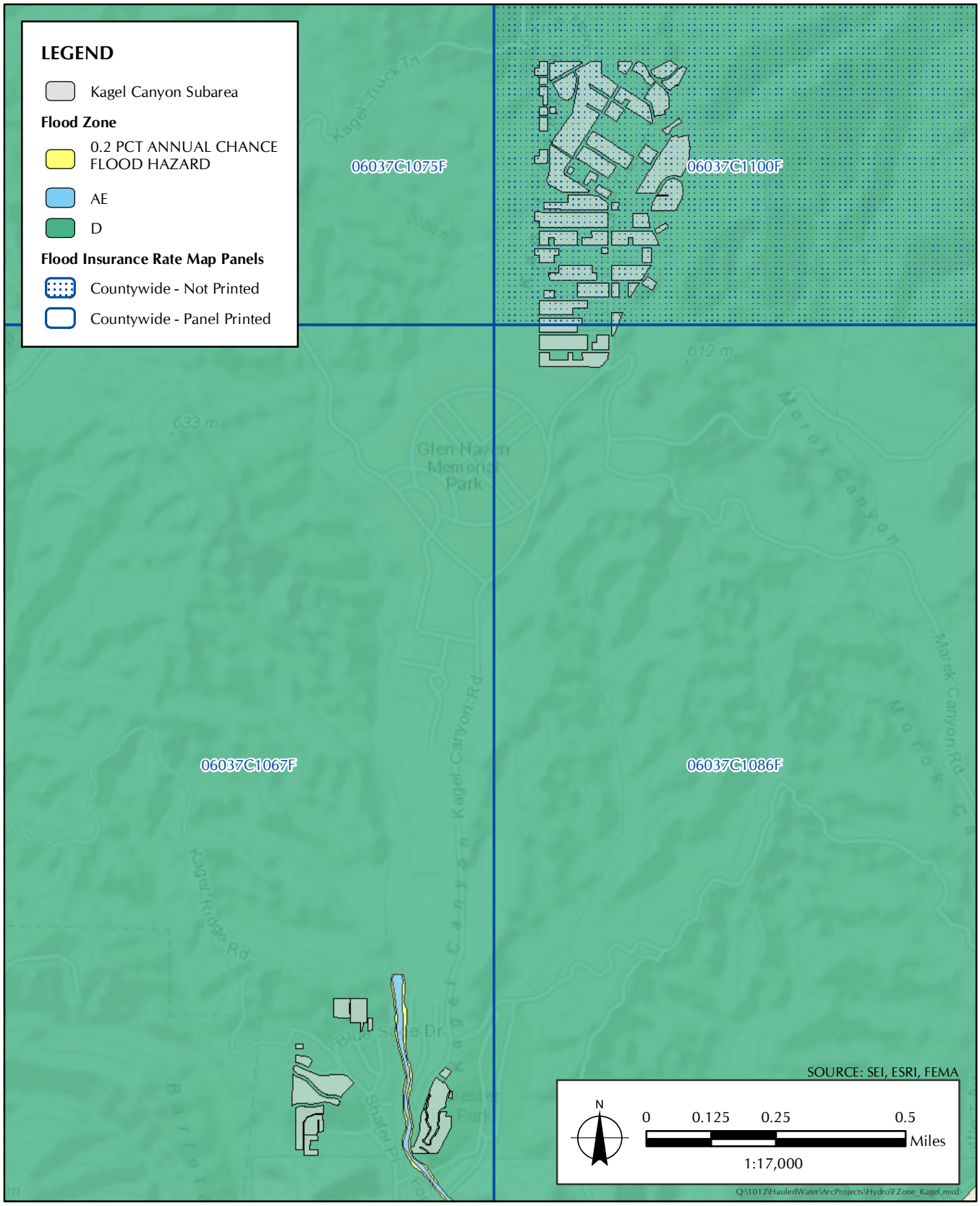

FIGURE 3.9.2-8

Flood Zones within the Vicinity of the Kagel Canyon Subarea

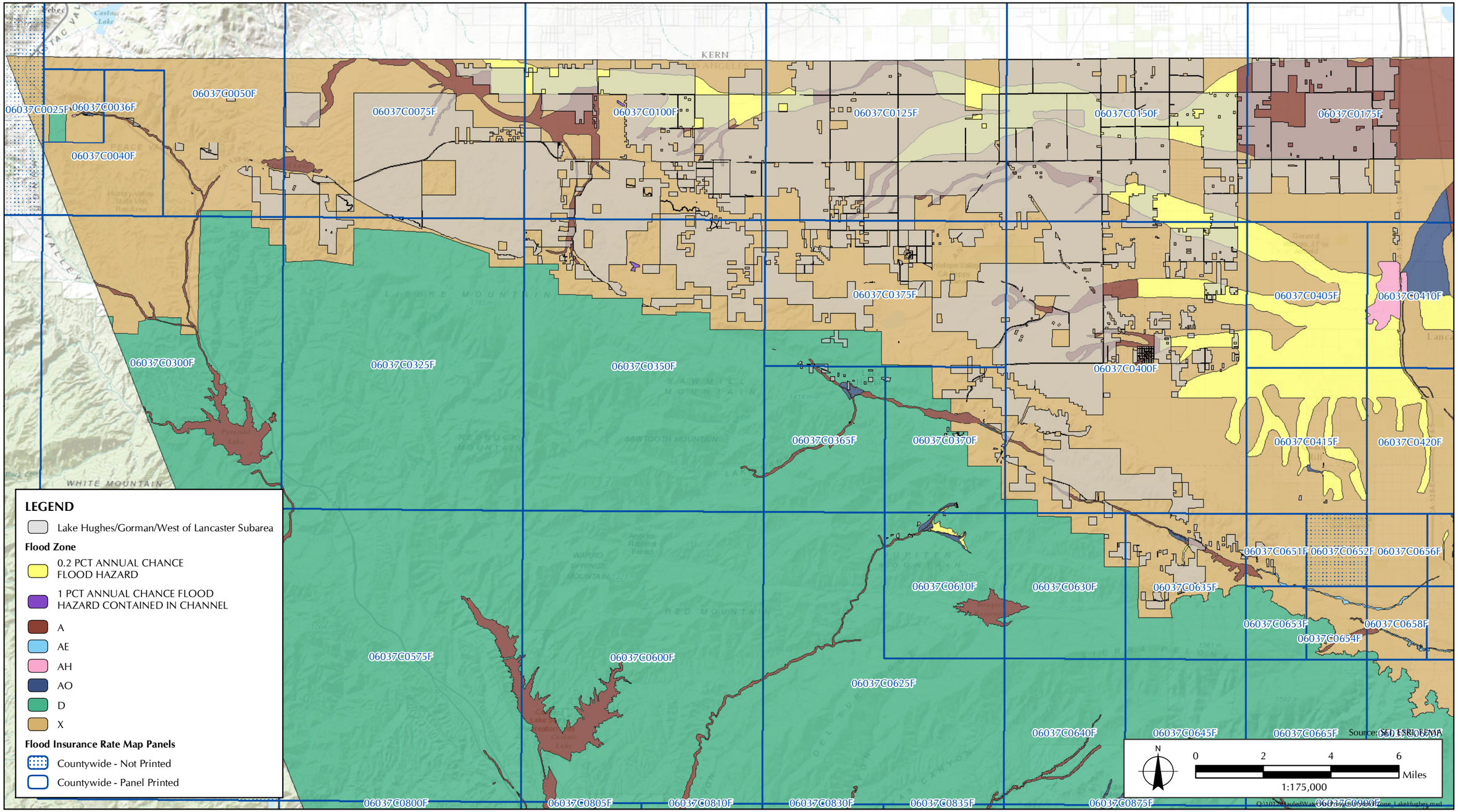

FIGURE 3.9.2-9

Flood Zones within the Vicinity of the Lake Hughes/Gorman/West of Lancaster Subarea

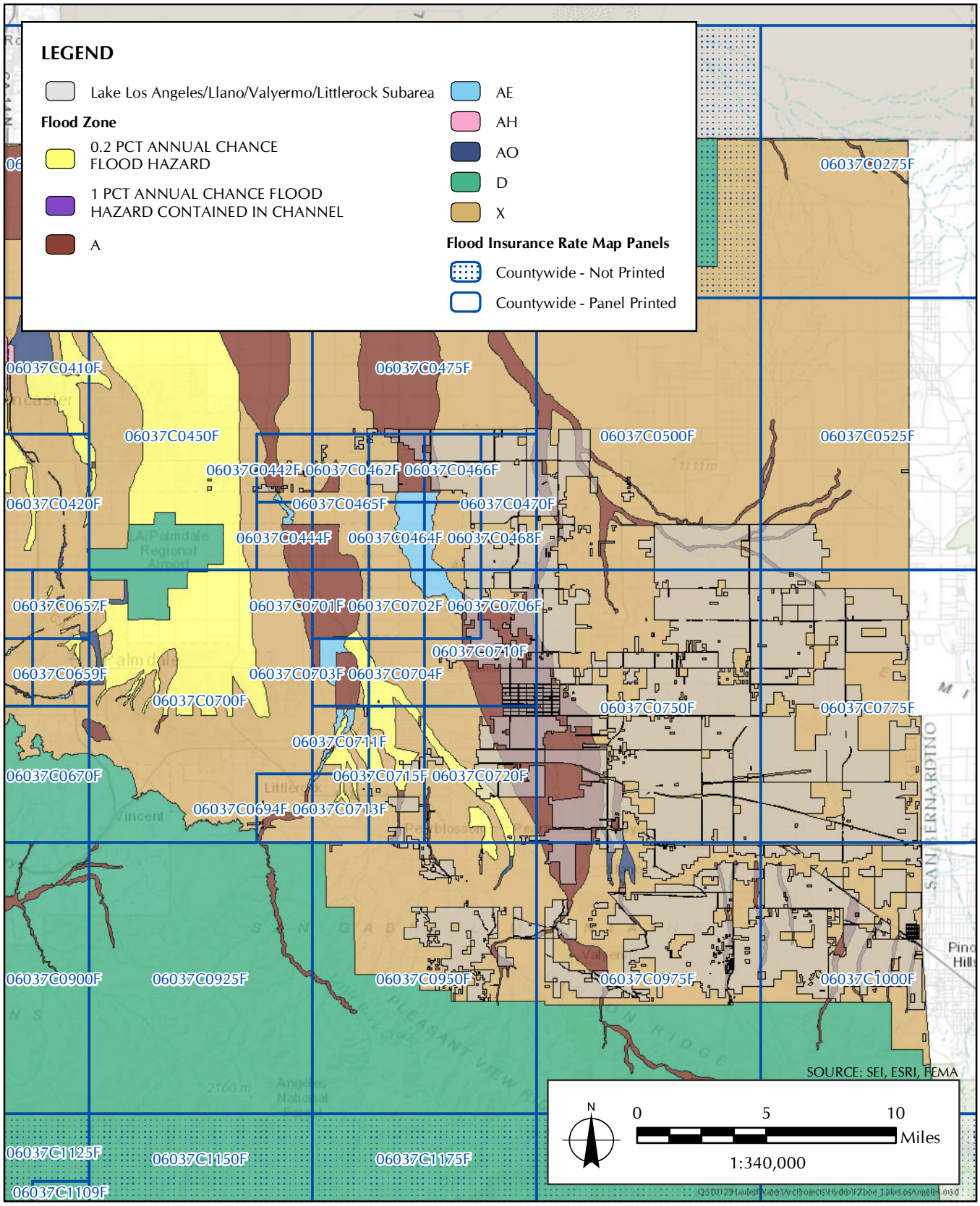

FIGURE 3.9.2-10

Flood Zones within the Vicinity of the Lake Los Angeles/Llano/Valyermo/Littlerock Subarea

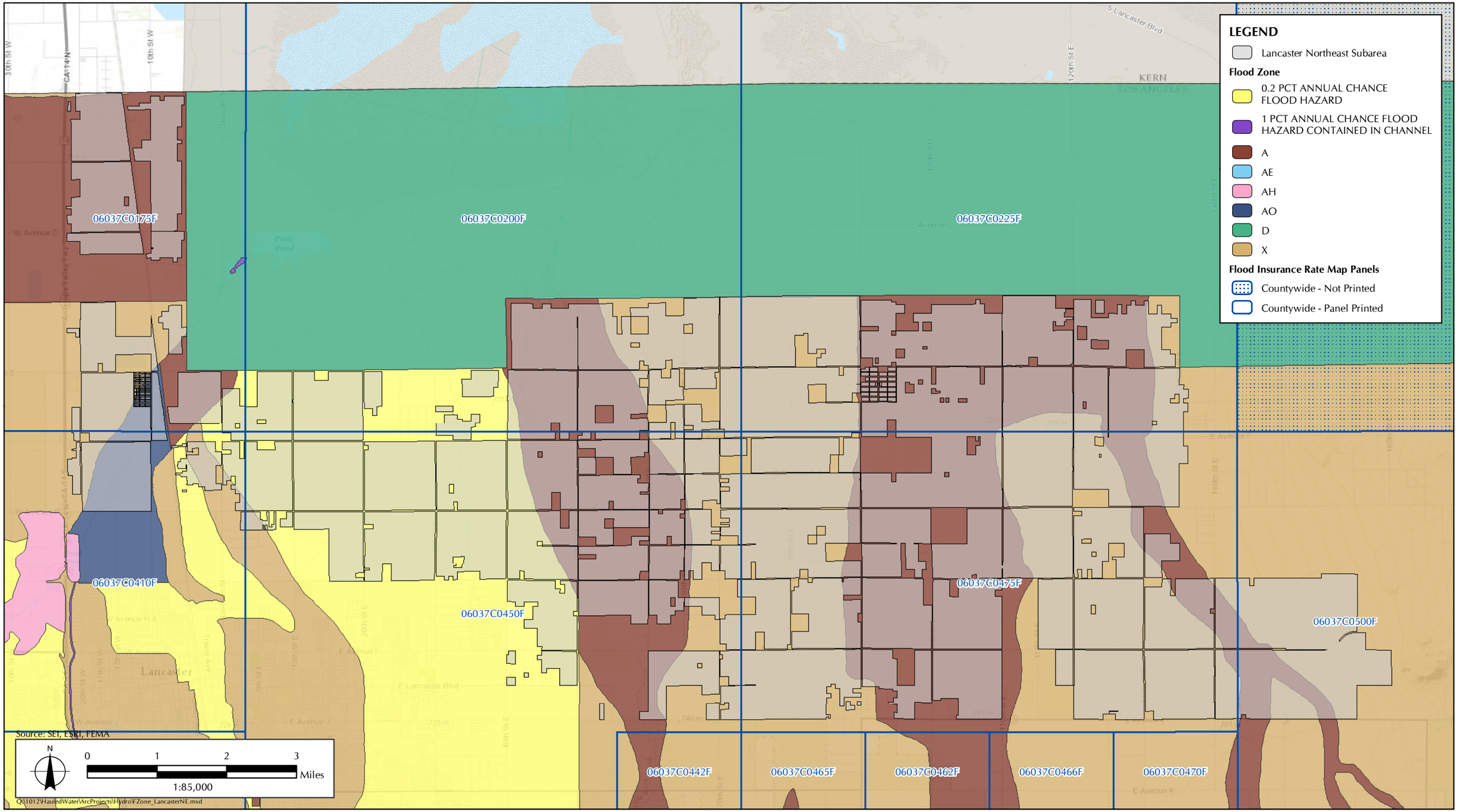

FIGURE 3.9.2-11

Flood Zones within the Vicinity of the Lancaster Northeast Subarea

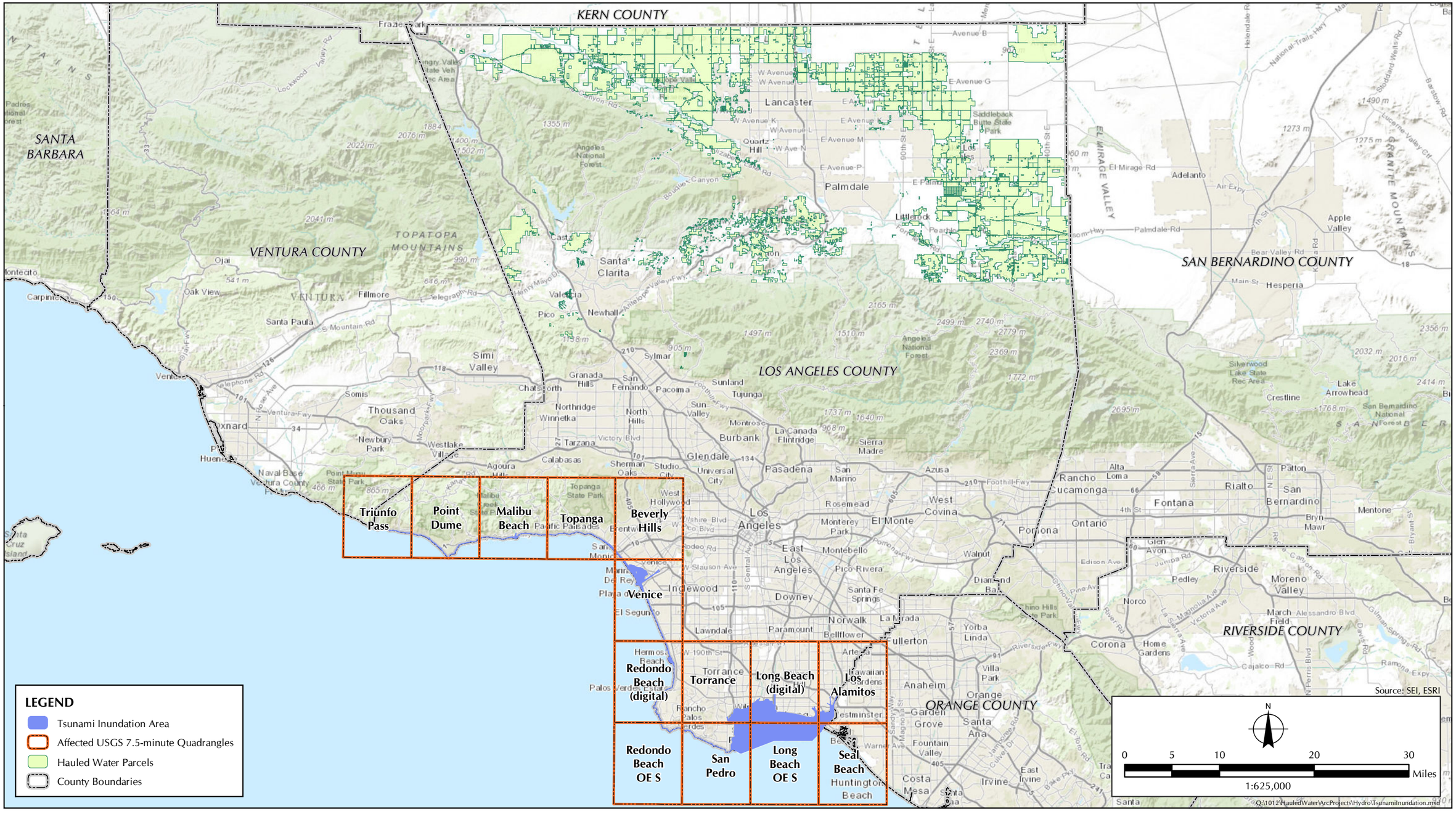

FIGURE 3.9.2-12

Tsunami Inundation within Los Angeles County

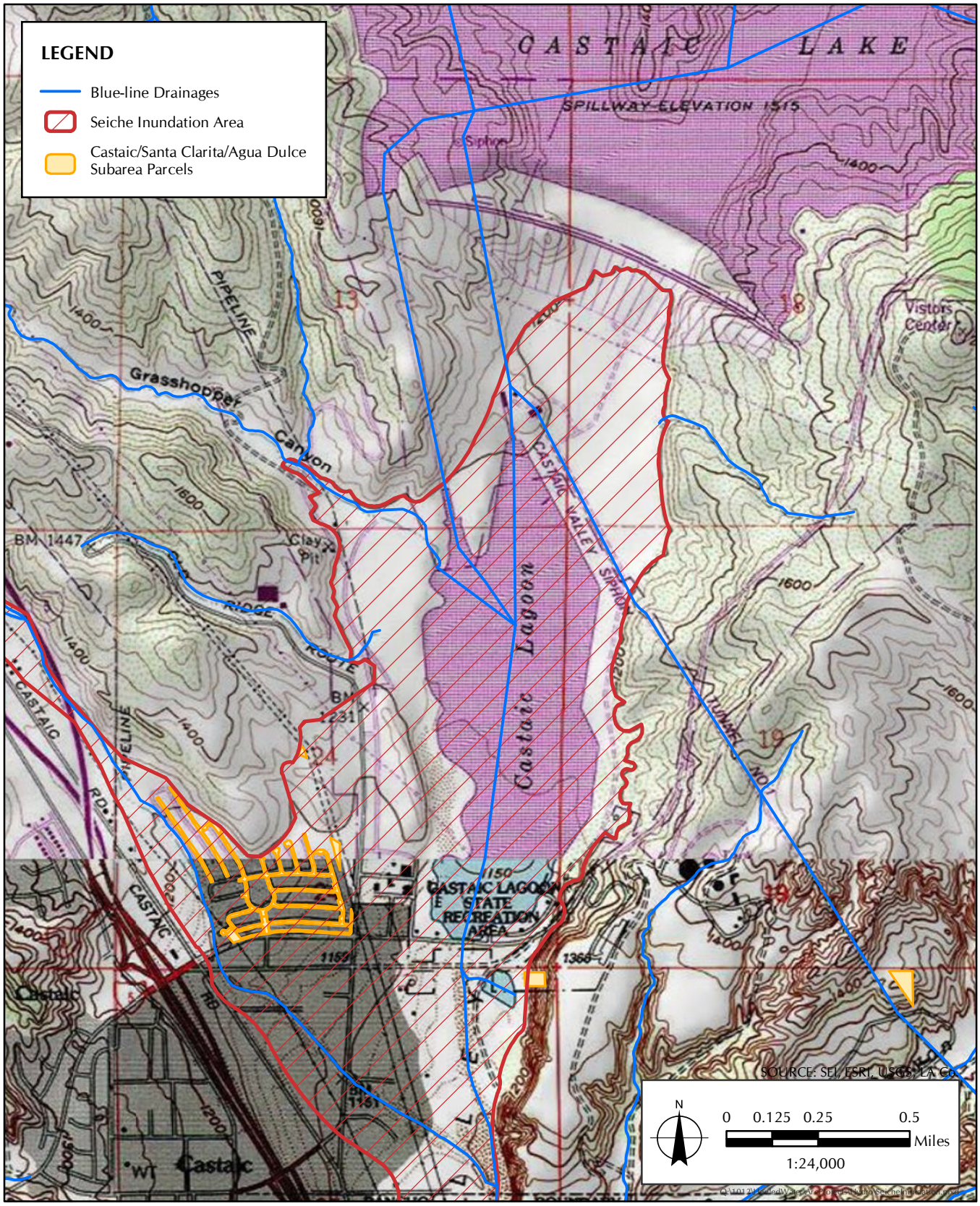

FIGURE 3.9.2-13

Seiche Inundation within the Vicinity of the Castaic/Santa Clarita/Agua Dulce Subarea

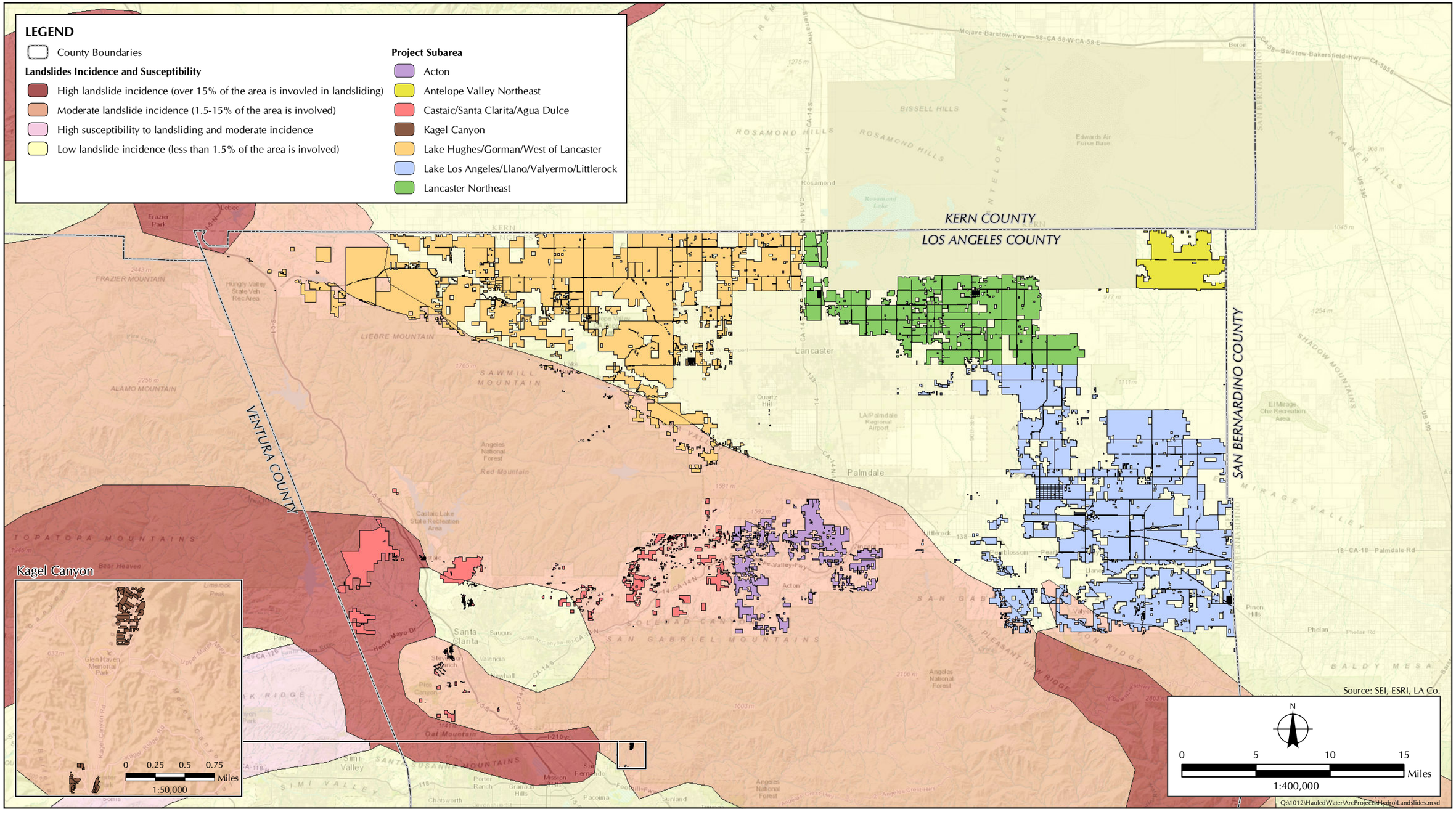

FIGURE 3.9.2-14

Landslides Incidence and Susceptibility

TABLE 3.9.2-6
FEMA FLOOD INSURANCE HAZARD ZONES

Subarea	Flood_Zone	Number of Parcels Intersected
Acton	A	48
	AO	11
	D	1,058
	X	83
Acton Total		**1,200**
Castaic/Santa Clarita/Agua Dulce	A	82
	AO	21
	D	1,611
Castaic/Santa Clarita/Agua Dulce Total		**1,714**
Antelope Valley Northeast	A	48
	D	5
	X	1,825
Antelope Valley Northeast Total		**1,878**
Kagel Canyon	0.2 pct annual chance flood hazard	1
	D	498
Kagel Canyon Total		**499**
Lake Hughes/Gorman/West of Lancaster	0.2 pct annual chance flood hazard	2,255
	A	2,723
	AE	1
	AO	4
	D	99
	X	10,837
Lake Hughes/Gorman/West of Lancaster Total		**15,919**
Lake Los Angeles/Llano/Valyermo/Littlerock	0.2 pct annual chance flood hazard	38
	A	3,336
	AE	1
	AO	37
	X	12,529
Lake Los Angeles/Llano/Valyermo/ Littlerock Total		**15,941**
Lancaster Northeast	0.2 pct annual chance flood hazard	1,493
	A	3,599
	AO	305
	D	15
	X	3,372
Lancaster Northeast Total		**8,784**
Total		**45,935**

TABLE 3.9.2-7
LANDSLIDE INCIDENCE AND SUSCEPTIBILITY BY SUBAREA

Subarea	Incidence	Parcels
Acton	Moderate landslide incidence (1.5-15% of the area is involved)	1,130
Castaic/Santa Clarita/Agua Dulce	High landslide incidence (over 15% of the area is involved in landsliding)	192
	Low landslide incidence (less than 1.5% of the area is involved)	271
	Moderate landslide incidence (1.5-15% of the area is involved)	1,181
Antelope Valley Northeast	Low landslide incidence (less than 1.5% of the area is involved)	1,820
Kagel Canyon	Moderate landslide incidence (1.5-15% of the area is involved)	498
Lake Hughes/Gorman/West of Lancaster	Low landslide incidence (less than 1.5% of the area is involved)	13,997
	Moderate landslide incidence (1.5-15% of the area is involved)	415
Lake Los Angeles/Llano/Valyermo/Littlerock	Low landslide incidence (less than 1.5% of the area is involved)	14,593
	Moderate landslide incidence (1.5-15% of the area is involved)	428
Lancaster Northeast	Low landslide incidence (less than 1.5% of the area is involved)	8,302
Total		**42,827**

3.9.3 IMPACT ANALYSIS

The State CEQA Guidelines recommend the consideration of 10 questions when addressing the potential for significant impacts to hydrology and water quality:

Would the proposed initiative have any of the following effects:

(a) Violate any water quality standards or waste discharge requirements?

The proposed initiative is expected to result in significant impacts associated with hydrology and water quality in relation to water quality standards or waste discharge requirements. 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 384 building permits per year, the proposed initiative would likely result in 1,344 additional people per year over an estimated 20-year period, or up to 26,880 additional people total from the single-family residential development of the subject parcels over 20 years. It is anticipated that the proposed initiative study area will utilize individual OWTS, where effluent is usually disposed of through its dispersal system (leach fields, seepage pits, and/or subsurface drip dispersal systems). In general, settled solids from OWTS are pumped out periodically (every three to five years) and hauled to a treatment facility for disposal. 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 (Table 3.9.3-1, *Estimated Average Wastewater Flow Generated per Planning Area per Year*).

TABLE 3.9.3-1
ESTIMATED AVERAGE WASTEWATER FLOW GENERATED PER PLANNING AREA PER YEAR

Planning Area	Planning Area Population[2]	Avg. Wastewater Flow (gpd)/Planning Area[3]	Avg. Wastewater Volume (gal)Pumped/Year With Septic Only
Total	**26,880**	**99,840**	**30,368**

NOTES: [1] Based on Table1.5.1-1.
[2] Based on Avg. of 3.5 people/single family residence.
[3] Based on Avg. of 260 gallons per day wastewater used/single family residence according to Los Angeles County Sanitation District.
[4] Based on Avg. Septic size of 1,200 gallons (size based on four- bedroom residence).
[5] Based on pumping being required every three years.

In addition, 6,567 of the parcels that could be developed have blue-line drainages within the limits of the parcel and would require OWTS to support the residential development. OWTS placed in close proximity to natural drainages would have the potential to contribute unacceptable levels of nitrates to surface drainages, thus presenting the potential to degrade surface water quality. Additionally, OWTS in proximity to groundwater basins that do not have sufficient infiltration distance between their dispersal systems and the groundwater table have the potential to contribute unacceptable levels of nitrates or organic material that could degrade groundwater quality.

Therefore, there is potential for OWTS and the resulting wastewater to be inconsistent with the established wastewater treatment requirements and permits regulated by the Los Angeles and Lahontan RWQCBs, and OWTS policy. Thus, further evaluation in an environmental impact report is warranted, including the consideration of mitigation measures and alternatives.

(b) 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 have the potential to result in significant impacts to groundwater supplies or interfere substantially with groundwater recharge. 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 (Figure 3.9.3-1,*Bouquet Reservoir*; Figure 3.9.3-2, *Castaic Lake*; Figure 3.9.3-3, *Pyramid Lake*; Table 3.9.3-2, *Parcels within Groundwater Recharge or Potable Water Source Areas*).

TABLE 3.9.3-2
PARCELS WITHIN GROUNDWATER RECHARGE OR POTABLE WATER SOURCE AREAS

Subarea	Lake/Reservoir	# of Parcels
Castaic/Santa Clarita/Agua Dulce	Castaic Lake	2
Lake Hughes/Gorman/West of Lancaster	Bouquet Reservoir	79
	Pyramid Lake	77
Total		**158**

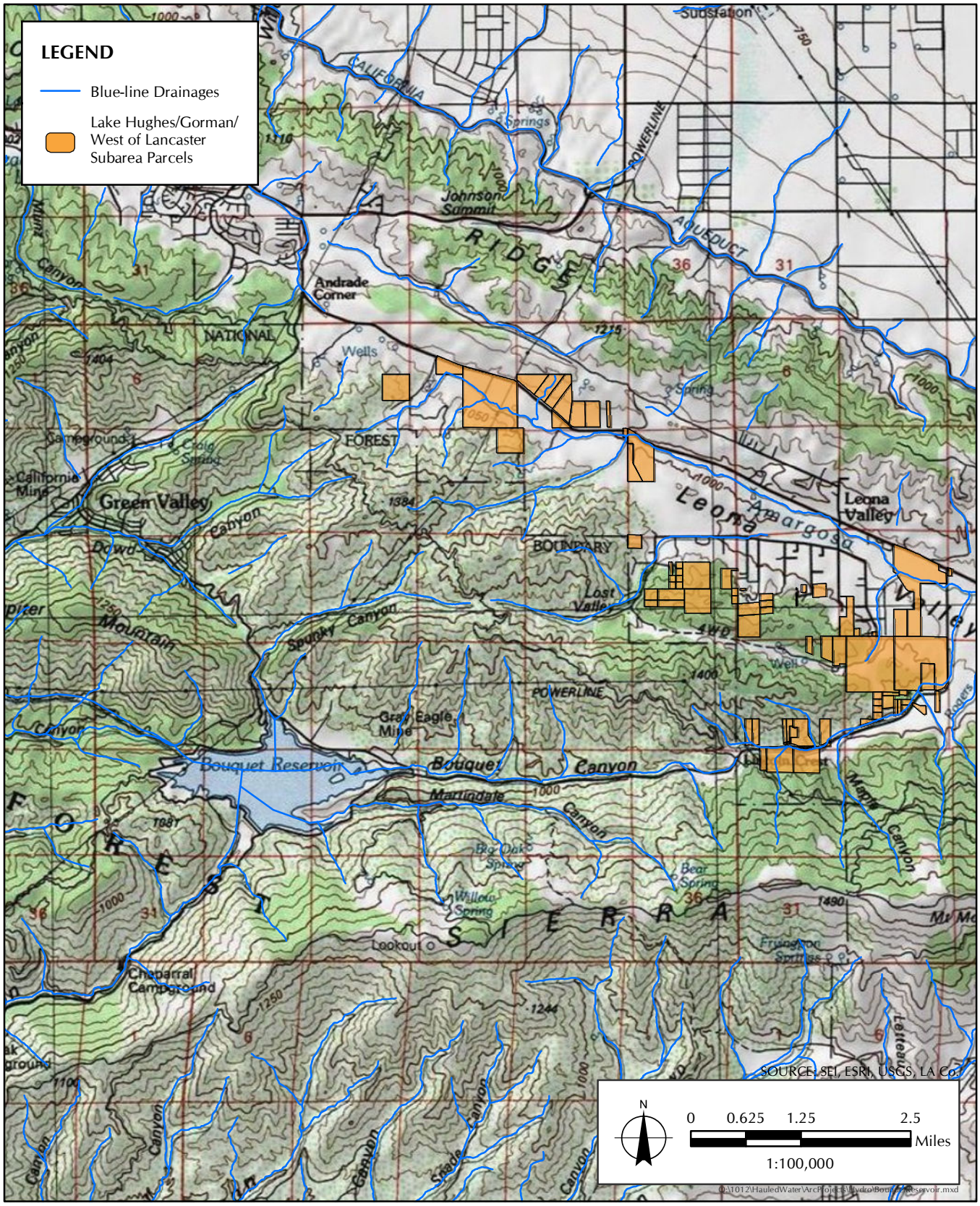

FIGURE 3.9.3-1

Bouquet Reservoir

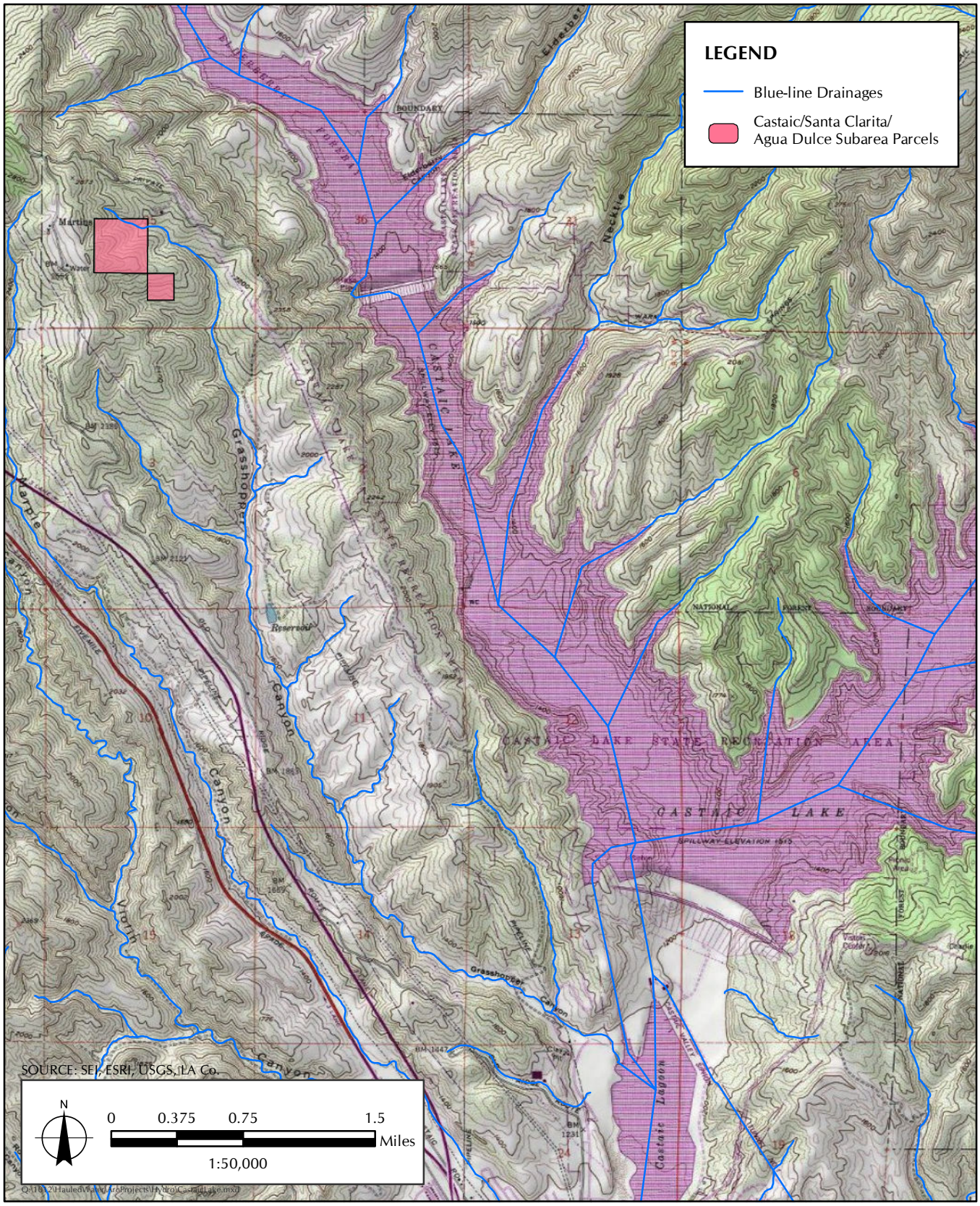

FIGURE 3.9.3-2

Castaic Lake

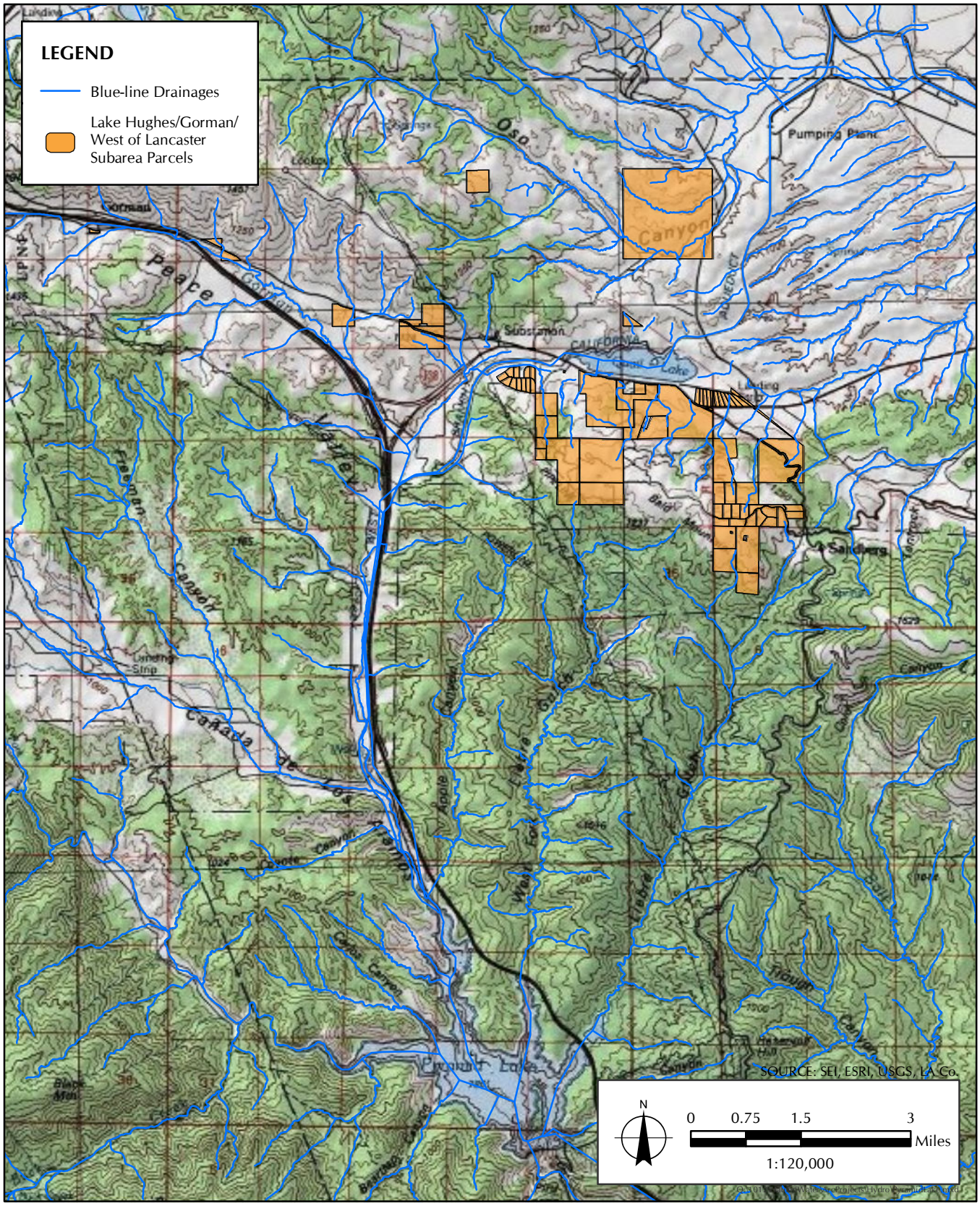

FIGURE 3.9.3-3

Pyramid Lake

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 384 building permits per year, the proposed initiative would likely result in 1,344 additional people per year over an estimated 20-year period of time, or up to 26,880 additional people total from the single-family residential development of the parcels over 20 years. The reasonable worst-case development scenario has the potential to deplete the existing water supply; thus, further evaluation in an environmental impact report is warranted, including the consideration of mitigation measures and alternatives.

(c) 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 significant impacts associated with hydrology and water quality in relation to altering the existing natural drainage pattern within the seven subareas. 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 384 building permits per year, the proposed initiative would likely result in 1,344 additional people per year over an estimated 20-year period, or up to 26,880 additional people total from the single-family residential development of the parcels over 20 years. A total of 6,567 of these single-family residences would be developed on parcels that 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 USACE 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 1986 Antelope Valley Areawide General Plan. Thus, further evaluation in an environmental impact report is warranted, including the consideration of mitigation measures and alternatives.

Additionally, given a 20-year planning horizon, it is expected that 7,680 single-family homes will be developed, resulting in approximately 19,200,000 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 1986 Antelope Valley Areawide General 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. Thus, further evaluation in an environmental impact report is warranted, including the consideration of mitigation measures and alternatives

(d) 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 proposed initiative is expected to result in significant impacts associated with hydrology and water quality in relation to altering the existing natural drainage pattern and increasing the amount of surface runoff within the seven subareas. 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 384 building permits per year, the proposed initiative would likely result in 1,344 additional people per year over an estimated 20-year period, or up to 26,880 additional people total from the single-family residential development of the parcels over 20 years. A total of 6,567 of these parcels would be developed 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 USACE 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. Thus, further evaluation in an environmental impact report is warranted, including the consideration of mitigation measures and alternatives.

The development would result in increased surface runoff as shown in Table 3.9.2-4. Standard NPDES requirements or Best Management Practices would need to be employed to offset the increased runoff.

(e) 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 result in potentially significant impacts in relation to the construction of new stormwater drainage facilities or expansion of existing facilities, and has the potential to create additional sources of polluted runoff. There are no existing stormwater drainage facilities in the proposed initiative study area. The construction of up to 42,677 additional single-family residences would have the potential to increase impervious surface in each of the seven subareas, and result in stormwater runoff requiring stormwater drainage systems, to divert stormwater flow from the properties. New stormwater drainage systems would be needed for new development to collect and convey surface runoff to a designated location that will not cause flooding. 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. Approved Best Management Practices (BMPs) would be required to mitigate the increased pollutant loads.

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 Update.

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.

Therefore, there is potential to substantially increase the amount of impervious surfaces, which could require construction of new stormwater drainage facilities. Further evaluation in an environmental impact report is warranted, including the consideration of mitigation measures and alternatives.

(f) Otherwise substantially degrade water quality?

The proposed initiative is expected to result in significant impacts associated with hydrology and water quality in relation to degrading water quality. 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 384 building permits per year, the proposed initiative would likely result in 1,344 additional people per year over an estimated 20-year period, or up to 26,880 additional people total from the single-family residential development of the parcels over 20 years. A total of 6,567 of these parcels would be developed within existing drainage areas, thus presenting the potential to degrade water quality. Further evaluation in an environmental impact report is warranted, including the consideration of mitigation measures and alternatives

(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?

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 42,677 parcels would be 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 13,502 parcels, nearly 50,000 people and over 13,000 properties would be at risk for living in a flood hazard zone. Further evaluation in an environmental impact report is warranted, including the consideration of mitigation measures and alternatives.

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

The proposed initiative has the potential to result in significant impacts to hydrology and water quality in relation to placement within a 100-year flood hazard area of structures that would impede or redirect flood flows. Approximately 13,502 of these parcels would be in a FEMA flood hazard area, and have the potential to impede or redirect flood flows. Further evaluation in an environmental impact report is warranted, including the consideration of mitigation measures and alternatives.

(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?

The proposed initiative has the potential to result in significant impacts to hydrology and water quality in relation to the failure of a levee or dam. 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. Therefore, further evaluation in an environmental impact report is warranted, including the consideration of mitigation measures and alternatives.

(j) Inundation by seiche, tsunami, or mudflow?

The proposed initiative is expected to result in potentially significant impacts to hydrology and water quality in relation to inundation by seiche, tsunami, or mudflow. The Castaic Reservoir is within the initiative study area, and approximately 34 parcels are downslope from the Castaic

reservoir dam, these parcels would be in danger of inundation by seiche. The proposed initiative study area is not located within the Los Angeles County delineated inundation and tsunami hazard areas delineated. Some parcels within the initiative study area are positioned in an area of potential mudflow. Therefore, further evaluation in an environmental impact report is warranted, including the consideration of mitigation measures and alternatives.

3.9.4 MITIGATION MEASURES

The proposed initiative would result in impacts to hydrology and water quality. Therefore, mitigation measure or alternatives will be considered in an environmental impact report.

SECTION 3.10
LAND USE AND PLANNING

This analysis is undertaken to determine if the Single-Family Residential Hauled Water Initiative for New Development (proposed initiative) would have a significant impact to land use and planning, thus requiring the consideration of mitigation measures or alternatives, in accordance with Section 15063 of the State California Environmental Quality Act (CEQA) Guidelines.[1] Land use and planning were evaluated with regard to the federal, State, regional, and local regulations in unincorporated Los Angeles County, including the 42,677 subject parcels zoned for single-family residential development, which, since January 2003, have not been issued building permits due to a lack of potable water from a water purveyor or water well. The proposed initiative would allow hauled water as the primary source of potable water for new single-family residential construction in selected areas of unincorporated areas of the Los Angeles County that are zoned for single-family residential use at the time of the effective date of the ordinance and not served by a private or public water purveyor, or groundwater.

The proposed initiative was evaluated with regard to the existing adopted County of Los Angeles General Plan,[2] the Los Angeles County General Plan 2035 Update,[3] Los Angeles County Zoning Ordinance,[4] the 1986 Antelope Valley Areawide General Plan,[5] the Santa Clarita Valley Area Plan,[6] Los Angeles County Department of Public Health Bureau of Environmental Protection Drinking Water Program,[7] the State of California Department of Health Services as related to potable drinking water standards and regulations,[8,9] and the California Energy Commission and the California Department of Fish and Wildlife Natural Community Conservation Planning (NCCP) as related to the Desert Renewable Energy Conservation Plan (DRECP).[10]

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[1] *California Code of Regulations*. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

[2] Los Angeles County Department of Regional Planning. November 25, 1980. *County of Los Angeles General Plan Land Use Element*. Available online at http://planning.lacounty.gov/assets/upl/project/gp_web80-land-use.pdf

[3] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 3: Land Use Element*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Part2_Chapter3_2012.pdf

[4] Los Angeles County 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

[5] Los Angeles County Department of Regional Planning. December 4, 1986. *Antelope Valley Areawide General Plan: A Component of the Los Angeles County General Plan*. PDF available online at: http://planning.lacounty.gov/assets/upl/data/pd_antelope-valley.pdf Page I-2

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

[7] Los Angeles County 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.

[8] 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.

[9] 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.

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

Definitions

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

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 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.[11]

Ordinance: A law set forth by a governmental authority. A municipal regulation.[12]

Natural Community Conservation Plan (NCCP) is defined by CDFW as a plan for the conservation of natural communities that identifies and provides for the regional or area-wide protection and perpetuation of plants, animals, and their habitats.

Habitat Conservation Plans (HCPs) are defined by USFWS as planning documents required as part of an application for an incidental take permit. 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.

Significant Ecological Area (SEA): 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.

3.10.1 REGULATORY FRAMEWORK

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…." Habitat Conservation Plans

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

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

(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.

West Mojave Plan

The West Mojave Plan is an amendment to BLM's California Desert Conservation Area Plan. The West Mojave Plan also has a proposed HCP component that, if and when finalized, would provide a program for complying with the federal ESA on private lands within the West Mojave Plan area. Together, the West Mojave Plan and the proposed HCP component would cover over 9 million acres north of the Los Angeles metropolitan area with a purpose of creating a comprehensive strategy to conserve and protect almost 100 sensitive desert species and natural communities.

Federal Land Policy and Management Act, 1976 as Amended (FLPMA)

The United States Congress passed the Federal Land Policy and Management Act (FLPMA) in 1976. Title V, "Rights-of-Way," of the FLPMA establishes public land policy, guidelines for administration, provides for management, protection, development, and enhancement of public lands; and provides the BLM authorization to grant right-of-way (ROW).[13] In addition, Section 503 specifically addresses "Right of Way Corridors" and requires common ROWs "to the extent practical."[14] FLPMA, Title V, Section 501(a)(6), states:

> The Secretary with respect to the public lands (including public lands, as defined in section 103(e) of this Act, which are reserved from entry pursuant to section 24 of the Federal Power Act and, the Secretary of Agriculture, with respect to lands within the National Forest System (except in each case land designated as wilderness), are authorized to grant, issue, or renew rights-of-way over, upon, under, or through such lands roads, trails, highways, railroads, canals, tunnels, tramways, airways, livestock driveways, or other means of transportation except where such facilities are constructed and maintained in connection with commercial recreation facilities on lands in the National Forest System.[15]

State

State of California Department of Public Health (CDPH)

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 that, "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

[13] *Federal Land Policy and Management Act.* (1976), 43 U.S.C., Title V.

[14] *Federal Land Policy and Management Act.* (1976), 43 U.S.C., Title V, § 503.

[15] *Federal Land Policy and Management Act.* (1976), 43 U.S.C., Title V, § 501(a)(6).

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."[16,17]

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 (NCCP) 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.

Local

Los Angeles County Department of Public Health, Environmental Health, Bureau of Environmental Protection Drinking Water Program

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."[18]

County of Los Angeles General Plan

The proposed initiative study area is located entirely within unincorporated Los Angeles County and is subject to the County of Los Angeles General Plan. The adopted County of Los Angeles General Plan and the Los Angeles County General Plan 2035 Update have both been referenced.

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[16] 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.

[17] 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.

[18] Los Angeles County 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.

1980 Adopted Los Angeles County General Plan

According to the adopted Land Use Policy Map in the 1980 Land Use Element of the adopted Los Angeles County General Plan, the 42,677 subject parcels have been designated with 13 different land use types that permit single-family residential development (see Figures 1.5.2-1, 1.5.2-2).[19]

Los Angeles County General Plan 2035 Update

The Los Angeles County 2035 General Plan update provides a policy framework for how and where the County will grow through the year 2035. The 2035 General Plan accommodates new housing and jobs within the unincorporated areas in anticipation of population growth in the County and region. The 2035 General Plan will replace the adopted General Plan including all of the elements with the exception of the Housing Element.[20] One of the Guiding Principles, and related policy goals and policies, of the 2035 General Plan Update 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 or upgrading community services and infrastructure to meet growth needs. Community services and infrastructure serve as the backbone of a community. Quality of life is dependent up on the quality and availability of schools, parks, libraries, police and fire services, cultural facilities, and community gathering places; as well as circulation systems, water, sewers, flood control, utilities, communication, and waste management. Successful land use planning and growth management rely on the orderly and efficient planning of community services and infrastructure. The key to growth management is the commitment to proactively coordinate with public and private partners to provide and maintain sufficient services and infrastructure that are commensurate with growth. The General Plan establishes policies and programs to address existing deficiencies in community services and infrastructure, and to ensure the provision of sufficient community services and infrastructure for new developments.[21]
>
> **Policy LU 2.8:** Coordinate with the Los Angeles County Department of Public Works and other infrastructure providers to analyze and assess infrastructure improvements that are necessary for plan implementation.[22]

[19] County of Los Angeles Department of Regional Planning. November 25, 1980. *Land Use Policy*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_web80-land-use-policy-map-5.pdf

[20] County of Los Angeles Department of Regional Planning. *General Plan 2025*. Available online at: http://planning.lacounty.gov/generalplan

[21] County of Los Angeles Department of Regional Planning. January 2014. *2014 Draft General Plan 2035* , Chapter 3: Guiding Principles. Text available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter3_2014.pdf

[22] County of Los Angeles Department of Regional Planning. January 2014. *2014 Draft General Plan 2035*, Chapter 6: Land Use Element. Text available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter6_2014.pdf

Goals and Policies for Effective Service and Facilities Planning and Maintenance

Goal PS/F 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.[23]

1986 Antelope Valley Areawide General Plan

The Acton, Antelope Valley Northeast, Kagel Canyon, Lake Hughes/Gorman/West of Lancaster, Lake Los Angeles/Llano/Valyermo/Littlerock, and the Lancaster Northeast subareas are completely within the Antelope Valley Areawide General Plan.

The planning area of the Antelope Valley Areawide General Plan,[24] 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 approximately 90 percent of the area that would be potentially affected by the proposed initiative. The Areawide General Plan identifies the main population centers of the Antelope Valley as Lancaster, Palmdale, and Quartz Hill in the central and southern part of Antelope Valley (although Acton is also part of the Antelope Valley), and most of the remaining Antelope Valley planning area consists of smaller communities that began as agricultural settlements or local farm trade centers and still maintain a rural character and a very low density of residential development. The Areawide General Plan has identified Acton, Crystalaire, Gorman, Green Valley, Lake Hughes-Elizabeth Lake, Leona Valley, Littlerock, Pearblossom, and Wrightwood as rural communities to be protected in order to preserve a "low density community lifestyle integrated into the natural environment of the foothills." The General Plan has identified Antelope Acres, Big Pines, Del Sur, El Dorado, Hi Vista, Juniper Hills, Llano, Neenach, Redman, Roosevelt, Three Points, Valyermo, Westside Park, and White Fence Farms as "very low density, rural villages which are worthy of protection" where their residents express a sense of community pride and local identity; the Areawide General Plan states that "it is important to sustain these areas as unique, low density 'living environments."

Chapter V, Policy Statements, establishes the following relevant policies relevant to land use in consideration of the proposed initiative:

- **Goal: Accommodation of Projected Land Use and Urban Growth**
  - **Policy 2.** Closely monitor growth in the Antelope Valley to maintain a balance between development and the capacity of the environmental, economic, and manmade or social system.

[23] County of Los Angeles Department of Regional Planning. January 2014. *2014 Draft General Plan 2035*, Chapter 13: Public Services and Facilities Element. Text available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter13_2014.pdf

[24] Los Angeles County Department of Regional Planning. December 4, 1986. *Antelope Valley Areawide General Plan: A Component of the Los Angeles County General Plan*. PDF available online at: http://planning.lacounty.gov/assets/upl/data/pd_antelope-valley.pdf Page I-2

- **Goal: Pattern of Population and Land Use Distribution**
  - **Policy 5.** Assign priorities for future land use growth in the Antelope Valley considering the following criteria:
    - A. Hazards or constraints of natural environmental systems on land use;
    - B. Sensitivities of natural environmental systems; and
    - C. Constraints of man-made systems.
  - **Policy 6**. Encourage growth in and adjacent to existing urban, suburban, and rural communities.
  - **Policy 11**. Promote and enhance a rural community character in designated rural areas.
- **Goal: Costs of Population and Urban Growth**
  - **Policy 12**. Relate costs of population and urban growth to those who benefit. Consequently, those costs which only benefit a particular developer or resident should be borne by that individual, while costs beneficial to a greater segment of the overall community should be borne by that group.
- **Goal: Community Identity**
  - **Policy 41**. Encourage development of distinct neighborhoods. Residents should be able to identify themselves as a part of a specific neighborhood or community within the greater Antelope Valley.

2012 Santa Clarita Valley Area Plan

The Castaic/Santa Clarita/Agua Dulce sub area is completely within the Santa Clarita Valley Area Plan.[25] Relevant guiding principles stated in the Santa Clarita Valley Area Plan include:

- **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.

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

- **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.

- **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-3.3.2:** In areas subject to wildland fire danger, ensure that land uses have adequate setbacks, fuel modification areas, and emergency access routes.

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

Pursuant to the zoning designations described under Title 22 Planning and Zoning,[26] the 42,677 parcels that are the subject of the proposed initiative fall within eight zoning designations described in the Los Angeles County, California, Code of Ordinances – Title 22 Planning and Zoning.[27] All eight of these zoning designations permit the construction of a single-family residence and are separated into agricultural, residential, special purpose and combining, and industrial zones.

Agricultural Zones

- A-1, Light Agricultural
- A-2, Heavy Agricultural

The agricultural zones are established to permit a comprehensive range of agricultural use in areas particularly suited for agricultural activities. Permitted uses are intended to encourage agricultural pursuits and such other uses required for, or desired by, the inhabitants of the community. An area so zoned may provide the land necessary to permit low-density single-family residential development, and outdoor recreational and needed public and institutional facilities.

Residential Zones

- R-1, Single-family Residence
- R-2, Two-family Residence
- R-A, Residential Agricultural
- RPD, Residential Planned Development

[26] Los Angeles County Department of Regional Planning. Accessed 4 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

[27] Los Angeles County Department of Regional Planning. Accessed 4 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

It is the intent of planned residential development to promote residential amenities beyond those expected under conventional development, to achieve greater flexibility in design, to encourage well-planned neighborhoods through creative and imaginative planning as a unit, and to provide for appropriate use of land which is sufficiently unique in its physical characteristics or other circumstances to warrant special methods of development. In implementing planned development, it is further declared the purpose of this section to reduce developmental problems in hillside areas and to preserve areas of natural scenic beauty through the encouragement of integrated planning, integrated design and unified control of development.

Special Purpose and Combining Zones

- R-R, Resort and Recreation

The R-R Zone is a special purpose zone and was established to provide for outdoor recreation and agricultural uses suitable for development without significant impairment to the resources of the area. Such zone also recognizes single-family residences, additional recreation uses and necessary commercial and public service facilities, subject to review and conditions to protect natural scenic or recreational value.

Industrial Zones

- D-2, Desert-Mountain

Although the D-2 Zone is considered an industrial zone, any use permitted in the A-2, Heavy Agriculture Zone is permitted in the D-2 Zone subject to all the conditions and requirements of the D-2 Zone relating to the A-2 Zone. As a result, a single-family residence is permitted in the D-2 Zone.

3.10.2 AFFECTED ENVIRONMENT

The area that would be subject to the proposed initiative consists of 42,677 parcels in the unincorporated territory of Los Angeles County (Figure 1.4-1).[28] The combined proposed initiative study area consists of approximately 285,500 acres or approximately 450 square miles.

The parcels that would be affected by the proposed initiative are located entirely within the 5th Supervisorial District in the northern one-third of the County, including areas located north and east of the San Gabriel Mountains in the Antelope Valley; areas located northeast of the City of Santa Clarita, north and south of California State Route 14; areas that are southwest of the City of Palmdale in the communities of Agua Dulce and Acton; and in the Kagel Canyon area in the Angeles National Forest. The subject parcels have been categorized into seven subareas (see Figure 1.4-1).

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

Los Angeles County General Plan Planning Areas

The seven subareas are located in two planning areas as designated in the adopted Land Use Element of the Los Angeles County General Plan (Figure 1.5.1-1, and Table 3.10.2-1, *Adopted Los Angeles County General Plan Planning Areas*).[29]

TABLE 3.10.2-1
ADOPTED LOS ANGELES COUNTY GENERAL PLAN PLANNING AREAS

Planning Area	Number of Subject Parcels in Planning Area	Percentage of Subject Parcels in Planning Area
Antelope Valley		
Antelope Valley Northeast	1,820	4.3
Lake Los Angeles/Llano/Valyermo/Littlerock	14,946	35.0
Lancaster Northeast	8,302	19.5
Acton	1,129	2.7
Lake Hughes/Gorman/West of Lancaster	14,356	33.6
Kagel Canyon	498	1.1
Santa Clarita Valley		
Castaic/Santa Clarita/Agua Dulce	1,626	3.8

Los Angeles County General Plan Land Use Designations

The 42,677 parcels that are the subject of the proposed initiative fall within thirteen (13) land use designations described in the Land Use Element of the adopted Los Angeles County General Plan (Figure 1.5.2-1, Figure 1.5.2-2, and Table 3.10.2-2, *Adopted Los Angeles County General Plan Land Use Designations by Subarea*).

[29] Los Angeles County Department of Regional Planning. 25 November 1980. *Los Angeles County Existing Adopted General Plan, Land Use Element*. Available online at: http://planning.lacounty.gov/ assets/upl/project/gp_web80-land-use.pdf

TABLE 3.10.2-2
ADOPTED LOS ANGELES COUNTY GENERAL PLAN
LAND USE DESIGNATIONS BY SUBAREA

Subarea	Land Use Designation	Number of Parcels	Acres
Acton	N1 - Non-Urban 1 (0.5 du/ac)	1,129	13,155.0
Castaic/Santa Clarita/Agua Dulce	H18 - Residential 18	85	78.0
	H2 - Residential 2	250	1,490.0
	H30 - Residential 30	1	3.0
	H5 - Residential 5	256	131.0
	RL1 - Rural Land 1	52	215.0
	RL10 - Rural Land 10	215	1,769.9
	RL2 - Rural Land 2	467	2,190.9
	RL20 - Rural Land 20	155	7,055.0
	RL5 - Rural Land 5	145	1,424.7
Antelope Valley Northeast	N1 - Non-Urban 1 (0.5 du/ac)	1,820	10,716.0
Kagel Canyon	N2 - Non-Urban 2 (1.0 du/ac)	498	40.8
Lake Hughes/Gorman/West of Lancaster	N1 - Non-Urban 1 (0.5 du/ac)	14,280	105,096.4
	N2 - Non-Urban 2 (1.0 du/ac)	69	246.8
	U1 - Urban 1 (1.1 to 3.3 du/ac)	4	3.2
	U1.5 - Urban 1.5 (1.1 to 2.0 du/ac)	3	5.5
	No designated land use	1	5.0
Lake Los Angeles/Llano/Valyermo/ Liitlerock	N1 - Non-Urban 1 (0.5 du/ac)	14,837	98,291.6
	N2 - Non-Urban 2 (1.0 du/ac)	105	491.8
	U1 - Urban 1 (1.1 to 3.3 du/ac)	4	59.9
Lancaster Northeast	N1 - Non-Urban 1 (0.5 du/ac)	8,295	42,925.5
	N2 - Non-Urban 2 (1.0 du/ac)	7	22.6
Total		**42,677**	**285,413**

Zoning

The 42,677 parcels that are the subject of the proposed initiative fall within eight zoning designations described in the Los Angeles County, California, Code of Ordinances – Title 22 Planning and Zoning[30] (Figure 1.6-1, and Table 3.10.2-3, *Los Angeles County Zoning Designations by Subarea*).

[30] Los Angeles County 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

TABLE 3.10.2-3
LOS ANGELES COUNTY ZONING DESIGNATIONS BY SUBAREA

Subarea	Zone Name	Zone Designation	Number of Parcels	Acres
Acton				
	Zone A-1	Light agricultural	124	753.7
	Zone A-2	Heavy agricultural	980	12,037.4
	Zone R-A	Residential agricultural	14	32.9
	Zone R-R	Resort and recreation	10	325.7
	Zone RPD	Residential planned development	1	5.2
Castaic/Santa Clarita/Agua Dulce				
	Zone A-1	Light agricultural	543	2,678.2
	Zone A-2	Heavy agricultural	535	10,866.0
	Zone R-1	Single-family residence	193	393.8
	Zone R-A	Residential agricultural	13	201.7
	Zone RPD	Residential planned development	342	218.3
Antelope Valley Northeast				
	Zone A-1	Light agricultural	201	625.5
	Zone A-2	Heavy agricultural	1,619	10,090.5
Kagel Canyon				
	Zone A-1	Light agricultural	392	32.3
	Zone R-1	Single-family residence	106	8.5
Lake Hughes/Gorman/West of Lancaster				
	Zone A-1	Light agricultural	5,661	21,021.2
	Zone A-2	Heavy agricultural	6,592	73,775.1
	Zone D-2	Desert-Mountain	2,034	9,709.0
	Zone R-1	Single-family residence	47	48.4
	Zone R-A	Residential agricultural	1	0.1
	Zone R-R	Resort and recreation	21	798.3
Lake Los Angeles/Llano/Valyermo/Littlerock				
	Zone A-1	Light agricultural	8,906	62,141.7
	Zone A-2	Heavy agricultural	5,876	34,290.3
	Zone R-2	Two-family residence	10	39.3
	Zone R-A	Residential agricultural	167	930.6
	Zone R-R	Resort and recreation	77	1,441.3
Lancaster Northeast				
	Zone A-1	Light agricultural	1,387	6,324.2
	Zone A-2	Heavy agricultural	4,446	25,739.3
	Zone D-2	Desert-Mountain	2,265	9,794.7
	Zone R-1	Single-family residence	35	126.1
	Zone R-A	Residential agricultural	169	963.9
Total			**42,677**	**285,413**

Habitat Conservation Plan and Natural Community Conservation Plan

The USFWS 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 Desert Renewable Energy Conservation Plan (DRECP).[31] 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 sub areas are outside of the DRECP (Figure 3.10.2-1, *Desert Renewable Energy Conservation Plan Area*).

The DRECP is currently in the process of being prepared as a joint federal and State effort involving the BLM, USFWS, the California Energy Commission, and the CDFW. The CEQA Notice of Preparation was released on July 28, 2011. It is anticipated that the draft EIR/EIS will be available in the fall of 2014.

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. The DRECP will comprehensively address how participating entities with jurisdiction over renewable energy and transmission projects and related facilities in the desert of California will conserve natural communities and species pursuant to the California Natural Community Conservation Planning Act (NCCP Act), ESA, and the FLPMA.

The DRECP is intended to serve as an NCCP under Section 2800 et seq. of the California Fish and Game Code and a multiple-species HCP pursuant to Section 10(a)(1)(B) of ESA. 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.[32]

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

[32] California Energy Commission. Website accessed June 1, 2014. Available online at http://www.energy.ca.gov/2011publications/DRECP-1000-2011-001/DRECP-1000-2011-001.pdf

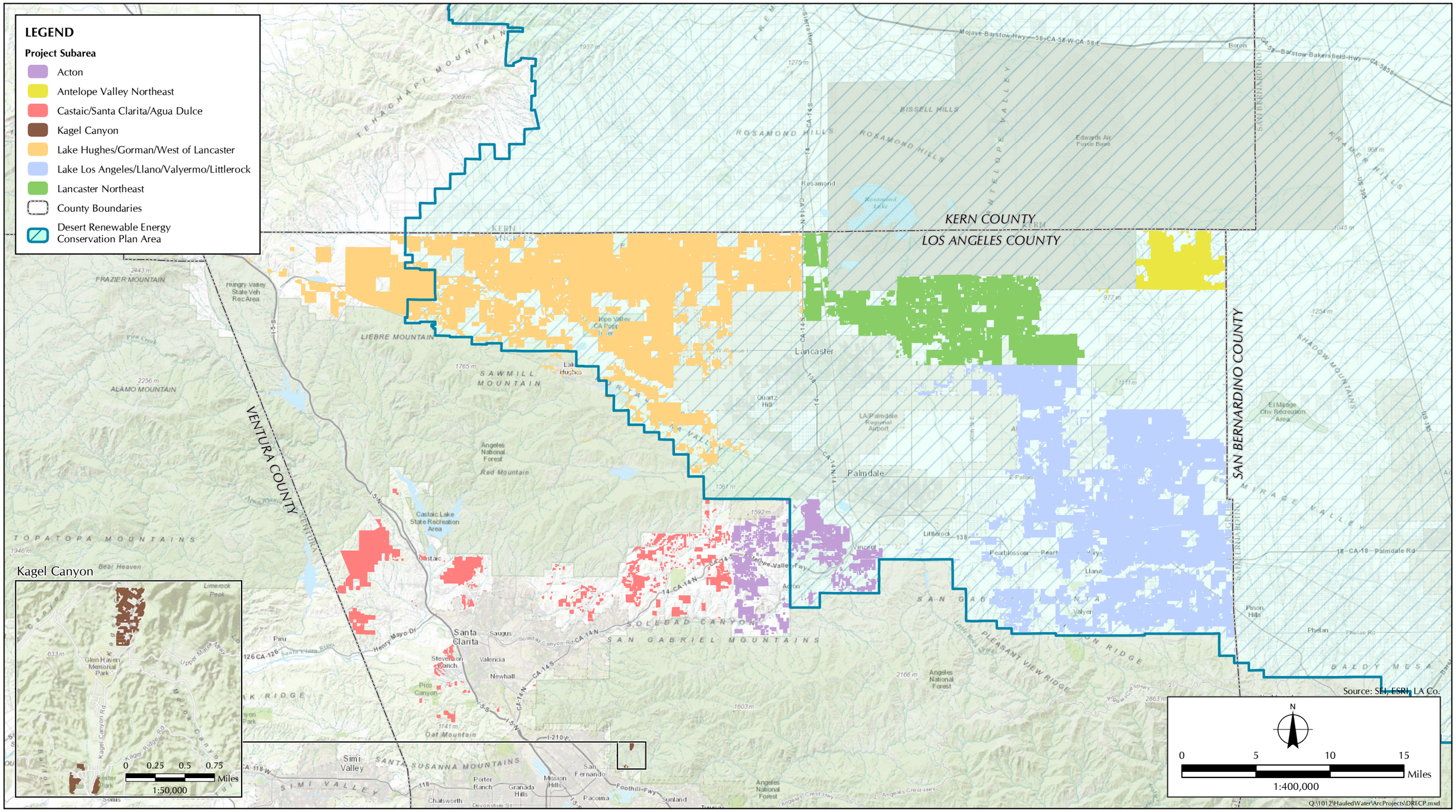

FIGURE 3.10.2-1

Desert Renewable Energy Conservation Plan Area

3.10.3 IMPACT ANALYSIS

The State CEQA Guidelines recommend the consideration of three questions when addressing the potential for significant impact to land use and planning.

Would the proposed initiative have any of the following effects:

(a) Physically divide an established community?

The proposed initiative would result in less than significant impacts in relation to land use and planning through the physical division of an established community. The 42,677 parcels that would be subject to the proposed initiative have not been issued building permits since January 2003, due to a lack of potable water from a water purveyor or water well. The incremental construction of single-family residences, not part of a subdivision, and over a 20- to 30-year time period would not result in the physical division of established communities in the proposed initiative study area. The construction of residences over time would add to the population and physical size of the communities in the study area but would not result in the division of them and would therefore not result in significant impacts to land use and planning as a result of the physical division of an established community. No further analysis related to the physical division of an established community is warranted.

(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?

The proposed initiative may result in significant impacts to land use and planning in relation to a conflict with adopted or proposed land use plans, policies, or regulations. The proposed initiative would allow hauled water as the primary source of potable water for 42,677 subject parcels zoned for single-family residential development, which, since January 2003, have not been issued building permits due to a lack of potable water from a water purveyor or water well. The proposed initiative would allow hauled water as the primary source of potable water for new single-family residential construction in selected areas of unincorporated areas of the Los Angeles County that are zoned for single-family residential use at the time of consideration of the proposed initiative and not served by a private or public water purveyor, or groundwater. Allowing hauled water to be used for new single-family residential development where a water purveyor or well water is not available may conflict with State and County regulations regarding the of use hauled water for residential uses.

Eight of the nine policies and regulations listed in Table 3.10.3-1, *Potential Policy/Regulation Conflicts*, have the potential to conflict with the Hauled Water Initiative. As a result, this issue will be carried forward for detailed consideration in the EIR.

TABLE 3.10.3-1
POTENTIAL POLICY/REGULATION CONFLICTS

Agency Jurisdiction	Plan/Document	Policy/Regulation	Potential Conflict	Discussion
Federal				
U.S. Fish and Wildlife Service	Endangered Species Act	Section 7(a)(2)	Yes	The entirety of the Antelope Valley Northeast subarea consisting of 1,820 parcels and 16.7 square miles is within critical habitat for the Desert Tortoise.
Bureau of Land Management, US Forest Service	Federal Land Policy and Management Act (FLPMA)	Section 202(a)	Yes	601 parcels out of 42,677 are within the administrative boundaries of the Angeles National Forest. All of the 498 parcels in the Kagel Canyon sub area are within the administrative boundaries of the Angeles National Forest. One hundred of 14,356 parcels of the Lake Hughes/Gorman/West of Lancaster subarea are within the administrative boundaries of the Angeles National Forest. Two parcels out of 1,626 the Castaic/Santa Clarita/Auga Dulce subarea are within the administrative boundaries of the Angeles National Forest. There are 174 parcels consisting of lands administered by the BLM that are adjacent to and near six of the seven subareas.
Bureau of Land Management	West Mojave Plan - California Desert Conservation Area Plan		Yes	See discussion for the FLPMA.
State				
California State Department of Public Health	Letter – Department of Health Services, California Conference of Directors of Environmental Heath - Federal Safe Drinking Water Act Amendments Affecting Potable Water, 2-7-2003	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.	Yes	The use of hauled water for new single-family residential development conflicts with the State Department of Health recommendation.
Local				
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	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.	Yes	
Los Angeles County	2035 General Plan Update	Policy PS/F 1.1: Discourage development in areas without adequate public services and facilities	Yes	[?]The potential development of single-family residences in areas without adequate public services would likely conflict with this policy.

TABLE 3.10.3-1
POTENTIAL POLICY/REGULATION CONFLICTS, *Continued*

Agency Jurisdiction	Plan/Document	Policy/Regulation	Potential Conflict	Discussion
Los Angeles County	1980 Adopted Los Angeles County General Plan Significant Ecological Areas	Policy 7. Preserve significant ecological areas and habitat management areas by appropriate measures, including preservation, mitigation, and enhancement.	Yes	Potential development of single family residences in SEI's conflicts with this policy.
Los Angeles County	Los Angeles County General Plan 2035 Update	Policy C/NR 3.8: Discourage development in areas with identified significant biological resources, such as SEAs	Yes	Potential development of single family residences in SEI's conflicts with this policy.
Los Angeles County	Antelope Valley Areawide General Plan	Policy 5. Assign priorities for future land use growth in the Antelope Valley considering the following criteria: A. Hazards or constraints of natural environmental systems on land use; B. Sensitivities of natural environmental systems; and C. Constraints of man-made systems.	Yes	The availability of potable water can be considered a natural environmental constraint and a constraint of a man-made system. The initiative may result in the placement of single-family residential development in sensitive natural environmental systems.
Los Angeles County	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.	Yes	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 Initiative has the potential to allow single-family residential development in areas containing significant ridgelines, canyons, rivers and drainage courses, riparian areas.
Los Angeles County	Zoning Code	Zone A-1 Light agricultural Zone A-2 Heavy agricultural Zone D-2 Desert-Mountain Zone R-1 Single-family residence Zone R-2 Two-family residence Zone R-A Residential agricultural Zone RPD Residential planned development Zone R-R Resort and recreation	No	The eight zoning designations currently applied to all 42,677 parcels permit the construction of a single-family residence by right or as an accessory use.

(c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

The proposed initiative may 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 and approximately 80 percent of the Lake Hughes/Gorman/West of Lancaster subarea are within the DRECP (Figure 3.10.2-1). The 42,677 parcels that would be subject to the proposed initiative have not been issued building permits since January 2003, due to a lack of potable water from a water purveyor or water well. The proposed initiative would allow hauled water as the primary source of potable water for new single-family residential construction in selected areas of unincorporated areas of the Los Angeles County that are zoned for single-family residential use. The construction of single-family residential homes in the portion of the initiative study subject to the DRECP may conflict with DRECP goals, policies, and regulations. As a result, further analysis is warranted.

3.10.4 MITIGATION MEASURES

The proposed initiative may result in significant impacts to land use and planning. Therefore, mitigation measures or alternatives may be required.

SECTION 3.11
MINERAL RESOURCES

This analysis is undertaken to determine if the proposed Los Angeles County Single-Family Residential Hauled Water Initiative for New Development (proposed initiative) may have a significant impact to mineral resources, thus requiring the consideration of mitigation measures or alternatives, in accordance with Section 15063 of the State California Environmental Quality Act (CEQA) Guidelines.[1] Mineral resources within the areas of the proposed initiative were evaluated with regard to California Division of Mines and Geology (CDMG) publications, the Conservation and Open Space Element[2] of the adopted 1980 Los Angeles County General Plan, and the Conservation and Natural Resources Element[3] of the Los Angeles County General Plan 2035 Update for the proposed initiative area.

Definitions

Mineral resources are commercially-viable aggregate or mineral deposits, such as sand, gravel, and other construction aggregate. California is the largest consumer of sand and gravel in the country, but is also a major producer, generating approximately one billion dollars' worth of these mineral resources annually. The Los Angeles metropolitan area produces and consumes more construction aggregate than any other metropolitan area in the country. A continuous supply of aggregate materials for urban infrastructure is essential to the Southern California economy. The County depends on the California Geological Survey (CGS) to identify deposits of regionally-significant aggregate resources. These clusters or belts of mineral deposits are designated into four classes of Mineral Resource Zones (MRZs) that indicate the potential for a specific area to contain significant mineral resources:

- **MRZ-1:** Areas where available geological information indicated there is little or no likelihood for presence of significant mineral resources

- **MRZ-2:** Areas underlain by mineral deposits where geological data indicate that significant measured or indicated resources are present or where adequate information indicates that significant mineral deposits are present or where it is judged that a high likelihood for their presence exists

- **MRZ-3:** Areas containing known mineral occurrences of undetermined mineral resources significance

- **MRZ-4:** Areas of known mineral occurrences where geological information does not rule out the presence or absence of significant mineral resources

[1] *California Code of Regulations*. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

[2] Los Angeles County Department of Regional Planning. November 25, 1980. *Los Angeles County General Plan. Conservation and Open Space Element*.

[3] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan 2035, Public Review Draft. Conservation and Natural Resources Element*.

The MRZs were initially mapped in 1980 as a result of the Surface Mining and Reclamation Act (SMARA) of 1975.[4] Portions of the areas within the MRZ sites in Los Angeles County were developed with structures prior to the MRZ classification, and therefore, are unavailable for extraction.

3.11.1 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. The regulatory framework for mineral resources has been limited to the combined study area, which consists of 42,677 parcels in unincorporated Los Angeles County with an area totaling approximately 285,500 acres, or approximately 450 square miles.

The proposed initiative is limited to the use of undeveloped parcels where the zoning allows for development of a single-family residence.

Federal

There are no applicable federal regulations related to mineral resources for the proposed initiative.

State

Surface Mining and Reclamation Act

The SMARA requires that the State Department of Mines and Geology Board map areas throughout the State of California that contain regionally significant mineral resources.[5] Construction aggregate resources (sand and gravel) deposits were the first commodity selected for classification by the Board. Once mapped, the Mines and Geology Board is required to designate for future use those areas that contain aggregate deposits that are of prime importance in meeting the region's future need for construction-quality aggregates. The primary objective of SMARA is for each jurisdiction to develop policies that will conserve important mineral resources, where feasible, that might otherwise be unavailable when needed. SMARA requires that once policies are adopted, local agency land use decisions must be in accordance with its mineral resource management policies. These decisions must also balance the mineral value of the resource to the market region as a whole, not just their importance to the local jurisdiction.

Government Code Section 65302(d)

Government Code Section 65302(d) states that a conservation element of the general plan shall address minerals and other natural resources.[6] The Conservation and Open Space Element[7] of the adopted 1980 Los Angeles County General Plan and the Conservation and Natural Resources

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[4] California Department of Conservation, Division of Mines and Geology. n.d. *Surface Mining and Reclamation Policies and Procedures: Guidelines for Classification and Designation of Mineral Lands*. Available online at: http://www.consrv.ca.gov/SMGB/Guidelines/ClassDesig.pdf

[5] Surface Mining and Reclamation Act. Adopted August 1977. *Public Resources Code*, § 2710-2796.

[6] *California Government Code*. Title 7, Division 1, Chapter 3, Article 5, *Authority for and Scope of General Plan*.

[7] Los Angeles County Department of Regional Planning. November 25, 1980. *Los Angeles County General Plan. Conservation and Open Space Element*.

Element[8] of the Los Angeles County General 2035 Plan Update contain a conservation element that addresses mineral resources.

Local

Los Angeles County General Plan 2035

Mineral Resource Zone Regulation and Conservation

The California Department of Conservation protects mineral resources to ensure adequate supplies for future production. The California Surface Mining and Reclamation Act of 1975 (SMARA) was adopted to encourage the production and conservation of mineral resources, prevent or minimize adverse effects to the environment, and protect public health and safety. An important component of SMARA requires that all surface mines be reclaimed to a productive second use upon the completion of mining (Public Resources Code, sub-sections 2712 (a), (b), and (c)).

In a joint regulatory effort, SMARA authorizes local governments to assist the State in issuing mining permits and monitoring site reclamation efforts. To manage mining resources, the County has incorporated mineral resource policies into the Conservation and Natural Resources Element. In addition to these policies, Title 22 of the County Code (Part 9 of Chapter 22.56) requires that applicants of surface mining projects submit a Reclamation Plan prior to receiving a permit to mine, which must describe how the excavated site will ultimately be reclaimed and transformed into another use.

Energy Resources

Energy in California is produced from a variety of non-renewable and renewable natural resources, including oil, natural gas, and hydrologic, wind, and solar power. Although non-renewable energy resources (oil and natural gas) generate a majority of its energy, California has one of the most diverse portfolios of renewable energy resources in the country. Renewable energy is derived from resources that are regenerative and cannot be depleted, such as wind and solar power. For this reason, renewable energy sources are fundamentally different from fossil fuels, such as coal, oil, and natural gas, which are finite and also produce greenhouse gases and other pollutants. Aside from existing oil and natural gas deposits, California's topography and climate lend themselves to the production of energy from wind, solar, and tidal power.

Goals and Policies for Mineral and Energy Resources

The Conservation and Natural Resources Element of the Los Angeles County General Plan consists of an identification and analysis of the existing natural resources in Los Angeles County.[9] Policies of the Conservation and Natural Resources Element include the preservation of mineral resources and the access to these resources. The applicable Conservation and Natural Resources Element goals and policies are provided below:

[8] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan 2035, Public Review Draft. Conservation and Natural Resources Element.*

[9] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan 2035, Public Review Draft. Conservation and Natural Resources Element.*

- **Goal C/NR 10 - Mineral Resource Zone Protection:** Locally available mineral resources to meet the needs of construction, transportation, and industry.
  - **Policy C/NR 10.1:** Protect MRZ-2s and access to MRZ-2s from development and discourage incompatible adjacent land uses.

- **Goal C/NR11 - Mineral Extraction:** Mineral extraction and production activities that are conducted in a manner that minimizes impacts to the environment.
  - **Policy C/NR 11.1:** Require mineral resource extraction and production activities and drilling for and production of oil and natural gas to comply with County regulations and state requirements, such as SMARA, and DOGGR regulations.
  - **Policy C/NR 11.2:** Require the reclamation of abandoned surface mines to productive second uses.
  - **Policy C/NR 11.3:** Require appropriate levels of remediation for all publicly-owned oil and natural gas production sites based on possible future uses.
  - **Policy C/NR 11.4:** Require that mineral resource extraction and production operations as well as activities related to the drilling for and production of oil and natural gas be conducted to protect other natural resources and prevent excessive grading in hillside areas.

- **Goal C/NR 12 - Energy Resources:** Sustainable management of renewable and non-renewable energy resources.
  - **Policy C/NR 12.1:** Expand the production and use of renewable energy resources.
  - **Policy C/NR 12.2:** Encourage the effective management of energy resources, such as ensuring adequate reserves to meet peak demands.

3.11.2 AFFECTED ENVIRONMENT

Regionally Important Mineral Resources

Mineral Resource Zones

According to the CGS, the subareas within the proposed initiative site are located within designated MRZ-1, MRZ-2, MRZ-3, and unclassified zones. Parcels that have been identified in MRZ-2 zones (i.e., areas underlain by known significant mineral deposits) are located in the following subareas:[10]

- Castaic/Santa Clarita/Agua Dulce
- Lake Los Angeles/Llano/Valyermo/Littlerock

However, given that the parcels under consideration are designated for single-family residential development in the adopted Los Angeles County General Plan[11] and the Land Use Element of the

[10] California Geological Survey. 1983. *Mineral Land Classification and Index to Detailed Zone & Sector Maps for the Saugus-Newhall & Palmdale P-C Regions*. Available online at: ftp://ftp.consrv.ca.gov/pub/dmg/pubs/sr/SR_143/PartV/Plate_5.1.pdf

[11] Los Angeles County Department of Regional Planning. November 25, 1980. *Los Angeles County General Plan. Conservation and Open Space Element*.

County General Plan 2035 Update,[12] it is anticipated that the proposed initiative would not result in significant impacts to mineral resources of statewide or local importance.

Oil Production

Oil production still occurs in many parts of the unincorporated territory of Los Angeles County, including the Santa Clarita Valley. There are active or abandoned oil or natural gas exploration or production activities in the Castaic/Santa Clarita/Agua Dulce subarea.[13]

Active and Abandoned Mines

According to the National Minerals Information Center, there are 20 active mines in Los Angeles County (two common clay and shale mines, three crushed stone mines, one dimension stone mine, and 14 sand and gravel mines). However, no active mines are located in any of the subareas within the project site.[14]

According to the Abandoned Mine Lands Unit of the California Department of Conservation, there are 365 abandoned mine features located in Los Angeles County. However, there are no active or abandoned mine sites in any of the proposed initiative site subareas.[15]

Oil and Gas Fields

According to DOGGR 2013, there are 72 oil fields located in Los Angeles County (17 abandoned, 55 active). The Castaic/Santa Clarita/Agua Dulce subarea is the only location in the proposed initiative site that has active or abandoned oil and gas fields. This subarea has 111 parcels located within active oil or gas fields and five parcels located within abandoned oil or gas fields.[16]

Locally Important Mineral Resources

The primary mineral resources within Los Angeles County are rock, gravel, and sand deposits. Sand and gravel deposits follow the Los Angeles River flood plain, coastal plain, and other water bodies and courses. Significant potential deposit sites have been identified by the State Geologist.

Los Angeles County depends on the CGS to identify deposits of regionally-significant aggregate resources. These clusters or belts of mineral deposits are designated as MRZ-2s. Two major MRZ-2s, the Little Rock Creek Fan and the Soledad Production Area are identified in, or partially within, the following subareas of the proposed initiative site:

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[12] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan 2035, Public Review Draft. Land Use Element.*

[13] California Division of Oil, Gas and Geothermal Resources Well Finder. n.d. Available online at: http://maps.conservation.ca.gov/doggr/index.html#

[14] National Minerals Information Center. 2003. Available online at: http://databasin.org/maps/new#datasets=853ea17d49f942d4af7b7e0fa2480598

[15] California Department of Conservation. Office of Mine Reclamation. n.d. *Active and Abandoned Mines*. Available online at: http://maps.conservation.ca.gov/mol/mol-app.html

[16] California Division of Oil, Gas and Geothermal Resources Well Finder. n.d. Available online at: http://maps.conservation.ca.gov/doggr/index.html#

- Lake Los Angeles/Llano/Valyermo/Littlerock
- Castaic/Santa Clarita/Agua Dulce

The Little Rock Creek Fan and the Soledad Production Area contain significant deposits that are estimated to provide for future needs through the year 2046.[17]

Mining of sand and gravel began in the Los Angeles area around 1900 when concrete became popular as a building material. Extraction began in the Arroyo Seco and the Big Tujunga Wash. From 1920 to the present, the demand for sand and gravel has been spurred by construction associated with growth in California and the southwestern United States. There are currently no available deposit sites in the proposed initiative area.

3.11.3 IMPACT ANALYSIS

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

Would the proposed initiative have any of the following effects:

(a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

The proposed initiative would result in no impact to mineral resources in relation to the loss of availability of a known mineral resource. The loss of availability of the MRZ-2 zone mapped resources mapped within the proposed initiative area is likely in the following subareas:

- Acton/Santa Clarita/Agua Dulce
- Lake Los Angeles/Llano/Valyermo/Littlerock

Additionally, the Castaic/Santa Clarita/Agua Dulce subarea is the only location within the proposed initiative area that has active or abandoned oil and gas fields. Furthermore, the proposed initiative, as currently proposed, will not result in a loss of soil within the proposed initiative area, and, therefore, potential mineral resources will not be disturbed. Given that the parcels under consideration are zoned for single-family residential development, it is anticipated that the proposed initiative would not result in impacts to mineral resources related to the loss of availability of a known mineral resource and no further analysis is warranted.

(b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

The proposed initiative would result in no impacts to a locally important mineral resource recovery site. According to the review of the Los Angeles County General Plan 2035 Update, the proposed

[17] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan 2035, Public Review Draft. Conservation and Natural Resources Element.*

initiative area has designated MRZ-2 zones identified as locally important mineral resource recovery sites located within the following subareas:[18]

- Acton/Santa Clarita/Agua Dulce
- Lake Los Angeles/Llano/Valyermo/Littlerock

However, given that the parcels under consideration are zoned for single-family residential development, it is anticipated that the proposed initiative would not result in impacts to mineral resources, related to the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. No further analysis is warranted.

3.11.4 MITIGATION MEASURES

The proposed initiative would not result in impacts to mineral resources. Therefore, there is no need for mitigation.

[18] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan 2035, Public Review Draft. Conservation and Natural Resources Element.*

SECTION 3.12
NOISE

This analysis is undertaken to determine if the Single-Family Residential Hauled Water Initiative for New Development (proposed initiative) may have a significant impact to noise, thus requiring the consideration of mitigation measures or alternatives in accordance with Section 15063 of the State California Environmental Quality Act Guidelines (State CEQA Guidelines).[1] Available noise and vibration data from the U.S. Environmental Protection Agency and the Federal Transit Administration were referenced for this analysis and evaluated with regard to federal, state, and regional standards and regulations.

Definitions

Ambient Noise: The level of the total noise in an area.

CNEL: The Community Noise Equivalent Level (CNEL) is the average sound level over a 24-hour period, with a penalty of 5 decibels (dB) added between the hours of 7:00 p.m. and 10:00 p.m., and a penalty of 10 dB added for the nighttime hours between 10:00 p.m. and 7:00 a.m. These increases account for reduced ambient noise levels during these time periods and increased human sensitivity to noise during the quieter periods of the day.

dBA: A-weighted decibels (dBA) are an expression of the relative loudness of sounds in air as perceived by the human ear. In the A-weighted system, the decibel values of sounds at low frequencies are reduced compared with unweighted decibels, in which no correction is made for audio frequency.

L_{eq}: The equivalent-continuous sound (L_{eq}) is the level of a constant sound, expressed in decibels (dB), which in a given time period ($T = T_2 - T_1$) has the same energy as a time varying sound.

Point Source: A single identifiable, localized source of noise.

Sensitive Receptors: These include, but are not limited to, hospitals, schools, daycare facilities, playgrounds, long-term health care facilities, elderly housing and convalescent facilities. These are areas where the occupants are more susceptible to noise impacts.

[1] *California Code of Regulations*. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

3.12.1 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,[2] 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

"Guidelines for the Preparation and Content of Noise Elements of the General Plan," Senate Bill 860

California Senate Bill (SB) 860, which became effective January 1, 1976, directed the California Office of Noise Control within the State Department of Health Services to prepare "Guidelines for the Preparation and Content of Noise Elements of the General Plan."[3] While the proposed initiative does not affect the adopted or proposed Noise Element of the Los Angeles County General Plan, a summary of the guidelines is provided here. 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 the four categories is as follows:

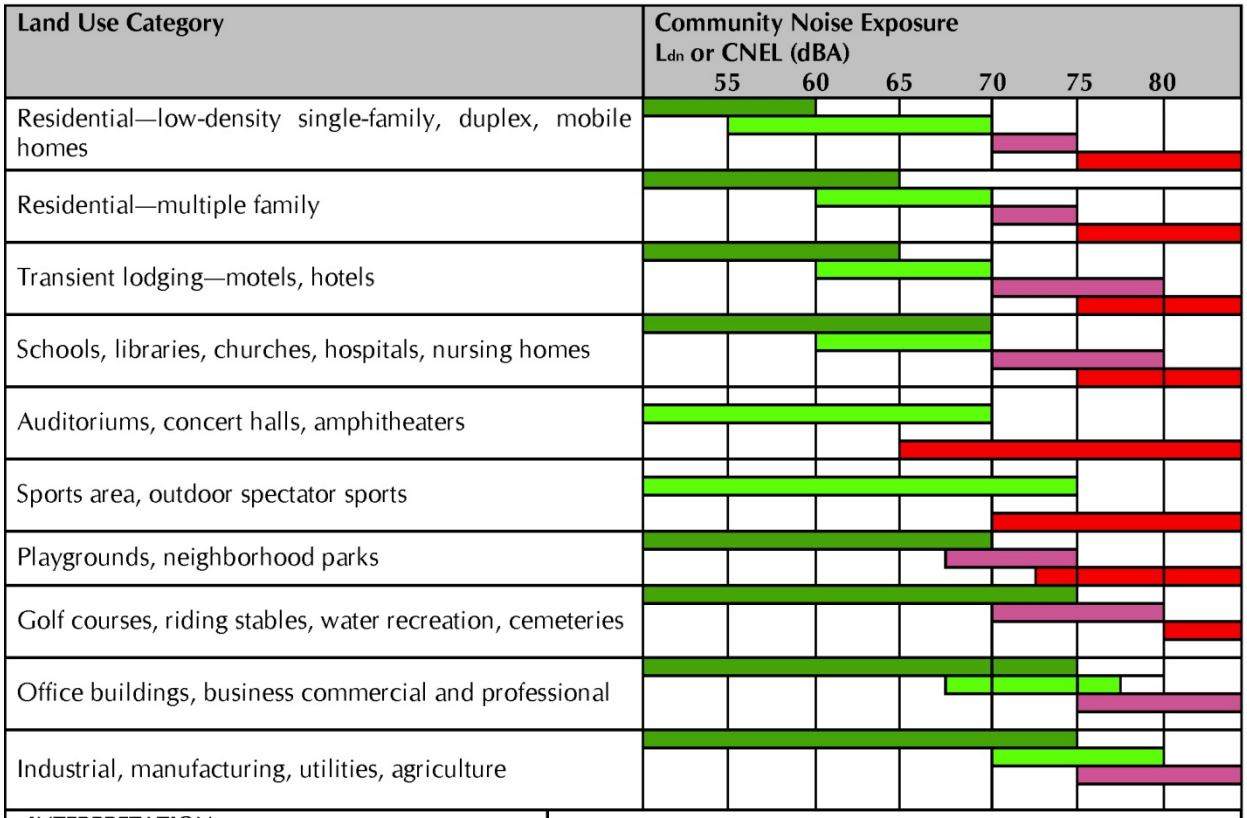
[2] 42 U.S.C., *Noise Control Act of 1972*, § 4901-4918.

[3] California Department of Health Services, Office of Noise Control. 1976. *Guidelines for the Preparation and Content of Noise Elements of the General Plan*. Sacramento, CA.

- 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 of California has developed a Land Use Compatibility Matrix for community noise environments that further defines the four categories of acceptance and assigns CNEL values to them. In addition, the State Building Code (Title 24, California Code of Regulations [CCR], Part 2) 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 3.12.1-1, *Land Use Compatibility for Community Noise Environments*, and Table 3.12.1-2, *Normally Acceptable Noise Levels for Residential Land Use*, depict noise levels for a variety of uses.

TABLE 3.12.1-1
LAND USE COMPATIBILITY 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 of 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.

TABLE 3.12.1-2
NORMALLY ACCEPTABLE NOISE LEVELS FOR RESIDENTIAL LAND USE

Land Use	Acceptable Range (dBA)
Residential – low density single-family, duplex, mobile homes	50–60
Residential – multiple family	50–65

Regional

Los Angeles County General Plan

The proposed initiative subareas are located in Los Angeles County and subject to the Los Angeles County General Plan (General Plan). Of the 15 policies outlined in the existing General Plan's Noise Element, adopted in 1975, two are applicable to the proposed initiative:[4]

- **Policy 3:** Establish acceptable noise standards consistent with health and quality of life goals and employ effective techniques of noise abatement through such means as building code, noise, sub-division, and zoning ordinances.

- **Policy 4:** Reduce the present and future impact of excessive noise from transportation sources through judicious use of technology, planning, and regulatory measures.

Of the 12 policies outlined in the Los Angeles County General Plan 2035 Update related to noise, seven are applicable to the proposed initiative:[5]

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 or berms.

- **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 excessive levels.

[4] Los Angeles County Department of Regional Planning. 30 January 1975. *Los Angeles County General Plan: Noise Element.*

[5] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 11: Noise Element.*

- **Policy N 1.7:** Utilize traffic management and noise suppression techniques to minimize noise from traffic and transportation.

- **Policy N 1.9:** Require construction of 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.

Antelope Valley Areawide General Plan

The planning area of the Antelope Valley Areawide General Plan, 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 approximately 90 percent of the area that would be potentially affected by the proposed initiative.

Chapter V, *Policy Statements*, establishes the following relevant policy relevant to noise in consideration of the proposed initiative:[6]

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.

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. 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[7]:

[6] Los Angeles County Department of Regional Planning. December 4, 1986. *Antelope Valley Areawide General Plan: A Component of the Los Angeles County General Plan*.

[7] Los Angeles County, Santa Clarita Valley Area Plan, 2012.

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.

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.

Los Angeles County Municipal Codes

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."[8]

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 which 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 3.12.1-3, *Los Angeles County Community Noise Criteria*.

TABLE 3.12.1-3
LOS ANGELES COUNTY 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: Los Angeles County. *Municipal Codes*. Title 12, Chapter 8, *Noise Control*.

In addition to the community noise criteria, the Los Angeles County Municipal Codes establish interior noise standards for residential dwellings. According to the Section 12.08.400 of the Los Angeles County Municipal Codes, 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:[9]

- 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 Los Angeles County Municipal 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,

[8] Los Angeles County. *Municipal Codes*. Title 12, Chapter 8, *Noise Control*.

[9] Los Angeles County. *Municipal Codes*. Title 12, Chapter 8, *Noise Control*.

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 3.12.1-4, *Los Angeles County Construction Noise Restrictions*).

TABLE 3.12.1-4
LOS ANGELES COUNTY CONSTRUCTION NOISE RESTRICTIONS

Time Frame	Single-Family Residential	Multifamily Residential	Semi-residential/ 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: Los Angeles County. *Municipal Codes*. 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

3.12.2 AFFECTED ENVIRONMENT

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,[10] and review of available data from noise studies conducted in comparable areas. According to the published document, the range of day-night noise levels (L_{dn}) in the United States is very large, extending from the region of 20–30 dB estimated for a quiet wilderness area to the region of 80–90 dB in the most noisy urban areas. The measured range of values of day-night noise levels outside a residential unit extends from 44 dB on a farm to 88.8 dB outside an apartment located adjacent to a freeway. Furthermore, the U.S. EPA determined that for rural or other non-urban areas, the estimated L_{dn} noise levels range from 35–50 dB. Due to the fact that 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 35–50 dB, consistent with the findings of the U.S. EPA.

[10] United States 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.

Pursuant to SB 860, and California Government Code Section 65302(f), Tables 3.12.2-1 through 3.12.2-5 indicate the number of proposed initiative parcels that are located within a quarter mile of an existing source of noise that may be incompatible for residential development.

TABLE 3.12.2-1
PROPOSED INITIATIVE PARCELS WITHIN ONE-QUARTER MILE OF A HIGHWAY OR FREEWAY

Subarea	Number of Parcels within ¼ mile
Acton	63
Castaic/Santa Clarita/Agua Dulce	42
Lake Los Angeles/Llano/Valyermo/Littlerock	712
Lake Hughes/Gorman/West of Lancaster	1,362
Lancaster Northeast	98
Kagel Canyon	0
Antelope Valley Northeast	0
Total	**2,277**

TABLE 3.12.2-2
PROPOSED INITIATIVE PARCELS WITHIN ONE-QUARTER MILE OF A PRIMARY ARTERIAL OR MAJOR STREET

Subarea	Number of Parcels within ¼ mile
Acton	990
Castaic/Santa Clarita/Agua Dulce	1,374
Lake Los Angeles/Llano/Valyermo/Littlerock	11,481
Lake Hughes/Gorman/West of Lancaster	11,167
Lancaster Northeast	6,352
Kagel Canyon	498
Antelope Valley Northeast	1,050
Total	**32,912**

TABLE 3.12.2-3
PROPOSED INITIATIVE PARCELS WITHIN ONE-QUARTER MILE OF A PASSENGER/FREIGHT RAILROAD OR GROUND RAPID TRANSIT SYSTEM

Subarea	Number of Parcels within ¼ mile
Acton	40
Castaic/Santa Clarita/Agua Dulce	7
Lake Los Angeles/Llano/Valyermo/Littlerock	474
Lake Hughes/Gorman/West of Lancaster	277
Lancaster Northeast	0
Kagel Canyon	0
Antelope Valley Northeast	0
Total	**798**

TABLE 3.12.2-4
PROPOSED INITIATIVE PARCELS WITHIN ONE-QUARTER MILE OF AN AIRPORT/HELIPORT

Subarea	Number of Parcels within ¼ mile
Acton	1
Castaic/Santa Clarita/Agua Dulce	0
Lake Los Angeles/Llano/Valyermo/Littlerock	32
Lake Hughes/Gorman/West of Lancaster	53
Lancaster Northeast	5
Kagel Canyon	0
Antelope Valley Northeast	0
Total	**91**

TABLE 3.12.2-5
PROPOSED INITIATIVE PARCELS WITHIN ONE-QUARTER MILE OF AN INDUSTRIAL ZONE

Subarea	Number of Parcels within ¼ mile
Acton	44
Castaic/Santa Clarita/Agua Dulce	140
Lake Los Angeles/Llano/Valyermo/Littlerock	196
Lake Hughes/Gorman/West of Lancaster	2,155
Lancaster Northeast	2,516
Kagel Canyon	0
Antelope Valley Northeast	0
Total	**5,051**

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 FTA technical study, *Transit Noise and Vibration Impacts 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."[11] Additionally, there are no active mines in the vicinity of the proposed initiative subareas; and therefore, there are no ground-borne vibration conditions in the area related to blasting or other activities associated with active mines.

[11] 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 42,677 parcels in the unincorporated area of Los Angeles County, all of which could potentially be developed into single-family residences (Figure 1.6-1). As these parcels are undeveloped, all 42,677 parcels shall be considered sensitive receptors.

Schools

There are 24 elementary schools, middle schools, and high schools located adjoining or in the vicinity of the parcels within all the proposed initiative subareas with the exception of the Antelope Valley Northeast subarea and the Kagel Canyon subarea, which do not contain any elementary, middle, or high schools (Figure 3.3.2-1). Table 3.12.2-6, *Schools in the Vicinity of Proposed Initiative Subareas*, indicates which schools are located adjoining or in the vicinity of the proposed initiative subareas.

TABLE 3.12.2-6
SCHOOLS IN THE VICINITY OF PROPOSED INITIATIVE SUBAREAS

Subarea	School	Public/Private
Acton	Vasquez High School	Public
Castaic/Santa Clarita/Agua Dulce	Agua Dulce Elementary School	Public
	Desert Canyon Academy	Private
	Mint Canyon Elementary School	Public
	Newhall School District - Oak Hills School	Public
	Newhall School District - Stevenson Ranch School	Public
	Rancho Pico Junior High School	Public
	Stevenson Ranch Central Elementary School	Public
	West Ranch High School	Public
Lake Hughes/Gorman/West of Lancaster	Covenant Christian	Private
	Gorman Elementary School	Public
	Gorman Middle Middle School	Public
	Neenach Elementary School	Public
	Sommer Haven Church School	Private
	Shema Christian	Private
Lake Los Angeles/Llano/Valyermo/Littlerock	Almondale Middle School	Public
	Lake Los Angeles Elementary School	Public
	Pearblossom Private, Inc.	Private
	Vista San Gabriel Elementary School	Public
	Wilsona School District - Vista San Gabriel Elementary School	Public
	Wilsona Elementary School	Public
	Challenger Middle School	Public
Lancaster Northeast	Eastside Elementary School	Public
	Lancaster Baptist School	Private

Medical Centers

There are 13 medical centers located adjoining or in the vicinity of the parcels within all the proposed initiative subareas with the exception of the Antelope Valley Northeast subarea, which does not contain any medical centers (Figure 3.3.2-2). Table 3.12.2-7, *Medical Centers in the Vicinity of Proposed Initiative Subareas*, indicates which medical centers are located adjoining or in the vicinity of the proposed initiative subareas.

TABLE 3.12.2-7
MEDICAL CENTERS IN THE VICINITY OF PROPOSED INITIATIVE SUBAREAS

Subarea	Health Center	Address
Acton	Palmdale Regional Medical Center	38600 Medical Center Dr Palmdale, CA 93551
Castaic/Santa Clarita/Agua Dulce	Providence Health and Services	24035 Newhall Ranch Rd, Santa Clarita, CA 91355
	Henry Mayo Newhall Memorial Hospital	23845 McBean Pkwy, Valencia, CA 91355
	Mender of Hearts	24868 Apple St, Newhall, CA 91321
	Olive View-UCLA Medical Center Neurology	14445 Olive View Dr, Sylmar, CA 91342
	Sylmar Medical Center	14124 Foothill Boulevard #100 Sylmar, California 91342
Kagel Canyon	San Fernando Post-acute Hospital	12260 Foothill Blvd Sylmar, CA 91342
	Providence Holy Cross Medical Center	5031 Rinaldi St Mission Hills, CA 91345
Lake Los Angeles/Llano/Valyermo/Littlerock	High Desert Medical Group	38209 47th St E Palmdale, CA 93552
Lancaster Northeast	Kaiser Permanente Medical Center	43112 15th Street West Lancaster, CA 93534
	Antelope Valley Hospital	1600 W Avenue J Lancaster, CA 93534
Lake Hughes/Gorman/West of Lancaster	Antelope Valley Surgical Institute	44830 Valley Central Way # 108 Lancaster, CA 93536
	Mayflower Gardens Convalescent Hospital	6705 Columbia Way Lancaster, CA 93536

Parks

In addition to residential parcels, schools, and hospitals, parks are often considered sensitive receptors due to the likely presence of children. There are seven neighborhood parks (approximately 42.6 acres) located within a half-mile radius of the proposed initiative subareas and 17 community parks (approximately 232.0 acres) located within a two-mile radius of the proposed initiative subareas (see Figure 3.3.2-3). Furthermore, there are 200 community regional parks (approximately 9,264.5 acres) located within a 20-mile radius of the proposed initiative subareas and 192 regional parks (approximately 141,499.5 acres) located within 25 miles of the proposed initiative subareas (Figure 3.3.2-4).

Public and Private Airports

There are a total of two public use airports and eight private use airports located within the proposed initiative subareas (Table 3.12.2-8, *Public/Private Airports within Two Miles of Proposed Initiative Subareas*, Figure 3.8.2-3). As Table 3.12.2-8 indicates, there are a total of 5,197 parcels located within two miles of a public and/or private use airport.

TABLE 3.12.2-8
PUBLIC/PRIVATE AIRPORTS WITHIN TWO MILES OF PROPOSED INITIATIVE SUBAREAS

Subarea	Airport	Private/Public	Number of Parcels within 2 miles
Castaic/Santa Clarita/Agua Dulce	Agua Dulce Airport	Public	275
Lake Hughes/Gorman/West of Lancaster	General Williams J. Fox Airfield	Public	104
	Bohunk's Airport	Private	787
	Quail Lake Sky Park	Private	60
	Skyotee Ranch	Private	181
	Little Buttes Antique Airfield	Private	1,486
Lake Los Angeles/Llano/Valyermo/Littlerock	Brian Ranch Airport	Private	811
	Crystal Airport	Private	559
	Gray Butte Field	Private	326
	Nichols Farms Airport	Private	608

3.12.3 IMPACT ANALYSIS

The State CEQA Guidelines recommend the consideration of six questions when addressing the potential for significant impacts to noise:

Would the proposed initiative have any of the following effects:

(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?

The proposed initiative is expected to result in significant impacts to noise in relation to exposure of persons to or generations of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. 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 undeveloped parcels in the proposed initiative subareas would not be able to be developed in the absence of the proposed initiative or comparable action. Assuming a worst-case-scenario, the proposed initiative has the potential to result in 384 building permits per year for residential development. Due to the fact that the proposed initiative subareas are primarily located in undeveloped, rural areas of Los Angeles

County, it is further assumed that the majority of the proposed initiative subareas will experience L_{dn} noise levels of 35–50 dB, consistent with the findings of the U.S. EPA.[12]

Construction Noise

Construction noise associated with the proposed initiative would include construction of new single-family residences in the each of the seven subareas where issuance of building permits could be allowed based on the use of hauled water. Noise impacts from construction of the single-family residences occurring within the proposed initiative subareas would be a function of the noise generated by construction equipment, the location of the equipment, the timing and duration of the noise-generating construction activities, and the relative distance to noise sensitive receptors. Construction activities would generally include ground clearing, site grading, and building construction. Each phase of construction would involve the use of various types of construction equipment and would, therefore, have its own distinct noise characteristics. To accurately characterize construction-phase noise levels, the average noise level associated with various phases of construction is calculated based on the quantity, type, and usage factors for each type of equipment that would be used during each construction phase. These noise levels are typically associated with multiple pieces of equipment operating simultaneously.

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. This data is presented in Table 3.12.3-1, *Typical Outdoor Construction Noise Levels*, for a reference distance of 50 feet. These noise levels would attenuate with distance from the construction site at a rate of approximately 6.0 dB per doubling of distance.

TABLE 3.12.3-1
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 3.12.3-1, the excavation/grading phase and finishing phase of construction would generate the highest levels of noise. This is due in large part to the operation of heavy equipment, though it should be noted that only a limited amount of equipment will be operating

[12] United States 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.

near a given location at a particular time. Based on the information in Table 3.12.3-1, construction noise levels could periodically reach 77 to 89 dBA at a distance of 50 feet from the construction site. According to the Los Angeles County Noise Ordinance, daily construction noise is limited to 75 dBA at single-family residences (see Table 3.12.1-4); and therefore, construction of residential properties has the potential to exceed the County noise restrictions by approximately 14 dBA during the loudest phases of construction when measured at a distance of 50 feet.

Based on these noise levels, and the fact that noise attenuates from a point source at a rate of approximately 6.0 dBA per doubling of distance, the noise impacts on sensitive receptors can be determined by Equation 1 for noise attenuation over distance:

(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
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 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 County's noise restrictions for single-family residences is approximately 250 feet (d_2). Thus, construction of residential properties as a result of the proposed initiative has the potential to exceed standards established in the County's Noise Ordinance, and therefore, have a significant impact on noise if constructed within 250 feet of a single-family residence or other noise sensitive land use. Therefore, this issue warrants further analysis in an environmental impact report (EIR), including the consideration of mitigation measures and alternatives capable of avoiding or reducing impacts to below the level of significance.

Operations

Operational noise associated with each of the seven subareas, where issuance of building permits for single-family residences could be allowed based on the use of hauled water, would include vehicular noise from hauling water to residential properties within the proposed initiative subareas using 5,000-gallon-capacity trucks. According to Table 3.12.1-3, noise levels during operations cannot exceed 65 dBA for more than 1 minute within an hour at residential properties between the hours of 7:00 a.m. and 10:00 p.m. Therefore, assuming that the time it takes a truck hauling water to pass by a residential property is less than 1 minute within an hour, the maximum noise level for operations occurring in the vicinity of residential properties cannot exceed 65 dBA.

The typical noise level for heavy trucks traveling at a speed of 35 miles per hour (mph) is 82 dBA at a distance of 50 feet.[13] By applying Equation 1 with 82 dBA (L_1) at a distance of 50 feet (d_1), the distance at which operational activities would reach a maximum of 65 dBA (L_2) and be below the County's noise restrictions for residential properties is approximately 354 feet (d_2). Therefore, assuming that each residential development receives one delivery a month of 5,000 gallons of

[13] Cowan, James P. 1994. *Handbook: Environmental Acoustics*. New York, NY: John Wiley & Sons.

water, the haul trucks have the potential to exceed standards established in the County's noise ordinance if traveling within 354 feet of an existing residential property. Therefore, this issue warrants further analysis in an EIR, including the consideration of mitigation measures and alternatives capable of avoiding or reducing impacts to below the level of significance.

(b) Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?

The proposed initiative would result in less than significant impacts to noise in relation to exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels.

Construction

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. The effect on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and construction characteristics of the receptor buildings. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels.

Los Angeles County currently does not have significance thresholds to assess vibration impacts during construction. Therefore, the FTA guidelines set forth in its technical manual, *Transit Noise and Vibration Impacts*, are utilized in determining the vibration impacts associated with the proposed initiative.[14] The FTA measures building vibration damage in peak particle velocity (PPV) described in inches per second. Table 3.12.3-2, *FTA Construction Vibration Impact Criteria for Building Damage*, provides the FTA vibration criteria applicable to construction activities. According 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, structures or buildings constructed of reinforced-concrete, steel, or timber have vibration damage criteria of 0.50 inch per second pursuant to the FTA guidelines.

TABLE 3.12.3-2
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

KEY: PPV = peak particle velocity.
SOURCE: Federal Transit Administration. May 2006. *Transit Noise and Vibration Impact Assessment*. Washington, DC.

[14] Federal Transit Administration. May 2006. *Transit Noise and Vibration Assessment*. Washington, DC.

The proposed initiative would generate ground-borne construction vibration during construction of new single-family residences, 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 3.12.3-3, *Vibration Source Levels for Construction Equipment*.

TABLE 3.12.3-3
VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	PPV at 25 feet (inches per second)	PPV at 50 feet (inches per second)	PPV at 100 feet (inches per second)
Vibratory roller	0.210	0.074	0.026
Hoe ram	0.089	0.031	0.011
Large bulldozer	0.089	0.031	0.011
Caisson drilling	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

KEY: PPV = peak particle velocity.
SOURCE: Federal Transit Administration. May 2006. *Transit Noise and Vibration Impact Assessment*. Washington, DC.

As indicated in Table 3.12.3-3, vibration velocities from most heavy construction operations that would be used during construction of the proposed project would range from 0.000 to 0.026 inch per second PPV at a reference distance of 100 feet from the equipment. The estimated vibration velocity levels at a distance of 100 feet would be well below the most stringent significance threshold of 0.12 inch per second PPV established by the FTA.[15] Therefore, ground-borne vibration or noise impacts associated with potential building damage during construction would be less than significant, and no further analysis is warranted in the EIR.

Operations

Ground-borne vibration or noise associated with operation of the proposed initiative would include vehicular traffic from hauling water to residential properties within the proposed initiative subareas using 5,000-gallon-capacity trucks. As indicated in Table 3.12.3-3, a haul truck traveling on a rough road surface would generate a ground-borne vibration level of 0.076 inch per second PPV at a distance of 25 feet from the haul truck. Therefore, the estimated ground-borne vibration level of 0.076 inch per second PPV due to the haul truck activities would be well below the most stringent significance threshold of 0.12 inch per second PPV established by the FTA. Thus, potential impacts related to ground-borne vibration or noise from haul trucks during operation of the proposed initiative would be less than significant, and no further analysis is warranted in the EIR.

[15] Federal Transit Administration. May 2006. *Transit Noise and Vibration Assessment*. Washington, DC.

(c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

The proposed initiative would result in less than significant impacts to noise in relation to permanent increases in ambient noise levels.

Construction

While the proposed initiative would result in construction of new, single-family residences, the proposed initiative would not cause a substantial permanent increase in ambient noise levels in the vicinity of the proposed initiative subareas above levels existing without the project. Assuming a worst-case scenario, the proposed initiative has the potential to result in 384 building permits a year for residential development. Based on the findings of the U.S. EPA for rural or non-urban areas, it is anticipated that where single-family residential development occurs in each of the seven subareas as a result of the proposed initiative, the parcels that are zoned for single-family residential development would experience L_{dn} noise levels of 35–50 dB.[16] Furthermore, the U.S. EPA estimates that quiet suburban residential areas typically experience L_{dn} noise levels of 48–52 dBA, which is within the range of the County's community noise criteria (see Table 3.12.1-3). Due to the relatively low percentage of parcels that would be developed throughout the proposed initiative subareas under a worst-case scenario, the likelihood of previously undeveloped, rural areas to be fully converted to suburban communities is very low. Therefore, single-family residential developments as a result of the proposed initiative would not create substantial permanent increases in ambient noise levels in the subareas that would be effected by the proposed initiative, and no further analysis is warranted in the EIR.

Operations

Operation of the proposed initiative would result in less than significant impacts related to substantial permanent increases in ambient noise levels. Operation of the proposed initiative would include vehicular traffic from hauling water to residential properties within the proposed initiative subareas using 5,000-gallon-capacity trucks. Therefore, assuming that each residential development receives one delivery a month of 5,000 gallons of water, operation of the proposed initiative would only result in temporary noise impacts during water delivery each month. Therefore, there would be no substantial permanent increase in ambient noise levels, and no further analysis is warranted in the EIR.

(d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

A significant impact to ambient noise levels would be expected, above the ambient noise levels without the proposed initiative.

[16] United States 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.

Construction

Construction noise associated with the proposed initiative would include construction of new single-family residences in the proposed initiative subareas. As discussed above for question (a), construction of new single-family residences as a result of the proposed initiative has the potential to exceed the standard of 75 dBA for daily construction activities established in the County's noise ordinance, and therefore, have a significant impact on noise if constructed within 250 feet of an existing single-family residence or other noise sensitive land use. Under a worst-case scenario of 384 building permits a year, the proposed initiative would result in substantial temporary or periodic increases in ambient noise levels. Therefore, this issue warrants further analysis in an EIR, including the consideration of mitigation measures and alternatives capable of avoiding or reducing impacts to below the level of significance.

Operations

Operational noise associated with the proposed initiative would include vehicular noise from hauling water to residential properties within the proposed initiative subareas using 5,000-gallon-capacity trucks. As discussed above for question (a), haul trucks have the potential to exceed standards established in the County's noise ordinance if traveling within 112 feet of an existing single-family residence or other noise sensitive land use. Assuming that each residential development receives one delivery a month of 5,000 gallons of water, operation of the proposed initiative would result in substantial temporary or periodic increases in ambient noise levels. Therefore, this issue warrants further analysis in an EIR, including the consideration of mitigation measures and alternatives capable of avoiding or reducing impacts to below the level of significance.

(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 project expose people residing or working in the project area to excessive noise levels?

The proposed initiative may result in impacts to noise in relation to exposing people residing or working in the proposed initiative subareas to excessive noise levels. As indicated above in Table 3.12.2-4, there are two public use airports within the proposed initiative subareas (Agua Dulce Airport and General Williams J. Fox Airfield). In total, there are 379 parcels that are located within two miles of a public use airport that could be developed if the proposed initiative were approved, thus potentially exposing residents to excessive noise levels from airports. As a result of developing single-family residences in the vicinity of public use airports, there is potential for significant impacts in relation to exposing people residing or working in the proposed initiative subareas to excessive noise levels. Therefore, further analysis is warranted in an EIR.

(f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

The proposed initiative may result in impacts to noise in relation to exposing people residing or working in the proposed initiative subareas to excessive noise levels. As indicated above in Table 3.12.2-4, there are eight private use airports within the study area for the proposed initiative (Bohunk's Airport, Quail Lake Sky Park, Skyotee Ranch, Little Buttes Antique Airfield, Brian Ranch Airport, Crystal Airport, Gray Butte Field, Nichols Farms Airport). In total, there are 4,818 parcels that are located within two miles of a private use airport that could be developed if the proposed initiative were approved, thus potentially exposing residents to excessive noise levels from airports.

As a result of developing single-family residences in the vicinity of private use airports, there is potential for significant impacts in relation to exposing people residing or working in the proposed initiative subareas to excessive noise levels. Therefore, further analysis is warranted in an EIR.

3.12.4 MITIGATION MEASURES

The proposed initiative would result in impacts related to exposing persons to or generation of noise levels in excess of standards established in the Los Angeles County Code of Ordinances and exposing people residing or working in the proposed initiative subareas to excessive noise levels associated with public and private use airports. Therefore, there is the need for consideration of mitigation measures and alternatives to avoid or reduce impacts to sensitive receptors and on ambient noise levels is each of the seven subareas.

SECTION 3.13
POPULATION AND HOUSING

This analysis is undertaken to determine if the Single-Family Residential Hauled Water Initiative for New Development (proposed initiative) may have a significant impact to population and housing, thus requiring the consideration of mitigation measures or alternatives in accordance with Section 15063 of the State California Environmental Quality Act Guidelines (State CEQA Guidelines).[1] 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, including the 42,677 subject parcels zoned for single-family residential development, which, since January 2003, have not been issued building permits due to a lack of potable water from a water purveyor or water well, consistent with the Housing Element of the Los Angeles County General Plan, between 2015 and 2035. The Southern California Association of Governments' (SCAG's) 2013 Profile of Los Angeles County;[2] SCAG's 2013 Profile of the Unincorporated Area of Los Angeles County;[3] SCAG's 2012 Adopted RTP Growth Forecast;[4] SCAG's 5th Cycle Regional Housing Needs Assessment Final Allocation Plan, 1/1/2014-10/1/2021;[5] the 2014–2021 Housing Element[6] of the Los Angeles County General Plan; the 1986 Antelope Valley Areawide General Plan;[7] the 2012 Santa Clarita Valley Area Plan;[8] and the Los Angeles County Code of Ordinances – Title 22 Planning and Zoning[9] were referenced in this analysis.

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[1] *California Code of Regulations*. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

[2] Southern California Association of Governments. May 2013. *Profile of Los Angeles County*. PDF available online at: http://www.scag.ca.gov/Documents/LosAngelesCounty%20(2).pdf Main website: http://www.scag.ca.gov/Pages/default.aspx

[3] Southern California Association of Governments. May 2013. *Profile of the Unincorporated Area of Los Angeles County*. PDF available online at: http://www.scag.ca.gov/Documents/UnIncAreaLosAngelesCounty.pdf Main website: http://www.scag.ca.gov/Pages/default.aspx

[4] Southern California Association of Governments. 12 March 2012. *2012 Adopted RTP Growth Forecast*. PDF available online at: http://www.scag.ca.gov/Documents/2012AdoptedGrowthForecastPDF.pdf Main website: http://www.scag.ca.gov/DataAndTools/Pages/GrowthForecasting.aspx

[5] Southern California Association of Governments. August 29, 2012. *5th Cycle Regional Housing Needs Assessment Final Allocation Plan, 1/1/2014-10/1/2021*. PDF available online at: http://www.scag.ca.gov/Documents/5thCyclePFinalRHNAplan.pdf

[6] Los Angeles County Department of Regional Planning. April 30, 2014. *Los Angeles County Housing Element, 2014-2021*. Available online at: http://planning.lacounty.gov/housing

[7] Los Angeles County Department of Regional Planning. December 4, 1986. *Antelope Valley Areawide General Plan: A Component of the Los Angeles County General Plan*. PDF available online at: http://planning.lacounty.gov/assets/upl/data/pd_antelope-valley.pdf

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

[9] Los Angeles County Department of Regional Planning. Accessed 25 April 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

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: The Regional Housing Needs Assessment (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.[10] 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.[11] The RHNA consists of two measurements:[12]

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.

3.13.1 REGULATORY FRAMEWORK

The proposed initiative would allow hauled water as the primary source of potable water for 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 42,677 parcels in unincorporated Los Angeles County with an area totaling approximately 285,500 acres, or approximately 450 square miles.

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[10] Southern California Association of Governments. N.d. *RHNA & Housing*. Available online at: http://www.scag.ca.gov/programs/Pages/Housing.aspx

[11] Southern California Association of Governments. N.d. *Regional Housing Needs Assessment (RHNA)*. PDF available online at: http://www.scag.ca.gov/Documents/scagRHNA2012.pdf

[12] Southern California Association of Governments. N.d. *Regional Housing Needs Assessment (RHNA)*. PDF 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

1969 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.[13] 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.[14]

Local

Los Angeles County General Plan

2014–2021 Housing Element of the Los Angeles County General Plan

Los Angeles County's consideration of development of single-family residences in the unincorporated areas of Los Angeles County 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.[15]

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[13] California Department of Housing and Community Development. 2013. *Housing Elements and Regional Housing Need Allocation*. Available online at: http://www.hcd.ca.gov/hpd/hrc/plan/he/

[14] Southern California Association of Governments. N.d. *Regional Housing Needs Assessment (RHNA)*. PDF available online at: http://www.scag.ca.gov/Documents/scagRHNA2012.pdf

[15] Los Angeles County Department of Regional Planning. N.d. *Housing Element*. Website. Available online at: http://planning.lacounty.gov/housing

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:[16]

- **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
  - **Policy 1.1:** Make available through land use planning and zoning an adequate inventory of vacant and underutilized sites to accommodate the County's Regional Housing Needs Assessment (RHNA) allocation

- **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

- **Goal 9**: Planning for and monitoring the long-term affordability of sound, quality housing.
  - **Policy 9.2**: Enforce and enhance the housing monitoring system to ensure compliance with funding program regulations and compliance with local, State, and federal laws

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 3.13.1-1, *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.[17] 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 1.5.2-3).

[16] Los Angeles County Department of Regional Planning. April 30, 2014. *Los Angeles County Housing Element, 2014-2021*. Available online at: http://planning.lacounty.gov/housing

[17] 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.

TABLE 3.13.1-1
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. September 2013. *Los Angeles County Housing Element, 2014-2021 Revised Public Review Draft*.

The Housing Element has established the following program and policies relevant to population and housing in consideration of the proposed initiative:[18]

- **Program 1: Adequate Sites for Regional Housing Needs:** the County shall maintain an inventory of sites with the appropriate General Plan land use designation and zoning, and adequate public infrastructure and services for the County's RHNA allocation of 30,145 units during the Housing Element planning period.
  - **Policy 1.1:** Make available through land use planning and zoning an adequate sites inventory of vacant and underutilized sites to accommodate the County's RHNA allocation.
  - **Policy 1.4:** Assist housing developers to identify and consolidate suitable sites for developing housing for low and moderate income households and those with special needs.

1986 Antelope Valley Areawide General Plan

The planning area of the Antelope Valley Areawide General Plan,[19] 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 approximately 90 percent of the area that would be potentially affected by the proposed initiative. The Areawide General Plan identifies the main population centers of the Antelope Valley as Lancaster, Palmdale, and Quartz Hill in the central and southern part of Antelope Valley (although Acton is also part of the Antelope Valley), and most of the remaining Antelope Valley planning area consists of smaller communities that began as agricultural settlements or local farm trade centers and still maintain a rural character and a very low density of residential development. The Areawide General Plan has identified Acton, Crystalaire, Gorman, Green Valley, Lake Hughes-

[18] Los Angeles County Department of Regional Planning. September 2013. *Los Angeles County Housing Element, 2014-2021 Revised Public Review Draft*.

[19] Los Angeles County Department of Regional Planning. December 4, 1986. *Antelope Valley Areawide General Plan: A Component of the Los Angeles County General Plan*. PDF available online at: http://planning.lacounty.gov/assets/upl/data/pd_antelope-valley.pdf Page I-2

Elizabeth Lake, Leona Valley, Littlerock, Pearblossom, and Wrightwood as rural communities to be protected in order to preserve a "low density community lifestyle integrated into the natural environment of the foothills." The General Plan has identified Antelope Acres, Big Pines, Del Sur, El Dorado, Hi Vista, Juniper Hills, Llano, Neenach, Redman, Roosevelt, Three Points, Valyermo, Westside Park, and White Fence Farms as "very low density, rural villages which are worthy of protection" where their residents express a sense of community pride and local identity; the Areawide General Plan states that "it is important to sustain these areas as unique, low density 'living environments."

Chapter V, *Policy Statements*, establishes the following relevant policy relevant to population and housing in consideration of the proposed initiative:

Housing:

Goal: Affordable Housing

- **Policy 48:** Promote and support efforts by public and private agencies and citizen groups to provide sufficient housing in all price ranges to enable persons employed in a community to obtain housing in that community.

The 1986 Antelope Valley Areawide General Plan is in the process of being revised by Los Angeles County.

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 and provides goals, policies, and maps to establish zoning regulations and guide new development proposals.[20] 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 environmental habitat or natural hazards, and taking into consideration accessibility to infrastructure and public services.

[20] Los Angeles County, Santa Clarita Valley Area Plan, 2012. PDF available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf

3.13.2 AFFECTED ENVIRONMENT

Population

The population in Los Angeles County has increased significantly in the last century from 170,290 people in 1900 to approximately 10,017,068 people in 2013 based on U.S. Census estimate (Table 3.13.2-1, *Historic Population in Los Angeles County, 1960–2010*).[21] 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 3.13.2-2, *Population Growth Rate in Los Angeles County, 1900–2010*).

According to SCAG's 2013 Profile of Los Angeles County, the population of Los Angeles County increased by 365,302 people between 2000 and 2012 to a population of 9,884,632.[22] During this 12-year period, Los Angeles County's population growth rate of 3.8 percent was lower than the SCAG Region rate of 10.4 percent. For unincorporated Los Angeles County, SCAG calculated a population increase by 76,023 people to 1,062,073 between 2000 and 2012, during which the unincorporated area's population growth rate of 7.7 percent was higher than the overall growth rate in Los Angeles County.[23] 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.[24]

Housing

According to the SCAG's 2013 Profile of Los Angeles County, the total number of households in Los Angeles County increased by 115,804 units, or 3.7 percent, from 2000 to 2012.[25] During this 12-year period, Los Angeles County's household growth rate of 3.7 percent was lower than the SCAG region growth rate of 9 percent. For unincorporated Los Angeles County, SCAG calculated an increase in total number of households by 20,093 units, or 7.2 percent, between 2000 and

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[21] United States Census Bureau. July 1, 2013. *Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2013*. Available online at: http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk

[22] Southern California Association of Governments. May 2013. *Profile of Los Angeles County*. PDF available online at: http://www.scag.ca.gov/Documents/LosAngelesCounty%20(2).pdf Main website: http://www.scag.ca.gov/Pages/default.aspx

[23] Southern California Association of Governments. May 2013. *Profile of the Unincorporated Area of Los Angeles County*. PDF available online at: http://www.scag.ca.gov/Documents/UnIncAreaLosAngelesCounty.pdf Main website: http://www.scag.ca.gov/Pages/default.aspx

[24] Southern California Association of Governments. 12 March 2012. *2012 Adopted RTP Growth Forecast*. PDF available online at: http://www.scag.ca.gov/Documents/2012AdoptedGrowthForecastPDF.pdf Main website: http://www.scag.ca.gov/DataAndTools/Pages/GrowthForecasting.aspx

[25] Southern California Association of Governments. May 2013. *Profile of Los Angeles County*. PDF available online at: http://www.scag.ca.gov/Documents/LosAngelesCounty%20(2).pdf Main website: http://www.scag.ca.gov/Pages/default.aspx

2012, significantly higher than the overall Los Angeles County growth rate of 3.7 percent.[26] According to the SCAG 2012 Adopted RTP Growth Forecast, SCAG estimates that the number of households in the Los Angeles County will grow from 3,228,000 households in 2008 to 3,513,000 households in 2020 and 3,852,000 households in 2035; in unincorporated areas of Los Angeles County, the number of households is estimated to increase from 298,100 households in 2008 to 336,100 households in 2020 and 405,500 households in 2035.[27]

Between 2000 and 2014, of the County of Los Angeles Department of Building and Safety indicates that building permits were issued for 3,836 new single-family homes in the Initiative study area, at an average rate of 256 permits per year, with the economic recession in 2008 resulting in an overall decrease in new residential construction as (Table 3.13.2-3, *Single-Family Residential Permits Issued in Unincorporated Los Angeles County, January 1, 2000–June 30, 2014*).[28] As the issuance of building permits decreased between 2008 and 2011, the number of foreclosures in unincorporated Los Angeles County increased from 76 in 2006 (before the recession) to 1,083 foreclosures in 2008, with a steady annual decline to 827 foreclosures in 2011.

According to SCAG's 5th Cycle Regional Housing Needs Assessment Final Allocation Plan, 1/1/2014-10/1/2021, the following final RHNA Allocations have been made within unincorporated Los Angeles County (Table 3.13.2-4, *SCAG Final RHNA Allocation, 2014–2021*). The Housing Element for the Los Angeles County General Plan 2035 Update has identified 48,543 adequate sites to meet Los County's RHNA allocation needs; 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.[29]

[26] Southern California Association of Governments. May 2013. *Profile of the Unincorporated Area of Los Angeles County*. PDF available online at: http://www.scag.ca.gov/Documents/UnIncAreaLosAngelesCounty.pdf Main website: http://www.scag.ca.gov/Pages/default.aspx

[27] Southern California Association of Governments. 12 March 2012. *2012 Adopted RTP Growth Forecast*. PDF available online at: http://www.scag.ca.gov/Documents/2012AdoptedGrowthForecastPDF.pdf Main website: http://www.scag.ca.gov/DataAndTools/Pages/GrowthForecasting.aspx

[28] Southern California Association of Governments. May 2013. *Profile of the Unincorporated Area of Los Angeles County*. PDF available online at: http://www.scag.ca.gov/Documents/UnIncAreaLosAngelesCounty.pdf Main website: http://www.scag.ca.gov/Pages/default.aspx

[29] 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.

TABLE 3.13.2-1
HISTORIC POPULATION IN LOS ANGELES COUNTY, 1960–2010

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[6]	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[5]	37,253,956[2]

SOURCES:

[1] Forstall, Richard L. US Bureau of the Census. March 27, 1995. *CALIFORNIA Population of Counties by Decennial Census: 1900 to 1990*. Available online at: http://www.census.gov/population/cencounts/ca190090.txt

[2] United States Census Bureau. March 27, 2014. *State & County Quickfacts*. Los Angeles County, California. "Population, 2010." Available online at: http://quickfacts.census.gov/qfd/states/06/06037.html

[5] United States 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/

[6] United States 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 3.13.2-2
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 3.8% from 2000 to 2012)[4]

SOURCES:

[1] Forstall, Richard L. US Bureau of the Census. March 27, 1995. *CALIFORNIA Population of Counties by Decennial Census: 1900 to 1990*. Available online at: http://www.census.gov/population/cencounts/ca190090.txt

[2] United States Census Bureau. March 27, 2014. *State & County Quickfacts*. Los Angeles County, California. "Population, 2010." Available online at: http://quickfacts.census.gov/qfd/states/06/06037.html

[3] United States 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/

[4] Southern California Association of Governments. May 2013. *Profile of Los Angeles County*. PDF available online at: http://www.scag.ca.gov/Documents/LosAngelesCounty%20(2).pdf Main website: http://www.scag.ca.gov/Pages/default.aspx

TABLE 3.13.2-3
SINGLE-FAMILY RESIDENTIAL PERMITS ISSUED IN UNINCORPORATED LOS ANGELES COUNTY, JANUARY 1, 2000–JUNE 30, 2014

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	January to June 2014	Annual Average*
New Single-Family Permits Issued in Entire Unincorporated County[1]	2,389	1,737	2,085	3,159	2,225	1,921	1,574	1,217	451	294	292	352	758	-	-	1,419.5
New Single-Family Residence Permits Issued in the Hauled Water Initiative study area not as part of a subdivisions)[2]	178	1186	3314	575	360	461	556	418	612	40	42	18	11	59	6	256

SOURCES:

[1] Southern California Association of Governments. May 2013. *Profile of the Unincorporated Area of Los Angeles County*. PDF available online at: http://www.scag.ca.gov/Documents/UnIncAreaLosAngelesCounty.pdf Main website: http://www.scag.ca.gov/Pages/default.aspx

[2] Los Angeles County Department of Public Works, Building and Safety Division. Data provided by David Smith, IT Project Manager, on August 8, 2014 and August 11, 2014 for new single-family residence building permits between January 1, 2000 and June 30, 2014.

TABLE 3.13.2-4
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. August 29, 2012. *5th Cycle Regional Housing Needs Assessment Final Allocation Plan, 1/1/2014-10/1/2021*. PDF available online at: http://www.scag.ca.gov/Documents/5thCyclePFinalRHNAplan.pdf

3.13.3 IMPACT ANALYSIS

The State CEQA Guidelines recommend the consideration of three questions when addressing the potential for significant impacts to population and housing:

Would the proposed initiative have any of the following effects:

(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)?

The proposed initiative is expected to result in significant impacts to population and housing in relation to inducing substantial direct or indirect 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.[30] Although the subject vacant[31] 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.[32]

The availability of housing within the unincorporated territory of Los Angeles County is managed pursuant to the Housing Element of the County General Plan, which has been completed in conjunction with RHNA numbers (developed by SCAG) and a regional coalition of allocated growth. The Housing Element establishes the location and amount of housing that must be developed within the unincorporated area of Los Angeles County in order to accommodate the RHNA. However, none of the subject parcels considered under the proposed initiative have been identified by the Adequate Sites Inventory in the 2014–2021 Housing Element as vacant and underutilized sites that need to be developed in order to meet Los County's RHNA allocation.[33] The proposed initiative would facilitate the construction of new homes, in areas for which building permits have not been issued since 2003, where the parcel meets all the specified criteria, at the time of the effective date of the ordinance.

The 2014–2021 Housing Element of the Los Angeles County General Plan does not identify any of the subject parcels as being essential to meet the housing requirements for the unincorporated territory of Los Angeles County. The proposed initiative would induce population growth in the unincorporated areas of the northern portion of Los Angeles County by allowing properties that are not served by a private or public water purveyor or groundwater to be developed based on using hauled water. In northern unincorporated Los Angeles County, the historic rates of issuance of building permits for new single-family residential homes on vacant parcels whose zoning

[30] 2003, January 1. "Potable Water Availability Requirements for Residential and Commercial Development." Los Angeles County Department of Public Health Bureau of Environmental Protection Drinking Water Program. 5050 Commerce Drive, Baldwin Park, CA 91706-1423

[31] The term vacant refers to parcels identified as such by the County Assessor.

[32] 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

[33] 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.

designations permit single-family residences has been approximately 256 per year. Thus, based on a Los Angeles County building permit data indicating 384 permits per year was used as a reasonable worst-case scenario for the issuance of building permits that could reasonably be expected to result from the proposed initiative. Therefore, approximately 7,680 single-family homes could be expected to be constructed during the 2015 to 2035 20-year planning horizon

The proposed initiative is expected to result in significant impacts as a result of substantial population growth, up to 7,680 single-family homes, in the unincorporated areas of northern Los Angeles County, constituting a significant impact to population and housing that warrants the consideration of mitigation measures and alternatives in an EIR.

(b) Displace substantial amounts of existing housing, necessitating the construction of replacement housing elsewhere?

The proposed initiative would not result in impacts to population and housing in relation to the displacement of substantial amounts of existing housing, necessitating the construction of replacement housing elsewhere. The proposed initiative would involve the approval of permits to construct new single-family residences on currently vacant parcels once property owners have acquired a permit/contract to use hauled water as a residential water resource and would not displace any existing housing. Therefore, there would be no impacts to population and housing related to the displacement of substantial amounts of existing housing. No further analysis is warranted.

(c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

The proposed initiative would not result in impacts to population and housing in relation to the displacement of substantial numbers of people, necessitating the construction of replacement housing elsewhere. There are no people residing on the vacant subject parcels. The proposed initiative involves the approval of permits to construct new single-family residences on currently vacant properties using hauled water as a residential water resource and does not involve properties on which people are already residing. Therefore, there would be no impacts to population and housing related to the displacement of substantial numbers of people. No further analysis is warranted.

3.13.4 MITIGATION MEASURES

The proposed initiative would result in significant impacts to population and housing related to induced substantial 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.

This analysis is undertaken to determine if the proposed Single-Family Residential Hauled Water Initiative for New Development (proposed initiative) may have a significant impact to public services, thus requiring the consideration of mitigation measures or alternatives, in accordance with Section 15063 of the State California Environmental Quality Act (CEQA) Guidelines.[1] The evaluation of public services is based on the consideration of 42,677 parcels, zoned for single-family residential development in the unincorporated area of Los Angeles County, that, since January 2003, have not been issued building permits due to a lack of accessibility of potable water from a public or private water purveyor or groundwater. Public Services were evaluated with regard to the Safety Element[2] and Regional Recreation Areas Plan[3] of the existing adopted Los Angeles County General Plan; the Safety Element,[4] Public Services and Facilities Element,[5] and Parks and Recreation Element of the Los Angeles County General Plan 2035 Update;[6] the Antelope Valley Areawide General Plan;[7] the Santa Clarita Valley Area Plan;[8] and the Los Angeles County Fire Code.[9]

3.14.1 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. The regulatory framework for public services has been limited to the combined study area, which consists of 42,677 parcels in unincorporated Los Angeles County with an area totaling approximately 285,500 acres, or approximately 450 square miles.

The proposed initiative is limited to the use of undeveloped parcels where the zoning allows for development of a single-family residence.

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[1] *California Code of Regulations*. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

[2] Los Angeles County Department of Regional Planning. December 1990. *Safety Element: Los Angeles County General* Plan. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_web90-safety-element.pdf

[3] Los Angeles County Department of Regional Planning. July 29, 1965. *Regional Recreation Areas Plan*. Available online at http://planning.lacounty.gov/assets/upl/project/gp_web80-regional-recreation-areas-plan.pdf

[4] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 12: Safety Element*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter12_2014.pdf

[5] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 13: Public Services and Facilities Element*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter13_2014.pdf

[6] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 10: Parks and Recreation Element*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter10_2014.pdf

[7] Los Angeles County Department of Regional Planning. December 4, 1986. *Antelope Valley Areawide General Plan: A Component of the Los Angeles County General Plan*. PDF available online at: http://planning.lacounty.gov/assets/upl/data/pd_antelope-valley.pdf

[8] Los Angeles County, Santa Clarita Valley Area Plan, 2012. PDF available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf

[9] Los Angeles County. *Los Angeles County, California, Code of Ordinances: Title 32 FIRE CODE*. Available online at: http://library.municode.com/HTML/16274/level1/TIT32FICO.html

Federal

There are no applicable federal plans or policies for this issue area.

State

Public Resources Code 4290, 4291 and SRA Fire Safe Regulations

Approximately 22 percent of the subject parcels are located within State Responsibility Areas (SRA), or areas for which the California Department of Forestry and Fire Protection are 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).[10] 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:[11]

- **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.

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 does not apply to the construction of individual single-family residences; it only applies to residential subdivisions and is therefore not applicable to the proposed initiative.

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[10] Los Angeles County. *Los Angeles County, California, Code of Ordinances: Title 32 FIRE CODE*. Available online at: http://library.municode.com/HTML/16274/level1/TIT32FICO.html

[11] 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

[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

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 Safety Element[14] and Regional Recreation Areas Plan[15] of the adopted Los Angeles County General Plan and the Safety Element,[16] Public Services and Facilities Element,[17] and Parks and Recreation Element[18] of the Los Angeles County General Plan 2035 Update have both been referenced. It is anticipated that the Los Angeles County General Plan 2035 Update will be considered by the Board of Supervisors in late 2014.

Adopted Los Angeles County General Plan

The adopted Los Angeles County General Plan has established the following general goals and policies relevant to public services in consideration of the proposed initiative:

- **Policy 56.** Extend new urban facilities and services only where new urban development is planned and permitted.
- **Policy 57.** Improve the quality and accessibility of critical urban services including crime control, health, recreational and educational services.
- **Policy 58.** Maintain high quality emergency response services.

1990 Safety Element

The Safety Element of the adopted Los Angeles County General Plan has established the following goal relevant to fire protection services and police protection services in consideration of the proposed initiative:

- **Goal:** strengthen County short-term emergency response and long-term recovery capability

[14] Los Angeles County Department of Regional Planning. December 1990. *Safety Element: Los Angeles County General* Plan. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_web90-safety-element.pdf

[15] Los Angeles County Department of Regional Planning. July 29, 1965. *Regional Recreation Areas Plan*. Available online at http://planning.lacounty.gov/assets/upl/project/gp_web80-regional-recreation-areas-plan.pdf

[16] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 12: Safety Element.* Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter12_2014.pdf

[17] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 13: Public Services and Facilities Element.* Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter13_2014.pdf

[18] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 10: Parks and Recreation Element.* Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter10_2014.pdf

1965 Regional Recreation Areas Plan

As established by the Regional Recreation Areas Plan of the adopted Los Angeles County General Plan, 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]

Los Angeles County General Plan 2035 Update

Safety Element

The Safety Element of the Los Angeles County General Plan 2035 Update 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:[20]

- **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 Update 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.[21] 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:

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[19] Los Angeles County Department of Regional Planning. July 29, 1965. *Los Angeles County Regional Recreation Areas Plan*. PDF available online at: http://planning.lacounty.gov/assets/upl/project/gp_web80-regional-recreation-areas-plan.pdf

[20] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 12: Safety Element*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter12_2014.pdf

[21] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 13: Public Services and Facilities Element*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter13_2014.pdf

- **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.
  - **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 Update, the standard for parklands is four acres of local parkland and six acres of regional parkland per 1,000 County residents in unincorporated areas.[22]

1986 Antelope Valley Areawide General Plan

The planning area of the Antelope Valley Areawide General Plan, 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.[23]

Chapter IV, *Planning Policies Relating to Specific Communities*, establishes the following relevant policies:

- **Acton:** "the area should remain a rural community to protect the quality of life found there and to avoid the need for additional expensive public service systems."
  - "In addition to the above issues, the community is concerned about the rate of growth of Acton and, in particular, its impact upon schools, roads, utilities and other services. The Plan calls for a slow, planned, well controlled growth rate to reduce adverse impacts. It is expected that future growth will require special assessments to be levied on new development to generate the needed revenues which would allow for expansion of the local schools and other public infrastructure."
  - As part of the overall rural nature of the community, all local streets and roads – except those found in the "Village" area and the adjacent Industrial areas – shall be, subject to applicable Fire Department access requirements,

[22] Los Angeles County Department of Regional Planning. Accessed 2 February 2014. January 2014. *Los Angeles County General Plan: Public Review Draft 1/2014*. "Chapter 10: Parks and Recreation." PDF available online at http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter10_2014.pdf

[23] Los Angeles County Department of Regional Planning. December 4, 1986. *Antelope Valley Areawide General Plan: A Component of the Los Angeles County General Plan*. PDF available online at: http://planning.lacounty.gov/assets/upl/data/pd_antelope-valley.pdf

limited to a maximum paved width of 28 feet with appropriate graded or paved inverted shoulders.

- **Juniper Hills:** Subject to applicable Fire Department access requirements, future local streets should be limited to a maximum dedicated width of 40 feet, and a maximum paved width of 24 feet (exclusive of needed slope easements). However, within 50 feet of the centerline of such streets, no new structure shall be built, and within 30 feet of centerline of such streets, no obstruction, including fences and vegetation, shall be permitted which would interfere with a driver's vision between street traffic and adjoining driveway traffic.
- **Littlerock:** Subject to applicable Fire Department requirements, street improvements should consist of 24 feet of paving with unpaved shoulders.

Chapter V*, Policy Statements*, establishes the following relevant policies:

Land Use

- **Goal:** Costs of Population and Urban Growth
  - **Policy 12.** Relate costs of population and urban growth to those who benefit. Consequently, those costs which only benefit a particular developer or resident should be borne by that individual, while costs beneficial to a greater segment of the overall community should be borne by that group.
- **Goal:** Adequacy of Public Services
  - **Policy 29.** Encourage development of services to meet the needs of Antelope Valley residents including health, education, welfare, police and fire, governmental operations, recreation, cultural, and utility services. Such services should be expanded at a rate commensurate with population growth. Phasing of their implementation should be timed to prevent gaps in service as the area grows. Where feasible, service facilities will be established in central urban areas with branches located in outlying communities. When the population base in a community is too small to support a facility, a common facility to be shared by a number of small communities should be established at a central point.
  - **Policy 30.** Locate public services so that they are easily accessible to the public.
  - **Policy 31.** Encourage joint use of school playgrounds for community recreation.

Public Services and Facilities

- **Goal:** Library Services
  - **Policy 116.** Support the development of libraries in population centers. Encourage the use of bookmobiles to service outlying rural communities.
- **Goal:** Fire Protection Services
  - **Policy 118.** Expand fire stations commensurate with population growth.
- **Goal:** Hospital Services
  - **Policy 119.** Encourage expansion of hospital services as required to accommodate increased population.

- **Goal:** Recreational Services
  - **Policy 120.** Encourage the following actions for supplementing recreational services: educational grant funding for developing and expanding school playgrounds; volunteer development and maintenance of County park sites with the cooperation of the County department of Parks and Recreation; and concessionaire development of County-owned park sites.

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 and provides goals, policies, and maps to establish zoning regulations and guide new development proposals.[24] 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 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.

The Land Use Element of the Santa Clarita Valley Area Plan has established the following goals, objectives, and policies relevant to public services in consideration of the proposed initiative:

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

- **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 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 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, the Sheriff's Department strives to maintain one officer per 1,000 people, and this service level is being met within the Santa Clarita Valley.

The Safety Element of the 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, establishes the fuel modification requirements for buildings.[25] 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 this code and any local ordinance of the authority having jurisdiction.[26] Section 325.2.1 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).[27]

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[25] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 12: Safety Element.* Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter12_2014.pdf

[26] 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

[27] County of Los Angeles. *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

3.14.2 AFFECTED ENVIRONMENT

Fire

As described in Section 3.8.2 of the Hazards and Hazardous Materials section, 100 percent of the parcels within the Kagel Canyon subarea, 98.9 percent of the parcels within the Castaic/Santa Clarita/Agua Dulce subarea, 97.5 percent of the parcels within the Acton subarea, 6.7 percent of the parcels within the Lake Hughes/Gorman/West of Lancaster subarea, and 3.3 percent of the parcels within the Lake Los Angeles/Llano/Valyermo/Littlerock subarea are located in very high fire hazard severity zones (VHFHSZs) (see Section 3.8.2, Table 3.8.2-4, *High or Very High Fire Hazards Severity Zones Located within or in the Vicinity of Proposed Initiative Subareas*, and Figure 3.8.2-4, *Fire Hazard Severity Zones*). None of the parcels in the Antelope Valley Northeast subarea or the Lancaster Northeast subarea are located within a VHFHSZ.

A total of 4,668 of the subject parcels are located within a designated VHFHSZ, 4,017 of the parcels are located within a high fire hazard severity zone, and 25,067 of the parcels are located within a moderate fire hazard severity zone (see Section 3.8.2, Table 3.8.2-4). Fire protection service responsibilities for the subject parcels within each fire hazard severity zone are as follows (Table 3.14.2-1, *Fire Protection Responsibility Areas*):

TABLE 3.14.2-1
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
Number of Parcels located in Federal Responsibility Area (FRA - USDA Forest Service)	46	15	0	0
Number of Parcels located in State Responsibility Area (SRA - CALFIRE)	4,479	3,877	1,253	0
Number of Parcels located in Local Responsibility Area (LRA - Los Angeles County Fire Department)	143	125	23,814	10,709

***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 42,677 parcels subject to the analysis in this Initial Study.
SOURCE: CALFIRE

Within the Local Responsibility Areas (LRAs), 26 LACFD Stations provide fire protection services for the subject parcels (Figure 3.14.2-1, *LACFD Fire Station Service Areas* and Table 3.14.2-2, *Fire Station Service Areas and Estimated Maximum Response Time*).[28] Based on travel time on dirt and paved roads and highways to the farthest subarea parcel within each fire station service area, the estimated maximum fire response time ranges from three minutes in the fire station service areas for Station No. 84, 136, and 157 within the Lake Hughes/Gorman/West of Lancaster subarea to 48 minutes from Station No. 114 within the Antelope Valley Northeast subarea.

TABLE 3.14.2-2
FIRE STATION SERVICE AREAS AND ESTIMATED MAXIMUM RESPONSE TIME

Subarea	Fire Station Service Areas	Estimated Maximum Response Time within Service Area
Acton	24, 80, and 81	16 minutes from #24 14 minutes from #80 15 minutes from #81
Castaic/Santa Clarita/Agua Dulce	73, 76, 80, 81, 108, 111, 124, 132, 149, and 156	12 minutes from #73 39 minutes from #76 32 minutes from #80 17 minutes from #81 9 minutes from #108 12 minutes from #11 39 minutes from #124 21 minutes from #132 9 minutes from #149 31 minutes from #156
Antelope Valley Northeast	114	48 minutes from #114
Kagel Canyon	74	5 minutes from #74
Lake Hughes/Gorman/West of Lancaster	24, 77, 78, 84, 112, 130, 136, 140, and 157	20 minutes from #24 24 minutes from #77 32 minutes from #78 3 minutes from #84 9 minutes from #112 16 minutes from #130 3 minutes from #136 5 minutes from #140 3 minutes from #157
Lake Los Angeles/Llano/Valyermo/Littlerock	79, 92, 114, 117, and 135	28 minutes from #79 12 minutes from #92 34 minutes from #114 15 minutes from #117 14 minutes from #135
Lancaster Northeast	33, 114, 117, and 130	12 minutes from #33 21 minutes from #114 18 minutes from #117 11 minutes from #130

[28] Los Angeles Times. *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/

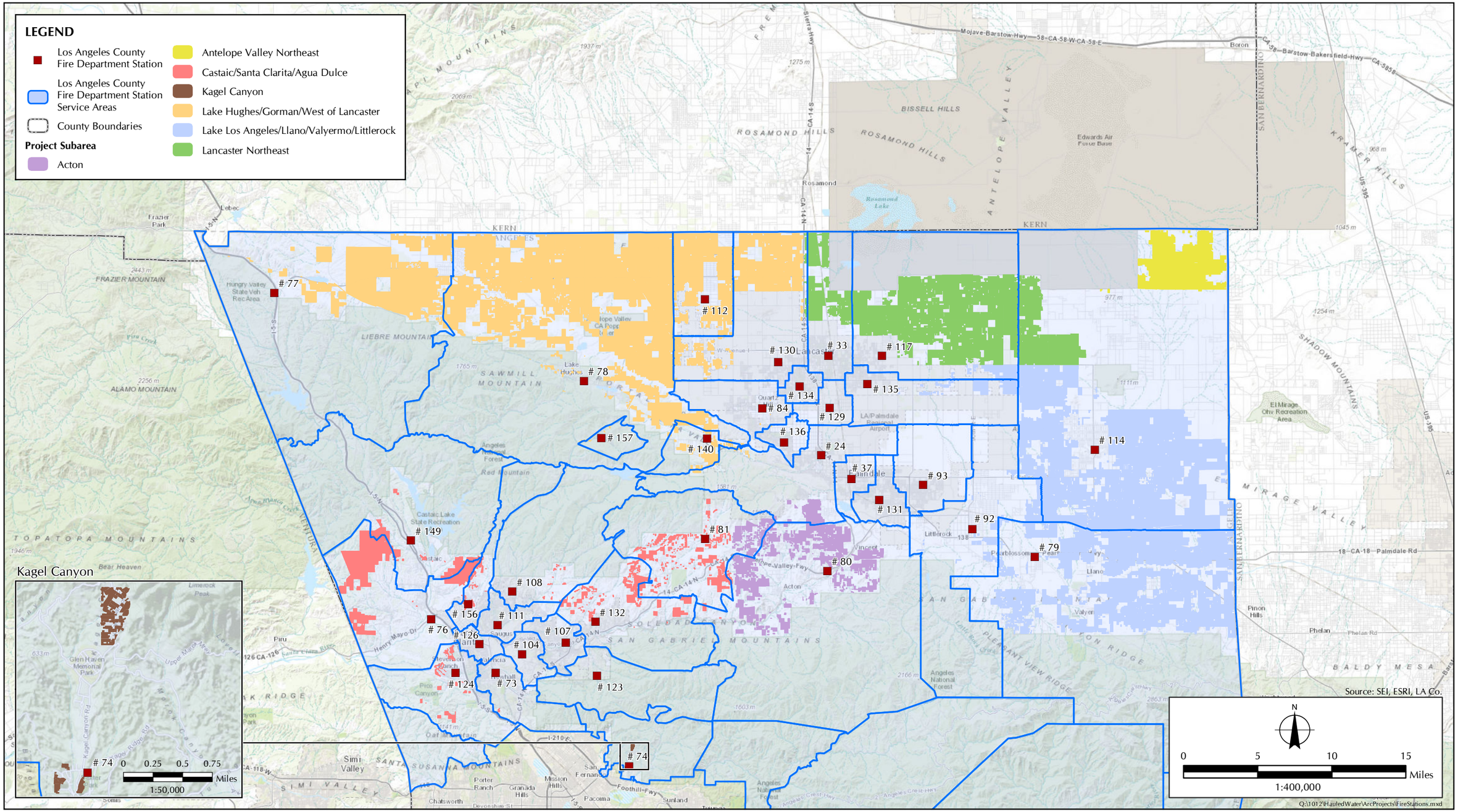

FIGURE 3.14.2-1

Los Angeles County Fire Department Fire Station Service Areas

There are five USFS fire stations located within the Santa Clarita Valley planning area. 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.[29] 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 still under construction.

Police

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.[30] The approximately 450-square-mile proposed initiative study area is served by the Lancaster, Palmdale, Santa Clarita Valley, and Crescenta Valley Sheriff's Department service areas. There are four Sheriff Stations that serve the subject parcels (Table 3.14.2-3, *Sheriff Station*s, and Figure 3.14.2-2, *Sheriff Station Service Areas*).[31]

[29] Los Angeles County, Santa Clarita Valley Area Plan, 2012. PDF available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf

[30] Los Angeles County Sheriff's Department. 2013. *Year in Review 2012*. PDF available online at: http://file.lacounty.gov/lasd/cms1_207718.pdf

[31] Los Angeles Times. *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/

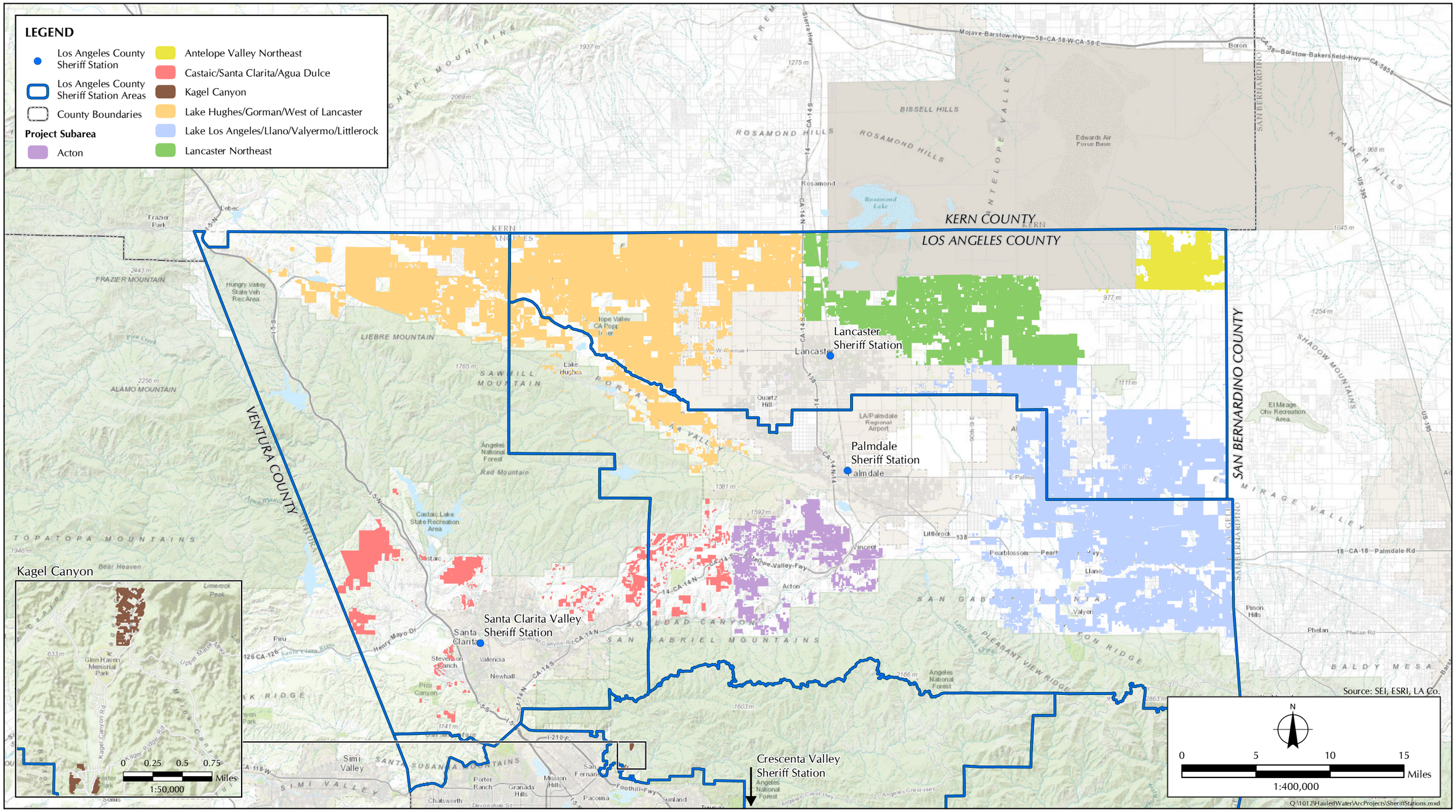

FIGURE 3.14.2-2

Sheriff Station Service Areas

TABLE 3.14.2-3
SHERIFF STATIONS

Sheriff Station Name	Santa Clarita Valley Sheriff Station	Palmdale County Sheriff Station	Lancaster County Sheriff Station	Crescenta Valley Sheriff Station
Sheriff 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
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
Distance from Acton subarea	n/a	2.6 miles northeast of the nearest parcel	n/a	n/a
Distance from Castaic/Santa Clarita/Agua Dulce subarea	1.8 miles east of the nearest parcel within the service area	9.0 miles northwest of the nearest parcel within the service area	n/a	n/a
Distance from Antelope Valley Northeast subarea	n/a	n/a	18.7 miles southwest of the nearest parcel	n/a
Distance from Kagel Canyon subarea	n/a	n/a	n/a	9.8 miles east of the nearest parcel
Distance from Lake Hughes/Gorman/West of Lancaster subarea	24.2 miles south of the nearest parcel within the service area	6.8 miles east of the nearest parcel within the service area	3.1 miles southeast of the nearest parcel within the service area	n/a
Distance from Lake Los Angeles/Llano/ Valyermo/Littlerock subarea	n/a	6.8 miles northwest of the nearest parcel within the service area	5.0 miles northwest of the nearest parcel within the service area	n/a
Distance from Lancaster Northeast subarea	n/a	n/a	2.2 miles south of the nearest parcel	n/a

According to the Santa Clarita Valley Area Plan, the Santa Clarita Valley Sheriff's Station 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 Valley Sheriff's Station has insufficient space to meet current staffing and future needs. 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.

Schools

As described in Section 3.8.2 of the Hazards and Hazardous Materials section, there are 24 K–12 schools located within a quarter mile of the parcels within all the proposed initiative subareas, with the exception of the Antelope Valley Northeast subarea and the Kagel Canyon subarea (see Figure 3.3.2-1, *Schools within One-Quarter Mile of Proposed Initiative Subarea Parcels*). The proposed initiative study area is served by the following school districts:[32,33,34]

- **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, and the Lancaster Elementary School District, and the Antelope Valley Union Joint High School District. There are seven public elementary schools, five public middle schools, zero public high schools, and five 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 three public elementary schools, two public middle schools, two private schools, 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 8.4 miles south of the subarea; the nearest public high school is located approximately 14.8 miles southwest of the subarea; and the nearest private school is located approximately 10.0 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 eight 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 one private school within a mile of this subarea.

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[32] Los Angeles Times. *Mapping LA Boundaries API*. "Elementary School Districts (2012)." Provides spatial data for school district service areas. Available online at: http://boundaries.latimes.com/sets/

[33] Los Angeles Times. *Mapping LA Boundaries API*. "Secondary School Districts (2012)." Provides spatial data for school district service areas. Available online at: http://boundaries.latimes.com/sets/

[34] Los Angeles Times. *Mapping LA Boundaries API*. "Unified School Districts (2012)." Provides spatial data for school district service areas. Available online at: http://boundaries.latimes.com/sets/

- **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 23 public elementary schools, two public middle schools, two public high schools, and 13 private schools within one mile of this subarea.

- **Kagel Canyon:** Served by the Los Angeles Unified School District. There are 20 public elementary schools, four public middle schools, three public high schools, and 22 private schools within five miles of this subarea. Two of these elementary schools and one of the private schools are located within a mile of this subarea.

Parks

As established by the Regional Recreation Areas Plan of the adopted Los Angeles County General Plan and the Parks and Recreation Element of the Los Angeles County General Plan 2035 Update, the standard for parklands is four acres of local parkland and six acres of regional parkland per 1,000 County residents in unincorporated areas.[35,36] Based on the standards established by the Regional Recreation Areas Plan, the Los Angeles County Department of Parks and Recreation *Strategic Asset Management Plan for 2020* 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.[37] There are only seven neighborhood parks (approximately 42.6 acres) located within a half-mile radius and 17 community parks (approximately 232.0 acres) located within a two-mile radius of the 42,677 subject parcels (see Figure 3.3.2-3, *Neighborhood and Community Parks*).

The *Strategic Asset Management Plan* also determined that there is a surplus of regional parkland and open space throughout the proposed initiative study area. There are 200 community regional parks (approximately 9,264.5 acres) located within a 20-mile radius and 192 regional parks (approximately 141,499.5 acres) located within 25 miles of the 42,677 subject parcels (see Figure 3.3.2-4, *Community Regional and Regional Parks*).

Other Public Facilities

Other public facilities include libraries and hospitals.

Libraries

The Los Angeles County Public Library (Library) provides library services to over 3.5 million residents living in unincorporated Los Angeles County and within 51 of the 88 incorporated cities

[35] Los Angeles County Department of Regional Planning. July 29, 1965. *Los Angeles County Regional Recreation Areas Plan*. PDF available online at: http://planning.lacounty.gov/assets/upl/project/gp_web80-regional-recreation-areas-plan.pdf

[36] Los Angeles County Department of Regional Planning. Accessed 2 February 2014. January 2014. *Los Angeles County General Plan: Public Review Draft 1/2014*. "Chapter 10: Parks and Recreation." PDF available online at http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter10_2014.pdf

[37] Chief Administrative Office of Los Angeles County. April 2004. *Los Angeles County Department of Parks and Recreation Strategic Asset Management Plan for 2020*.

of Los Angeles County within a service area of 3,032 square miles.[38,39] In June 2013, the Library had 85 regional and communities libraries, one institutional library, and three bookmobiles that served 3,116,397 registered borrowers (approximately 90 percent of the residents) at a budgeted expenditure rate of $34.44 per capita for fiscal year 2012/2013.[40] There are nine County libraries and 18 bookmobile stops within the vicinity of the subject parcels (Figure 3.14.2-3, *Public Libraries and Bookmobile Stops*). The subject parcels are located approximately 0.1 to 17.3 miles away from the nearest County library or bookmobile stop (Table 3.14.2-4, *County Libraries and Bookmobile Stops by Subarea*).

TABLE 3.14.2-4
COUNTY LIBRARIES AND BOOKMOBILE STOPS BY SUBAREA

Subarea	Number of Libraries in Vicinity of Subject Parcels	Number of Bookmobile Stops in Vicinity of Subject Parcels	Distance to Nearest Library and/or Bookmobile Stop
Acton	1	3	0.6 to 5.2 miles
Castaic/Santa Clarita/Agua Dulce	5	5	0.1 to 5.0 miles
Antelope Valley Northeast	1	0	10.0 to 16.4 miles
Kagel Canyon	0	0	8.0 to 10.6 miles
Lake Hughes/Gorman/West of Lancaster	10	1	0.1 to 8.0 miles
Lake Los Angeles/Llano/Valyermo/Littlerock	1	0	1.0 to 17.3 miles
Lancaster Northeast	2	0	2.3 to 12.6 miles

Hospitals

There are five hospitals in the vicinity of the subject parcels (Table 3.14.2-5, *Hospitals*, and see Figure 3.3.2-2, *Medical Centers in Vicinity of Proposed Initiative Subareas*). The Safety Element of the 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.[41] 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.

[38] County of Los Angeles Public Library. 2014. *County of Los Angeles Public Library: About Us*. Website. Available online at: http://www.colapublib.org/aboutus/

[39] County of Los Angeles Public Library. 2014. *County of Los Angeles Public Library: Statistics*. Website. Available online at: http://www.colapublib.org/aboutus/info.html

[40] County of Los Angeles Public Library. 2014. *County of Los Angeles Public Library: Statistics*. Website. Available online at: http://www.colapublib.org/aboutus/info.html

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

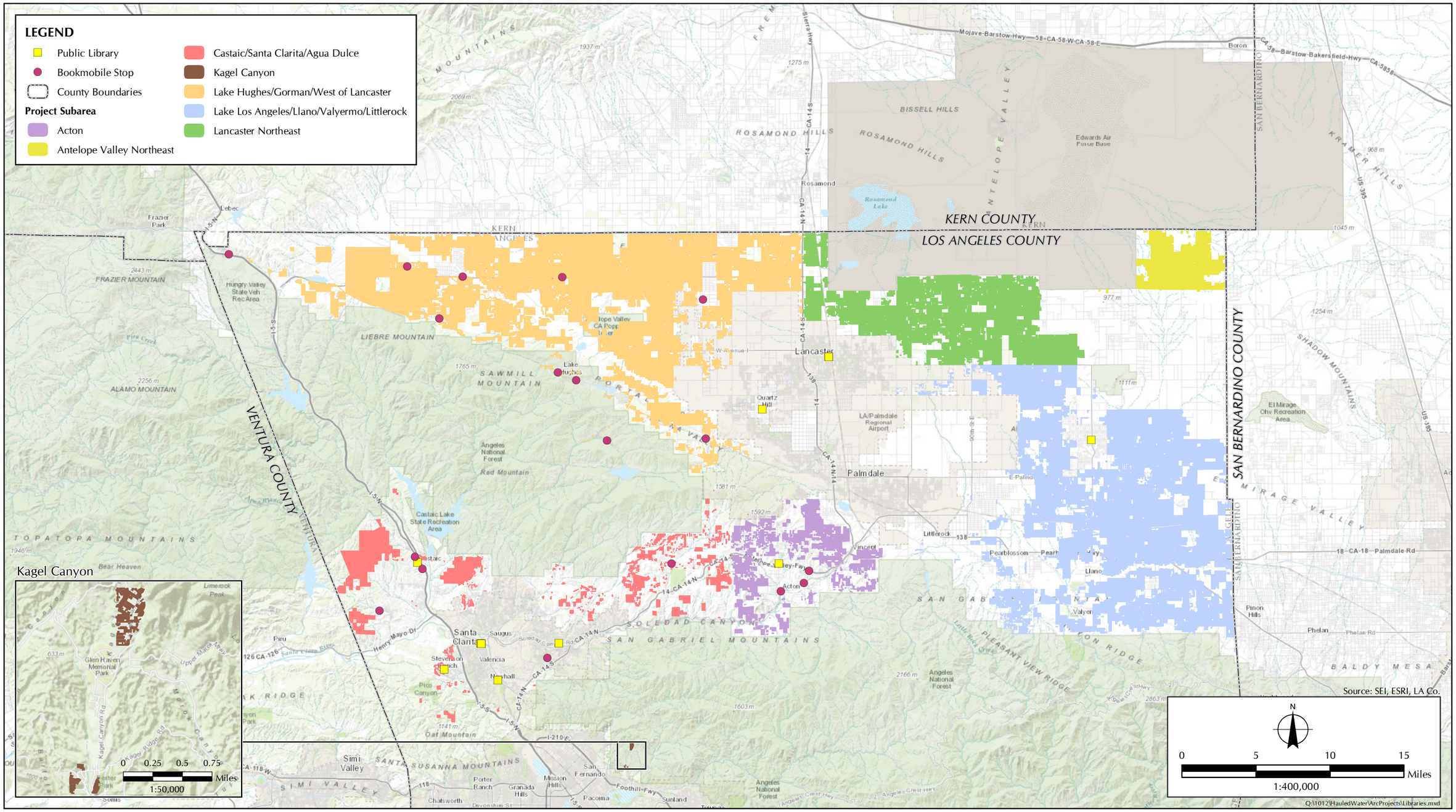

FIGURE 3.14.2-3

Public Libraries and Bookmobile Stops

TABLE 3.14.2-5
HOSPITALS

Hospital Name	Antelope Valley Hospital[1]	Palmdale Regional Medical Center[2]	Henry Mayo Newhall Memorial Hospital[3]	Olive View – UCLA Medical Center[4]	Providence Holy Cross Medical Center[5]
Hospital Address	1600 W Avenue J, Lancaster, CA 93534	38600 Medical Center Dr., Palmdale, CA 93551	23845 McBean Pkwy, Valencia, CA 91355	14445 Olive View Dr, Sylmar, CA 91342	15031 Rinaldi St, Mission Hills, CA 91345
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]
Distance from Acton subarea	9.0 miles north	**1.8 miles north (nearest hospital)**	17.5 miles southwest	13.3 miles southwest	15.7 miles southwest
Distance from Castaic/Santa Clarita/Agua Dulce subarea	11.5 miles north east	7.8 miles north east	**1.6 miles west (nearest hospital)**	5.0 miles east	6.2 miles southeast
Distance from Antelope Valley Northeast subarea	**20.0 miles southwest (nearest hospital)**	22.2 miles southwest	48.8 miles southwest *(outside service area)*	47.3 miles southwest	49.6 miles southwest
Distance from Kagel Canyon subarea	28.1 miles north east	22.3 miles north east	11.7 miles northwest *(outside service area)*	**4.2 miles west (nearest hospital)**	4.6 miles southwest
Distance from Lake Hughes/Gorman/West of Lancaster subarea	5.5 miles east	**5.2 miles east (nearest hospital)**	19.2 miles southwest	19.7 miles south	23.1 miles southwest
Distance from Lake Los Angeles/ Llano/Valyermo/ Littlerock subarea	**5.9 miles west (nearest hospital)**	7.3 miles southwest	30.4 miles southwest *(outside service area)*	26.5 miles southwest	29.0 miles southwest
Distance from Lancaster Northeast subarea	**3.0 miles south (nearest hospital)**	9.1 miles southwest	35.0 miles southwest *(outside service area)*	33.8 miles southwest	36.9 miles southwest

SOURCES:

[1] Antelope Valley Hospital. 2013. *About Us*. Website. Available online at: http://avhospital.org/About/Pages/default.aspx

[2] Palmdale Regional Medical Center. 2014. *About the Hospital*. Website. 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] Health Services Los Angeles County. Olive View – UCLA Medical Center. Website. Available online at: http://dhs.lacounty.gov/wps/portal/dhs/oliveview

[5] Providence Health & Services Southern California. April 2014. *Fact Sheet*. PDF available online at: http://california.providence.org/~/media/Files/Providence%20CA/California%20and%20Foundation/phsSoCalFactSheet April2014.pdf

3.14.3 IMPACT ANALYSIS

The State CEQA Guidelines recommend the consideration of the following question when addressing the potential for significant impact to public services:

(a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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:

(1) Fire protection?

The proposed initiative is expected to result in significant impacts associated with the provision of new or expanded fire protection services in order to maintain acceptable service ratios for fire protection. Based on the Santa Clarita Valley Area Plan fire response time policy 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 3.14.2-2, the existing fire protection services in the vicinity of the proposed initiative study area will not adequately serve the additional development of up to 42,677 single-family residential parcels, several of which are located in VHFHSZs. As shown in Table 3.14.2-2, 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 except the Kagel Canyon subarea. This would require the construction, operation, and maintenance of additional fire protection services and facilities beyond the 26 existing LACFD fire stations to adequately serve the subject parcels, in terms of the ability to house adequate staffing, and be located in a manner to respond within 12 minutes. Therefore, the proposed initiative 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, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services, and thus warrants further evaluation in an environmental impact report, including the consideration of mitigation measures and alternatives.

(2) Police protection?

The proposed initiative is expected to 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 Santa Clarita Valley Area Plan and the Safety Element of the Los Angeles County General Plan 2035 Update of one officer per 1,000 residents, an additional approximately 27 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 existing Sheriff stations and substation are at or near capacity; therefore, it is anticipated that existing stations would need to be expanded or new substations constructed.

The 2012 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 384 building permits per year in northern unincorporated Los Angeles County. The issuance of 384 building permits with the proposed initiative, at an average of 3.5 people per household, would likely result in an annual population increase of 1,344 per year, or

up to 26,880 additional people from the single-family residential development of the 7,680 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 27 additional officers to service 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. Therefore, the proposed initiative 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, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services and thus warrants further evaluation in an environmental impact report, including the consideration of mitigation measures and alternatives.

(3) 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 2012 average single-family residence household size of 3.5 people in unincorporated Los Angeles County and a reasonable worst-case scenario of 384 building permits per year, the proposed initiative would likely result in 26,880 additional people per year during the 2015–2035 planning period from the single-family residential development of the 42,677 subject parcels. The Southern California Association of Governments estimates that the 2012 population in unincorporated Los Angeles County was comprised of 24 percent children to young adults between the age of five and 20 years old; of the 151,756 students enrolled in public schools in 2012 within unincorporated Los Angeles County, approximately 59 percent were enrolled in elementary schools, 23 percent in middle schools, and 18 percent in high schools.[42] Based on these enrollment percentages and the projected population increase, the proposed initiative may generate the need to provide school services for approximately 3,806 elementary school students, 1,484 middle school students, and 1,161 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. Therefore, the potential for new or expanded schools in order to maintain acceptable service ratios for schools warrants further evaluation in an environmental impact report, including the consideration of mitigation measures and alternatives.

(4) 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 per 1,000 residents.[43] The parcels that could be developed as a result of the proposed initiative are adequately served by regional parks, for which there is a surplus in the vicinity of the

[42] Southern California Association of Governments. May 2013. *Profile of the Unincorporated Area of Los Angeles County*. PDF available online at: http://www.scag.ca.gov/Documents/UnIncAreaLosAngelesCounty.pdf Main website: http://www.scag.ca.gov/Pages/default.aspx

[43] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 10: Parks and Recreation Element*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter10_2014.pdf

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 2000.[44] 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. As described in Section 3.15.3 (Recreation), the proposed initiative would require 5.4 additional acres of local parkland per year, or an estimated 107.5 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. The construction of up to 107.5 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, thus warranting further evaluation in an environmental impact report, including the consideration of mitigation measures and alternatives. 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.

(5) 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 90 percent of County residents use library or bookmobile services.[45] Four of the subareas (Table 3.14.2-4)—Antelope Valley Northeast, Kagel Canyon, Lake Los Angeles, and Lancaster Northeast—have parcels with more than a 10-mile travel distance to the nearest library. Therefore, it is anticipated that new libraries would need to be constructed. In addition, it is estimated that the County operational cost for library patrons would increase from an additional $41,658.63 in the first year to up to $833,172.48 per year at end of the twenty-year 2015–2035 planning horizon. The 2012 average single-family residence household size is 3.5 people in unincorporated Los Angeles County. There would be an estimated 384 building permits issued per year in the reasonable worst-case scenario. Therefore, the proposed initiative would likely result in 1,344 additional people per year, or an estimated 26,880 additional people, during the 2015–2035 planning horizon. Based on the County data, approximately 90 percent of the additional people (up to 24,192 during the 2015–2035 planning horizon) would be expected to become registered borrowers. The expected per capita expenditure in 2012/2013 dollars would be expected to be approximately $34.44 on library services. Similarly, a population increase of up to 24,192 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. The construction of new libraries and hospitals that would likely result from the proposed initiative 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, in order to achieve service ratios for libraries and hospitals, and thus warrants further evaluation in an environmental impact report, including the consideration of mitigation measures and alternatives.

[44] Based on 2012 average household size of 3.5 persons per household in unincorporated Los Angeles County, the development of 42,677 parcels, and the County standard for local parkland of four acres per 1,000 residents.

[45] County of Los Angeles Public Library. 2014. *County of Los Angeles Public Library: Statistics*. Website. Available online at: http://www.colapublib.org/aboutus/info.html

3.14.4 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 and alternatives in an environmental impact report.

SECTION 3.15
RECREATION

This analysis is undertaken to determine if the proposed Single-Family Residential Hauled Water Initiative for New Development (proposed initiative) may have a significant impact to recreation, thus requiring the consideration of mitigation measures or alternatives in accordance with Section 15063 of the State California Environmental Quality Act (CEQA) Guidelines.[1] The evaluation of recreation is based on the consideration of 42,677 parcels, zoned for single-family residential development in the unincorporated area of Los Angeles County, that, since January 2003, have not been issued building permits due to a lack of accessibility of potable water from a public or private water purveyor or groundwater. Recreation was evaluated with regard to the 1980 Conservation and Open Space Element,[2] and 1965 Regional Recreation Areas Plan[3] of the adopted Los Angeles County General Plan; the Parks and Recreation Element[4] of the Los Angeles County General Plan 2035 Update; the 1986 Antelope Valley Areawide General Plan;[5] the 2012 Santa Clarita Valley Area Plan;[6] the Los Angeles County Department of Parks and Recreation Strategic Asset Management Plan for 2020;[7] and recreation information available on the Los Angeles County Department of Parks and Recreation website.[8]

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 Update (Table 3.15-1, *Los Angeles County Park Service Area Definitions*).[9] Los Angeles County also treats trails as linear parks that provide community access to increased health and fitness activities in the increasingly urbanized region.

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[1] *California Code of Regulations*. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

[2] Los Angeles County Department of Regional Planning. November 25, 1980. *Los Angeles County General Plan Conservation and Open Space Element*. Available online at http://planning.lacounty.gov/assets/upl/project/gp_web80-conservation-and-open-space.pdf

[3] Los Angeles County Department of Regional Planning. July 29, 1965. *Regional Recreation Areas Plan*. Available online at http://planning.lacounty.gov/assets/upl/project/gp_web80-regional-recreation-areas-plan.pdf

[4] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 10: Parks and Recreation Element*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter10_2014.pdf

[5] Los Angeles County Department of Regional Planning. December 4, 1986. *Antelope Valley Areawide General Plan: A Component of the Los Angeles County General Plan*. PDF available online at: http://planning.lacounty.gov/assets/upl/data/pd_antelope-valley.pdf

[6] Los Angeles County, Santa Clarita Valley Area Plan, 2012. PDF available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf

[7] Chief Administrative Office of Los Angeles County. April 2004. *Los Angeles County Department of Parks and Recreation Strategic Asset Management Plan for 2020*.

[8] Los Angeles County Department of Parks and Recreation. Accessed 2 May 2014. *Find Parks, Amenities, and Things to Do in Los Angeles County*. Website. Available online at: http://parks.lacounty.gov/wps/portal/dpr/parkslocator/

[9] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 10: Parks and Recreation Element*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter10_2014.pdf

TABLE 3.15-1
LOS ANGELES COUNTY PARK SERVICE AREA DEFINITIONS

Recreational Facility	Local/Regional	Service Standards	Suggested Park Size	Service Area
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
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: Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 10: Parks and Recreation Element*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter10_2014.pdf

3.15.1 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. The regulatory framework for recreation has been limited to the combined study area, which consists of 42,677 parcels in unincorporated Los Angeles County with an area totaling approximately 285,500 acres, or approximately 450 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.[10] 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.[11] However, this ordinance does not apply to the

[10] 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

[11] Municode. N.d. *Los Angeles County, California, Code of Ordinances: Title 21 Subdivisions*. Available online at: https://library.municode.com/index.aspx?clientId=16274

construction of individual single-family residences; it only applies to residential subdivisions and is therefore not applicable to the proposed initiative.

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 Conservation and Open Space Element[12] and Regional Recreation Areas Plan[13] of the adopted Los Angeles County General Plan and the Parks and Recreation Element[14] of the Los Angeles County General Plan 2035 Update have both been referenced. It is anticipated that the Los Angeles County General Plan 2035 Update will be considered by the Board of Supervisors in late 2014.

Adopted Los Angeles County General Plan

1980 Conservation and Open Space Element

The County's recreation objective, found in the Conservation and Open Space Element of the General Plan, is to provide additional recreation areas through more recreation sites and better access to recreation facilities.[15] Under this objective, the County has established the following policies relevant to recreation in consideration of the proposed initiative:

- **Policy 27.** Provide low intensity outdoor recreation in areas of scenic and ecological value compatible with protection of these natural resources.
- **Policy 28.** Develop local parks in urban areas as part of urban revitalization projects, wherever possible.
- **Policy 30.** Develop a system of bikeways, scenic highways, and riding and hiking trails; link recreational facilities where possible.

1965 Regional Recreation Areas Plan

The 1965 Regional Recreation Areas Plan of the existing adopted Los Angeles County General Plan identified 22 existing regional parks, 17 proposed regional parks, and 22 developing regional parks in Los Angeles County for recreational use in extensive areas; 19 existing recreation parks, 26 proposed recreation parks, and 14 developing recreation parks in Los Angeles County for active recreational use; and eight existing reservations, 26 proposed reservations, and four developing

[12] Los Angeles County Department of Regional Planning. November 25, 1980. *Los Angeles County General Plan Conservation and Open Space Element.* Available online at http://planning.lacounty.gov/assets/upl/project/gp_web80-conservation-and-open-space.pdf

[13] Los Angeles County Department of Regional Planning. July 29, 1965. *Regional Recreation Areas Plan.* Available online at http://planning.lacounty.gov/assets/upl/project/gp_web80-regional-recreation-areas-plan.pdf

[14] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 10: Parks and Recreation Element.* Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter10_2014.pdf

[15] Los Angeles County Department of Regional Planning. November 25, 1980. *Los Angeles County General Plan Conservation and Open Space Element.* Available online at http://planning.lacounty.gov/assets/upl/project/gp_web80-conservation-and-open-space.pdf

reservations in Los Angeles County for passive recreation use on land set aside for the protection of scenic resources, unusual native flora and fauna, geologic phenomena, or open space that would enhance or complement the recreational function of an adjacent or nearby recreation area.[16] The Regional Recreation Areas Plan has established a recreation standard of one recreation park for every 200,000 persons.

Los Angeles County General Plan 2035 Update

The Parks and Recreation Element of the Los Angeles County General Plan 2035 Update has identified 50 existing acres of local parkland and 3,870 existing acres of regional parkland in the Antelope Valley Planning Area, 71 acres of local parkland and 14,425 acres of regional parkland in the Santa Clarita Valley planning area, and nine acres of local parkland and 603 acres of regional parkland in the San Fernando Planning Area.

The Parks and Recreation Element of the Los Angeles County General Plan 2035 Update established the following goals and policies relevant to recreation:[17]

- **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 additional local and regional parkland to meet the following County standards: 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, require developers to provide for local and regional parkland above and beyond their Quimby obligations as based on an appropriate nexus study.
  - **Policy P/R 3.4:** Provide additional parks in communities with insufficient local parkland as identified through the gap analysis.
  - **Policy P/R 3.7:** Pursue a variety of opportunities to secure property for parks and recreational facilities, including purchase, grant funding, private donation, 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.

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[16] Los Angeles County Department of Regional Planning. July 29, 1965. *Regional Recreation Areas Plan*. Available online at http://planning.lacounty.gov/assets/upl/project/gp_web80-regional-recreation-areas-plan.pdf

[17] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 10: Parks and Recreation Element*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter10_2014.pdf

1986 Antelope Valley Areawide General Plan

The planning area of the Antelope Valley Areawide General Plan, 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.[18]

Chapter V, *Policy Statements*, establishes the following policy relevant to recreation in consideration of the proposed initiative:

Environmental Resource Management

- **Goal:** Antelope Valley Trails Plan
  - **Policy 166.** Where a proposed discretionary project encompasses a mapped trail corridor, a trail dedication requirement will be a condition of approval.

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 and provides goals, policies, and maps to establish zoning regulations and guide new development proposals.[19] 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.

[18] Los Angeles County Department of Regional Planning. December 4, 1986. *Antelope Valley Areawide General Plan: A Component of the Los Angeles County General Plan*. PDF available online at: http://planning.lacounty.gov/assets/upl/data/pd_antelope-valley.pdf

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

The Conservation Element of the Santa Clarita Valley Area Plan provides the following 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 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.

3.15.2 AFFECTED ENVIRONMENT

As established by the Regional Recreation Areas Plan of the adopted Los Angeles County General Plan and the Parks and Recreation Element of the Los Angeles County General Plan 2035 Update, the standard for parklands is four acres of local parkland and six acres of regional parkland per 1,000 County residents in unincorporated areas.[20,21] Based on the standards established by the Regional Recreation Areas Plan, the Los Angeles County Department of Parks and Recreation *Strategic Asset Management Plan for 2020* determined that the demand for parkland in unincorporated Los Angeles County exceeds the supply in all Los Angeles County Supervisorial Districts (Districts).[22] The 42,677 subject parcels are located within 15 Park Planning Areas (PPAs) in Recreation Planning Areas (RPAs) 1, 2, and 3 within District 5, which encompasses the northern portion of the County (Figure 3.15.2-1, *Recreation Planning Areas and Park Planning* Areas, and Table 3.15.2-1, *Recreation Planning Areas and Park Planning Areas by Subarea*). The *Strategic Asset Management Plan for 2020* used population projections made in 2000 by the Southern California Association of Governments (SCAG),[23] the California Department of Housing and Community Development,[24] and the California Department of Finance[25] as a baseline for the 2020 population projection in each PPA, with the assumption that the population of Los Angeles County was projected to grow from approximately 9.5 million in 2000 to approximately 10.6 million in 2010 and approximately 11.6 million in 2020. The population growth projections estimated in 2000 for 2020 are based on a higher growth rate than the current trend due to the economic recession that began in 2008, as the 2010 population of Los Angeles County was approximately 9.8 million according to SCAG's Profile of Los Angeles County in 2013[26] and SCAG predicts that the population in Los Angeles County will be approximately 10.4 million in 2020 based on updated population growth projections made in 2012.[27]

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[20] Los Angeles County Department of Regional Planning. July 29, 1965. *Los Angeles County Regional Recreation Areas Plan*. PDF available online at: http://planning.lacounty.gov/assets/upl/project/gp_web80-regional-recreation-areas-plan.pdf

[21] Los Angeles County Department of Regional Planning. Accessed 2 February 2014. January 2014. *Los Angeles County General Plan: Public Review Draft 1/2014*. "Chapter 10: Parks and Recreation." PDF available online at http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter10_2014.pdf

[22] Chief Administrative Office of Los Angeles County. April 2004. *Los Angeles County Department of Parks and Recreation Strategic Asset Management Plan for 2020*.

[23] Southern California Association of Governments (SCAG) Region Growth Trends, 1950–2025, U.S. Census and SCAG 2001 Regional Transportation Plan

[24] Projected Population Growth by Metro Region, MSA, and County, 1997–2020, California Department of Housing and Community Development

[25] California Department of Finance, 2000

[26] Southern California Association of Governments. May 2013. *Profile of Los Angeles County*. PDF available online at: http://www.scag.ca.gov/Documents/LosAngelesCounty%20(2).pdf Main website: http://www.scag.ca.gov/Pages/default.aspx

[27] Southern California Association of Governments. 12 March 2012. *2012 Adopted RTP Growth Forecast*. PDF available online at: http://www.scag.ca.gov/Documents/2012AdoptedGrowthForecastPDF.pdf Main website: http://www.scag.ca.gov/DataAndTools/Pages/GrowthForecasting.aspx

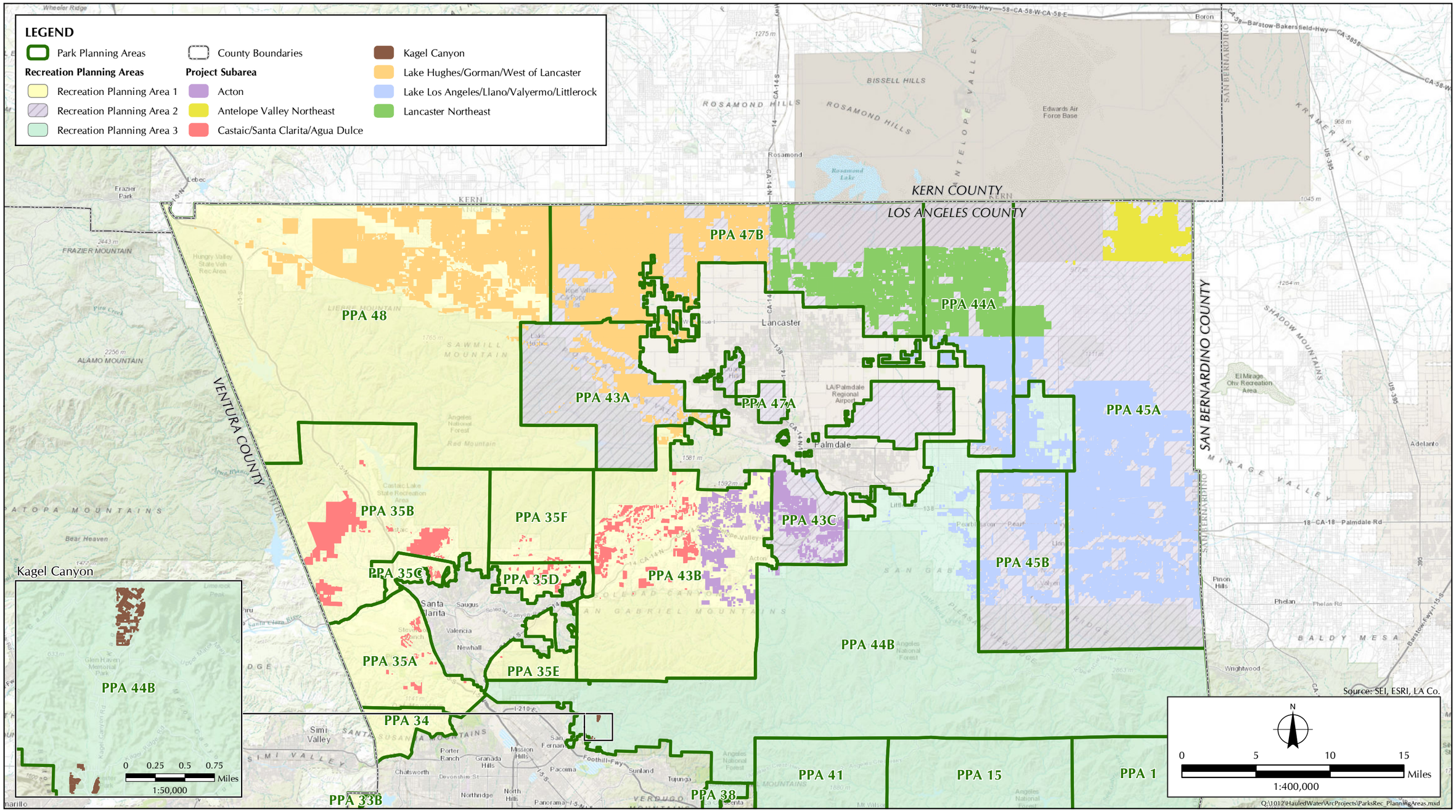

FIGURE 3.15.2-1

Recreation Planning Areas and Park Planning Areas

TABLE 3.15.2-1
RECREATION PLANNING AREAS AND PARK PLANNING AREAS BY SUBAREA

RPA	PPA Number	PPA Name	Subarea	Local Parkland Deficiency in 2000 (acres)	Projected Local Parkland Deficiency in 2020 (acres)	Regional Parkland Deficiency in 2000 (acres)	Projected Regional Parkland Deficiency in 2020 (acres)
RPA 1	PPA 35A	Valencia	Castaic/Santa Clarita/Agua Dulce	25.0	24.4	None – Surplus of 9,728.5 acres	None – Surplus of 9,736.9 acres
	PPA 35B	Castaic	Castaic/Santa Clarita/Agua Dulce	47.8	59.6		
	PPA 35C	Saugus	Castaic/Santa Clarita/Agua Dulce	45.7	51.8		
	PPA 35D	Mint Canyon	Castaic/Santa Clarita/Agua Dulce	24.2	56.3		
	PPA 35F	Bouquet Canyon	Castaic/Santa Clarita/Agua Dulce	2.2	4.8		
	PPA 43B	Agua Dulce/Acton	Acton	41.3	69.7		
			Castaic/Santa Clarita/Agua Dulce				
			Lake Hughes/Gorman/ West of Lancaster				
	PPA 48	West Antelope Valley	Lake Hughes/Gorman/ West of Lancaster	5.9	10.9		
RPA 2	PPA 43A	Lake Elizabeth	Lake Hughes/Gorman/ West of Lancaster	17.8	21.7	None – Surplus of 2,854.1 acres	None – surplus of 2,783.6 acres
	PPA 43C	Lakeview	Acton	14.2	14.7		
	PPA 44A	Redman	Lake Los Angeles/Llano/ Valyermo/Littlerock	16.4	25.5		
			Lancaster Northeast				
	PPA 45A	East Antelope Valley	Antelope Valley Northeast	6.3	7.1		
			Lake Los Angeles/Llano/ Valyermo/Littlerock				
			Lancaster Northeast				
	PPA 45B	Pearblossom	Lake Los Angeles/Llano/ Valyermo/Littlerock	2.5	6.2		
	PPA 47A	Quartz Hill	Lake Los Angeles/Llano/ Valyermo/Littlerock	43.2	65.6		
	PPA 47B	Edwards	Lake Hughes/Gorman/ West of Lancaster	13.2	19.7		
			Lancaster Northeast				
RPA 3	PPA 44B	Littlerock	Acton	44.3	58.6	None – surplus of 2,255.8 acres	None – surplus of 2,021.1 acres
			Kagel Canyon				
			Lake Los Angeles/Llano/ Valyermo/Littlerock				
TOTAL				**350.0-acre deficiency**	**496.6-acre deficiency**	**Surplus of 14,838.4 acres**	**Surplus of 14,541.6 acres**

SOURCE: Chief Administrative Office of Los Angeles County. April 2004. *Los Angeles County Department of Parks and Recreation Strategic Asset Management Plan for 2020*.

District 5 RPA 1 consists of the northwestern portion of the County, including the majority of the unincorporated Santa Clarita Valley and the majority of the western area of the Angeles National Forest. Over 50 percent of District 5 RPA 1 is occupied by the federally owned Angeles National Forest.[28] According to the Strategic Asset Management Plan for 2020, in 2004, District 5 RPA 1 had a 233.1-acre deficiency of local parkland, which is projected to increase by 101.9 acres to a 355-acre deficiency of local parkland by 2020, based on an estimated population increase in District 5 RPA 1 from 65,082 in 2000 to 65,685 in 2020. In 2004, District 5 RPA 1 had adequate regional parkland acreage to meet the County's existing standard of six acres of regional parkland per 1,000 County residents in unincorporated areas; by 2020, District 5 RPA 1 is projected to have a 9,736.9-acre surplus of regional parkland above the projected need.

District 5 RPA 2 consists of areas of the Antelope Valley and the northeastern portion of the County.[29] In 2004, District 5 RPA 2 had a 113.6-acre deficiency of local parkland, which is projected to increase by 46.9 acres to a 160.5-acre deficiency of local parkland by 2020, based on an estimated population increase in District 5 RPA 2 from 34,098 in 2000 to 45,862 in 2020. In 2004, District 5 RPA 2 had adequate regional parkland acreage to meet the County's existing standard of six acres of regional parkland per 1,000 County residents in unincorporated areas; by 2020, District 5 RPA 2 is projected to have a 2,783.6-acre surplus of regional parkland above the projected need.

District 5 RPA 3 consists of the central and eastern portions of the County, primarily within the San Gabriel Mountains and the San Gabriel Valley. In 2004, District 5 RPA 3 had a 526.7-acre deficiency of local parkland, which is projected to increase by 156.9 acres to a 683.1-acre deficiency of local parkland by 2020, based on an estimated population increase in District 5 RPA 3 from 162,676 in 2000 to 201,807 in 2020. In 2004, District 5 RPA 3 had adequate regional parkland acreage to meet the County's existing standard for regional parkland; by 2020, District 5 RPA 3 is projected to have a 2,021.1-acre surplus of regional parkland above the projected need.

Existing Neighborhood Parks

There are seven neighborhood parks (approximately 42.6 acres) located within a half-mile radius of the 42,677 subject parcels (Figure 3.3.2-3, *Neighborhood and Community Parks*). Hillside Park, an approximately 10.0-acre park managed by the City of Palmdale, is located within the service area of the Lake Hughes/Gorman/West of Lancaster subarea. There are three neighborhood parks located within the service area of the Lake Los Angeles/Llano/Valyermo/Littlerock subarea: Pearblossom Park, an approximately 7.7-acre park located in PPA #45B and managed by Los Angeles County; Everett Martin Park, an approximately 5.8-acre park located in PPA #44B and managed by Los Angeles County; and Avenue T Park, an approximately 3.0-acre park in Littlerock. There are three neighborhood parks located within the service area of the Castaic/Santa Clarita/Agua Dulce subarea: Oak Spring Park, an approximately 4.9-acre park managed by the City of Santa Clarita; Jake Kuredjian Park, an approximately 5.7-acre park managed by Los Angeles County; and Hasley Canyon Park, an approximately 5.4-acre park located in PPA #35C and managed by Los Angeles County.

[28] Chief Administrative Office of Los Angeles County. April 2004. *Los Angeles County Department of Parks and Recreation Strategic Asset Management Plan for 2020*.

[29] Chief Administrative Office of Los Angeles County. April 2004. *Los Angeles County Department of Parks and Recreation Strategic Asset Management Plan for 2020*.

There are no existing neighborhood parks located within the half-mile service radius of the subject parcels within the subareas of Lancaster Northeast, Antelope Valley Northeast, Acton, or Kagel Canyon.

Existing Community Parks

There are 17 community parks (approximately 232.0 acres) located within a two-mile radius of the 42,677 subject parcels (see Figure 3.3.2-3). There are two community parks located within the service area of the Lake Hughes/Gorman/West of Lancaster subarea: George Lane Park, an approximately 12.8-acre park located in PPA #47A and managed by Los Angeles County; and Rawley Duntley Park, an approximately 18.2-acre park managed by the City of Lancaster. There are three community parks located within the service area of the Lancaster Northeast subarea: Mariposa Park, an approximately 12.4-acre park managed by the City of Lancaster; Deputy Pierre W. Bain Park, an approximately 11.5-acre park managed by the City of Lancaster; and Skytower Park, an approximately 12.9-acre park managed by the City of Lancaster that is also located within the service area of the Lake Los Angeles/Llano/Valyermo/Littlerock subarea. The second community park located within the service area of the Lake Los Angeles/Llano/Valyermo/Littlerock subarea is Juniper Hills Park, an approximately 10.1-acre park managed by Los Angeles County. One community park is located within the service area of the Acton subarea, Tejon Park, an approximately 19.4-acre park managed by the City of Palmdale. There is one community park located within the service area of the Kagel Canyon subarea, Gabrielino Equestrian Park, an approximately 11.7-acre park that is managed by the City of Los Angeles. Nine community parks are located within the service area of the Castaic/Santa Clarita/Agua Dulce subarea:

- North Oaks Park, 10.2 acres, managed by the City of Santa Clarita
- Newhall Park, 14.3 acres, managed by the City of Santa Clarita
- Canyon Country Park, 18.0 acres, managed by the City of Santa Clarita
- David March Park, 12.3 acres, managed by the City of Santa Clarita
- Bouquet Canyon Park, 10.6 acres, managed by the City of Santa Clarita
- Dr. Richard H Rioux Memorial Park, 16.6 acres, located in PPA #35A and managed by Los Angeles County
- Valencia Heritage Park, 15.6 acres, managed by the City of Santa Clarita
- Bridgeport Park, 14.7 acres, managed by the City of Santa Clarita
- Emmaus Park, 10.7 acres, managed by the City of Santa Clarita

There are no existing community parks located within the two-mile service radius of the Antelope Valley Northeast subarea.

Existing Community Regional Parks

There are 200 community regional parks (approximately 9,264.5 acres) located within a 20-mile radius of the 42,677 subject parcels (Figure 3.3.2-4, *Community Regional and Regional Parks*). The three nearest community regional parks to each subarea include:

- **Lake Hughes/Gorman/West of Lancaster:** Warrack Park, an approximately 32.0-acre park managed by the City of Palmdale, located approximately 0.8 miles east of the subarea; Apollo Park, an approximately 54.2-acre park managed by Los Angeles County, located approximately 1.2 miles south of the subarea; and Hungry Valley

State Vehicular Recreation Area, an approximately 41.1-acre park managed by the California Department of Parks and Recreation, located approximately 3.5 miles southwest of the subarea.

- **Lancaster Northeast:** Tierra Bonita Park, an approximately 28.6-acre park managed by the City of Lancaster, located approximately 1.0 mile west of the subarea; Apollo Park, an approximately 54.2-acre park managed by Los Angeles County, located approximately 1.6 miles west of the subarea; and COGO, an approximately 82.5-acre park managed by the United States Bureau of Land Management, located approximately 4.1 miles southeast of the subarea.

- **Antelope Valley Northeast:** Antelope TaxDef3, an approximately 62.3-acre park managed by the Santa Monica Mountains Conservancy, located adjacent to the western portion of the subarea; COGO, an approximately 82.5-acre park managed by the United States Bureau of Land Management, located approximately 5.9 miles south of the subarea; and Antelope TaxDef, an approximately 78.0-acre park managed by the Santa Monica Mountains Conservancy, located approximately 12.2 miles south of the subarea.

- **Lake Los Angeles/Llano/Valyermo/Littlerock:** Antelope TaxDef, an approximately 78.0-acre park managed by the Santa Monica Mountains Conservancy; Big Rock Wash TaxDef, an approximately 41.1-acre park managed by Los Angeles County; and Largo Vista TaxDef1, an approximately 43.5-acre par managed by the Mountains Recreation and Conservation Authority, all three of which are located between parcels in this subarea.

- **Acton:** Pelona Vista Park, an approximately 73.0-acre park managed by the City of Palmdale, located approximately 0.8 mile northeast of the subarea; Palmdale Oasis Park, an approximately 28.9-acre park managed by the City of Palmdale, located approximately 3.5 miles northeast of the subarea; and Domenic Massari Park, an approximately 40.6-acre park managed by the City of Palmdale, located approximately 5.6 miles northeast of the subarea.

- **Castaic/Santa Clarita/Agua Dulce:** Laing – Brookfield, an approximately 37.1-acre park managed by the Mountains Recreation and Conservation Authority, located adjacent to subject parcels within the subarea; Oat Mountain Tax Default, an approximately 85.1-acre park managed by the Mountains Recreation and Conservation Authority, located approximately 0.1 mile south of the nearest parcel in the subarea; and Oat Mountain Tax Default, an approximately 85.1-acre park managed by the Mountains Recreation and Conservation Authority, located approximately 0.1 mile east of the nearest parcel in the subarea.

- **Kagel Canyon:** Dexter Park, an approximately 40.0-acre park in PPA #44B and managed by Los Angeles County, located adjacent to the southern parcels within the subarea; Lopez Reservoir and Dam, an approximately 92.4-acre park managed by the United States Army Corps of Engineers, located approximately 1.6 miles west of the subarea; and Veterans Memorial Park, an approximately 96.5-acre park managed by Los Angeles County, located approximately 2.2 miles west of the subarea.

Existing Regional Parks

There are 192 regional parks (approximately 141,499.5 acres) located within 25 miles of the 42,677 subject parcels (see Figure 3.4.2-4). The three nearest regional parks to each subarea include:

- **Lake Hughes/Gorman/West of Lancaster:** Antelope Valley California Poppy Reserve, an approximately 1,771.6-acre park managed by the California Department of Parks and Recreation, located between parcels in this subarea; Arthur B. Ripley Desert Woodland State Park, an approximately 568.2-acre park managed by the California Department of Parks and Recreation, located between parcels in this subarea; and DWR Mitigation – L.A. Property, an approximately 692.8-acre park managed by the California Department of Fish and Wildlife.

- **Lancaster Northeast:** Saddleback Butte State Park, an approximately 2,965.7-acre park managed by the California Department of Parks and Recreation, located approximately 0.7 mile southeast of the subarea; BLM land, approximately 10,616.6 disjointed acres of property managed by the United States Bureau of Land Management, located between and in the vicinity of the parcels in the subarea; and Antelope Valley Indian Museum, an approximately 164.2-acre park managed by the California Department of Parks and Recreation, located approximately 2.5 miles south of the subarea.

- **Antelope Valley Northeast:** Phacelia Wildlife Sanctuary, an approximately 159.6-acre park managed by Los Angeles County that overlaps with a few of the parcels in the southwestern corner of the subarea; BLM land, approximately 10,616.6 disjointed acres of property managed by the United States Bureau of Land Management, located adjacent to and between the parcels in the subarea; and Saddleback Butte State Park, an approximately 2,965.7-acre park managed by the California Department of Parks and Recreation, located approximately 5.2 miles south of the subarea.

- **Lake Los Angeles/Llano/Valyermo/Littlerock:** BLM land, approximately 10,616.6 disjointed acres of property managed by the United States Bureau of Land Management, located between the parcels in the subarea; Devil's Punchbowl County Park, an approximately 1,315.0-acre park in PPA #45B managed by Los Angeles County, located approximately 0.3 mile south of the subarea; and Longview Sanctuary an approximately 164.3-acre park managed by the County of Los Angeles Department of Parks and Recreation, located between the parcels in the subarea.

- **Acton:** BLM land, approximately 10,616.6 disjointed acres of property managed by the U.S. Department of the Interior, Bureau of Land Management, located between the parcels in the subarea; Ritter Ranch, an approximately 4,090.0-acre park managed by the Mountains Recreation and Conservation Authority, located approximately 0.1 mile north of the nearest parcel within the subarea; and Little Rock Wash, an approximately 293.4-acre park managed by the Littlerock Creek Irrigation District, located approximately 2.7 miles east of the subarea.

- **Castaic/Santa Clarita/Agua Dulce:** Santa Clarita Woodlands Park, an approximately 3,497.6-acre park managed by the Mountains Recreation and Conservation Authority, located between parcels in the subarea; Vasquez Rocks Natural Area Park, an approximately 848.0-acre park in PPA #43B managed by Los Angeles County, located adjacent to parcels within this subarea; and Pico Canyon/Carroll, an approximately 201.9-acre park managed by the Mountains Recreation and Conservation Authority, located approximately 0.1 mile west of the nearest parcel within the subarea.

- **Kagel Canyon:** Hansen Dam Park, an approximately 1,859.0-acre park managed by the City of Los Angeles, located approximately 1.3 miles south of the subarea; El Cariso Regional Park and Golf Course, an approximately 165.2-acre park managed by Los Angeles County, located approximately 2.0 miles west of the subarea; and Pacoima Wash, an approximately 125.0-acre park managed by the Los Angeles County Flood Control District, located approximately 1.5 miles northwest of the subarea.

3.15.3 IMPACT ANALYSIS

The State CEQA Guidelines recommend the consideration of two questions when addressing the potential for significant impact to recreation:

(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?

The proposed initiative is expected to 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 2012 average single-family residence household size of 3.5 people in unincorporated Los Angeles County,[30] and a reasonable worst-case scenario of 384 building permits per year, the proposed initiative would likely result in 1,344 additional people per year over an estimated 20year period of time. The County estimates the need for four acres of local parkland per 1,000 people. Therefore, the proposed initiative would require 5.4 additional acres of local parkland per year. The induced population growth would not significantly impact the regional parks, which had 12,808.4 surplus acres in 2000 and were projected to have approximately 14,541.6 surplus acres in 2020.

[30] Southern California Association of Governments. May 2013. *Profile of the Unincorporated Area of Los Angeles County*. PDF available online at: http://www.scag.ca.gov/Documents/UnIncAreaLosAngelesCounty.pdf Main website: http://www.scag.ca.gov/Pages/default.aspx

The proposed initiative would exacerbate the deficiency of local parkland, estimated at 496.6 acres in the year 2020.[31] 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[32] 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. Therefore, the potential for increased use of local and regional parks warrants further evaluation in an environmental impact report, including the consideration of mitigation measures and alternatives.

(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?

The proposed initiative would require the construction or expansion of an estimated 108 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.[33] 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. The goals and policies of the Open Space and Conservation Element of the adopted County General Plan and the General Plan 2035 Update 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 single-family residences that would result from the proposed initiative would generate demand for 108 additional acres of local parklands.[34] 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. Therefore, the potential for local parks, in excess of the available supply of such facilities, warrants further evaluation in an environmental impact report, including the consideration of mitigation measures and alternatives.

3.15.4 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, thus requiring the consideration of mitigation measures and alternatives in an environmental impact report.

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[31] Chief Administrative Office of Los Angeles County. April 2004. *Los Angeles County Department of Parks and Recreation Strategic Asset Management Plan for 2020*.

[32] Municode. N.d. *Los Angeles County, California, Code of Ordinances: Title 21 Subdivisions*. Available online at: https://library.municode.com/index.aspx?clientId=16274

[33] Based on 2012 average household size of 3.5 persons per household in unincorporated Los Angeles County, the development of 42,677 parcels, and the County standard for local parkland of four acres per 1,000 residents.

[34] Municode. N.d. *Los Angeles County, California, Code of Ordinances: Title 21 Subdivisions*. Available online at: https://library.municode.com/index.aspx?clientId=16274

SECTION 3.16
TRANSPORTATION/TRAFFIC

This analysis is undertaken to determine if the Single-Family Residential Hauled Water Initiative for New Development (proposed initiative) may have a significant impact to transportation/traffic, thus requiring the consideration of mitigation measures or alternatives in accordance with Section 15063 of the State of California Environmental Quality Act Guidelines (State CEQA Guidelines).[1] Potential impacts to transportation/traffic within the parcels that would be potentially eligible for the use of hauled water to support development of a single-family residence pursuant to the proposed initiative were evaluated with regard to the California Transportation Plan,[2] the County of Los Angeles Congestion Management Plan,[3] the Regional Transportation Plan, and the County of Los Angeles General Plan.[4,5]

Definitions

California Transportation Plan (CTP): This is a statewide, long-range transportation plan to meet future mobility needs and reduce greenhouse gas emissions.[6] The CTP defines performance-based goals, policies, and strategies to achieve the collective vision for California's future, statewide, integrated, multimodal transportation system. The CTP is prepared in response to federal and State requirements and is updated every five years.

Congestion Management Plan (CMP): This is a State-mandated program enacted by the State legislature to address the increasing concern that urban congestion is affecting the economic vitality of the State and diminishing the quality of life in some communities. The CMP provides the analytical basis for transportation decisions through the State Transportation Improvement Program.

Level of Service (LOS): This is a measure used to relate the quality of traffic service. LOS is used to analyze highways by categorizing traffic flow and assigning quality levels of traffic based on performance measures such as speed and density.

Peak Hour: The part of the day during which traffic congestion on roads and crowding on public transport is at its highest.

[1] *California Code of Regulations*. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

[2] California Department of Transportation. April 2013. *California Transportation Plan 2040: Fact Sheet*.

[3] Los Angeles County Metropolitan Transportation Authority. Adopted October 2010. *2010 Congestion Management Program*. Prepared by Long Range Planning and Coordination.

[4] Los Angeles County Department of Regional Planning. 25 November 1980. *Los Angeles County General Plan: Transportation Element*.

[5] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 7: Mobility Element*.

[6] California Department of Transportation. April 2013. *California Transportation Plan 2040: Fact Sheet*.

3.16.1 REGULATORY FRAMEWORK

Federal

There are no federal regulations for transportation or traffic applicable to the proposed initiative.

State

California Transportation Plan

The purpose of the CTP is to provide a common policy framework that will guide transportation investments and decisions by all levels of government, the private sector, and other transportation stakeholders. Through this policy framework, and by using newly created modeling tools, the CTP 2040 will identify the Statewide transportation system needed to achieve maximum feasible greenhouse gas emission reductions while meeting the State's transportation needs.

The CTP 2025 was approved in 2006 and updated by a 2030 Addendum in 2007. The CTP 2040 was initiated with the development of the California Interregional Blueprint (CIB) in early 2010 in response to Senate Bill 392. The CIB is a state-level transportation blueprint that articulates the State's visions for an integrated multimodal transportation system that complements regional transportation plans and land use visions. The CIB provides the foundation for the CTP 2040, which will conclude with plan approval by the Secretary of the Transportation Agency in December 2015.

Congestion Management Program

The Congestion Management Program (CMP) is a state-mandated program enacted by the State legislature to address the increasing concern that urban congestion is affecting the economic vitality of the State and diminishing the quality of life in some communities. The CMP provides the analytical basis for transportation decisions through the State Transportation Improvement Program.

Within Los Angeles County, the Los Angeles County Metropolitan Transportation Authority (Metro) is responsible for planning and managing vehicular congestion and coordinating regional transportation policies. Metro prepared the 2010 Congestion Management Plan for Los Angeles County, in accordance with Section 65089 of the California Government Code.[7,8] The CMP is intended to address vehicular congestion relief by linking land use, transportation, and air quality decisions. The program also seeks to propose transportation projects eligible to compete for State gasoline tax funds and to develop a partnership among transportation decision-makers to devise appropriate transportation solutions that include all modes of travel.

The Los Angeles County CMP requires that new development projects analyze potential project impacts on CMP monitoring locations if an environmental impact report (EIR) is prepared for the project. The CMP project traffic impact analysis (TIA) guidelines requires that the traffic study analyze traffic conditions at all CMP arterial monitoring intersections where the proposed project will add 50 or more trips during either the a.m. or p.m. weekday peak hours of adjacent street

[7] Los Angeles County Metropolitan Authority. Adopted October 2010. *2010 Congestion Management Program*. Available online at: http://media.metro.net/projects_studies/cmp/images/CMP_Final_2010.pdf

[8] California Government Code. Title 7, Division 1, Chapter 2.6, *Congestion Management*.

traffic. If, based on this threshold, the traffic study identifies no facilities for study, no further traffic analysis is required.[9] The CMP TIA guidelines also require that a traffic study analyze traffic conditions at all CMP mainline freeway monitoring locations where a project will add 150 or more trips in either direction during either a.m. or p.m. weekday peak hours. If, based on this criterion, a traffic study identifies no facilities for study, then no further traffic analysis is required.

Regional

Regional Transportation Plan

In April 2012, the Southern California Association of Governments (SCAG) adopted the most recent Regional Transportation Plan (RTP), which presents the long-term visions for the region's transportation system. Specific issues and goals within the RTP address corridor preservation; mobility and accessibility; sustainability, including promoting transit-oriented development growth patterns; environmental protection, which addresses air quality and energy efficiency; transportation financing, security, and safety; environmental justice and mitigation; revenues and expenditures; transportation conformity, implementation, and monitoring; and future connections and growth. The RTP provides a basic policy and program framework for long-term investment in the regional transportation system in a coordinated, cooperative, and continuous manner. By law, transportation investments in the SCAG region that receive State or federal transportation funds must be consistent with the RTP and must be included in the Regional Transportation Improvement Program (RTIP).

County of Los Angeles General Plan

The proposed initiative subareas are located within unincorporated Los Angeles County and subject to the County of Los Angeles General Plan (General Plan). Of the 41 policies outlined in the existing General Plan's Transportation Element, adopted in 1980, four are applicable to the proposed initiative: [10]

- **Policy 19**: Support traffic-operation improvements for improved flow of vehicles.
- **Policy 21**: Stress environmental compatibility (including air quality, noise, ecology and aesthetics, health and safety), in developing transportation systems.
- **Policy 26**: Encourage the efficient use and conservation of energy used in transportation.
- **Policy 28**: Promote development of alternative energy sources for transportation to reduce reliance on petroleum.

[9] Los Angeles County Metropolitan Transportation Authority. Adopted October 2010. *2010 Congestion Management Program*. Prepared by Long Range Planning and Coordination.

[10] Los Angeles County Department of Regional Planning. 25 November 1980. *Los Angeles County General Plan: Transportation Element*.

The Los Angeles County 2014 General Plan 2035 Update has replaced the Transportation Element with a Mobility Element. Of the 50 policies outlined in the Los Angeles County 2014 General Plan 2035 Update, eight are applicable to the proposed initiative:[11]

- **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 5.3**: Maintain transportation right-of-way corridors for future transportation uses, including bikeways, or new passenger rail or bus services.

- **Policy M 6.3**: Designate official truck routes to minimize the impacts of truck traffic on residential neighborhoods and other sensitive land uses.

- **Policy M 6.4**: Minimize noise and other impacts of goods movement, truck traffic, deliveries, and staging in residential and mixed-use neighborhoods.

- **Policy M 7.1**: Minimize roadway runoff through the use of permeable surface materials, such as porous asphalt and concrete materials, wherever feasible.

- **Policy M 7.2**: Encourage the creation of wildlife underpasses and overpasses, fencing, signage, and other measures to minimize impacts to wildlife at junctures where transit infrastructure passes through or across sensitive habitats.

- **Policy M 7.3**: Where the creation of new or the retrofit of roadways or other transportation systems is necessary in areas with sensitive habitats, particularly SEAs, use best practice design to encourage species passage and minimize genetic diversity losses.

- **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.

3.16.2 AFFECTED ENVIRONMENT

Roadway Network

Highways

The proposed initiative subareas cover approximately 42,677 parcels throughout the northern portion of unincorporated Los Angeles County. This portion of unincorporated Los Angeles County is served by a network of regional highways that connect to several local routes that provide access to each of the proposed initiative subareas (Figure 3.16.2-1, *Regional Highways for Proposed Initiative Subareas*). Below is a brief description of the regional highways providing access to the proposed initiative subareas.

[11] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 7: Mobility Element.*

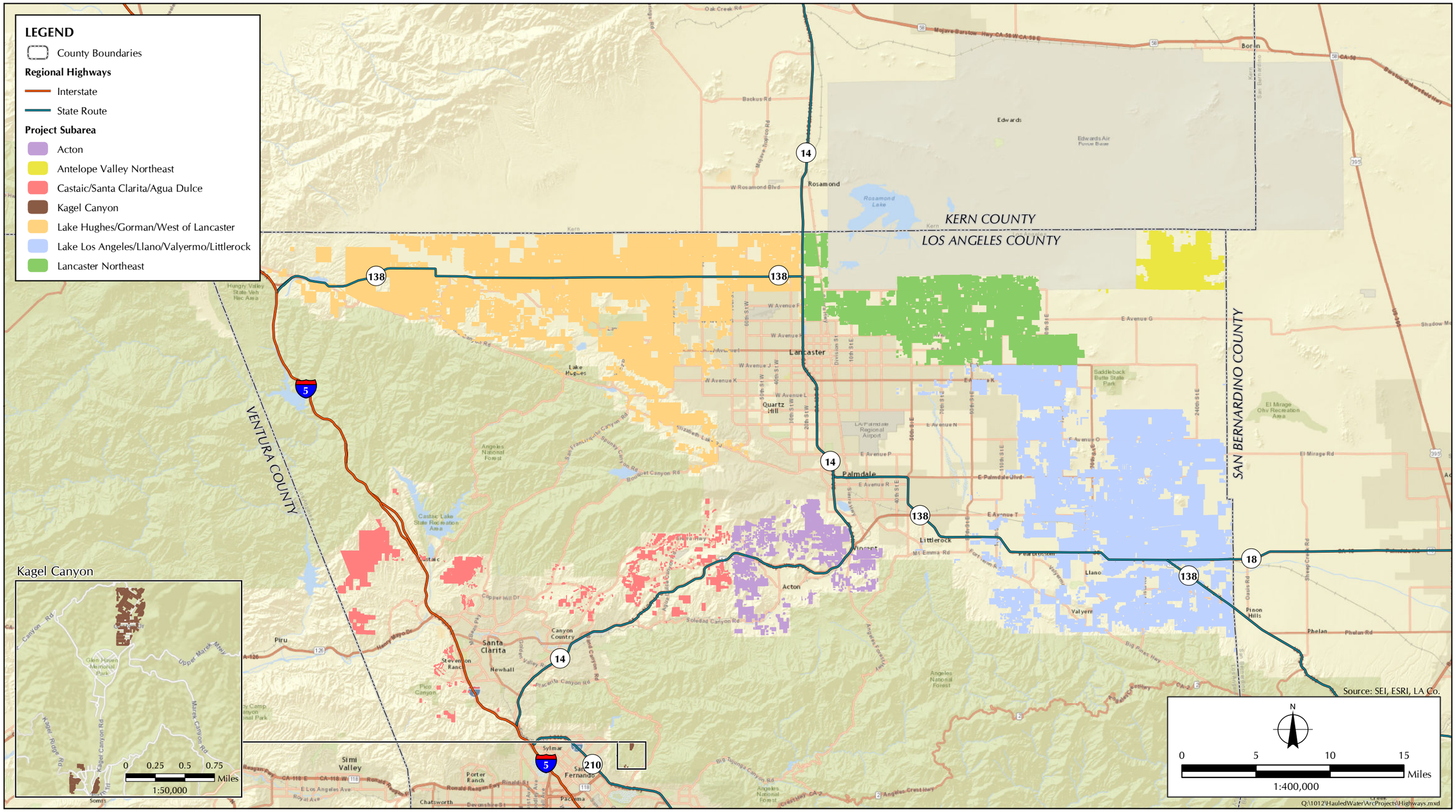

FIGURE 3.16.2-1

Regional Highways for Proposed Initiative Subareas

Interstate 5

Interstate 5 is a major north-south route that begins at the Mexico-U.S. border, and continues north across the length of California. Interstate 5 is the most used north-south route on the Pacific Coast and links the major California cities of San Diego, Santa Ana, Los Angeles, Stockton, Sacramento, and Redding. Interstate 5 runs through the central portion of Los Angeles County and provides access to the western portions of the Castaic/Santa Clarita/Agua Dulce and Lake Hughes/Gorman/West of Lancaster subareas.

State Route 138

State Route (SR) 138 is an east-west state highway generally following the northern foothills of the San Gabriel Mountains. SR 138 provides access to the central portions of the Lake Hughes/Gorman/West of Lancaster and the Lake Los Angeles/Llano/Valyermo/Littlerock subareas.

State Route 14

SR 14 is a north-south highway primarily located in the Mojave Desert. SR 14 connects the Interstate 5 with U.S. Route 396 near Inyokern. The southern section of SR 14 is a busy commuter freeway serving and connecting the communities of Santa Clarita, Palmdale, and Lancaster with the rest of the Greater Los Angeles area. The northern section of SR 14 is legislatively named the Aerospace Highway, as the highway serves Edwards Air Force Base. Most of SR 14 is loosely paralleled by a main line of the Southern Pacific Railroad, used for the Antelope Valley Line of the Metrolink commuter rail system as well as a connection between Los Angeles and the Central Valley via the Tehachapi Pass. SR 14 provides access to the central portions of the Castaic/Santa Clarita/Agua Dulce and the Action subareas, as well as the western portion of the Lancaster Northeast subarea.

State Route 18

SR 18 runs from SR 210 in San Bernardino to SR 138 near Adelanto. It is the primary route into the San Bernardino Mountains and has two discontinuities in Big Bear Lake and Victorville. SR 18 provides access to the eastern portion of the Lake Los Angeles/Llano/Valyermo/Littlerock subarea.

Interstate 210

Interstate 210 is an east-west highway in the Greater Los Angeles Area and runs parallel to the southern portion of the San Gabriel Mountains, connecting Los Angeles with its northern suburbs. Interstate 210 provides access to the Kagel Canyon subarea via Kagel Canyon Road and Lopez Canyon Road.

Mass Transit

A Metrolink line runs through portions of the Castaic/Santa Clarita/Agua Dulce, the Acton, the Lake Los Angeles/Llano/Valyermo/Littlerock, and the Lancaster Northeast proposed initiative subareas. The Metrolink connects the proposed initiative subareas with the Greater Los Angeles Areas to the south and the City of Mojave to the north.

Bicycle Facilities

The County of Los Angeles contains a vast network of bicycle facilities. These bicycle facilities are broken down into Class I, Class II, and Class II. Class I bicycle paths are paved right-of-way paths for exclusive use by bicyclists, pedestrians, and other non-motorized modes of travel. Class II bicycle lanes are defined by pavement striping and signage used to allocate a portion of a roadway for exclusive bicycle travel. Class III bicycle routes provide a shared use with motor vehicle traffic within the same travel lane. Table 3.16.2-1, *Bicycle Facility Type within Proposed Initiative Subareas*, indicates what classes of bicycle facilities are located within each proposed initiative subarea.

TABLE 3.16.2-1
BICYCLE FACILITY TYPE WITHIN PROPOSED INITATIVE SUBAREAS

Subarea	Bicycle Facility Type
Castaic/Santa Clarita/Agua Dulce	Class I Class II
Lake Hughes/Gorman/West of Lancaster Lancaster Northeast	Class I Class II Class III
Lake Los Angeles/Llano/Valyermo/Littlerock	Class II Class III
Acton	Class III
Antelope Valley Northeast	None
Kagel Canyon	None

SOURCE: County of Los Angeles. March 2012. *Bicycle Master Plan, Final Plan*.

Air Traffic

Public and Private Airports

There are a total of two public use airports and eight private use airports located within the proposed initiative subareas (see Section 3.8, Table 3.8.2-3, *Public/Private Airports within Two Miles of Proposed Initiative Subarea Parcels*, Figure 3.8.2-3, *Public or Private Use Airports within Two Miles of Proposed Initiative Subarea Parcels*). As Table 3.8.2-3 indicates, there are a total of 5,197 parcels located within two miles of a public and/or private use airport.

3.16.3 IMPACT ANALYSIS

The State CEQA Guidelines recommend the consideration of six questions when addressing the potential for significant impact to transportation/traffic.

Would the proposed initiative:

(a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the 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 proposed initiative has the potential to result in significant impacts in relation to conflicting with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system. The proposed initiative is located within the County of Los Angeles, and is therefore subject to the California Transportation Plan, the Regional Transportation Plan, and the County of Los Angeles General Plan. 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 in the proposed initiative subareas would not be able to be developed in the absence of the proposed initiative or comparable action. Assuming a worst-case scenario, the proposed initiative has the potential to result in 384 building permits a year for residential development. According to a 2008 study by Experian Automotive, which specializes in collecting and analyzing automotive data, Americans own an average of 2.28 vehicles per household.[12] Therefore, under a worst-case scenario, the proposed initiative could result in a permanent increase of 875 vehicles per year in the proposed initiative subareas. Furthermore, according to *California Travel Trends and Demographics Study Final Report* prepared by the Institute of Transportation Studies at the University of California, Los Angeles in December 2002, the daily per capita trip rate for vehicles in California is forecasted to be 1.67 per vehicle in 2025,[13] which would account for an additional 1,461 vehicle trips per day in the proposed initiative subareas. Additionally, the development of new single-family residences that require hauled water to be delivered on a monthly basis from private water purveyors would increase traffic from construction workers and water trucks in the areas where the development occurs. The overall increase in traffic from residents, construction workers, and water trucks has the potential to conflict with the applicable plans establishing measures of effectiveness for the performance of the circulation system, and therefore this issue warrants further analysis in an environmental impact report, including an analysis of existing roadways, traffic counts, traffic models, future traffic conditions, and the consideration of mitigation measures and alternatives capable of avoiding or reducing impacts to below the level of significance.

[12] Experian Automotive. 12 February 2008. *New Study Shows Multiple Cars Are King in American Households*. Available online at: http://press.experian.com/united-states/Press-Release/new-study-shows-multiple-cars-are-king-in-american-households.aspx?&p=1

[13] California Department of Transportation, Divisions of Transportation of Planning, Office of State Planning. December 2002. *California Travel Trends and Demographic Study Final Report*.

(b) Conflict with an 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?

The proposed initiative is located within the County of Los Angeles, and is therefore subject to the County of Los Angeles Congestion Management Program (CMP), which requires that new development projects analyze potential impacts on CMP monitoring locations if an environmental impact report is prepared for the project. Additionally, the CMP requires that a traffic study analyze traffic conditions at all CMP arterial monitoring intersections where the proposed project will add 50 or more trips during either the a.m. or p.m. weekday peak hours of adjacent street traffic. As mentioned above, the proposed initiative has the potential to result in a permanent increase of 875 vehicles per year, which translates to approximately 1,461 trips per day in the proposed initiative subareas, which exceeds 50 trips, thus triggering the need for a traffic study pursuant to the County of Los Angeles CMP. Additionally, the development of new single-family residences that require hauled water to be delivered on a monthly basis from private water purveyors would increase traffic from construction workers and water trucks in the areas where the development occurs. This overall increase in traffic from residents, construction workers, and water trucks could potentially degrade the current level of service on local roadways. Therefore, the proposed initiative has the potential to result in significant impacts in relation to conflicting with the County of Los Angeles CMP, including the degradation of level of service standards, and therefore this issue warrants further analysis in an environmental impact report, including the consideration of mitigation measures and alternatives capable of avoiding or reducing impacts to below the level of significance.

(c) 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 proposed initiative is not anticipated to result in impacts to traffic in relation to changing air traffic patterns. As is indicated above in Table 3.8.2-2, there are two public use airports within the proposed project subareas (Agua Dulce Airport and General Williams J. Fox Airfield). In total, there are 379 parcels that are located within two miles of a public use airport that could be developed if the proposed initiative were approved. While the proposed initiative has the potential to result in a permanent increase of 875 vehicles per year in the proposed initiative subareas, the increase in traffic would utilize the existing roadway network with the exception of additional roads that would need to be constructed to access the more rural areas of the proposed initiative subareas. Therefore, it is anticipated that the proposed initiative would not result in impacts to traffic in relation to changing air traffic patterns, and no further analysis is warranted.

(d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The proposed initiative is not anticipated to result in impacts to traffic in relation to substantially increasing hazards due to a design feature or incompatible use. While the proposed initiative has the potential to result in 384 building permits a year for residential development, all developments would be required to conform to all applicable regulations, performance standards, and design standards that address safety and site design, including the County of Los Angeles's zoning ordinances. Future developments would be reviewed on a case-by-case basis as they arise to determine if project layouts, driveway locations, or similar factors would result in hazardous conditions. Therefore, the proposed initiative is not anticipated to result in impacts to traffic in

relation to substantially increasing hazards due to a design feature or incompatible use, and no further analysis is required.

(e) Result in inadequate emergency access?

The proposed initiative is not anticipated to result in impacts to traffic in relation to resulting in inadequate emergency access. While the proposed initiative has the potential to result in 384 building permits a year for residential development, all developments would be required to conform to all applicable regulations, performance standards, and design standards that address emergency access, including County of Los Angeles Fire Code requirements. New roadways would be constructed to provide access to the affected parcels and would be constructed to County of Los Angeles standards. Future developments would be reviewed on a case-by-case basis as they arise to determine if adequate emergency access is provided. Therefore, the proposed initiative is not anticipated to result in impacts to traffic in relation to resulting in inadequate emergency access, and no further analysis is required.

(f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

The proposed initiative is not anticipated to result in impacts to traffic in relation to conflicting with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. While the proposed initiative has the potential to result in 384 building permits a year for residential development, most of the development would occur 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. Furthermore, all future developments would be required to conform to all applicable policies, regulations, and design standards that address public transit and active transportation modes, including bicycle and pedestrian facilities. Therefore, the proposed initiative is not anticipated to impact traffic in relation to public transit, bicycle paths, or pedestrian facilities, and no further analysis is required.

3.16.4 MITIGATION MEASURES

As a result of potential significant impacts related to traffic/transportation from implementation of the proposed initiative, including potential conflicts with applicable plans, ordinances, or policies establishing measures of effectiveness for the performance of the circulation system, there is need for consideration of mitigation measures and alternatives to avoid or reduce impacts in relation to traffic to below the level of significance.

SECTION 3.17
UTILITIES AND SERVICE SYSTEMS

This analysis is undertaken to determine if the proposed Single-Family Residential Hauled Water Initiative for New Development (proposed initiative) may have a significant impact to utilities and service systems, thus requiring the consideration of mitigation measures or alternatives, in accordance with Section 15063 of the State California Environmental Quality Act Guidelines (State CEQA Guidelines).[1] The evaluation of utilities and service systems is based on the consideration of 42,677 parcels, zoned for single-family residential development in the unincorporated area of Los Angeles County, that, since January 2003, have been ineligible for building permits due to a lack of accessibility of potable water from a public or private water purveyor or groundwater. Utilities and service systems were evaluated with regard to the Federal Clean Water Act of 1972 (CWA),[2] the Los Angeles, and Lahontan Regional Water Quality Control Board (RWQCB) Basin Plans, California Integrated Waste Management Plan, the Waste Management Element of the adopted Los Angeles County General Plan,[3] the Public Services and Facilities Element of the Los Angeles County General Plan 2035 Update,[4] the 1986 Antelope Valley Areawide General Plan,[5] the 2012 Santa Clarita Valley Area Plan,[6] and the State Water Resources Control Board Onsite Wastewater Treatment System (OWTS) Policy.[7]

Definitions

Lahontan Regional Water Quality Control Board: The jurisdiction of the California Regional Water Quality Control Board, Lahontan Region (Regional Board) extends from the Oregon border to the northern Mojave Desert and includes all of California east of the Sierra Nevada crest. The name of the Region is derived from prehistoric Lake Lahontan, which once covered much of the State of Nevada. Most of the waters of the North Lahontan Basin drain into closed basins which were previously part of Lake Lahontan. Waters of the South Lahontan Basin also drain into closed basin remnants of prehistoric lakes. The Lahontan RWQCB is responsible for implementing the Water Quality Control Plan for the Lahontan Region.

Los Angeles Regional Water Quality Control Board: The Los Angeles RWQCB is one of nine statewide regional boards. The Los Angeles RWQCB protects ground and surface water quality in

[1] *California Code of Regulations*. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

[2] United States Environmental Protection Agency. March 16, 2014. *Laws and Regulations: Summary of the Clean Water Act*. Website. Available online at http://www2.epa.gov/laws-regulations/summary-clean-water-act

[3] Los Angeles County Department of Regional Planning. November 25, 1980. *Los Angeles County General Plan: Water and Waste Management Element*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_web80-water-and-waste-management-element.pdf

[4] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 13: Public Services and Facilities Element*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter13_2014.pdf

[5] Los Angeles County Department of Regional Planning. December 4, 1986. *Antelope Valley Areawide General Plan: A Component of the Los Angeles County General Plan*. PDF available online at: http://planning.lacounty.gov/assets/upl/data/pd_antelope-valley.pdf

[6] Los Angeles County, Santa Clarita Valley Area Plan, 2012. PDF available online at: http://planning.lacounty.gov/assets/upl/data/pd_santa-clarita-area-plan-2012.pdf

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

the Los Angeles Region, including the coastal watersheds of Los Angeles and Ventura Counties, along with very small portions of Kern and Santa Barbara Counties. The Los Angeles RWQCB is responsible for implementing the Water Quality Control Plan for the Los Angeles Region.

Non-hazardous Municipal Solid Waste:[8] more commonly known as trash or garbage—consists of everyday items that are used and then thrown away, such as product packaging, grass clippings, furniture, clothing, bottles, food scraps, newspapers, appliances, paint, and batteries. This comes from homes, schools, hospitals, and businesses.

Septic Tank[9]**:** An underground vessel for treating wastewater from a single dwelling or building by a combination of settling and anaerobic digestion. Effluent is usually disposed of through a dispersal system which consists of one or a combination of leach fields, seepage pits, and/or subsurface drip dispersal system. Settled solids in septic tank are pumped out periodically and hauled to a treatment facility for disposal.

Storm Water and Stormwater: In layman's terms, stormwater is defined as an abnormal amount of surface water due to a heavy rain or snowstorm. The term *storm water* is used when employed by the cited source of information. In all other instances, *stormwater* is used, consistent with the provision of Appendix G of the CEQA Guidelines and as defined by the U.S. Environmental Protection Agency. Stormwater runoff is generated when precipitation from rain and snowmelt events flows over land or impervious surfaces and does not percolate into the ground. As the runoff flows over the land or impervious surfaces (paved streets, parking lots, and building rooftops), it accumulates debris, chemicals, sediment, or other pollutants that could adversely affect water quality if the runoff is discharged untreated.

Tier 1 Onsite Wastewater Treatment System:[10] Low Risk New or Replacement OWTS (Policy Section 7 & 8). Applies to new or replacement OWTS that comply with conservative siting and design standards describe in the OWTS Policy. Tier 1 applies when a Local Agency Management Program (LAMP) has not been approved by the Regional Water Board. Maximum flow rate is 3,500 gallons per day (gpd).

Tier 2 Onsite Wastewater Treatment System:[11] Local Agency Management Program (LAMP) for New or Replacement OWTS (OWTS Policy Section 9). Applies to new or replacement OWTS that comply with the siting and design standards in an approved LAMP. LAMPs are developed by Local Agencies based on local conditions; siting and design standards may differ from Tier 1 standards. Maximum flow rate is 10,000 gpd.

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[8] U.S. Environmental Protection Agency. n.d. Wastes – Non-Hazardous Waste – Municipal Solid Waste. Website Available online at: http://www.epa.gov/waste/nonhaz/municipal/

[9] California Association of Sanitation Agencies. n.d. Definition of Terms – S. Website Available online at: http://www.casaweb.org/definition-of-terms/s

[10] California Association of Sanitation Agencies. n.d. Definition of Terms – S. Website Available online at: http://www.casaweb.org/definition-of-terms/s

[11] California Association of Sanitation Agencies. n.d. Definition of Terms – S. Website Available online at: http://www.casaweb.org/definition-of-terms/s

Tier 3 Onsite Wastewater Treatment System:[12] Advanced Protection Management Program (OWTS Policy Section 10). Applies to OWTS located near impaired surface water bodies that are subject to a Total Maximum Daily Load (TMDL) implementation plan, a special provision contained in a LAMP, or is located within 600 feet of a water body listed on OWTS Attachment 2. Supplemental treatment requirements may apply to a Tier 3 system. Maximum flow rate is 10,000 gpd.

Wastewater:[13] The spent or used water of a community or industry that contains dissolved and suspended matter.

3.17.1 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. The regulatory framework for utilities and service systems has been limited to the combined study area, which consists of 42,677 parcels in unincorporated Los Angeles County with an area totaling approximately 285,500 acres, or approximately 450 square miles.

The proposed initiative is limited to the use of undeveloped parcels whose zone permits single-family residential construction.

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.[14] 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; the parcels that would be eligible for the

[12] California Water Boards Fact Sheet "Water Quality Control Policy for Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment Systems (OWTS Policy). Website Available online at: http://www.waterboards.ca.gov/water_issues/programs/owts/index.shtml

[13] California Association of Sanitation Agencies. n.d. Definition of Terms – S. Website Available online at: http://www.casaweb.org/definition-of-terms/s

[10] California Association of Sanitation Agencies. n.d. Definition of Terms – S. Website Available online at: http://www.casaweb.org/definition-of-terms/s

[14] California Water Boards Fact Sheet "Water Quality Control Policy for Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment Systems (OWTS Policy). Website Available online at: http://www.waterboards.ca.gov/water_issues/programs/owts/index.shtml

use of hauled water are located within the boundaries of two authorities: Lahontan RWQCB and the Los Angeles RWQCB.

State

California Integrated Waste Management Act

The California Integrated Waste Management Act of 1989 (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.

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.[15] 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 proposed project. Moreover, the collection areas are to be located as close to existing exterior refuse collection areas as possible.

State Water Resources Control Board OWTS Policy

The State Water Resources Control Board OWTS policy allows 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

[15] CalRecycle Model Ordinance on Recycling Space Allocation - AB 1327. October 11, 1991

water bodies specifically identified as part this Policy where OWTS contribute to water quality degradation that adversely affect beneficial uses.

Regional

Water Quality Control Plan for the Los Angeles Region

The federal CWA is administered and enforced by the State Water Resources Control Board (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 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 one of nine statewide regional boards. The Los Angeles RWQCB protects ground and surface water quality in the Los Angeles Region, including the coastal watersheds of Los Angeles and Ventura Counties, along with very small portions of Kern and Santa Barbara Counties. In order to carry out its mission "to preserve and enhance water quality in the Los Angeles Region for the benefit of present and future generations," the Los Angeles RWQCB conducts the following broad range of activities to protect ground and surface waters under its jurisdictions:

- Addresses region-wide and specific water quality concerns through updates of the Water Quality Control Plan (Basin Plan) for the Los Angeles Region;
- Prepares, monitors compliance with, and enforces Waste Discharge Requirements, including NPDES Permits;
- Implements and enforces local stormwater control efforts;
- Regulates the cleanup of contaminated sites, which have already polluted or have the potential to pollute ground or surface water;
- Enforces water quality laws, regulations, and waste discharge requirements;

- Coordinates with other public agencies and groups that are concerned with water quality; and

- Informs and involves the public on water quality issues.

General Construction Activity Stormwater Discharges

Stormwater discharges that are composed entirely of runoff from qualifying construction activities may require regulation under the General Construction Activity Storm Water Permit issued by the SWRCB. Construction activities that qualify include clearing, grading, excavation, reconstruction, and dredge-and-fill activities that result in the disturbance of at least one acre and less than five acres of total land area. The proposed initiative would be required to conform to the Standard Urban Stormwater Management Plan (SUSMP) as part of compliance with the NPDES General Construction Activity Storm Water Permit to reduce water quality impacts to the maximum extent practicable. A SUSMP is a report that includes one or more site maps, an identification of construction activities that could cause pollutants to enter the stormwater, and a description of measures or best management practices (BMPs) to control these pollutants to the maximum extent practicable. A BMP is defined by the Stormwater Quality Task Force as any program, technology, process, siting criteria, operating method, measure, or device that controls, prevents, removes, or reduces stormwater pollution.

Water Quality Control Plan for the Lahontan Region

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 Lanhontan RWQCB has prepared a Water Quality Control Plan for the Lahontan Region (Basin Plan). The jurisdiction of the Lahontan RWQCB region extends from the Oregon border to the northern Mojave Desert and includes all of California east of the Sierra Nevada crest, including a large area of northern Los Angeles County that includes parcels where a single-family residence is an allowable use that would become feasible as a result of the proposed initiative. The name of the Region is derived from prehistoric Lake Lahontan, which once covered much of the State of Nevada. Most of the waters of the North Lahontan Basin drain into closed basins which were previously part of Lake Lahontan. Waters of the South Lahontan Basin also drain into closed basin remnants of prehistoric lakes.

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 which 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. The 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 Plan also summarizes past and present water quality monitoring programs, and identifies monitoring activities, which should be carried out to provide the basis for future Basin Plan updates and for waste discharge requirements or conditional waivers.

Local

Los Angeles County General Plan

Adopted Los Angeles County General Plan

The Water and Waste Management Element of the adopted Los Angeles County General Plan describes existing systems in the County that provide water supply and distribution, flood protection, water conservation, sewerage, water reclamation, and solid waste disposal.[16,17] The Element sets forth County policy on these systems by identifying a series of four broad objectives and 25 supporting policies. All four of the broad objectives are relevant to the evaluation of the proposed initiative:

- To mitigate hazards and avoid adverse impacts in providing water and waste services and to protect the health and safety of all residents.
- To develop improved systems of resource use, recovery, and reuse.
- To provide efficient water and waste management services.
- To maintain the high quality of our coastal, surface, and ground waters.

There are four policies in support of these objectives presented in the Water and Waste Management Element that are relevant to the evaluation of the proposed initiative:

- **Policy 3:** Encourage private firms and public agencies providing water and waste management services to cooperate with all levels of government in establishing, enacting, and enforcing consistent standards and criteria.
- **Policy 14:** Continue to recover off-site costs for capital improvements necessitated by development, including required additional plant capacity, as well as other water and waste management facilities.
- **Policy 18:** Provide protection for ground water recharge areas to ensure water quality and quantity.
- **Policy 25:** Design and construct new water and waste management facilities to maintain or protect existing riparian habitats.

[16] Los Angeles County Department of Regional Planning. November 25, 1980. *Los Angeles County General Plan: Water and Waste Management Element.* Available online at: http://planning.lacounty.gov/assets/upl/project/gp_web80-water-and-waste-management-element.pdf

[17] Los Angeles County Department of Regional Planning. January 1993. *Los Angeles County Streamlined General Plan, Public Facilities Element*. Los Angeles, CA.

Los Angeles County General Plan 2035 Update

The Public Services and Facilities Element of the Los Angeles County General Plan 2035 Update 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.[18] 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.
  - **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.

1986 Antelope Valley Areawide General Plan

The planning area of the Antelope Valley Areawide General Plan, 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.[19]

Chapter V, *Policy Statements*, establishes the following policy relevant to utilities in consideration of the proposed initiative:

[18] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 13: Public Services and Facilities Element.* Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter13_2014.pdf

[19] Los Angeles County Department of Regional Planning. December 4, 1986. *Antelope Valley Areawide General Plan: A Component of the Los Angeles County General Plan*. PDF available online at: http://planning.lacounty.gov/assets/upl/data/pd_antelope-valley.pdf

- **Policy 101.** Develop and use groundwater sources to their safe yield limits.
- **Policy 104.** Require a public or private sewerage system for land use densities which, if unsewered, would threaten nitrate pollution of groundwater, or where otherwise required by County regulations.
- **Policy 105.** Prohibit continued use of septic tanks where a community sewerage system has been installed or if identified groundwater pollution or vector problems exist.
- **Policy 106.** Require annexation of a developing area to an existing sanitation district where practical.
- **Policy 107.** Continue to use land use planning and control as a tool in Water Quality Management.
- **Policy 113.** Identify planned flow paths and groundwater recharge preserves on the Antelope Valley Comprehensive Plan of Flood Control and Water Conservation for the primary water course and for conservation of storm runoff in the rural areas.
- **Policy 134.** Encourage uniform standards for grading practices on steep terrain, and carefully review projects involving major grading to ensure environmentally sound development practices.
- **Policy 149.** Encourage a sustained yield management approach for renewable resources which includes consideration of watershed conservation, scenic quality, habitat protection and recreation.

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.[20] 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.

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

- **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 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.[21]

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.[22] 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.[23]

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[21] Los Angeles County Department of Regional Planning. January 1993. *Los Angeles County Streamlined General Plan, Public Facilities Element*. Los Angeles, CA

[22] 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.

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

The State Water Resources Control Board OWTS Policy

The State Water Resources Control Board OWTS policy allows 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, the 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.

The 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

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.

2013 Updated Antelope Valley Integrated Regional Water Management Plan

This document includes new information as required by the California Department of Water Resources' (DWR) 2012 Integrated Regional Water Management Proposition 84 Guidelines as well as updates to previous information from the 2007 AV IRWM Plan.

IRWM is a collaborative effort to manage all aspects of water resources in a region. The State recognizes that there is a need to consider a broader range of resource management issues, competing water demands, new approaches to ensuring water supply reliability, and new ways of financing. The State's IRWM program was developed beginning with Senate Bill 1672, which created the Integrated Regional Water Management Act to encourage local agencies to work cooperatively to manage local and imported water supplies to improve water quality, quantity and reliability.

Funding programs for IRWM planning were created when voters passed Proposition 50 in November 2002 and Proposition 84 in November 2006. These propositions set aside funds for IRWM planning and project implementation to be administered by the State. These grant programs state that IRWM Plans should include specific aspects, or "standards." This table also indicates where each standard may be located in the 2013 Plan Update.

Upper Santa Clara River Integrated Regional Water Management Plan

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.

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.

3.17.2 AFFECTED ENVIRONMENT

Wastewater

There are four water reclamation plants (WRPs) within the proposed initiative study area (Figure 3.17.2-1, *Water Reclamation Plants*). Each of the four WRPs serves 50,000 to 160,000 people (Table 3.17.2-1, *Water Reclamation Plant and Service Population*). Table 3.17.2-2, *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.

FIGURE 3.17.2-1
Water Reclamation Plants

TABLE 3.17.2-1
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 3.17.2-2
ESTIMATED AVERAGE WASTEWATER FLOW GENERATED PER PLANNING AREA PER YEAR

Planning Area Population[2]	Avg. Wastewater Flow (gpd)/Planning Area[3]	Avg. Wastewater Volume (gal)Pumped/Year With Septic Only
26,880	**99,840**	**30,368**

NOTES: [1] Based on Table1.5.1-1.
[2] Based on Avg. of 3.5 people/single-family residence.
[3] Based on Avg. of 260 gallons per day wastewater used/single-family residence according to Los Angeles County Sanitation District.
[4] Based on avg. septic size of 1,200 gallons (size based on four- bedroom residence).
[5] Based on pumping being required every three years.

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 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 pgd 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

There are no existing stormwater drainage facilities in the proposed initiative study area.

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 development of the subject parcels would affect lands that are regulated by the Lahontan and Los Angeles RWQCBs (Table 3.17.2-3, *Parcels within Lahontan and Los Angeles Regional Water Quality Control Board Jurisdictions*).

TABLE 3.17.2-3
PARCELS WITHIN LAHONTAN AND LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD JURISDICTIONS

Subarea	RWQCB NAME	% 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

As proposed, the proposed initiative would allow hauled water as the primary source of potable water for new development of single-family residences on existing vacant legal lots, or lots that are eligible for a certificate of compliance, where the property owner has demonstrated that there is no other feasible source of private or municipal potable water, or capability of developing an onsite well to provide potable water to the property, and only if the property lies outside of the boundaries of the local private and municipal water districts, and is not eligible for service by the nearest public-community water purveyor. The ordinance is proposed for parcels that are larger than 2,000 square feet in size, with slopes under 50 percent (26.6°). All criteria would need to be met at the effective date of the ordinance.[24]

The Task Force identified 42,667 parcels, where the land use designation allows for the development of a single-family residence, where there is currently no designated water purveyor.

Due to the lack of designated private or municipal water purveyors in the proposed initiative study area, properties that meet all the specified criteria, at the effective date of the ordinance, 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 Los Angeles County Metropolitan Water District (MWD) member agencies, 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.

Los Angeles County Water Works District (LACoWWD) 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

[24] The term vacant is used as identified by the County Assessor.

transitions from agricultural to residential and industrial use in its demand projections. Based on the forecasted development of its service area, LACoWWD projects to have sufficient water supply to serve its three districts for single dry year, multiple dry year, and average weather years. LACoWWD obtains its water from AVEK, who obtains water from the California State Water Project (SWP) and local groundwater basins.

The MWD has plans for increasing water supply for the increasing demand of its service area in its 2010 UWMP. MWD is projected to have a surplus of water under the conditions of a single dry year, multiple dry years, and average year. MWD projects to have a surplus of 620,000 acre-feet per year (AFY) in 2020 and 371,000 in 2035 with its existing water supplies in an average dry year. MWD supplies water to member agencies that distribute water to their service areas and a member agency can possibly supply water to the proposed initiative study area. MWD obtains water from the State Water Project (SWP) and from the Colorado River and financially supports the development of local water supply projects such as groundwater replenishment and extraction, local stormwater capture and storage, water recycling and storage, water conservation, and brackish and seawater desalination.

Los Angeles Department of Water & Power (LADWP) is a member agency of MWD and could potentially supply water to purveyors who would provide water to the proposed initiative study area. According to the LADWP's 2010 UWMP, LADWP obtains its current water supply from the Los Angeles Aqueduct, MWD (SWP and Colorado River), local groundwater, and recycled water. By 2035, LADWP estimates that it will receive additional water supply from water transfers, stormwater capture, and conservation. LADWP's supply projections are expected to exactly meet the increased demands of its service area, which does not include the project area, between 2010 and 2035. LADWP accounted for an annual population growth rate of 0.4 percent within its service area over the next 25 years.

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 proposed initiative study area, such as Acton and Quartz Hill. AVEK receives deliveries from the SWP and provides water to LACoWWD, 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 LACoWWD, have developed supplemental water supplies, such as groundwater, and, therefore, are currently meeting demand.

Solid Waste

Solid Waste from Septic Fields

It is anticipated that the proposed initiative study area will utilize individual OWTS that require periodic servicing and disposal of solid waste. It is anticipated that the vast majority of developed OWTS will fall under State Water Resources Control Board OWTS Policy Tier 1: Low Risk New or Replacement OWTS, and will 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 3.17.2-4 depicts the average pounds of household solid waste per resident per day and provides an annual total for the subject parcels.

TABLE 3.17.2-4
AVERAGE HOUSEHOLD SOLID WASTE PER YEAR

Planning Area Population*	Avg. lbs/Resident/Day**	Avg. Waste Lbs/Resident/Day
26,880	4.74	127,411.20 (63.7 tons/yr)

NOTE: * Based on 3.5 people per single-family residence
** Based on Los Angeles County Wide 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 3.17.2-2, *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 3.17.2-5, *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*.

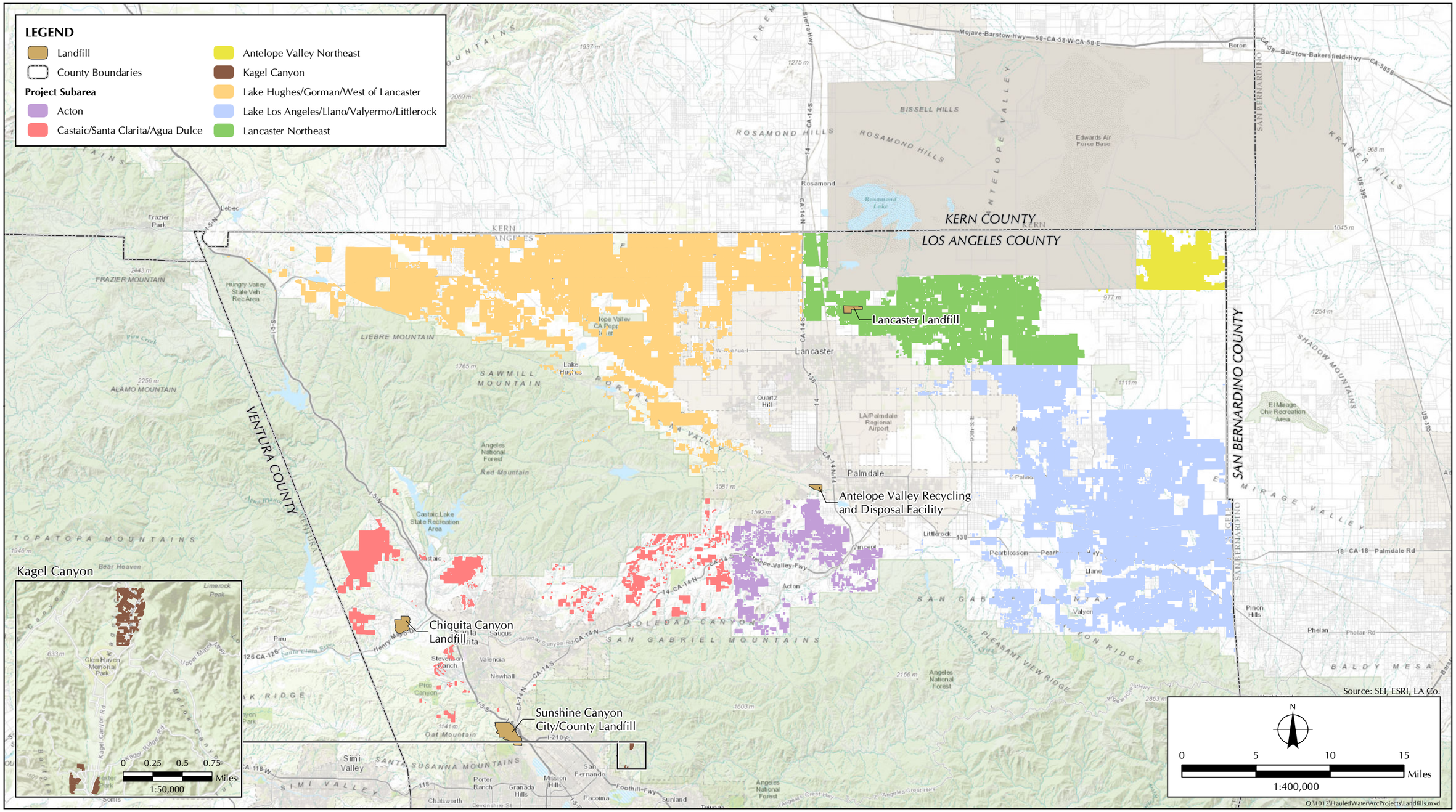

FIGURE 3.17.2-2

Regional Active Landfills

TABLE 3.17.2-5
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[25]

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

[25] 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

3.17.3 IMPACT ANALYSIS

The State CEQA Guidelines recommend the consideration of seven questions when addressing the potential for significant impact to utilities and service systems.

Would the proposed initiative have any of the following effects:

(a) Exceed wastewater treatment requirements of the applicable regional water quality control board?

The proposed initiative is expected to result in significant impacts associated with utilities and service systems in relation to exceeding wastewater treatment requirements of both the Los Angeles and Lahontan RWQCBs. It is anticipated that the proposed initiative study area will utilize individual OWTS, where effluent is usually disposed of through leach fields. In general, settled solids from septic tanks 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 384 building permits per year, the proposed initiative would likely result in 26,880 additional people over an estimated 20-year period. Therefore, there is potential for new wastewater hauling activities to be inconsistent with the established wastewater treatment requirements and permits regulated by both the Los Angeles and Lahontan RWQCBs, and with the State Water Resources Control Board OWTS policy, thus further evaluation in an environmental impact report is warranted, including the consideration of mitigation measures and alternatives.

(b) Require or result in the construction of new water or wastewater treatment 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 3.17.2-1 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 384 building permits per year, the proposed initiative would likely result in 1,344 additional people per year over an estimated 20-year period, or up to 26,880 additional people total from the single-family residential development of the 42,677 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 (Table 3.17.2-2 and Table 3.17.2-3). 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.

(c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental impacts?

The proposed initiative would result in potentially significant impacts in relation to the construction of new stormwater drainage facilities or expansion of existing facilities. There are no existing stormwater drainage facilities in the proposed initiative study area. The construction of up to 42,677 additional single-family residences would have the potential to increase impervious surface in each of the seven subareas, and result in stormwater runoff requiring stormwater drainage

systems. Table 3.17.3-1, *Proposed Initiative Build-Out Acreage*, depicts the potential acreage developed.

TABLE 3.17.3-1
PROPOSED INITIATIVE BUILD-OUT ACREAGE

Subarea	Parcels	Acres
Acton	1,129	13,155
Castaic/Santa Clarita/Agua Dulce	1,626	14,358
Antelope Valley Northeast	1,820	10,716
Kagel Canyon	498	41
Lake Hughes/Gorman/West of Lancaster	14,356	105,352
Lake Los Angeles/Llano/Valyermo/Littlerock	14,946	98,843
Lancaster Northeast	8,302	42,948
Total Parcels	**42,677**	**285,413**

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 Update.

- **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.

Therefore, there is potential to substantially increase the amount of impervious surfaces, which could require construction of new stormwater drainage facilities. Further evaluation in an environmental impact report is warranted, including the consideration of mitigation measures and alternatives.

(d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

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 384 building permits per year, the proposed initiative would likely result in 1,344 additional people per year over an estimated 20-year period, or up to 26,880 additional people total from the single-family residential development of the 42,677 subject parcels. The reasonable worst-case development scenario has the potential to deplete the existing water supply.

The proposed initiative would result in significant impacts to utilities and service systems in relation to having sufficient water supplies available to serve the project 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 384 building permits per year, the proposed initiative would likely result in 1,344 additional people per year over an estimated 20-year period, or up to 26,880 additional people total from the single-family residential development of the 42,677 subject parcels. The proposed initiative is expected to exceed sustainable yield and therefore is in conflict with policy 149 of the Antelope Valley Areawide General Plan.

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, new single-family residences would obtain their water supply from potential water suppliers, such as MWD member agencies, 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 agencies located within approximately 10 miles of the proposed initiative study area and are presented herein.

Los Angeles County Water Works District (LACoWWD) is a retail water purveyor that operates three districts, District 37- Acton and District 40-04/34 – Antelope Valley, that are located within approximately 10 miles of 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, LACoWWD projects to have sufficient water supply to serve its three districts for single dry year, multiple dry year, and average weather years. LACoWWD obtains its water from AVEK, who obtains water from the California State Water Project (SWP) and local groundwater basins.

MWD has plans for increasing water supply for the increasing demand of its service area in its 2010 UWMP. MWD is projected to have a surplus of water under the conditions of a single dry year, multiple dry years, and average year. MWD projects to have a surplus of 620,000 acre-feet per year (AFY) in 2020 and 371,000 in 2035 with its existing water supplies in an average dry year. MWD supplies water to member agencies that distribute water to their service areas and a member agency can possibly supply water to the proposed initiative study area. MWD obtains water from the SWP and from the Colorado River and financially supports the development of local water supply projects such as groundwater replenishment and extraction, local stormwater capture and storage, water recycling and storage, water conservation, and brackish and seawater desalination.

Los Angeles Department of Water and Power (LADWP) is a member agency of MWD and could potentially supply water to purveyors who would provide water to the proposed initiative study area. According to the LADWP's 2010 UWMP, LADWP obtains its current water supply from the Los Angeles Aqueduct, MWD (SWP and Colorado River), local groundwater, and recycled water. By 2035, LADWP estimates that it will receive additional water supply from water transfers, stormwater capture, and conservation. LADWP's supply projections are expected to exactly meet the increased demands of its service area, which does not include the proposed initiative study area, between 2010 and 2035. LADWP accounted for an annual population growth rate of 0.4 percent within its service area over the next 25 years.

The Palmdale Water District (PWD), which is adjacent to the proposed initiative 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.

Antelope Valley Eastern Kern Water District (AVEK) serves cities and communities of the County of Los Angeles that are located at a maximum distance of approximately 10 miles from the proposed initiative study area, such as Acton and Quartz Hill, CA. AVEK receives deliveries from the SWP and provides water to LACoWWD, 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 LACoWWD 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 their anticipated growth needs, which may or may not have included the projected increased number of developed residential parcels that would be served by water haulers. Some agencies, such as MWD, in 2010 were predicting surplus water supplies. Others, such as AVEK, were predicting shortages. 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.

The reasonable worst-case development scenario has the potential to deplete the existing water supply, thus further evaluation in an environmental impact report is warranted, including the consideration of mitigation measures and alternatives.

(e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has 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 project's projected demand, in addition to the provider's existing commitments. Table 3.17.2-1 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 384 building permits per year, the proposed initiative would likely result in 1,344 additional people per year over an estimated 20-year period of time, or up to 26,880 additional people total from the single-family residential development of the 42,677 subject parcels. An estimated 11.1 million gpd of wastewater could be generated with a build-out worst-case scenario; 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 (see Table 3.17.2-2). Table 3.17.2-1 depicts the wastewater flow capacity of the four water reclamation plants within the proposed initiative study area.

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. No further evaluation in an environmental impact report is warranted.

(f) Be 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 project's solid waste disposal needs. Table 3.17.2-5 illustrates the current permitted capacity levels of the existing landfills 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 384 building permits per year, the proposed initiative would likely result in 1,344 additional people per year over an estimated 20-year period of time, or up to 26,880 additional people total from the single-family residential development of the 42,677 subject parcels. Table 3.17.2-5 depicts the remaining permitted disposal capacity of existing solid waste disposal facilities in the proposed initiative study area. Table 3.17.2-4 shows that an additional 129,212 tons per year of solid waste could potentially enter the 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. Further evaluation in an environmental impact report is warranted, including the consideration of mitigation measures and alternatives.

(g) 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. No further evaluation in an environmental impact report is warranted.

3.17.4 MITIGATION MEASURES

The proposed initiative would result in impacts to utilities. Therefore, mitigation measures or alternatives may be required.

SECTION 3.18
MANDATORY FINDINGS OF SIGNIFICANCE

This analysis was undertaken to determine if the Single-Family Residential Hauled Water Initiative for New Development (proposed initiative) would be expected to have a significant impact to Mandatory Findings of Significance, thus requiring the consideration of mitigation measures or alternatives, in accordance with Section 15065 of the State California Environmental Quality Act (CEQA) Guidelines.[1] Mandatory Findings of Significance for the proposed initiative were evaluated with regard to the information contained in the Environmental Analysis (Section 3).

State CEQA Guidelines recommend the consideration of three questions when addressing the potential for significant impacts to Mandatory Findings of Significance.

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

The proposed initiative would be expected to result in significant impacts in relation to the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory 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. The potential development of 42,677 parcels consisting of an area of approximately 285,500 acres or approximately 450 square miles for single-family residential development has the potential for significant direct impacts to natural and cultural resources through the development of existing open space resources, indirectly through habitat fragmentation and disruption of wildlife movement corridors and alteration of the landscape setting for cultural resources, and cumulatively through the conversion of an area characterized by open space, agricultural, and rural land uses to a density of single-family homes comparable to a suburban housing-rich and jobs-poor community. Preparation of an environmental impact report (EIR) is warranted.

(b) Does the proposed project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

The proposed initiative would be expected to result in impacts that, in some instances, are individually limited but cumulatively considerable that would be expected to result in significant impacts, due to the sheer magnitude of the 42,677 parcels consisting of an area of approximately 285,500 acres or approximately 450 square miles, that are currently restricted from residential development and would become eligible for development of a single-family residence due to the allowance to use hauled water. The proposed initiative may be expected to contribute to the incremental environmental impacts when viewed in connection with the effects of past, current, or reasonably foreseeable projects. The proposed initiative would entail development that would be expected to result in impacts

[1] *California Code of Regulations*, Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

to aesthetics, air quality, biological resources, cultural resources, greenhouse gas emissions, hydrology and water quality, land use and planning, noise, population and housing, public services, recreation, transportation and traffic, and utilities and service systems. The proposed initiative may have the potential to result in incremental effects that when considered in connection to other projects, could result in potentially significant impacts.

Further review of these impacts in relation to the effects of past projects, the effects of other current projects, and the effects of probable future projects, is required in order to determine if there are feasible mitigation measures or alternatives capable of avoiding or reducing the significant effects of the proposed initiative. Preparation of an EIR is warranted.

(c) Does the proposed project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

The proposed initiative would be expected to result in significant impacts to human beings, either directly or indirectly, 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. The proposed initiative could be expected to result in impacts to aesthetics, air quality, biological resources, cultural resources, greenhouse gas emissions, hydrology and water quality, land use and planning, noise, population and housing, public services, recreation, transportation and traffic, and utilities and service systems. Preparation of an EIR is warranted.

SECTION 4.0
REPORT PREPARATION PERSONNEL

The following individuals contributed to the preparation of this document.

4.1 COUNTY

Contributor:	*Title:*	*Area of Responsibility:*
Patricia Hachiya	Supervising Regional Planner	Initial Study Review
Joseph Decruyenaere	Biologist	Biological Resources
Gina M. Natoli	Supervising Regional Planner	Initial Study Review

4.2 SAPPHOS ENVIRONMENTAL, INC.

Contributor:	*Title:*	*Area of Responsibility:*
Marie C. Campbell	President	Senior Project Manager
Eric Charlton	Senior Environmental Compliance Specialist	Project Manager Initial Study Author
Adam Furman	Environmental Compliance Coordinator	Initial Study Author
Jeffrey Rex	Senior Environmental Compliance Specialist	Initial Study Author
Andre Anderson	Senior Environmental Compliance Specialist	Initial Study Author
Laura Male	Environmental Compliance Coordinator	Initial Study Author
Karl Holland	Senior Cultural Resources Coordinator	Initial Study Author
Michael Williams	Lead Paleontologist	Initial Study Author
Brian Bielfelt	Biological Resources Analyst	Initial Study Author
Matthew Adams	Senior Technical Editor	Document Production
Grace Ok	Technical Editor	Document Production
Noah Albers	Senior Geographical Information System (GIS) Specialist	GIS Analysis and Document Production
Ann Espejo	GIS Specialist	GIS Analysis and Document Production
Eugene Ng	Senior Graphics Specialist	Graphics and Document Production

SECTION 5.0
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APPENDIX A
LISTED AND SENSITIVE SPECIES WITHIN TOPOGRAPHIC QUADRANGLES AND SURROUNDING TOPOGRAPHIC QUADRANGLES OF PROPOSED INITIATIVE PARCELS

APPENDIX A
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Common Name	Scientific Name	Status*	Probability of Presence	Locational Considerations
Plants				
alkali mariposa-lily	*Calochortus striatus*	1B.2	Present	Located in playas and alkali sinks north of Lancaster, near the airport and Piute Ponds. Several CNDDB records including one from 2011 on parcels. Most records from dry lakes on Edward's Air Force Base.
Baja navarretia	*Navarretia peninsularis*	1B.2	Potentially Present	Recent 2004 CNDDB record located between parcels near Gorman.
Barstow woolly sunflower	*Eriophyllum mohavense*	1B.2	Absent	No habitat present. Needs alkali playas in chenopod scrub.
Big Bear Valley woollypod	*Astragalus leucolobus*	1B.2	Absent	No habitat present. Occurs at higher elevations in the San Gabriel Mountains.
black bog-rush	*Schoenus nigricans*	2B.2	Absent	No habitat present. Needs marshes and swamps. Closest CNDDB records are at high elevation in the eastern San Gabriel Mountains.
Blochman's dudleya	*Dudleya blochmaniae ssp. blochmaniae*	1B.1	Absent	No habitat present. Single CNDDB record in the vicinity of Chatsworth Reservoir. Generally a coastal species.
Braunton's milk-vetch	*Astragalus brauntonii*	1B.1	Presumed Absent	All records located closer to the coast. Generally a coastal species of chaparral, coastal scrub, and grasslands.
calico monkeyflower	*Mimulus pictus*	1B.2	Absent	Two CNDDB records from 2007. The closest record is located at the head of Liveoak Canyon. Needs broad-leaved upland forest and cismontane woodland.
California muhly	*Muhlenbergia californica*	4.3	Absent	No habitat present. Two old CNDDB records in the san Gabriel Mountains at higher elevations.
California Orcutt grass	*Orcuttia californica*	FE, SE, 1B.1	Presumed Present	Present in vernal pools on Cruzan Mesa; several parcels occur on or adjacent to these vernal pools. Occurs with two rare navarretias.
California satintail	*Imperata brevifolia*	2B.1	Potentially Present	CNDDB record from 2008 of a population near where collections made in 1968 and 1998 within Big Tujunga Canyon. Generally occurs on the non-desert side of the mountains in scrub, meadows, and riparian areas but also in mountains near Death Valley.
chaparral nolina	*Nolina cismontane*	1B.2	Absent	Single CNDDB record for 1987 near Jordan Ranch, in the Simi Hills. Generally coastal within chaparral and coastal scrub.
chaparral ragwort	*Senecio aphanactis*	2.2	Absent	Single CNDDB record from 1901 in developed areas of Santa Clarita.

APPENDIX A
LISTED AND SENSITIVE SPECIES WITHIN TOPOGRAPHIC QUADRANGLES AND SURROUNDING TOPOGRAPHIC QUADRANGLES OF PROPOSED INITIATIVE PARCELS, *Continued*

Common Name	Scientific Name	Status*	Probability of Presence	Locational Considerations
Clokey's cryptantha	*Cryptantha clokeyi*	1B.2	Potentially Present	CNDDB record from 2003 at the Poppy Preserve. Potential to occur on adjacent parcels.
Conejo dudleya	*Dudleya parva*	FT	Absent	Two CNDDB records from 1998 and earlier in the vicinity of Simi Valley and Moorpark. Needs coastal scrub, and grasslands.
Coulter's goldfields	*Lasthenia glabrata ssp. coulteri*	1B.1	Absent	Two old CNDDB records, poorly recorded near Pasadena and near Chatsworth Reservoir. Needs marshes, swamps , playas, and vernal pools
Cove's cassia	*Senna covesii*	2B.2	Absent	No habitat present. Single CNDDB record noted as a transplant and at the entrance to Edwards Air Force Base. Needs Sonoran desert scrub (sandy)
Davidson's bush-mallow	*Malacothamnus davidsonii*	1B.2	Potentially Present	Old CNDDB records in developed portions of San Fernando Valley. Records from the 1970s in the foothills of San Fernando Valley, including the Kagel Canyon area. Most recent records from Big Tujunga Canyon.
delicate bluecup	*Githopsis tenella*	1B.3	Potentially Present	Single CNDDB record from 1965, on Purdie Ridge in the Tehachapi Mountains. May occur in chaparral on parcels near Gorman.
desert cymopterus	*Cymopterus deserticola*	1B.2	Potentially Present	Numerous records on Edward's Air Force Base. May occur on the Edwards Air Force Base North East subarea. Generally requires sandy soils within creosote bush scrub or Joshua tree woodlands
Ewan's cinquefoil	*Drymocallis cuneifolia var. ewanii*	1B.3	Absent	No habitat present. Single CNDDB record from 1989 in the San Gabriel Mountains.
Fort Tejon woolly sunflower	*Eriophyllum lanatum var. hallii*	1B.1	Absent	No habitat present. No reliable CNDDB records in the vicinity of parcels.
Greata's aster	*Symphyotrichum greatae*	1B.3	Presumed Absent	Occurs within the mountains but no reliable CNDDB records near parcels.
grey-leaved violet	*Viola pinetorum var. grisea*	1B.3	Absent	No habitat present. CNDDB records at Table Mountain.
Horn's milk-vetch	*Astragalus hornii var. hornii*	1B.1	Absent	No habitat present. No reliable CNDDB records in the vicinity.
hot springs fimbristylis	*Fimbristylis thermalis*	2B.2	Absent	No habitat present. Single CNDDB record from 1915 on the north fork of the San Gabriel River in the high San Gabriel Mountains.

APPENDIX A
LISTED AND SENSITIVE SPECIES WITHIN TOPOGRAPHIC QUADRANGLES AND SURROUNDING TOPOGRAPHIC QUADRANGLES OF PROPOSED INITIATIVE PARCELS, *Continued*

Common Name	Scientific Name	Status*	Probability of Presence	Locational Considerations
Johnston's buckwheat	*Eriogonum microthecum var. johnstonii*	1B.3	Absent	No habitat present, two CNDDB records near within the high San Gabriel Mountains.
Jokerst's monardella	*Monardella australis ssp. jokerstii*	1B.1	Absent	No habitat present. Only CNDDB and herbaria records from the Lytle Creek area of the eastern San Gabriel mountains.
Kern Canyon clarkia	*Clarkia xantiana ssp. parviflora*	4.3	Presumed Present	Single CNDDB record of many individuals from 1995 near Valeyermo.
knotted rush	*Juncus nodosus*	2.3	Absent	No habitat present. Single record in the vicinity art a seep in the San Gabriel Mountains.
Lancaster milk-vetch	*Astragalus preussii var. laxiflorus*	1B.1	Absent	No habitat present. Occurs along dry lakes on Edwards Air Force Base.
late-flowered mariposa-lily	*Calochortus fimbriatus*	1B.3	Presumed Absent	Only CNDDB records within the Santa Susana Mountains and at higher elevations.
Lemmon's jewelflower	*Caulanthus lemmonii*	1B.2	Absent	A western Central Valley species. Single CNDDB record located on Wheeler Ridge above the Central Valley. Needs Pinyon and juniper woodland and valley and foothill grassland.
lemon lily	*Lilium parryi*	1B.2	Absent	No habitat present. Occurs in San Gabriel Mountains at higher elevations.
Lincoln rockcress	*Boechera lincolnensis*	2.3	Potentially Present	Photographed in 2005 at Ripley Desert Woodland State park. Potential to occur on adjacent parcels.
Los Angeles Sunflower	*Helianthus nuttallii ssp. parishii*	1A	Absent	Two old CNDDB records from 1923 and earlier within the San Gabriel Mountains.
Lyon's pantachaeta	*Pantachaeta lyonii*	FE, SE, 1B.1	Absent	All CNDDB records within the vicinity of Simi Valley. Generally coastal within chaparral openings, coastal scrub, and grasslands.
Madera leptosiphon	*Leptosiphon serrulatus*	1B.2	Absent	A species from the foothills and lower mountains on eastern edge of the Central Valley. Single CNDDB record from 1935 in the Tehachapi Mountains.
many-stemmed dudleya	*Dudleya multicaulis*	1B.2	Absent	Two CNDDB records from 1978 and earlier. Earliest record is considered extirpated, 1978 record on the south side of Chatsworth Reservoir. Needs Chaparral, coastal scrub, and grasslands.
Mason's neststraw	*Stylocline masonii*	1B.1	Potentially Present	First county record in 1991 found in Santa Clara River in Soledad Canyon adjacent to parcel in Acton.
mesa horkelia	*Horkelia cuneata var. puberula*	1B.1	Absent	Several CNDDB records, all prior to 1948. Most records are considered extirpated and located in the vicinity of Pasadena and Glendale

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LISTED AND SENSITIVE SPECIES WITHIN TOPOGRAPHIC QUADRANGLES AND SURROUNDING TOPOGRAPHIC QUADRANGLES OF PROPOSED INITIATIVE PARCELS, *Continued*

Common Name	Scientific Name	Status*	Probability of Presence	Locational Considerations
mingan moonwort	*Botrychium minganense*	2B.2	Absent	No habitat present. Single CNDDB record from 1922. Needs bogs and fens, lower and montane conifer forests.
Mt. Gleason paintbrush	*Castilleja gleasoni*	1B.2	Absent	No habitat present. All CNDDB records from higher mountain areas.
Nevin's barberry	*Berberis nevinii*	FE, SE, 1B.1	Potentially Present	Although most CNDDB records are old or indicate the plant has been extirpated, there is a single record from 2000 near Kagel Canyon parcels.
Newhall sunflower	*Helianthus inexpectatus*	1B.1	Potentially Present	Single record from Santa Clara River prior to recognition of being a full species. Could occur near Val Verde parcels.
Ojai navarretia	*Navarretia ojaiensis*	1B.1	Potentially Present	Could occur on the slopes near Val Verde; records in the Santa Susana Mountains.
pale-yellow layia	*Layia heterotricha*	1B.1	Absent	No habitat present. No reliable CNDDB records in the vicinity.
Palmer's grapplinghook	*Harpagonella palmeri*	4.2	Absent	No habitat present. No reliable CNDDB records in the vicinity of parcels.
Palmer's mariposa-lily	*Calochortus palmeri var. palmeri*	1B.2	Potentially Present	Likely to occur near Valyermo given habitat and records close to parcels.
Parish's brittlescale	*Atriplex parishii*	1B.1	Absent	Single CNDDB record near Cahuenga, presumed extirpated.
Parish's gooseberry	*Ribes divaricatum var. parishii*	1A	Absent	Single CNDDB record from 1882 near Pasadena that is possibly extirpated.
Parish's popcornflower	*Plagiobothrys parishii*	1B.1	Absent	No habitat present. No reliable CNDDB records in the vicinity of parcels.
Parry's spineflower	*Chorizanthe parryi var. parryi*	1B.1	Absent	No habitat present. No reliable CNDDB records in the vicinity of parcels.
Peirson's lupine	*Lupinus peirsonii*	1B.3	Absent	No habitat present. Occurs in the Gabriel Mountains.
Peirson's morning-glory	*Calystegia peirsonii*	4.2	Present	Numerous CNDDB records. Present in the Sierra Poloma Mountains near Lake Hughes, Elizabeth Lake, and Castaic.
Peirson's spring beauty	*Claytonia lanceolata var. peirsonii*	3.1	Absent	No habitat present. All records in the high San Gabriel Mountains on the eastern portion of the range. Needs high elevation conifer forests.
Piute Mountains navarretia	*Navarretia setiloba*	1B.1	Presumed Present	Present in vernal pools on Cruzan Mesa; several parcels occur on or adjacent to these vernal pools. Occurs with two rare other rare plants. Occur near Gorman too.
Plummer's mariposa-lily	*Calochortus plummerae*	4.2	Presumed Present	Many records, especially within the San Gabriel and Santa Susana Mountains. Likely to occur on parcels near in the foothills around Santa Clarita Valley.

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LISTED AND SENSITIVE SPECIES WITHIN TOPOGRAPHIC QUADRANGLES AND SURROUNDING TOPOGRAPHIC QUADRANGLES OF PROPOSED INITIATIVE PARCELS, *Continued*

Common Name	Scientific Name	Status*	Probability of Presence	Locational Considerations
recurved larkspur	*Delphinium recurvatum*	1B.2	Presumed Absent	CNDDB and herbaria records from Edward's Air Force Base near the dry lakes. Habitat generally lacking.
Red Rock poppy	*Eschscholzia minutiflora ssp. twisselmannii*	1B.2	Absent	Populations from within the Red Rock area, but a single CNDDB record from 1977 on Edwards Air Force Base. Needs desert scrub with volcanic tuff.
Robbins' nemacladus	*Nemacladus secundiflorus var. robbinsii*	1B.2	Absent	No habitat present. No reliable CNDDB records in the vicinity.
Robinson's pepper-grass	*Lepidium virginicum var. robinsonii*	1B.2	Absent	No habitat present. Single CNDDB record from 1917 that needs fieldwork.
rock-loving oxytrope	*Oxytropis oreophilia var. oreophilia*	2B.3	Absent	No habitat present. Single CNDDB record from 1915 on the summit of Mount San Antonio in the eastern San Gabriel Mountains.
Rock Creek broomrape	*Orobanche valida ssp. valida*	1B.2	Presumed Absent	No habitat present. Generally occur on slope at a higher elevation than parcels. May be found near parcels in Valyermo.
Ross' pitcher sage	*Lepechinia rossii*	1B.2	Absent	No habitat present. Single CNDDB record from 2004 near Red Mountain.
round-leaved filaree	*California macrophylla*	1B.1	Present	Recent CNDDB records. Present in the vicinity of Quail Lake and the foothills of Santa Clarita Valley.
sagebrush loeflingia	*Loeflingia squarrosa var. artemisiarum*	2.2	Potentially Present	Habitat present near parcels near Edward's Air Force Base and Littlerock, but not likely to be found.
San Antonio milk-vetch	*Astragalus lentiginosus var. antonius*	1B.3	Absent	No habitat present. Most records from around Blue Ridge and Wrightwood.
San Bernardino aster	*Symphyotrichum defoliatum*	1B.2	Presumed Absent	No habitat present. Two old CNDDB records from pre-1940.
San Bernardino grass-of-Parnassus	*Parnassia cirrata var. cirrata*	1B.3	Absent	No CNNDB records after 1970 and all from high elevations of the eastern San Gabriel Mountains. Needs montane conifer forests, meadows and seeps
San Fernando Valley spineflower	*Chorizanthe parryi var. fernandina*	FC, SE, 1B.1	Potentially Present	Extirpated from San Fernando Valley. Given potentially present given that the species was rediscovered in a previously unknown location on the slopes above the Santa Clara River during surveys for land development. Could occur on parcels near Val Verde and Stevenson Ranch.
San Gabriel bedstraw	*Galium grande*	1B.2	Absent	No habitat present. Single CNDDB record from 1979 near Castaic Lake.

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Common Name	Scientific Name	Status*	Probability of Presence	Locational Considerations
San Gabriel linanthus	*Linanthus concinnus*	1B.2	Absent	No habitat present. Generally at higher elevations on dry slopes in the San Gabriel Mountains.
San Gabriel manzanita	*Arctostaphylos glandulosa ssp. gabrielensis*	1B.2	Absent	No habitat present. Occurs on Mount Gleason.
Santa Susana tarplant	*Deinandra minthornii*	1B.2	Absent	Present on lower, south-facing slopes of the Santa Susana Mountains. No habitat near parcels.
scalloped moonwort	*Botrychium crenulatum*	2.2	Absent	No habitat present. No reliable CNDDB records in the vicinity of parcels.
short-jointed beavertail	*Opuntia basilaris var. brachyclada*	1B.2	Present	Numerous and recent CNDDB records. Mostly concentrated on the north slope of mountains and foothills above the Mojave Desert. Also records near Acton and Castaic.
short-sepaled lewisia	*Lewisia brachycalyx*	2B.2	Absent	Single CNDDB record from 1915 near the summit of Mount San Antonio in the eastern San Gabriel Mountains. Needs montane conifer forests, meadows, and seeps.
slender mariposa-lily	*Calochortus clavatus var. gracilis*	1B.2	Present	Numerous and recent CNDDB records.
slender-horned spineflower	*Dodecahema leptoceras*	FE, SE, 1B.1	Presumed Absent	Single recent records from Big Tujunga Creek, Santa Clara River, and Mint Canyon. Could occur on parcels in Mint Canyon but unlikely given the habitat on those parcels.
southern alpine buckwheat	*Eriogonum kennedyi var. alpigenum*	1B.3	Absent	No habitat present. Occurs at higher elevations in the San Gabriel Mountains.
southern tarplant	*Centromadia parryi ssp. australis*	1B.1	Absent	No habitat present. No reliable CNDDB records in the vicinity of parcels.
spreading navarretia	*Navarretia fossalis*	FE, 1B.1	Presumed Present	Present in vernal pools on Cruzan Mesa; several parcels occur on or adjacent to these vernal pools. Occurs with two rare other rare plants.
Tehachapi buckwheat	*Eriogonum callistum*	1B.1	Absent	No habitat present. May occur in the Tehachapi Mountains near Gorman.
Tehachapi monardella	*Monardella linoides ssp. oblonga*	1B.3	Absent	No habitat present. No reliable CNDDB records.
Tejon poppy	*Eschscholzia lemmonii ssp. kernensis*	1B.1	Presumed Absent	Single CNDDB record from 1935 near the mouth of Salt Creek. Most records are on the north slope of the Tehachapi Mountains.

APPENDIX A
LISTED AND SENSITIVE SPECIES WITHIN TOPOGRAPHIC QUADRANGLES AND SURROUNDING TOPOGRAPHIC QUADRANGLES OF PROPOSED INITIATIVE PARCELS, *Continued*

Common Name	Scientific Name	Status*	Probability of Presence	Locational Considerations
western sedge	*Carex occidentalis*	2B.3	Absent	Two CNDDB records in higher elevations of the eastern San Gabriel Mountains. Needs montane conifer forests, meadows, and seeps.
white pygmy-poppy	*Canbya candida*	4.2	Potentially Present	Generally the existing CNDDB records are old or on areas currently developed. If present, it would be found on slopes within the desert in sandy soils.
white rabbit-tobacco	*Pseudognaphalium leucocephalum*	2B.2	Absent	Generally within coastal slopes. Two records from 1932 and earlier within the Arroyo Seco and La Tuna Canyon. Needs chaparral, coastal scrub and riparian woodland.
white-bracted spineflower	*Chorizanthe xanti var. leucotheca*	1B.2	Presumed Absent	One CNDDB record from 2011 in Cajon Canyon. Most herbaria records for this species are the eastern San Gabriels and mountain ranges to the east. Needs coastal scrub, alluvial fans, desert scrub, and juniper woodland.
White-veined monardella	*Monardella hypoleuca ssp. hypoleuca*	1B.3	Presumed Absent	One CNDDB record from 1907 in Topanga Canyon in the Santa Monica Mountains. Generally coastal within chaparral.
woolly mountain-parsley	*Oreonana vestita*	1B.3	Absent	No habitat present. Occurs in the San Gabriel Mountain at higher elevations.
Invertebrates				
Conservancy fairy shrimp	*Branchinecta conservatio*	SE	Potentially Present	Single CNDDB record from 1989 near Frazier Mountain Road. May be present in vernal pools, especially near Gorman
Desert cuckoo wasp	*Ceratochrysis longimala*		Absent	Single CNDDB record in Hungry Valley.
Gertsch's socalchemmis spider	*Socalchemmis gertschi*		Absent	Known only from a few locations within the Santa Monica Mountains, usually on the coastal slopes.
Kern River pyrg	*Pyrgulopsis greggi*		Absent	No habitat present, two CNDDB record from 1991 near Fort Tejon.
monarch butterfly	*Danaus plexippus*		Presumed Absent	Few autumnal/migration roosts near Santa Clarita Valley but generally too cold on parcels for winter roosts.
Riverside fairy shrimp	*Streptocephalus woottoni*	FE	Absent	Single CNDDB record from 2011 near Moorpark. May be present in vernal pools, especially near Cruzan Mesa.
San Emigdio blue butterfly	*Plebulina emigdionis*		Absent	No habitat present. Single CNDDB record without reliable location information; likely closer to Frazier Peak.

APPENDIX A
LISTED AND SENSITIVE SPECIES WITHIN TOPOGRAPHIC QUADRANGLES AND SURROUNDING TOPOGRAPHIC QUADRANGLES OF PROPOSED INITIATIVE PARCELS, *Continued*

Common Name	Scientific Name	Status*	Probability of Presence	Locational Considerations
San Gabriel Mountains blue butterfly	*Plebejus saepiolus aureolus*		Absent	No habitat present. Occurs at higher elevations in the San Gabriel Mountians.
Amphibians				
arroyo toad	*Anaxyrus californicus*	FE	Presumed Present	Known and recent occurrences within the Santa Clara River, downstream from parcels. Proposed parcels exist within suitable habitat and the current range of the species.
California red-legged frog	*Rana draytonii*	FT	Presumed Present	CNDDB records in vicinity of project. All CNDDB records in the mountains, upstream from proposed parcels. Proposed parcels exist within suitable habitat and the current range of the species.
coast range newt	*Taricha torosa*		Absent	Few CNDDB records. All CNDDB records in the Arroyo Seco or tributary. Generally found along the coastal ranges of California.
foothill yellow-legged frog	*Rana boylii*		Absent	Single record from 1949 north of Lake Piru; far away from potential impacts.
San Gabriel slender salamander	*Batrachoseps gabrieli*		Absent	CNDDB records from 1998 and earlier, all far away from potential impacts. Closely associated with rock talus on forested slopes, often near a stream.
southern mountain yellow-legged frog	*Rana muscosa*	FE, SE	Potentially Present	One CNDDB record surrounded by parcels that is old and considered extirpated by USGS. All other CNDDB records upstream from parcels in the San Gabriel Mountains
Tehachapi slender salamander	*Batrachoseps stebbinsi*	ST	Presumed Absent	CNDDB records in surrounding parcels, far from potential impacts. Needs north facing moist canyons and ravines in oak and mixed woodlands in arid to semi-arid locations.
western spadefoot	*Spea hammondii*		Presumed Present	Numerous records in the Santa Clara River and tributaries. Also present on the Cruzan Mesa adjacent to parcels. Impacts likely given location of records compared to parcels.
yellow-blotched salamander	*Ensatina eschscholtzii croceator*		Absent	Two records in the Tehachapi Mountains between Gorman and Lebec. Far from potential impacts.
Reptiles				
blunt-nosed leopard lizard	*Gambelia sila*	FE, SE	Absent	Numerous CNDDB records generally within the central valley near the intersection of the I-5 and the California Aqueduct

APPENDIX A
LISTED AND SENSITIVE SPECIES WITHIN TOPOGRAPHIC QUADRANGLES AND SURROUNDING TOPOGRAPHIC QUADRANGLES OF PROPOSED INITIATIVE PARCELS, *Continued*

Common Name	Scientific Name	Status*	Probability of Presence	Locational Considerations
California mountain kingsnake	*Lampropeltis zonata (parvirubra)*	FE, SE	Absent	No habitat present. Single CNDDB record at mouth of Alder Creek in the Angeles National Forest.
coast horned lizard	*Phrynosoma blainvillii*		Present	Numerous CNDDB records generally within the Sierra Peloma and San Gabriel Mountains. Recent records on proposal parcel along Portal Ridge near Elizabeth Lake and in foothills of Santa Clarita Valley.
coastal whiptail	*Aspidoscelis tigris stejnegeri*		Present	Most CNDDB records in the Santa Clarita Valley, near Bouquet Canyon and San Francisquito Canyon; records also near Gorman.
coast patch-nosed snake	*Salvadora hexalepis virgultea*		Absent	Single CNDDB record to the NW of Piru.
desert tortoise	*Gopherus agassizii*	FT, ST	Potentially Present	Habitat present, especially east of Lancaster. Parcels near Lake Los Angeles and west of the Shadow Mountains mostly like to have this species.
rosy boa	*Charina trivirgata*		Potentially Present	Few CNDDB records but this species occurs within the Sierra Peloma Mountains near Green Valley; recent record near Acton at Soledad Pass.
San Bernardino ringneck snake	*Diadophis punctatus modestus*		Absent	Single CNDDB record located in Live Oak Canyon, to the north of Lebec, in the mountains.
silvery legless lizard	*Anniella pulchra pulchra*		Present	Recent CNDDB near Soledad Pass, near Sierra Highway, on parcels. Habitat present within foothills around Acton and Agua Dulce.
two-striped garter snake	*Thamnophis hammondii*		Presumed Present	Generally in the riparian areas within the mountains. Two CNDDB records in the 1990s along Amargosa Creek in Leona Valley, west of Palmdale; several parcels within this creek.
western pond turtle	*Emys marmorata*		Potentially Present	Water bodies that support or have the ability to support western pond turtle exist adjacent to parcels near Gorman and Elizabeth Lake. Potential impacts only if habitat affected.
Fish				
arroyo chub	*Gila orcuttii*		Presumed Absent	No habitat on parcels but impacts could occur downstream. Known to occur in Santa Clara River and tributaries.
Santa Ana speckled dace	*Rhinichthys osculus ssp. 3*		Absent	One record from near Hansen Dam in a wash not likely to be impacted.

APPENDIX A
LISTED AND SENSITIVE SPECIES WITHIN TOPOGRAPHIC QUADRANGLES AND SURROUNDING TOPOGRAPHIC QUADRANGLES OF PROPOSED INITIATIVE PARCELS, *Continued*

Common Name	Scientific Name	Status*	Probability of Presence	Locational Considerations
Santa Ana sucker	*Catostomus santaanae*	FT	Presumed Absent	No habitat on parcels but impacts could occur downstream. Known to occur in Santa Clara River and tributaries.
unarmored threespine stickleback	*Gasterosteus aculeatus williamsoni*	FE, SE	Presumed Present	Known to occur in Santa Clara River and tributaries. Occurs in tributaries immediately adjacent to parcels.
Birds				
American peregrine falcon	*Falco peregrinus anatum*	Delisted, FP	Presumed Absent	Closest CNDDB record located in Pasadena. Nests on cliff edges or ledges of tall structures. May occur in a variety of habitats when not nesting.
bald eagle	*Haliaeetus leucocephalus*	Delisted, SE/FP	Presumed Absent	May occasionally occur at Lake Elizabeth and Quail Lake but these areas already have houses.
bank swallow	*Riparia riparia*	ST	Absent	Extirpated from southern California.
Bell's sage sparrow	*Artemisiospiza belli belli*		Present	Present in low numbers in the foothills north of Santa Clarita, and around Agua Dulce and Acton.
burrowing owl	*Athene cunicularia*		Present	Commonly encountered species within the Mojave Desert; numerous records in the Antelope Valley area
California condor	*Gymnogyps californianus*	FE, SE	Potentially Present	May encroach on parcels from the North. Have been observed within the Transverse ranges including the Tehachapi's and the Topatopa Mountains
California horned lark	*Eremophila alpestris actia*		Present	Only one CNDDB record; however, the Cruzan Mesa provides habitat and is a locally important location for wintering Horned Lark.
coastal California gnatcatcher	*Polioptila californica californica*	FT	Potentially Present	Although some records occur on in the foothills of the southern Santa Clarita Valley, few to no records of this species occur in the area with parcels.
Cooper's hawk	*Accipiter cooperii*		Presumed Present	Nests within urban area of Santa Clarita. Under reported species in CNDDB. May nest in all rural areas but more likely in areas near Palmdale, Lancaster, Valyermo, Santa Clarita, and Acton.
ferruginous hawk	*Buteo regalis*		Present	Commonly encountered wintering bird in the Antelope Valley area and the foothills around Santa Clarita and Acton.
golden eagle	*Aquila chrysaetos*	FP	Potentially Present	Wintering birds more likely than breeding birds. Generally occurs within the mountains and foothills of the study area.

APPENDIX A
LISTED AND SENSITIVE SPECIES WITHIN TOPOGRAPHIC QUADRANGLES AND SURROUNDING TOPOGRAPHIC QUADRANGLES OF PROPOSED INITIATIVE PARCELS, *Continued*

Common Name	Scientific Name	Status*	Probability of Presence	Locational Considerations
grasshopper sparrow	*Ammodramus savannarum*		Presumed Present	Although few CNDDB records, this species occurs locally in grass areas within the foothills. Other records exist for this species in the Santa Clarita Valley that are not listed in CNDDB.
Le Conte's thrasher	*Toxostoma lecontei*		Present	Uncommon but regularly encountered species in the Mojave Desert. Most CNDDB records in proximity to Lake Los Angeles.
least Bell's vireo	*Vireo bellii pusillus*	FE, SE	Presumed Absent	No habitat on parcels but impacts could occur downstream. Known to occur in Santa Clara River, Hansen Dam, and several ponds in Palmdale.
loggerhead shrike	*Lanius ludovicianus*		Present	Regularly encountered but not very abundant species in the Mojave Desert and foothills around Santa Clarita. Known to nest on or in proximity to parcels.
merlin	*Falco columbarius*		Present	Uncommon wintering resident in the Antelope Valley area.
mountain plover	*Charadrius montanus*		Present	Known wintering species in the Antelope Valley area, especially east of Lancaster; abundance fluctuates annually.
prairie falcon	*Falco mexicanus*		Present	Uncommon but regularily occurring species in the Mojave Desert. Most CNDDB record located in the vicinity Pearblossom but other records are known elsewhere in the project area.
short-eared owl	*Asio flammeus*		Absent	Uncommon in the Mojave Desert. Very few records. Desert habitat not favored but they may occur near sod farms.
southern California rufous-crowned sparrow	*Aimophila ruficeps canescens*		Present	Although no CNDDB record for within parcels, Sapphos Environmental, Inc. biologists have viewed this species within parcels in Santa Clarita Valley. Inhabits many of the same areas that Bell's Sparrow occurs.
southwestern willow flycatcher	*Empidonax traillii extimus*	FE, SE	Potentially Present	Riparian area downstream from parcels in Soledad Canyon and Castaic Creek. Marginal habitat a few parcels but impacts could occur downstream.
Swainson's hawk	*Buteo swainsoni*	ST	Present	Uncommon but known nests within Antelope Valley area. Found within proximity to agricultural and sod fields.
tricolored blackbird	*Agelaius tricolor*		Presumed Present	Occurs occasionally near Quail Lake and within agricultural and sod fields near Antelope Valley area.

APPENDIX A
LISTED AND SENSITIVE SPECIES WITHIN TOPOGRAPHIC QUADRANGLES AND SURROUNDING TOPOGRAPHIC QUADRANGLES OF PROPOSED INITIATIVE PARCELS, *Continued*

Common Name	Scientific Name	Status*	Probability of Presence	Locational Considerations
western snowy plover	*Charadrius alexandrinus nivosus*	FT	Absent	No habitat present or likely to be impacted. Single CNDDB record from Edward's Air Force Base.
western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	CF, SE	Absent	Very uncommon species in the study area. No habitat on parcels but impacts to potential habitat could occur downstream.
white-faced ibis	*Plegadis chihi*		Absent	No habitat present or likely to be impacted. Records only from Piute Ponds on Edwards Air Force Base.
white-tailed kite	*Elanus leucurus*	FP	Potentially Present	Very uncommon in foothills. Habitat may be present. Few CNDDB and other records in the Santa Clarita Valley. So rarely encountered that it may not occur on parcels.
yellow warbler	*Dendroica petechia brewsteri*		Presumed Absent	No habitat on parcels but impacts could occur downstream. Known to occur in Santa Clara River, and Hansen Dam.
yellow-breasted chat	*Icteria virens*		Absent	Very uncommon species in the study area. May occur far downstream in Santa Clara River, away from expected impacts.
Mammals				
American badger	*Taxidea taxus*		Potentially Present	Uncommon species that is rarely encountered or reported. CNDDB record from 2001 near Quail Lake. Other very old records near buttes within the Mojave Desert.
big free-tailed bat	*Nyctinomops macrotis*		Absent	Single CNDDB record from 1987 in Burbank. Prefers rocky habitats, and records are clustered primarily within the coastal ranges.
California leaf-nosed bat	*Macrotus californicus*		Absent	Single CNDDB record determined to be extirpated.
desert bighorn sheep	*Obis cnadensis nelsoni*		Absent	Two CNDDB records from 1986 from Iron Mountain and Lytle Creek. Generally in the high San Gabriel Mountains.
fringed myotis	*Myotis thysanodoes*		Potentially Present	Single CNDDB record from 1998 near Frazier Mountain. Known to occur throughout California except the Central Valley
hoary bat	*Lasiurus cinereus*		Potentially Present	Commonly species that occurs at the edge of open habitats. Records as recent as the 1990s.
lodgepole chipmunk	*Neotamias speciosus speciosus*		Absent	Habitat generally absent. Single CNDDB record from 1974 near Green Valley.

APPENDIX A
LISTED AND SENSITIVE SPECIES WITHIN TOPOGRAPHIC QUADRANGLES AND SURROUNDING TOPOGRAPHIC QUADRANGLES OF PROPOSED INITIATIVE PARCELS, *Continued*

Common Name	Scientific Name	Status*	Probability of Presence	Locational Considerations
long-eared myotis	*Myotis evotis*		Potentially Present	Seasonally prefers riparian forest. No habitat on parcels but impacts could occur downstream.
long-legged myotis	*Myotis volans*		Absent	Habitat is conifer forest and higher elevations, which is not present.
Mohave ground squirrel	*Xerospermophilus mohavensis*	ST	Present	Abundant records on or near parcels, especially around Lake Los Angeles and Edward's Air Force Base.
Nelson's antelope squirrel	*Ammospermophilus nelsoni*	ST	Presumed Absent	Single CNDDB record from a specimen collected in 1954 at an unknown location near Llano. Potential for this species to still occur near Llano in appropriate habitat.
pallid bat	*Antrozous pallidus*		Potentially Present	Older records with no specific locational data. Habitat present in vicinity of parcels.
pallid San Diego pocket mouse	*Chaetodipus fallax pallidus*		Potentially Present	Several records from mid-20th century but exact locations unkown; records near Valyermo, Juniper Hills, and Granview Canyon were parcels occur. Lack of trapping may explain paucity of records.
San Bernardino kangaroo rat	*Dipodomys merriami parvus*	FE	Presumed Absent	Two CNDDB records from a specimen collected in 1958 and 1962 at an unknown location near Pearblossom. Potential for this species to still occur near Pearblossom in appropriate habitat.
San Diego black-tailed jackrabbit	*Lepus californicus bennettii*		Present	Single CNDDB record from a parcel in the foothills of Santa Clarita Valley between Castaic Lake and San Fracisquito Canyon.
San Diego desert woodrat	*Neotoma lepida intermedia*		Potentially Present	Two records from 1992 north of Newhall Pass; one parcel in the vicinity.
San Joaquin kit fox	*Vulpes macrotis mutica*	FE, ST	Absent	No habitat present. All CNDDB records within the Central Valley or the foothills north of Lebec.
San Joaquin pocket mouse	*Perognathus inornatus inornatus*		Absent	Very few records outside the San Joaquin Valley. If present, it would be found near Gorman given 4 individual captured in 1989 in Hungry Valley area.
silver-haired bat	*Lasionycteris noctivagans*		Potentially Present	Single CNDDB record in 1978 in La Canada. Known to occupy the coastal and montane coniferous forests. Migrates throughout California.
south coast marsh vole	*Microtus californicus stephensi*		Absent	No habitat present. Single CNDDB record from the San Gabriel Mountains.

APPENDIX A
LISTED AND SENSITIVE SPECIES WITHIN TOPOGRAPHIC QUADRANGLES AND SURROUNDING TOPOGRAPHIC QUADRANGLES OF PROPOSED INITIATIVE PARCELS, *Continued*

Common Name	Scientific Name	Status*	Probability of Presence	Locational Considerations
southern grasshopper mouse	*Onychomys torridus ramona*		Potentially Present	Two CNDDB records from 1930 in Mint Canyon and 1988 near Llano but location generally unknown. Habitat present, including areas near Gorman, but rarely reported given trapping must occur; may still occur on or near parcels.
spotted bat	*Euderma maculatum*		Absent	Habitat absent.
Tehachapi pocket mouse	*Perognathus alticolus inexpectatus*		Presumed Absent	Records from the mid-20th century near Gorman. Habitat may be present near parcels.
Tipton kangaroo rat	*Dipodomys nitratoides nitratoides*	FE, SE	Absent	CNDDB records are prior to 1978 and are north of Fort Tejon
Townsend's big-eared bat	*Corynorhinus townsendii*	SC	Potentially Absent	Nests and roosts in caves or mines. CNDDB records within impact areas date from before 1950. Recent records are all outside impact areas.
western mastiff bat	*Eumops perotis californicus*		Presumed Present	Habitat present on parcels in the Mojave Desert and several records within the area.
western small-footed myotis	*Myotis ciliolabrum*		Presumed Absent	Single CNDDB record in 1998 south of Valerymo in the San Gabriel Mountains; could forage over parcels but unlikely to roost.
western yellow bat	*Lasiurus xanthinus*		Potentially Present	One CNDDB record from 1984 from Glendale. Known to occur in Los Angeles and San Bernardino counties south. No records within the San Gabriel Mountains or north.
Yuma myotis	*Myotis yumanensis*		Potentially Present	CNDDB record from 1999 with 4 individuals within 2 miles of parcels; record from Little Rock Reservoir.

NOTES: *Species without CRPR ranking or abbreviated status are considered species of special concern.

FC = Federal candidate species; FE = Listed as endangered under the federal Endangered Species Act; FT = Listed as threatened under the federal Endangered Species Act; SE = Listed as endangered by the State of California; ST = Listed as threatened by the State of California, FP = Fully Protected by the State of California

CRPR categories: List 1B: Rare, threatened, or endangered in California and elsewhere; List 2: Rare, threatened, or endangered in California but common elsewhere; List 4: Limited distribution- A Watch List

Threat ranks: 0.1: Seriously threatened in California; 0.2: Moderately threatened in California

APPENDIX B
GEOLOGY AND SOILS TECHNICAL REPORT

SINGLE-FAMILY RESIDENTIAL HAULED WATER INITIATIVE FOR NEW DEVELOPMENT

GEOLOGY AND SOILS TECHNICAL REPORT

Prepared for:

Los Angeles County Hauled Water Task Force
900 South Fremont Avenue, 11th Floor
Alhambra, California 91803-1331

Prepared by:

Sapphos Environmental, Inc.
430 North Halstead Street
Pasadena, California 91107

September 17, 2014

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SECTION 1.0
INTRODUCTION AND BACKGROUND

This Geology and Soils Technical Report (GSTR) has been prepared to provide information related to the consideration of the Los Angeles County Single-Family Residential Hauled Water Initiative for New Development (proposed initiative). This analysis was undertaken to determine if the proposed initiative would result in adverse significant impacts related to geology and soils, requiring the consideration of mitigation measures or alternatives in accordance with Section 15063 of the State California Environmental Quality Act (CEQA) Guidelines.[1] Geology and soils within the general areas of Los Angeles County where the parcels that would potentially be eligible for the use of hauled water to support development of a single-family residence pursuant to the proposed initiative are located were evaluated with regard to the Land Use Element and Conservation and Open Space Element of the existing adopted Los Angeles County General Plan;[2,3] the Land Use Element and Conservation and Natural Resources Element of the Los Angeles County General Plan 2035 Update;[4,5] the Safety Element of the Los Angeles County General Plan 2035 Update;[8] and the Los Angeles County Code of Ordinances – Title 22 Planning and Zoning.[9]

Definitions

Alluvium: An unconsolidated accumulation of stream-deposited sediments, including sands, silts, clays or gravels.

Extrusive Igneous Rocks: Rocks that crystallize from molten magma on earth's surface.

Fault: A fracture or fracture zone in rock along which movement has occurred.

Formation: A laterally continuous rock unit with a distinctive set of characteristics that make it possible to recognize and map from one outcrop or well to another. The basic rock unit of stratigraphy.

Holocene: An interval of time relating to, or denoting the present epoch, which is the second epoch in the Quaternary period, from approximately 11,000 years ago to the present.

Miocene: An interval of time relating to, or denoting the fourth epoch of the Tertiary period, between the Oligocene and Pliocene epochs, from approximately 23 to 5.5 million years ago.

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[1] *California Code of Regulations*. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

[2] Los Angeles County Department of Regional Planning. November 25, 1980. *Los Angeles County General Plan Land Use Element*. Available online at http://planning.lacounty.gov/assets/upl/project/gp_web80-land-use.pdf

[3] Los Angeles County Department of Regional Planning. November 25, 1980. *Los Angeles County General Plan Conservation and Open Space Element*. Available online at http://planning.lacounty.gov/assets/upl/project/gp_web80-conservation-and-open-space.pdf

[4] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 6: Land Use Element*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter6_2014.pdf

[5] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan Public Review Draft: Chapter 9: Conservation and Natural Resources Element*. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter9_2014.pdf

Oligocene: An interval of time relating to, or denoting the third epoch of the Tertiary period, between the Eocene and Miocene epochs, from approximately 34 to 23 million years ago.

Outcrop: A rock formation that is visible on earth's surface.

Paleocene: An interval of time, relating to, or denoting the earliest epoch of the Tertiary period, between the Cretaceous period and the Eocene epoch.

Paleozoic: An interval of time relating to, or denoting the era between the Precambrian eon and the Mesozoic era.

Pleistocene: An interval of time relating to, or denoting the first epoch of the Quaternary period, between the Pliocene and Holocene epochs, from approximately 2.6 million years ago to 11,000 years ago.

Pliocene: An interval of time relating to, or denoting the last epoch of the Tertiary period, between the Miocene and Pleistocene epochs, from approximately 5.5 to 2.6 million years ago.

Plutonic Igneous Rocks: Igneous rocks that have crystallized beneath the earth's surface.

Quaternary: The most recent period in geological time; includes the Pleistocene and Holocene Epochs.

SECTION 2.0
PROJECT LOCATION AND DESCRIPTION

Location

The area that would be subject to the proposed initiative consists of 42,677 parcels in the unincorporated territory of Los Angeles County (Figure 2-1, *Proposed Initiative Study Area*).[6] The combined proposed initiative study area consists of approximately 285,500 acres or approximately 450 square miles.

The parcels that would be affected by the proposed initiative are located entirely within the 5th Supervisorial District in the northern one-third of the County, including areas located north and east of the San Gabriel Mountains in the Antelope Valley; areas located northeast of the City of Santa Clarita, north and south of California State Route 14; areas that are southwest of the City of Palmdale in the communities of Agua Dulce and Acton; and in the Kagel Canyon area in the Angeles National Forest. The subject parcels have been categorized into seven subareas:

1. **Lake Hughes/Gorman/West of Lancaster:** The Lake Hughes/Gorman/West of Lancaster subarea is located in an area generally west of State Highway 14 and north of the Angeles National Forest. This subarea consists of 14,356 parcels and encompasses approximately 164.6 square miles (105,352.0 acres). State Highway 138 bisects the subarea in an east-west direction, and State Highway 14 forms the eastern boundary of this subarea. This subarea is adjacent to the northwestern edge of the incorporated City of Lancaster.

2. **Lancaster Northeast:** The Lancaster Northeast subarea is located generally east of State Highway 14 and north of East Avenue J. This subarea consists of 8,302 parcels and encompasses approximately 67.1 square miles (42,948.2 acres). State Highway 14 forms the western boundary and East Avenue J forms the southern boundary of this subarea. Edwards Air Force Base is located to the north. This subarea is adjacent to the northeastern edge of the incorporated City of Lancaster.

3. **Antelope Valley Northeast:** The Antelope Valley Northeast subarea is located in an area generally north of East Avenue E and east of 165th Street East in the far northeastern portion of Los Angeles County. This subarea consists of 1,820 parcels and encompasses approximately 16.7 square miles (10,716.0 acres). This subarea is relatively isolated and is located in the northeastern area of Los Angeles County. This subarea is located approximately 10.9 miles northeast of the incorporated City of Palmdale and approximately 11.3 miles northeast of the incorporated City of Lancaster.

4. **Lake Los Angeles/Llano/Valyermo/Littlerock:** The Lake Los Angeles/Llano/ Valyermo/Littlerock subarea is located in an area generally south of East Avenue J, east of 47th Street East. This subarea consists of 14,946 parcels and encompasses approximately 154.4 square miles (98,843.3 acres). Avenue J forms the northern

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

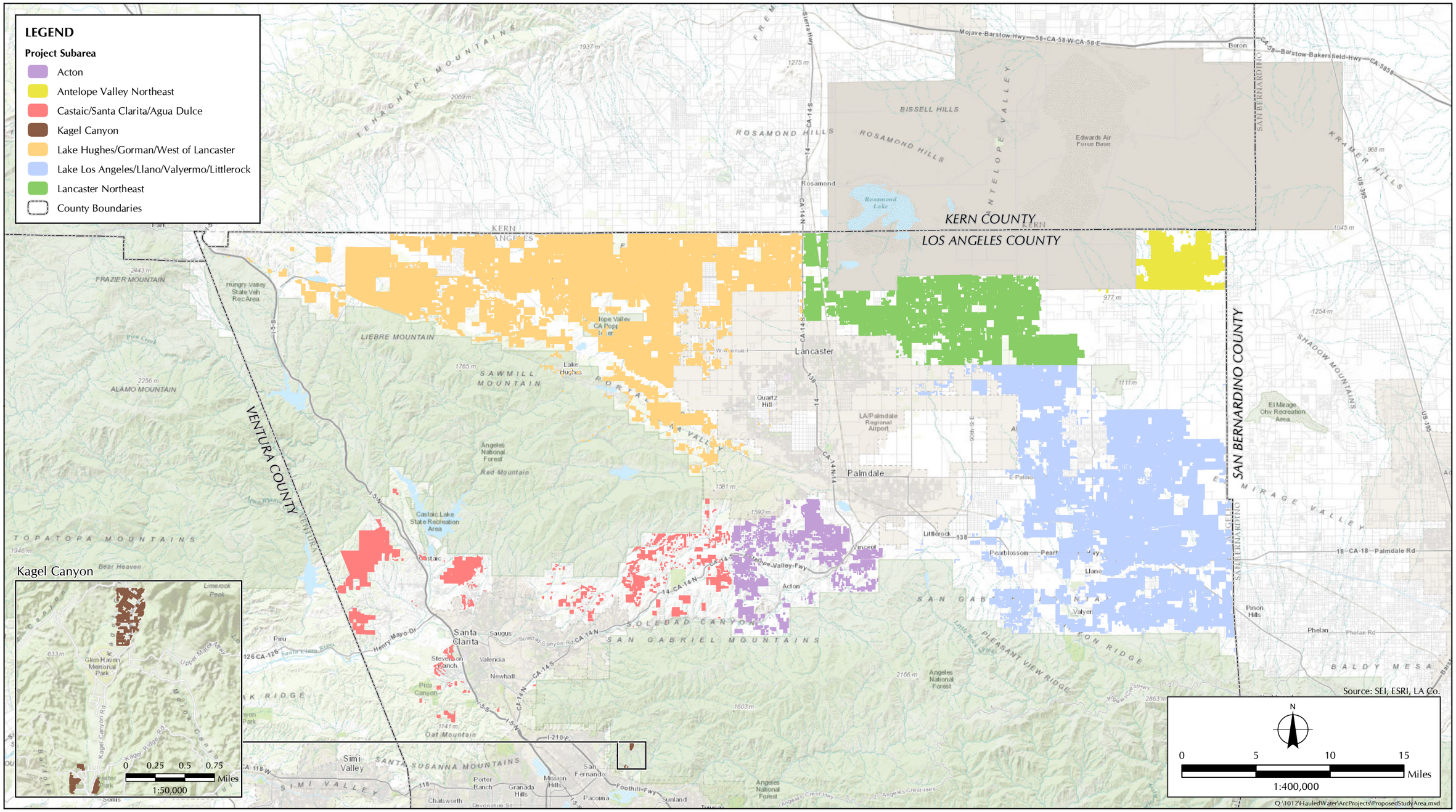

FIGURE 2-1

Proposed Initiative Study Area

boundary, the Cities of Palmdale and Lancaster form the western boundary, and the San Bernardino County line forms the eastern boundary of this subarea. This subarea is adjacent to the eastern edge of the incorporated City of Palmdale.

5. **Acton:** The Acton subarea is located in an area generally east of Hubbard Road and West of 47th Street East. This subarea consists of 1,129 parcels and encompasses approximately 20.6 square miles (13,155.0 acres). The Angeles National Forest is located to the north and south of the subarea. This subarea is adjacent to the southwestern edge of the incorporated City of Palmdale.

6. **Castaic/Santa Clarita/Agua Dulce:** The Castaic/Santa Clarita/Agua Dulce subarea is located generally west of Hubbard Road and north of the 210 Freeway excluding Kagel Canyon. This subarea consists of 1,626 parcels and encompasses approximately 22.4 square miles (14,357.9 acres). This subarea is adjacent to the northern, western, and southern edges of the incorporated City of Santa Clarita and the northern edge of the incorporated City of Los Angeles.

7. **Kagel Canyon:** The Kagel Canyon subarea is the smallest of the project subareas and consists of 498 parcels surrounded by the Angeles National Forest generally located along Kagel Canyon Road north of the 210 Freeway, west of Little Tujunga Road, and east of Lopez Canyon Road. This subarea encompasses approximately 0.1 square mile (40.8 acres). This subarea is located approximately 0.1 mile northeast of the northern edge of the incorporated City of Los Angeles.

The proposed initiative study area is located within 42 USGS 7.5-minute quadrangle maps (Figure 2-2, *USGS 7.5-Minute Quadrangle Index*):

- Acton
- Adobe Mountain
- Agua Dulce
- Alpine Butte
- Black Mountain
- Burnt Peak
- Del Sur
- El Mirage
- Fairmont Butte
- Green Valley
- Hi Vista
- Jackrabbit Hill
- Juniper Hills
- La Liebre Ranch
- Lake Hughes
- Lancaster East
- Lancaster West
- Lebec
- Liebre Mountain
- Little Buttes
- Littlerock
- Lovejoy Buttes
- Mescal Creek
- Mint Canyon
- Neenach School
- Newhall
- Oat Mountain
- Pacifico Mountain
- Palmdale
- Redman
- Ritter Ridge
- Rogers Lake South
- Rosamond
- Rosamond Lake
- San Fernando
- Simi Valley East
- Sleepy Valley
- Sunland
- Val Verde
- Valyermo
- Warm Springs Mountain
- Whitaker Peak

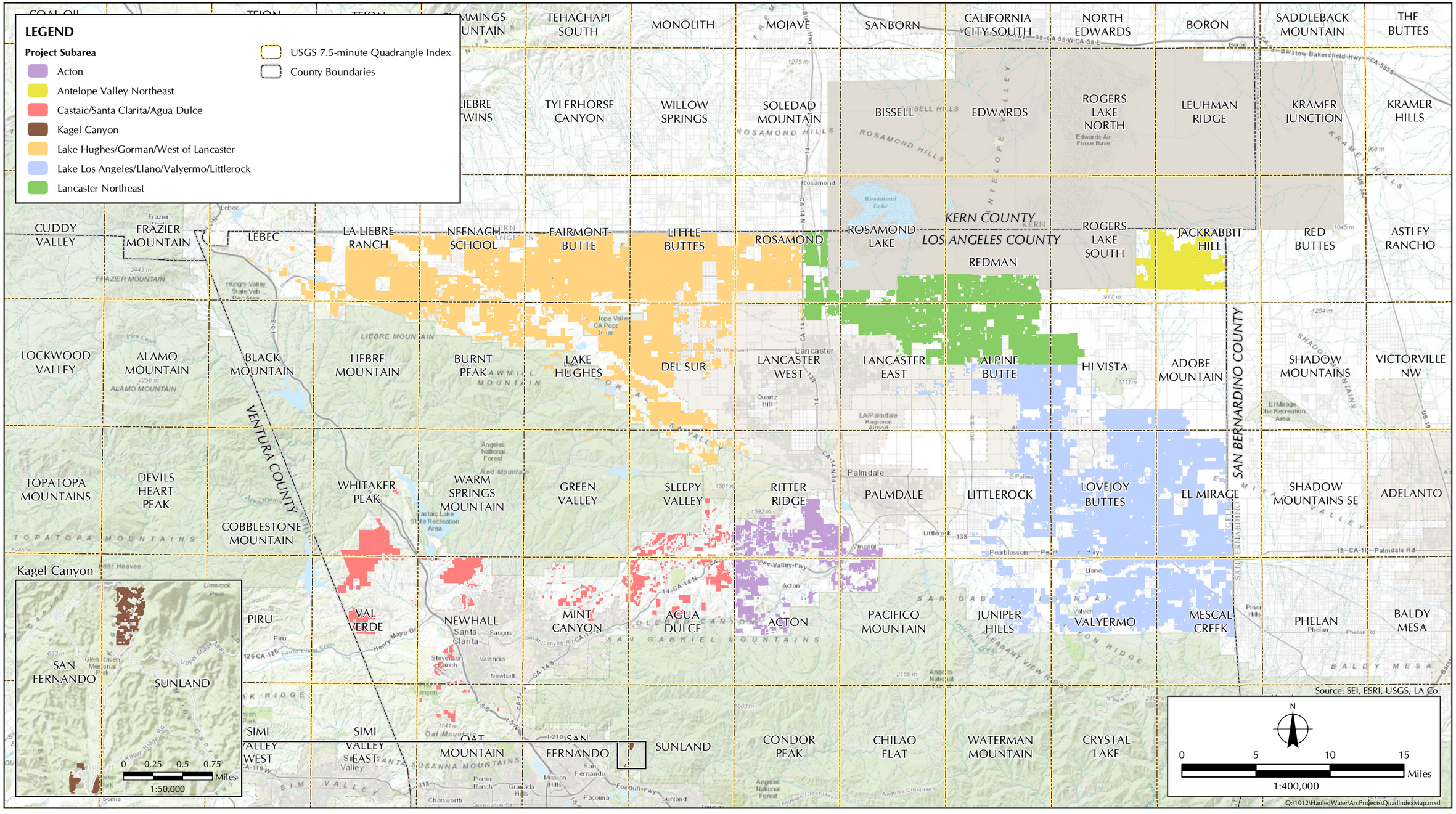

FIGURE 2-2

USGS 7.5-minute Quadrangle Index

The elevation of the overall proposed initiative study area ranges from 5,055 feet above sea level in the Valyermo area of the Lake Los Angeles/Llano/Valyermo/Littlerock subarea to 1,423 feet above sea level in the Kagel Canyon subarea (Figure 2-3, *Topographic Map*).

Project Description

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. Specifically, the Los Angeles County Board of Supervisors has directed the preparation of an ordinance to allow hauled water as the primary source of potable water for new single-family residential construction in certain unincorporated areas of Los Angeles County. The initiative would be applicable to those properties that are zoned single-family residential at the time of the effective date of the ordinance, in addition to other criteria including but not limited to those specified below.

In order to determine which areas would be subject to the proposed initiative, the Los Angeles County Department of Regional Planning developed a geographic information system (GIS) suitability model in 2012 based on five criteria defined by the Hauled Water Task Force:

- Parcels located in the unincorporated territory of Los Angeles County
- Vacant parcels[7]
- Parcels located in areas where there is no designated water purveyor
- Zoning and General Plan designation that allow for development of a single-family residence
- Parcel size >2,000 square feet with slopes under 50 percent (26.6°)

[7] The term "vacant" is used as identified by the County Assessor.

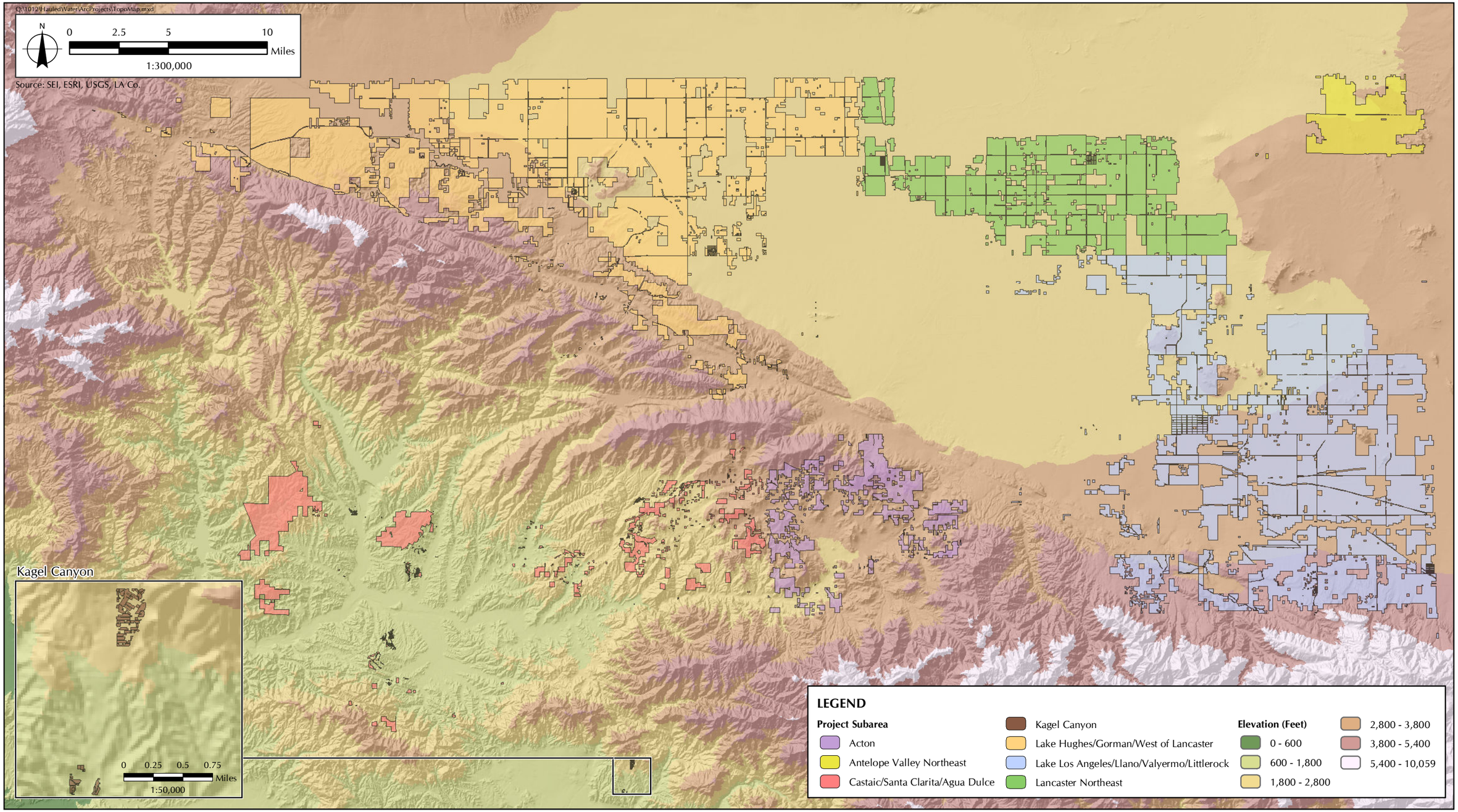

FIGURE 2-3

Topographic Map

SECTION 3.0
REGULATORY FRAMEWORK

The regulatory framework for geology and soils has been limited to the regulations that would govern construction of a residential structure and the requisite appurtenant facilities on parcels in unincorporated areas of Los Angeles County that would be potentially eligible pursuant to the proposed initiative.

Federal

Uniform Building Code

The Uniform Building Code (UBC) is published by the International Conference of Building Officials and forms the basis for California's building code, as well as approximately 50 percent of the state building codes in the United States. It has been adopted by the California Legislature to address the specific building conditions and structural requirements for California, and to provide guidance on foundation design and structural engineering for different soil types. The UBC defines and ranks regions of the United States according to their seismic hazard potential. There are four types of regions defined by Seismic Zones 1 through 4, with Zone 1 having the least seismic potential and Zone 4 the highest. The subject parcels in the proposed initiative are located within Seismic Zone 4.

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) provides policies and criteria to assist cities, counties, and state agencies in the development of structures for human occupancy across the trace of active faults. The Alquist-Priolo Act was intended to provide the citizens of the State of California with increased safety and to minimize the loss of life during and immediately following earthquakes by facilitating seismic retrofitting to strengthen buildings, including historical buildings, against ground shaking.

Seismic Hazards Mapping Act of 1990

In order to address the effects of strong ground shaking, liquefaction, landslides, and other ground failures due to seismic events, the State of California passed the Seismic Hazards Mapping Act of 1990. Under the Seismic Hazards Mapping Act, the State Geologist is required to delineate "seismic hazard zones." Cities and counties must regulate certain development projects within these zones until the geologic and soil conditions of the Community Plan Area (CPA) are investigated and appropriate mitigation measures, if any, are incorporated into development plans. The State Mining and Geology Board provides additional regulations and policies to assist municipalities in preparing the Safety Element of their General Plan and encourage land use management policies and regulations to reduce and mitigate those hazards to protect public health and safety. Under Public Resources Code Section 2697, cities and counties shall require, prior to the approval of a project located in a seismic hazard zone, a geotechnical report defining and delineating any seismic hazard which could affect the project. Each city or county shall submit one copy of each geotechnical report, including mitigation measures, to the State Geologist within 30 days of project approval.

California Building Code

California Building Code (CBC) Title 24 is a compilation of building standards, including seismic safety standards for new buildings. CBC standards are based on building standards that have been adopted by State agencies without change from a national model code; building standards based on a national model code that have been changed to address particular California conditions; and building standards authorized by the California legislature but not covered by the national model code. Given the state's susceptibility to seismic events, the seismic standards within the CBC are among the strictest in the world. The CBC applies to all occupancies in California, except where stricter standards have been adopted by local agencies.

Regional

Los Angeles County General Plan

The Los Angeles County General Plan provides growth and development policies by providing a comprehensive long-range view of the County as a whole. The General Plan also provides a comprehensive strategy for accommodating long-term growth should it occur as projected. Applicable goals and policies that apply to all development within the County include a balanced distribution of land uses, adequate housing for all income levels, and economic stability.

The intent of the Conservation Element is the conservation and preservation of natural resources. Policies of the Conservation Element address the effect of erosion on such natural resources as beaches, watersheds, and watercourses. The Conservation Element cites erosion of hillsides resulting in loss of natural watersheds and features, flooding, and endangerment to structures and people as a continuing issue.

The applicable policy of the adopted 1980 Conservation and Open Space Element[8] is provided below:

- **Policy No. 24:** Manage development in hillside areas to protect their natural and scenic character and to reduce risks from fire, flood, mudslides, erosion and landslides.

The adopted 1980 Safety Element of the General Plan addresses the issues of protection of people from unreasonable risks associated with seismic activity and earthquakes. The Safety Element provides a contextual framework for understanding the relationship between hazard mitigation, response to a natural disaster, and initial recovery from a natural disaster.

The applicable seismic and geologic goals and policies of the adopted 1980 Safety Element[9] are provided below:

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[8] Los Angeles County Department of Regional Planning. 6 December 1990. *Los Angeles County General Plan, Safety Element*.

[9] Los Angeles County Department of Regional Planning. 6 December 1990. *Los Angeles County General Plan, Safety Element*.

- **Seismic Hazards Goal:** Minimize injury and loss of life, property damage, and the social, cultural, and economic impacts caused by earthquake hazards.
    - **Policy No. 1:** Encourage the use of nonurbanized segments of active fault zones for rural and open space purposes.
    - **Policy No. 3:** Continue enforcement of stringent site investigations (such as seismic, geologic, hydrologic and soils investigation) and implementation of adequate hazard mitigation measures for development projects in areas of high earthquake hazard, especially those involving critical facilities. Do not approve proposals and projects which cannot mitigate safety hazards to the satisfaction of responsible agencies.
    - **Policy No. 4:** Promote the development of seismically resistant major lifelines serving Los Angeles County and connecting it to surrounding regions and the rest of the nation.

- **Geologic Hazards Goal:** Protect public safety and minimize the social and economic impacts from geologic hazards.
    - **Policy No. 8:** Review proposals and projects proposing new development and expansion of existing development in areas susceptible to landsliding, debris flow, and rockfalls, and in areas where collapsible or expansive soils are a significant problem; and disapprove projects which cannot mitigate these hazards to the satisfaction of responsible agencies.
    - **Policy No. 9:** Continue to improve and enforce stringent slope investigation and design standards, and to apply innovative hazard mitigation and maintenance plans for development in hillside areas.
    - **Policy No. 10:** Upgrade maintenance measures and improve emergency response capability in hillside areas.

The applicable seismic and geologic goals and policies of the Safety Element of the Los Angeles County General Plan 2035 Update[10] are provided below:

- **Goal S 1:** An effective regulatory system that prevents or minimizes personal injury, loss of life and property damage due to seismic and geotechnical hazards.
    - **Policy S 1.1:** Discourage development in Seismic Hazard and Alquist-Priolo Earthquake Fault Zones.
    - **Policy S 1.2:** Prohibit the construction of most structures for human occupancy adjacent to active faults until a comprehensive geotechnical study that addresses the potential for fault rupture has been completed.
    - **Policy S 1.3:** Require developments to mitigate geotechnical hazards, such as soil instability and landsliding, in Hillside Management Areas through siting and development standards.
    - **Policy S 1.4:** Support the retrofitting of unreinforced masonry structures to help reduce the risk of structural and human loss due to seismic hazards.

[10] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan 2035, Public Review Draft: Safety Element.*

SECTION 4.0
AFFECTED ENVIRONMENT

This section of the GSTR provides a characterization of the environmental baseline condition, in relation to geology and soils, for parcels that would be affected by the proposed initiative. The characterization is based on a review of pertinent geological maps and technical reports, the Safety Element of the adopted Los Angeles County General Plan and Los Angeles County General Plan 2035 Update, and literature germane to geology and soils within the proposed initiative project area. In the discussion that follows, the surficial geological units located within the proposed initiative study area are described; the potentially threatening geological faults within and near the proposed initiative boundaries are analyzed; the potential for impacts from soil expansion, consolidation, liquefaction, and erosion are outlined; and groundwater and landslides are considered. The results described in this section provide the substantial evidence required to address the scope of analysis recommended in Appendix G of the State CEQA Guidelines as well as the goals and policies relating to soils and geology of the Los Angeles County General Plan, the Antelope Valley Area wide General Plan, and the Earthquake Fault Zoning Act.

Regional and Project Site Geologic Setting

Topography

Topography of the proposed initiative project area ranges from flat, slightly dissected desert plains and rolling hills to relatively steep, rugged mountainous areas. In general, flat to rolling hill relief is found in the Antelope Valley Northeast, Lake Los Angeles/Llano/Valyermo/Little Rock, Lancaster Northeast, and Lake Hughes/Gorman/West of Lancaster Subareas while Acton, Castaic/Santa Clarita/Agua Dulce, and Kagel Canyon subareas contain steeper, more rugged relief. Elevations range from approximately 1,300 feet above mean sea level (AMSL) in Kagel Canyon and southern portions of the Castaic/Santa Clarita subareas to just over 5,000 feet AMSL southern part of the Lake Los Angeles/Llano/Valyermo/Littlerock subarea.

Earthquakes and Faults

The study area for the proposed initiative lies within two fault-bounded geomorphic provinces: Mojave Desert and Transverse Ranges (Figure 4-1, *Geomorphic Provinces and Faults*). The Transverse Ranges (represented by the San Gabriel, Santa Susana, and Sierra Pelona Mountains in proposed initiative study area) are an anomalous west-trending geological province of deformation associated with relative movement of the North American and Pacific Plates along the San Andreas Fault System. The majority of the Los Angeles Basin (south of the mountains) lies within the northwest-trending Peninsular Ranges Province, which represents the prevailing structural orientation of California. Potentially governing faults are outlined in Table 4-1, *Potentially Governing Faults, Estimates of Mw, Distance to Nearest Subarea, and Approximate Fault Length*. Associated northwest trending surface faults are the San Andreas and San Jacinto faults, the Whittier-Elsinore, Palos Verdes, and Newport-Inglewood faults.

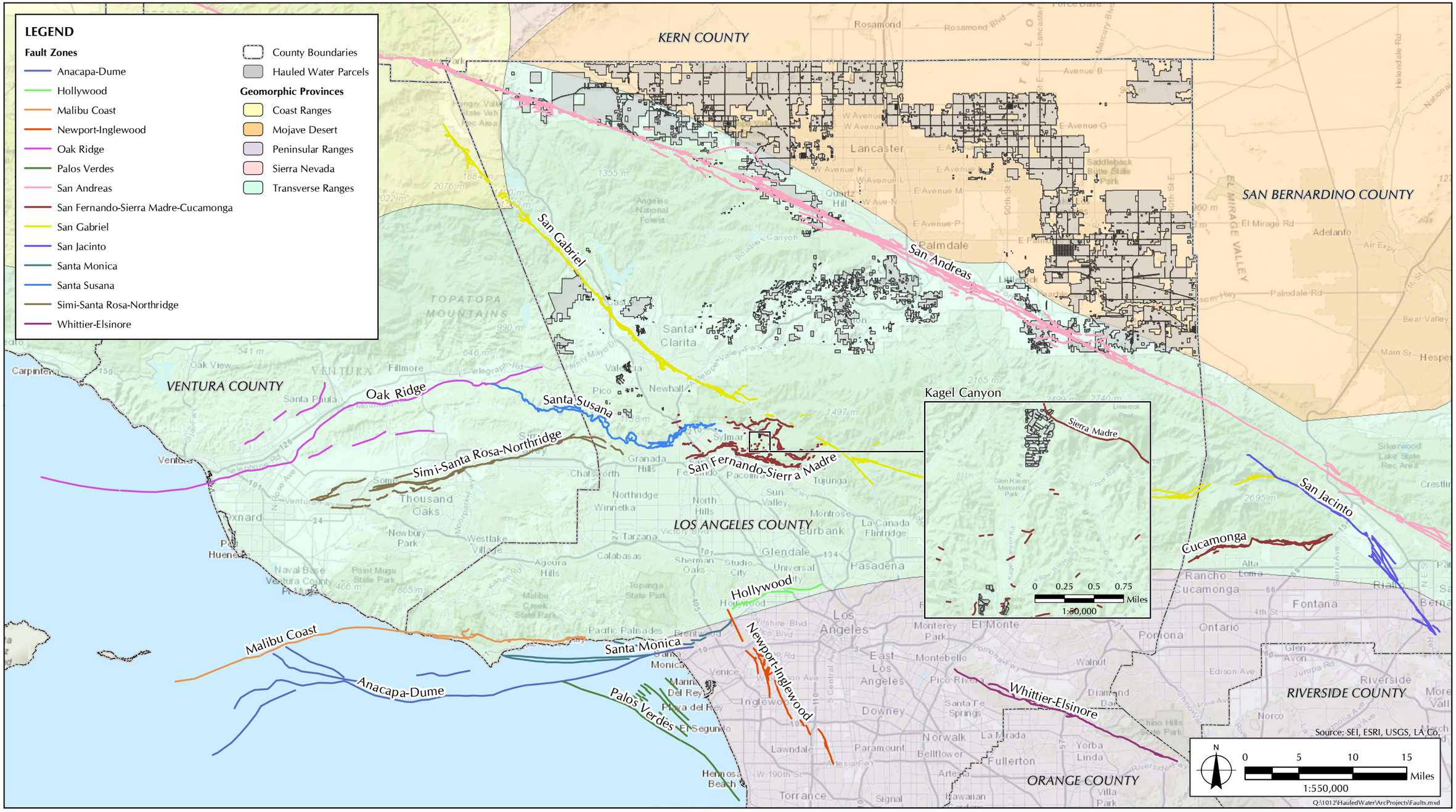

FIGURE 4-1

Geomorphic Provinces and Faults

TABLE 4-1
POTENTIALLY GOVERNING FAULTS, ESTIMATES OF Mw, DISTANCE TO NEAREST SUBAREA, AND APPROXIMATE FAULT LENGTH

Fault	Predominant Style of Faulting	M_w [1]	Site-to-Source Distance to Nearest Subarea[2]	Approximate Fault Length
Alamo Thrust	Thrust	*	7.9 mi (12.2 km) Lake Hughes/Gorman/West of Lancaster	20 km
Chatsworth	Reverse	6.8[4]	5.1 mi (8.2 km) Castaic/Santa Clarita/Agua Dulce	20 km
Clearwater	Reverse	*	3.86 mi (6.21 km) Castaic/Santa Clarita/Agua Dulce	32 km
Garlock	Left Lateral Strike-Slip	7.6[4]	1.5 mi (2.4 km) Lake Hughes/Gorman/West of Lancaster	250 km
Hollywood	Left-Reverse	6.5[4]	13.5 mi (21.7 km) Kagel Canyon	15 km
Llano	Reverse	*	<1.0 mi (1 km) (Lake Los Angeles/Llano/Valyermo/ Littlerock)	7 km
Malibu Coast Fault	Reverse	*	20.0 mi (32.2 km) Castaic/Santa Clarita/Agua Dulce and Kagel Canyon	34 km
Mirage Valley	Right Lateral Strike-Slip	*	5.0 mi (8.1 km) (Lake Los Angeles/Llano/Valyermo/ Littlerock)	37 km
Mission Hills Fault	Reverse	*	3.6 miles (5.8 km) Castaic/Santa Clarita/Agua Dulce	10 km
Northridge Hills	Reverse	6.9[4]	5.8 mi (9.3 km) Castaic/Santa Clarita/Agua Dulce	25 km
1994 Northridge Earthquake [7]	Reverse	6.7[4]	8.8 mi (14.2 km) Castaic/Santa Clarita/Agua Dulce	Earthquake epicenter

TABLE 4-1
POTENTIALLY GOVERNING FAULTS, ESTIMATES OF M_w, DISTANCE TO NEAREST SUBAREA, AND APPROXIMATE FAULT LENGTH, *Continued*

Fault	Predominant Style of Faulting	M_w [1]	Site-to-Source Distance to Nearest Subarea[2]	Approximate Fault Length
Oak Ridge (Onshore)	Reverse	7.5[4]	7.3 mi (11.8 km) Castaic/Santa Clarita/Agua Dulce	90 km
Pine Mountain	Reverse	*	8.9 mi (14.3 km) Castaic/Santa Clarita/Agua Dulce	59 km
San Andreas	Right Lateral Strike-Slip	8.0[4]	<1mi (<1 km)	1,200 km
San Cayetano	Reverse (Thrust)	7.3[4]	<1.0 mi (<1.0 km) mi (29 km) Castaic/Santa Clarita/Agua Dulce	45 km
San Fernando	Reverse (Thrust)	6.8[4]	<1.0 mi (<1.0 km) Kagel Canyon	17 km
San Gabriel	Primarily Right Lateral Strike Slip	7.0[5]	3.4 mi (5.5 km) Kagel Canyon	140 km
Santa Monica Fault	Left-Reverse	7.0[4]	14 mi (22.5 km) Kagel Canyon	24 km
Santa Susana	Reverse (Thrust)	7.3[4]	< 1 mi (<1 km) Castaic/Santa Clarita/Agua Dulce	38 km
Santa Ynez	Left Reverse	7.5[4]?	8.5 mi (13.7 km) Castaic/Santa Clarita/Agua Dulce	130 km
Simi	Reverse	6.7[4]	6.6 mi (10.6 km) Castaic/Santa Clarita/Agua Dulce	40 km

NOTES: 1. Maximum Credible Earthquake (MCE) Moment Magnitude (Mw); 2. Shortest (map) distance from the nearest subarea to the inferred fault plane; 4. Data from the Southern California Earthquake Data Center. Available online at: http://www.data.scec.org. 5. MCE Moment Magnitude from Impact Sciences, Inc. (2008).
*Data unavailable or fault considered to be inactive.

Many major surface faults and fault zones have been mapped near or within the boundaries of the proposed initiative project area (Table 4-1). Faults associated with the Transverse Ranges generally parallel the province and include the Malibu Coast, Anacapa-Dume, Oak Ridge, Santa Monica, Hollywood, Santa Susana, Simi-Santa Rosa-Northridge, San Fernando-Sierra Madre-Cucamonga, and San Gabriel faults. Some earthquake faults are not exposed at the surface; these faults are buried (blind) thrusts. Faults such as these were responsible for the 1987 Whittier and 1994 Northridge earthquakes.

Surficial Geologic Units

Surficial geological units within the proposed initiative area vary greatly due to the immense geographical area represented and the complex geology found along tectonic plate boundaries like Southern California and are described in relation to the seven subareas that the proposed initiative is divided into. These seven subareas include Acton; Castaic/Santa Clarita/Agua Dulce; Antelope Valley Northeast; Kagel Canyon; Lake Hughes/Gorman/West of Lancaster; Lake Los Angeles/Llano/Valyermo/Littlerock; and Lancaster Northeast. The surficial geology has been discussed within the context of these subareas. All geological units are terrestrial in origin unless otherwise noted.

Acton. Surficial geology within the Acton subarea was mapped by Dibblee between 1996 and 2001[11,12,13]). Sedimentary geological units include the Holocene and Pleistocene Quaternary alluvium, Quaternary landslide deposits, and the Oligocene to Early Miocene Vasquez Formation. Plutonic igneous rocks are represented by the Lowe Granodiorite, hornblende diorite gabbro, anorthite gabbro complex rocks, granitic rocks, and syenite. Metamorphic rocks include the Pelona Schist and scattered gneissic outcrops.

Castiac/Santa Clarita/Agua Dulce. The surficial geology of the Castaic / Santa Clarita/Agua Dulce subarea was mapped by Dibblee between 1991 and 1997[14,15,16,17,18,19,20]). Sedimentary deposits

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[11] 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. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[12] 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. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[13] 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. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[14] 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

[15] 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

[16] 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

[17] 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

[18] 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

[19] 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

[20] 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

include Quaternary alluvial and older alluvial deposits and landslide deposits; the Pleistocene Saugus Formation; the Pliocene marine, Pico Formation; the Late Miocene to Early Pliocene marine, Towsley Formation; the Late Miocene marine, Ridge Basin Group; the Late Miocene marine, Sisquoc Formation; the Middle to Late Miocene marine, Castaic Formation; the Middle to Late Miocene marine, Monterey Formation; the Middle Miocene Mint Canyon Formation; the early to Middle Miocene Tick Canyon Formation; and the Oligocene to Early Miocene Vasquez Formation (contains sedimentary and igneous sequences). Plutonic Igneous rocks represented in the Castaic / Santa Clarita subarea include granite, syenite, and rocks of the anorthosite-gabbro complex. Metamorphic rocks are represented by the Pelona Schist and Precambrian Augen Gneiss.

Antelope Valley Northeast. The Antelope Valley Northeast subarea lies in two United States Geological Survey 7.5-inch quadrangles: Jackrabbit Hill and Rogers Lake South. The Jackrabbit Hill Quadrangle has not been mapped; however, Dibblee (1960[21]) mapped the Rogers Lake and Kramer Quadrangles at a scale of 1:62,500, which includes the portion of the Jackrabbit Hill Quadrangle that would be affected by the proposed initiative. The surficial geology consists of Quaternary alluvium in the drainages, Quaternary fanglomerate on the slopes, and quartz monzonite and Granitic outcrops (including pegmatites) in the higher elevations of the hills. The sedimentary units were deposited by water in the form of ephemeral streams or slope debris while the igneous rocks crystalized in place below the ground surface. Sediments comprising Quaternary alluvium consist of unconsolidated sands and gravels with minor amounts of clay. The Rogers Lake South Quadrangle was mapped by Dixon and Ward (2002[22]) at a scale of 1:24,000. Geological units in the south-central portion of the quad are mapped as Late Pleistocene Quaternary fan alluvium and Holocene Quaternary alluvium. The Late Pleistocene alluvium is described as moderately sorted, thin deposits eroded from nearby granitic outcrops; whereas, the Holocene alluvium is described as unsorted sands and silts with small amounts of gravels. In addition to these deposits, Dixon and Ward reported outcrops calcareous tufa of an unknown age and Cretaceous quartz monzonite/monzodiorites in the area. The eastern portion of the Rogers Lake South Quadrangle was mapped as having deposits of Pleistocene pediment gravels (fan alluvium) and Cretaceous quartz monzonite/monzodiorite near the border of Los Angeles and Kern Counties, and Cretaceous quartz monzonite/monzodiorite, Holocene alluvium, calcareous tufa, and leucogranite further south, on the eastern border of the quadrangle.

Kagel Canyon. The geology of the Kagel Canyon subarea was mapped by Dibblee (1991[23,24]). Sedimentary units include Quaternary older alluvium, Quaternary landslide deposits, and Plio-Pleistocene Saugus Formation. Igneous rocks represented in the subarea are quartz, hornblende diorite, and granite, while gneiss represents the metamorphic rocks in the subarea.

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[21] 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. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[22] 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/

[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. 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

Lake Hughes/Gorman/West of Lancaster. The Lake Hughes/Gorman/West of Lancaster subarea is situated west of SR-14 and contains the following quadrangles: Rosamond, Little Buttes, Fairmont Butte, Neenach School, La Liebre Ranch, Lebec, Liebre Mountain, Burnt Peak, Lake Hughes, Del Sur, Lancaster West, Ritter Ridge, Sleepy Valley, and Green Valley. the geology of the Rosamond Quadrangle was mapped by Dibblee (1959[25]) at a scale of 1:48,000. All of the sediments from the Lake Hughes/Gorman/West of Lancaster subarea represented on this map are mapped as Quaternary alluvium.

The geology of the Little Buttes Quadrangle was mapped by Lancaster and Holland (2012[26]), at a scale of 1:24,000 and contains both sedimentary and igneous outcrops. The majority of surficial geological units represented on this map is sedimentary and include Holocene Quaternary alluvium, Holocene to Late Pleistocene younger alluvium, Quaternary aeolian deposits, Late Pleistocene older playa deposits, Late Pleistocene older fan deposits, late Holocene wash deposits, and Holocene colluvial deposits. Little Butte, just south of the Kern County/Los Angeles County border, is mapped as Late Oligocene to Middle Miocene Gem Hill Formation. With the exception of a small outcrop of Cretaceous granodiorite southwest of Little Butte in the central portion of the quadrangle, igneous rock outcrops within the proposed initiative boundaries are restricted to the southwest corner in the Antelope Buttes.

Geological mapping of the Fairmont Butte Quadrangle was completed by Hernandez and Lancaster (2011[27]), and sedimentary deposits and igneous outcrops are represented. As with the Little Buttes Quadrangle, the majority of the surficial geology is sedimentary. The deposits include Holocene Quaternary alluvium, Holocene to Late Pleistocene younger alluvium, Holocene eolian deposits, Holocene alluvial fan deposits, Holocene to Late Pleistocene fan deposits, Late Pleistocene older playa deposits, Late Pleistocene older fan deposits, late Holocene wash deposits, and Holocene colluvial deposits. Tertiary sedimentary deposits within the proposed initiative boundary are restricted to the southeast corner of the quadrangle where elevated topography associated with the Antelope and Fairmont Buttes is found. They are represented by the Middle to Late Miocene Fiss Fanglomerate and Oligocene? to Middle Miocene Gem Hill. Similarly, igneous outcrops are restricted to the southeast corner of the quadrangle and consist of Cretaceous granodiorite.

Dibblee (2008[28]) mapped the geology of the Neenach and Willow Springs Quadrangles at a scale of 1:62,500. Sedimentary, igneous, and metamorphic rocks are mapped on the quadrangle with igneous and metamorphic rocks being restricted to the southwestern corner of the quadrangle within the boundaries of the proposed initiative. Sedimentary rocks in the area include Holocene Quaternary alluvium, Pleistocene older Quaternary alluvium, Late Pliocene or Early Pleistocene

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[25] 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

[26] 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

[27] 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

[28] 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

Meeke Mine Formation, Late Miocene Oso Canyon Formation, and the Late Miocene, marine Quail Lake Formation. Tertiary extrusive igneous rocks within the proposed initiative boundaries are composed of felsite and andesite from the Oligocene to Early Miocene Neenach Volcanic Formation; intrusive igneous rocks include quartz monzonite and granodiorite in the extreme southwest corner of the quadrangle. Metamorphic rocks comprise less than one percent of the surficial rocks in the portion of the quadrangle that includes the proposed initiative area. They are represented by probable late Paleozoic schist and Precambrian gneissic rocks.

Geological mapping of the La Liebre Ranch and Lebec Quadrangles is covered in the 2006 and 2008 mapping efforts completed by Dibblee[29,30]; both maps are a 1:62,500 scale. Sedimentary rocks in the La Liebre Ranch Quadrangle include Holocene Quaternary alluvium, Quaternary older alluvium (Pleistocene), Late Miocene Oso Canyon Formation (Santa Margarita Formation), and the Middle to Late Miocene Marine Quail Lake Formation. Igneous rocks within the quadrangle include the Oligocene Neenach Volcanics and quartz monzonites. The Lebec Quadrangle contains sedimentary outcrops of Holocene Quaternary alluvium and clays, Quaternary landslide deposits near the town of Gorman, the Pliocene Hungry Valley Formation, and the Middle to Late Miocene Quail Lake Formation. Igneous rocks within the Lebec Quadrangle are represented by the Oligocene Neenach Volcanics and Mesozoic granitic rocks. No metamorphic rocks are mapped within the proposed initiative boundaries on the Lebec Quadrangle.

The Liebre Mountain Quadrangle was mapped by Dibblee (2002[31]) at a scale of 1:24,000. Sedimentary rocks are represented by Quaternary alluvium (Holocene) and older Quaternary alluvium and gravels (Pleistocene). Igneous rocks include the Oligocene Neenach Volcanics and Mesozoic granitic rocks. No metamorphic rocks are mapped on the quadrangle within the proposed initiative boundaries.

The Burnt Peak Quadrangle was mapped by Dibblee (2002a[32]) at a scale of 1:24,000. Sedimentary rocks are represented by Holocene Quaternary alluvium, and older Quaternary (Pleistocene) alluvium and gravels. Igneous rocks include the Oligocene Neenach Volcanics and granitic rocks of Mesozoic age. Metamorphic rocks within the proposed initiative boundaries are represented by gneiss of Precambrian to Mesozoic age.

In 2002, Dibblee also mapped the Lake Hughes and Del Sur Quadrangles, at a scale of 1:24,000 (Dibblee, 2002b[33]). Sedimentary rocks within the proposed initiative boundaries include

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[29] 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

[30] 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

[31] Dibblee, T. W., Jr. 2002. G*eologic 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

[32] Dibblee, T. W., Jr. 2002a. *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

[33] Dibblee, T. W., Jr. 2002b. *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

Quaternary alluvium (Holocene), older Quaternary alluvium and gravels (Pleistocene), and the Pliocene Anaverde Formation (exposed along the San Andreas Fault). Igneous outcrops include Cretaceous plutonic granitic rocks and Tertiary extrusive igneous rocks of the Neenach Volcanic Formation. Metamorphic rocks are represented by small linear outcrops along the San Andreas Fault System, near the town of Gorman and the Pelona Schist and gneiss southeast and south of Lake Hughes, respectively.

The surficial geology of the Green Valley Quadrangle was mapped by Dibblee (1997[34]) at 1:24,000 scale. Sedimentary geology of the area within the proposed initiative consists of Holocene and Pleistocene Quaternary alluvium and gravels while the igneous and metamorphic outcrops include Mesozoic and older Quartz Diorite and gneiss, respectively.

Also in 1997, Dibblee mapped the Sleepy Valley and Ritter Ridge Quadrangles at a scale of 1:24,000 (Dibblee, 1997a[35]). Surficial sedimentary units include Holocene and Pleistocene (older) Quaternary alluvium and the Pliocene Anaverde Formation (exposed along the San Andreas Fault Zone). Igneous rocks are represented by Mesozoic quartz diorite while exposed metamorphic rocks include the Mesozoic and older Pelona Schist and gneiss of unresolved age.

Lake Los Angeles/Llano/Valyermo/Littlerock, The geology of the Lake Los Angeles, Llano, Valyermo, Littlerock subarea was mapped by Dibblee, initially in 1959 and 1960, and again by Dibblee and Minch in 2002[36,37,38,39,40,41]). Sedimentary rocks within the proposed initiative boundaries are represented by Holocene and Pleistocene alluvium; the Pleistocene Harold Formation; the Miocene to Pliocene Crowder Formation; the Pliocene Anaverde Formation; The late Miocene Punchbowl Formation; and the Paleocene, marine, San Francisquito Formation. Plutonic igneous rocks include quartz monzonite, granite, hornblende diorite, and the Lowe

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[34] 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

[35] 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. Available online at: http://www.sbnature.org/dibblee/newweb/maps_catalog.html

[36] 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

[37] Dibblee, T. W., Jr. 1960a. *Geologic 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

[38] 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

[39] Dibblee, T.W., and Minch, J.A. 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

[40] 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

[41] 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

Granodiorite. Metamorphic Paleozoic marble is found in small areas on the north slope of the San Gabriel Mountains.

Lancaster Northeast. The Lancaster Northeast subarea comprises portions of the Redman, Rosamond Lake, Rosamond, Lancaster West, Lancaster East, Alpine Buttes, and Hi Vista Quadrangles. Ward and Dixon (2002[42]) mapped the Redman Quadrangle at a scale of 1:24,000. The project area covers the southern third of the quadrangle with the exclusion of the eastern boundary. Surficial sediments in the area were mapped as recent alluvial sediments, which include playa clay and windblown sand, playa clay, Pleistocene channel alluvium (three ages from older to younger), and scattered deposits of Holocene and Late Pleistocene eolian sands and Late Pleistocene beach bar deposits.

The Rosamond Quadrangle was mapped by Dibblee (1959[43]) at a scale of 1:48,000 and includes the Rosamond and Rosamond Lake Quadrangles. Surficial geological units consist of Quaternary alluvium (Qa = alluvial gravel and sand), Quaternary playa clay, and wind-blown sand. In addition, areas surrounding Rosamond Lake are mapped as sand bars deposited by wave action (Qsb). All of these geological units are Holocene in age. The portion of the Lancaster Northeast subarea depicted on Rosamond Quadrangle lies east of State Route (SR) 14. The surficial geology consists of recent alluvial gravels and sands.

Geological mapping of the Lancaster Quadrangle, which comprises the Lancaster East and West Quadrangles, was completed by Dibblee, (1960[44]) at a scale of 1:62,500. The Lancaster Northeast subarea represented on the map is limited to the northern section. Surficial sediments are mapped as two distinct Quaternary alluvial sediment types: unconsolidated gravel, sands, and silts and finer-grained, unconsolidated clays and silts that are partially covered in windblown sand.

The Alpine Butte Quadrangle was mapped by Dibblee (1959a[45]) at a scale of 1:62,500 and includes the Hi Vista Quadrangle. The Lancaster East subarea extends north of Avenue J. Sedimentary deposits consist of unconsolidated Quaternary alluvium that is Holocene in age, with scattered deposits of finer-grained, Holocene eolian sands.

Soils Engineering Characteristics

Expansiveness

The siltstone, claystone, shale, sandstone, and conglomerate units of the surficial sediments and formations have expansion potential that is variable. These units are generally moderately to highly expansive for shale, siltstone, and claystone beds and are non-expansive to slightly expansive for

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[42] Ward, A.W. and G.L. Dixon. 2002. Preliminary Geologic Map of the Redman Quadrangle, Los Angeles and Kern Counties, California: U.S. Geological Survey, Open-File Report OF-93-695, scale 1:24,000.

[43] 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

[44] 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

[45] 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

sandstone and conglomerate beds. Surficial deposits of young and older alluvium, playa clays, and colluvium/soil can be fine-grained due to the nature of the surrounding bedrock formations, and are therefore generally moderately to highly expansive, depending on the clay content. In areas where the surficial young and older alluvial deposits have higher gravel content and less clay, they are more often than not non-expansive to slightly expansive.

Consolidation and Settlement

Consolidation of earth materials is caused by the addition of a load (e.g., additional sediment or a building) or by the addition of water (hydroconsolidation). As the internal pore spaces are compressed (reduced in size), the material becomes denser, and the overall volume is reduced. Settlement is the downward movement of a structure as a response to the underlying earth material consolidation. Typically younger deposits (Holocene and sometimes Pleistocene alluvium) will undergo more consolidation and settlement than the older bedrock formations (e.g., sandstone) due to lack of cohesion between individual grains. In general, the bedrock formations (and sometimes Pleistocene older alluvium) have a moderate to high density and low compressibility, and therefore have a low potential for consolidation and settlement. More often than not, fine-grained recent alluvium and colluvium/soil may be moderately to highly compressible.

Erosion

Erosion of earth materials is the process of wearing away and transport due to concentrated water, wind, or gravitational forces. Harder, denser, and more cemented bedrock formations (usually older) will erode much less than softer, uncemented alluvium under the same forces. Erosion by water and gravity are usually more severe on steep terrain/slopes, than on relatively flat ground, and in seismically active (uplifting) areas. The shale, siltstone, and claystone bedrock formations will generally have low erosion potential due to their higher density and some cementation. Sandstones and conglomerates with a sandy matrix will generally have low to moderate erosion potential due to the presence of some cementation. Holocene alluvium and colluvium/soil are softer and less dense than the other deposits, and therefore will have a moderate to high erosion potential where exposed. New cut slopes or newly graded fill slopes will have relatively high to low erosion potential for Holocene alluvium and bedrock, respectively.

Dynamic (Earthquake) Considerations

The primary effects of an earthquake are fault rupture and ground shaking. These are discussed below, under *Faulting and Seismicity*. Earthquake shaking can generate secondary affects as these ground motions permanently deform and dislocate some near-surface earth materials. Ground failure can include affects ranging from simple ground cracking to complex lateral spreading landslides. Failures may be associated with saturated deposits (liquefaction) or unsaturated deposits (densification). The various considerations under these two topics are discussed below.

Liquefaction

The three key factors that indicate whether an area is potentially susceptible to liquefaction are severe ground shaking, shallow groundwater, and cohesionless sands. In addition to having ground shaking parameters, quantitative estimates of liquefaction potential require specific data from geotechnical borings and groundwater level information. Although there is some potential for deep liquefaction deeper than about 50 below ground surface (bgs), liquefaction potential is substantially higher where water has historically been found less than 30 to 50 feet bgs. The

potential for liquefaction to occur in the separate subareas is evaluated below in Table 4-2, *Liquefaction Potential by Proposed Initiative Subarea*. The data is taken from the California Geological Survey, Seismic Hazard Maps.

TABLE 4-2
LIQUEFACTION POTENTIAL BY PROPOSED INITIATIVE SUBAREA

Subarea	Liquefaction Potential (Y/N)	Location	Notes
Acton	Y	Numerous liquefaction zones indicated	
Castaic/ Santa Clarita/ Agua Dulce	Y	Numerous liquefaction zones indicated	Warm Springs Mountain Quadrangle unavailable
Antelope Valley Northeast	No seismic hazard maps available		
Kagel Canyon	Y	On canyon bottom	
Lake Hughes/Gorman/ West of Lancaster	Y	Numerous liquefaction zones indicated	Fairmont Buttes, Neenach, La Liebre Ranch, Lebec, Liebre Mountain, Green Valley, and Burnt Peak Quadrangles unavailable
Lake Los Angeles/Llano/Valyermo/ Little Rock	Y	Numerous liquefaction zones indicated	Mescal Creek, El Mirage, and Adobe Mountain Quadrangles unavailable
Lancaster Northeast	Y	Along Armagosa Creek and sewage disposal ponds; Little Rock Wash	Rosamond Lake and Redman Quadrangles unavailable

Earthquake-Induced Slope Instability

Static slope instability can arise for many reasons (e.g., adverse geologic bedding, overly steep slopes, saturation of weak materials) in hillside areas. Earthquake shaking can destabilize earth materials, which under static conditions may be stable or marginally stable. The California Division of Mines and Geology (CDMG) maps such areas for planning purposes, primarily considering slope angle, seismic intensity, and material type. The landslide potential for the proposed initiative is presented below in Table 4-3, *Landslide Potential by Proposed Initiative Subarea*.

TABLE 4-3
LANDSLIDE POTENTIAL BY PROPOSED INITIATIVE SUBAREA

Project Subarea	Landslide Potential (Y/N)	Location	Notes
Acton	Y	Numerous landslide zones indicated	
Castaic/Santa Clarita/ Agua Dulce	Y	Numerous landslide zones indicated	Warm Springs Mountain Quadrangle unavailable
Antelope Valley Northeast	No seismic hazard maps available		
Kagel Canyon	Y	On slopes surrounding canyon	
Lake Hughes/Gorman/West of Lancaster	Y	Numerous landslide zones indicated	Fairmont Buttes, Neenach, La Liebre Ranch, Lebec, Liebre Mountain, Green Valley, and Burnt Peak Quadrangles unavailable
Lake Los Angeles/Llano/ Valyermo/Little Rock	Y	Numerous landslide zones indicated, especially on north slope of San Gabriel Mountains and adjacent buttes	Mescal Creek, El Mirage, and Adobe Mountain Quadrangles unavailable
Lancaster Northeast	Y	In elevated areas on Buttes	Rosamond Lake and Redman Quadrangles unavailable

Settlement

Dry to partially saturated sediments that may not be susceptible to liquefaction may be susceptible to dynamic consolidation and local ground subsidence during strong earthquake shaking. This consolidation or densification occurs in loose cohesionless sediments as the void spaces are diminished due to grain-to-grain compaction from the intense seismic shaking.

As noted above (Consolidation and Settlement), bedrock has a low potential for dynamic consolidation, older alluvium (Pleistocene) has moderate high potential, and the younger alluvium the highest potential. Variations in vertical subsidence may occur within a small area, such as an individual lot or beneath an individual structure. This is particularly important at the cut-to-fill transition lines within the landfill grading area where differential settlement can cause substantially more damage than if the structure were to settle evenly throughout. Settlements of five to 30 centimeters (two to 12 inches) can occur during strong earthquake shaking, as was manifest in the 1994 Northridge event. The amount of dynamic consolidation and subsidence would not be consistent from location to location throughout the proposed initiative area.

Seismicity and Faulting

The type and style of faulting has an influence on the potential for fault rupture and the intensity of ground shaking. The three principal seismic hazards to properties in Southern California are surface rupturing of earth materials along fault traces, damage to structures and foundations due to strong ground motions generated during earthquakes, and liquefaction (discussed above).

Fault Rupture

Under the Alquist-Priolo (AP) Earthquake Fault Zoning Act, the State Geologist is required to delineate "earthquake zones" (formerly called "special studies" zones) along known active faults ((Hart and Bryant 2007[46]). An active fault is one that has demonstrated offset of Holocene materials (less than 11,000 years ago) or significant seismic activity. Potentially active faults have demonstrated movement within Pleistocene time (approximately 1.6 million years before present). According to the California Department of Conservation, Division of Mines and Geology, active and potentially active faults must be considered as potential sources of fault rupture. Cities or counties affected by the zones must regulate development within the designated zones. Approval of building permits for sites within State-designated zones must be withheld until geologic investigation demonstrates that a proposed development is not threatened by surface displacement from future seismic activity. Active or potentially active faults are mapped within the proposed initiative boundaries (see Table 4-1).

Groundwater

Groundwater is highly variable within the affected environment. There are 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. Groundwater in the East Basin generally flows from east to west, following the movement of the Santa Clara River. Groundwater in the Acton Valley is unconfined and found in alluvium and stream terrace deposits. The regional direction of groundwater flow is in a southwesterly direction toward Soledad Canyon. The Antelope Valley Groundwater Basin underlies an extensive alluvial valley in the western Mojave Desert. 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 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. Groundwater depth is variable throughout the affected environment.

[46] Hart, E., and W. Bryant. 1997. Fault-Rupture Hazard Zones in California--Alquist-Priolo Earthquake Fault (Special Studies) Zones Act (as amended 1994) with Index to Special Studies Zones Maps, California Division of Mines and Geology, Special Publication 42, Supplements 1 and 2 added 1999, Revised 2007. (Details regarding the Alquist-Priolo Earthquake Fault Zone Act can be found at http://www.consrv.ca.gov/CGS/rghm/ap/index.htm)

SECTION 5.0
THRESHOLDS OF SIGNIFICANCE

The following significance thresholds are based on the CEQA Guidelines Environmental Checklist Form (Appendix G). The impacts of the proposed initiative are considered significant if they would:

a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

   i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. Refer to Division of Mines and Geology Special Publication 42.
   ii. Strong seismic ground shaking?
   iii. Seismic-related ground failure, including liquefaction?
   iv. Landslides?

b. Result in substantial soil erosion or the loss of topsoil?

c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life and property?

e. Have soils incapable of adequately supporting the use of onsite wastewater treatment systems where sewers are not available for the disposal of wastewater?

The proposed initiative would allow importation of hauled water to unincorporated areas of Los Angeles County that do not have access to private or public water distribution systems or groundwater. No earthwork, construction, or modification of existing facilities is required, because the current zoning allows for development of a single-family residences, in accordance with the County's building permit process. 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, where land use designation and zoning allow for development of a single-family residence. The proposed initiative does not allow for development in conflict with the existing zoning, or facilitate rezoning. Therefore, no impacts related to geology and soils are anticipated due to the proposed initiative.

Earthquakes and Seismic-Induced Ground Shaking

The proposed initiative would not expose people or structures to potential adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning (APEFZ) Map issued by the State Geologist for the area or based on other substantial evidence of a known fault.

i. There are APEFZs or other active or potentially active faults within, near or projecting toward the proposed initiative area. However, the current zoning allows for development of single-family residences, in accordance with the County's building permit process. The proposed initiative would allow hauled water as the primary source of potable water for new single-family residential construction in unincorporated areas of the Los Angeles County, where land use designation and zoning allow for development of single-family residences. The proposed initiative does not allow for development in conflict with the existing zoning, or facilitate rezoning. Therefore, no significant impacts are anticipated from earthquake fault movement due to the proposed Amendment.

ii. The proposed initiative does not allow for development in conflict with the California Building Code or the Safety Element of the Los Angeles County General Plan. Because of this, the proposed initiative would not result in impacts from exposing people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking. Regional faults have been analyzed relative to the specifications of the proposed initiative. The current zoning allows for development of single-family residences, in accordance with the County's building permit process. 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, where land use designation and zoning allow for development of a single-family residence. The proposed initiative does not allow for development in conflict with the existing zoning, or facilitate rezoning. Therefore, further analysis is not warranted.

iii. The proposed initiative does not allow for development in conflict with the California Building Code or the Safety Element of the Los Angeles County General Plan. Therefore, the proposed initiative would not result in impacts from exposing

people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction. The current zoning allows for development of a single-family residences, in accordance with the County's building permit process. 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, where land use designation and zoning allow for development of a single-family residence. The proposed initiative does not allow for development in conflict with the existing zoning, or facilitate rezoning. Therefore, further analysis is not warranted.

iv. The proposed initiative does not allow for development in conflict with the California Building Code or the Safety Element of the Los Angeles County General Plan. Therefore, the proposed initiative would not result in impacts from exposing people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides. The proposed initiative is situated on a variety of ground surfaces including relatively level ground and steep mountain/canyon slopes that could be potentially susceptible to slope instability. According to the CDMG, the site is situated within a Seismic Hazard Zone. However, the current zoning allows for development of single-family residences, in accordance with the County's building permit process. The proposed initiative would allow hauled water as the primary source of potable water for new single-family residential construction in unincorporated areas of the Los Angeles County, where land use designation and zoning allow for development of a single-family residence. The proposed initiative does not allow for development in conflict with the existing zoning, or facilitate rezoning. Therefore, further analysis is not warranted.

Soil Erosion

The proposed initiative does not allow for development in conflict with the California Building Code or the Safety Element of the Los Angeles County General Plan. Therefore, the proposed initiative would not result in impacts to geology and soils in relation to substantial soil erosion and loss of topsoil. The use of trucks to haul water on unpaved roads could result in substantial soil erosion, especially if done at high frequencies over a long span of time. However, the current zoning allows for development of single-family residences, in accordance with the County's building permit process. 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, where land use designation and zoning allow for development of a single-family residence. The proposed initiative does not allow for development in conflict with the existing zoning, or facilitate rezoning. Therefore, further analysis is not warranted.

Unstable Geologic Units or Soil

The proposed initiative does not allow for development in conflict with the California Building Code or the Safety Element of the Los Angeles County General Plan. Therefore, the proposed initiative would not result in impacts to geology and soils in relation to location on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. This current zoning allow for development of single-family residences, in accordance with the County's

building permit process. 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, where land use designation and zoning allow for development of a single-family residence. The proposed initiative does not allow for development in conflict with the existing zoning, or facilitate rezoning. Therefore, further analysis is not warranted.

Expansive Soils

The proposed initiative does not allow for development in conflict with the California Building Code or the Safety Element of the Los Angeles County General Plan. Therefore, the proposed initiative would result in no impacts to geology and soils in relation to location on expansive soil creating substantial risks to life or property. Expansive surficial materials are found within the proposed initiative area; however, the current zoning allows for development of single-family residences, in accordance with the County's building permit process. 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, where land use designation and zoning allow for development of a single-family residence. The proposed initiative does not allow for development in conflict with the existing zoning, or facilitate rezoning. Therefore, further analysis is not warranted.

Wastewater Disposal

The proposed initiative does not allow for development in conflict with the California Building Code or the Safety Element of the Los Angeles County General Plan. Therefore, the proposed initiative would not result in impacts to geology and soils in relation to being located on soils that are incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. Existing surficial conditions in parts of the proposed initiative are that of cohesionless alluvial sands and gravels that are incapable of supporting septic tanks or wastewater disposal systems. Approval of building permits for sites within State-designated zones must be withheld until geologic investigation demonstrates that a proposed development is not threatened by surface displacement from future seismic activity. Active or potentially active faults trend toward the proposed initiative (Table 3.6.2-3). Because the current zoning allows for development of single-family residences, in accordance with the County's building permit process. 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, where land use designation and zoning allow for development of a single-family residence. The proposed initiative does not allow for development in conflict with the existing zoning, or facilitate rezoning. Therefore, further analysis is not warranted.

Compliance with Existing Regulations and Permit Requirements

The current zoning allows for development of single-family residences, in accordance with the County's building permit process. 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, where land use designation and zoning allow for development of a single-family residence. The proposed initiative does not allow for development in conflict with the existing zoning, or facilitate rezoning.

Previous Investigations

Based on the references throughout this report and the references cited in those reports, there is a history of geological investigations and documentation. Southern California is a region with numerous active, potentially active, and inactive faults as a result of being situated on tectonic plate boundary. Because of this surficial geology and landforms can change in very short distances and become quite complex.

Project Impacts

The proposed initiative would not result in impacts that would expose people or structures to potential adverse effects, including the risk of loss, injury or death related to seismic ground-shaking, soil erosion, unstable geologic units or soils, expansive soils, or wastewater disposal issues. Therefore, the consideration of mitigation measures or alternatives in relation to geology and soils is not warranted.

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APPENDIX C
HAZARDOUS MATERIALS ASSESSMENT

SINGLE-FAMILY RESIDENTIAL HAULED WATER INITIATIVE FOR NEW DEVELOPMENT

HAZARDOUS MATERIALS ASSESSMENT

Prepared for:

Los Angeles County Hauled Water Task Force
900 South Fremont Avenue, 11th Floor
Alhambra, California 91803-1331

Prepared by:

Sapphos Environmental, Inc.
430 North Halstead Street
Pasadena, California 91107

September 17, 2014

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SECTION 1.0
OBJECTIVES AND LIMITATIONS

1.1 INTRODUCTION

This Hazardous Materials Assessment (HMA) has been prepared to provide information related to the consideration of the Los Angeles County Single-Family Residential Hauled Water Initiative for New Development (proposed initiative). This analysis was undertaken to determine if the proposed initiative would result in adverse significant risks related to hazardous materials. Hazardous materials, within the areas of Los Angeles County where parcels would potentially be eligible for the use of hauled water to support development of a single-family residence pursuant to the proposed initiative, were evaluated in light of the Safety Element[1] of the adopted 1980 County of Los Angeles (County) General Plan and the Draft Safety Element[2] of the Draft General Plan 2035 Update, and review of available public records, literature, and relevant environmental regulatory databases.[3] The scope of this analysis is also based on publicly available databases and records for the regions that provide a relative characterization of the parcels that would be potentially eligible for the use of hauled water to support development of a single-family residence, as a result of the proposed initiative.[4]

The information used in the characterization of the study area does not constitute a Phase I Environmental Site Assessment (ESA) pursuant to the American Society for Testing and Materials (ASTM) standards; nor should it be used by an individual property owner as the basis for determining presence or absence of hazards, hazardous materials, or risk on or in the vicinity of an individual parcel that would be potentially eligible for the use of hauled water pursuant to the proposed initiative.

1.2 PURPOSE

The purpose of this HMA is to determine the existence or potential for existence of recognized environmental conditions (RECs) on, or adjacent to, parcels within the proposed initiative study area. RECs include, but are not limited to, the presence or likely presence of any hazardous substances or wastes on a property under conditions that indicate an existing release, a past release, a material threat of a release into the ground, groundwater, or surface water, or hazardous emissions.

The information in the HMA was evaluated as much as was reasonably feasible in accordance with the ASTM Standard E 1527-13, "*Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*," as it relates to review and consideration of information from government databases, samples of aerial photographs, and historic and current topographic maps. However, due to the enormous size of the proposed initiative study area (i.e., approximately 285,500 acres or approximately 450 square miles), certain aspects of ASTM Standard E 1527-013

[1] Los Angeles County Department of Regional Planning. November 25, 1980. *Los Angeles County General Plan. Safety Element.*

[2] Los Angeles County Department of Regional Planning. January 2014. *Los Angeles County General Plan 2035, Public Review Draft. Safety Element.*

[3] California Environmental Protection Agency, Department of Toxic Substances Control. n.d. EnviroStor Database. Available online at: http://www.envirostor.dtsc.ca.gov/public/

[4] Los Angeles County. n.d. Location Management System. Available online at: http://egis3.lacounty.gov/lms/

requirements were not feasible due to time and cost constraints, such as a site inspection, the review of some sources of historical information (i.e., aerial photographs, topographic maps, land use and landowner questionnaires, etc.), and review of an environmental regulatory database compilation. For the purpose of this HMA, RECs also consist of hazardous materials that are predicted be present based on a more detailed evaluation of randomly selected parcels within the study area. The evaluation considers criteria regarding hazards or hazardous materials in accordance with Section 15063 of the State California Environmental Quality Act (CEQA) Guidelines.[5]

Sapphos Environmental, Inc. conducted a regional search of publicly available government records regarding significant known sources of contamination in the areas of the County where approximately 42,677 parcels are located that might be eligible for development supported by hauled water, should the proposed initiative be enacted. It is understood that the initiative would require property owners to demonstrate that a Phase I ESA is required to be prepared consistent with the ASTM standards, as part of the building application and permitting process, and that the proposed initiative would therefore not be expected to expose people or property to significant risk or hazards associated with the routine generation, use, disposal, or transport of hazardous substances or materials.

Unlike a Phase I ESA that is typically prepared for specific parcels proposed for development, this HMA is focused on identifying areas within the study area that may have development constraints due to the potential existence of hazardous materials, thus representing a significant risk to parcels that might become eligible for single-family residential development as a result of the proposed initiative. Sapphos Environmental, Inc. also evaluated randomly selected parcels within the study area to identify areas that would likely expose people or property to unacceptable levels of risk or hazards.

1.3 SCOPE OF SERVICES

The scope of work for this HMA comprises seven key tasks:

- Review of reasonably available aerial photographs and U.S. Geologic Survey topographic maps
- Review of California Division of Oil, Gas and Geothermal Resources records
- Review of the Envirostor regulatory database maintained by the Department of Toxic Substances Control (DTSC) of the California Environmental Protection Agency to assess the potential for the study area to be considered or affected by potential, known, or suspected hazardous waste sites; contaminated soil, surface water or groundwater; or leaking underground storage tanks within the standard radius from the property as specified by the ASTM Standard E1527-13[6]
- Research of the existing landfills in the study area region

[5] *California Code of Regulations*. Title 14, Division 6, Chapter 3, Sections 15000–15387, Appendix G.

[6] American Society for Testing and Materials. November 1, 2005. Standard E 1527-13, *"Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process."*

- Review of California Department of Forestry and Fire Protection fire hazard severity zones maps

- Evaluation of 35 randomly selected parcels, five parcels from each of the seven subareas within the proposed initiative area, for the hazardous waste sites analysis. These parcels were exported from ArcGIS to Google Earth KML files, and U.S. Geological Survey topographic quadrangle and aerial photographic analyses were conducted using Google Earth to determine the presence/absence of potential hazards or hazardous sites within the parcels.

- Preparation of a report documenting the findings, opinions, and conclusions regarding observed or potential environmental concerns

SECTION 2.0
SITE LOCATION AND PROJECT DESRIPTION

2.1 SITE LOCATION

The area that would be subject to the proposed initiative consists of 42,677 parcels in the unincorporated territory of Los Angeles County (Figure 2.1-1, *Proposed Initiative Study Area*).[1] The combined proposed initiative study area consists of approximately 285,500 acres or approximately 450 square miles.

The parcels that would be affected by the proposed initiative are located entirely within the 5th Supervisorial District in the northern one-third of the County, including areas located north and east of the San Gabriel Mountains in the Antelope Valley; areas located northeast of the City of Santa Clarita, north and south of California State Route 14; areas that are southwest of the City of Palmdale in the communities of Agua Dulce and Acton; and in the Kagel Canyon area in the Angeles National Forest. The subject parcels have been categorized into seven subareas:

1. **Lake Hughes/Gorman/West of Lancaster:** The Lake Hughes/Gorman/West of Lancaster subarea is located in an area generally located west of State Highway 14 and north of the Angeles National Forest. This subarea consists of 14,356 parcels and encompasses approximately 164.6 square miles (105,352.0 acres). State Highway 138 bisects the subarea in an east-west direction, and State Highway 14 forms the eastern boundary of this subarea. This subarea is adjacent to the northwestern edge of the incorporated City of Lancaster.

2. **Lancaster Northeast:** The Lancaster Northeast subarea is located in an area generally east of State Highway 15 and north of East Avenue J. This subarea consists of 8,302 parcels and encompasses approximately 67.1 square miles (42,948.2 acres). State Highway 14 forms the western boundary and East Avenue J forms the southern boundary of this subarea. Edwards Air Force Base is located north of the study area. This subarea is adjacent to the northeastern edge of the incorporated City of Lancaster.

3. **Antelope Valley Northeast:** The Antelope Valley Northeast subarea is located in an area generally located north of East Avenue E and east of 165th Street East in the far northeastern portion of Los Angeles County. This subarea consists of 1,820 parcels and encompasses approximately 16.7 square miles (10,716.0 acres). This subarea is relatively isolated and is located in the northeastern area of Los Angeles County. This subarea is located approximately 10.9 miles northeast of the incorporated City of Palmdale and approximately 11.3 miles northeast of the incorporated City of Lancaster.

4. **Lake Los Angeles/Llano/Valyermo/Littlerock:** The Lake Los Angeles/Llano/ Valyermo/Littlerock subarea is located in an area generally south of East Avenue J, east of 47th Street East. This subarea consists of 14,946 parcels and encompasses approximately 154.4 square miles (98,843.3 acres). Avenue J forms the northern

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

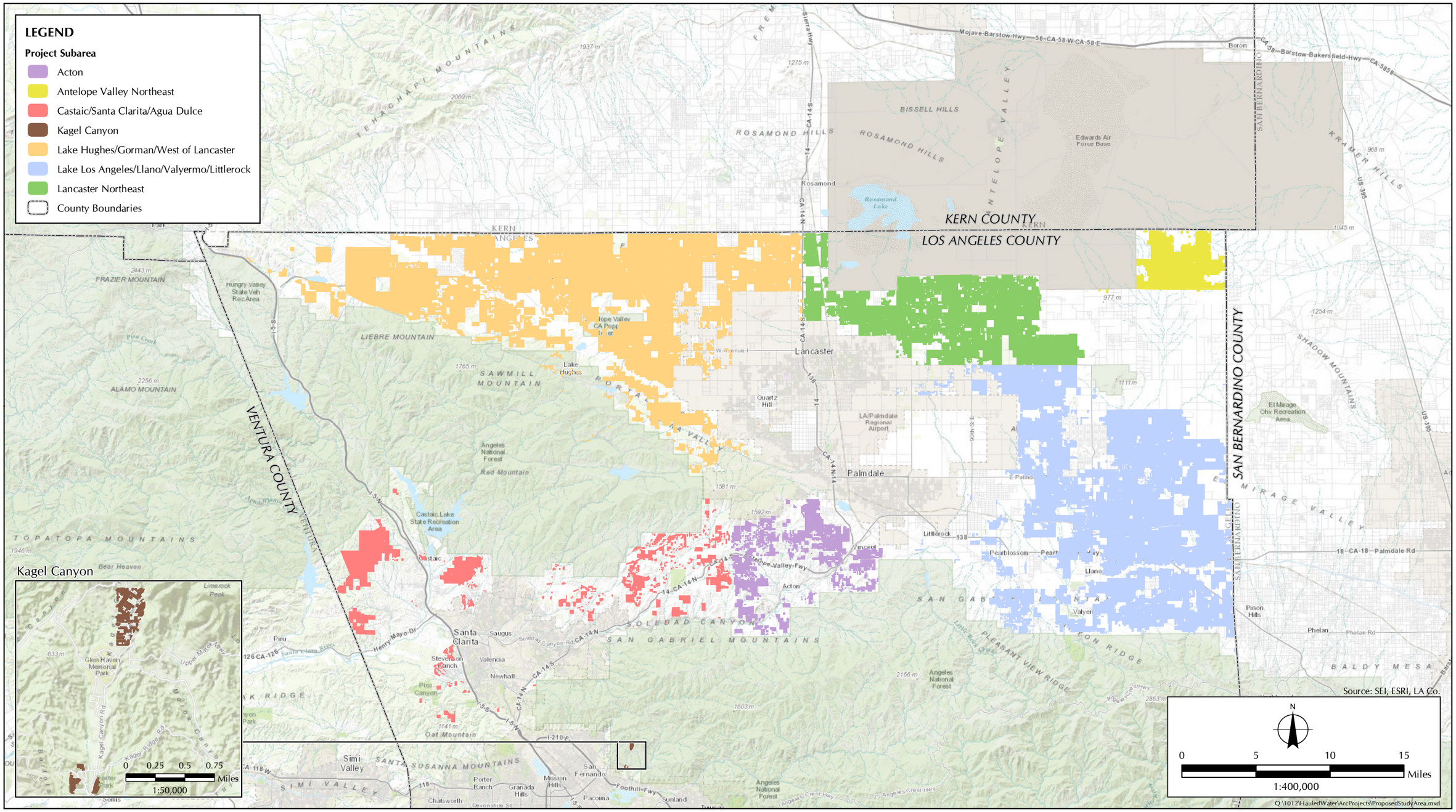

FIGURE 2.1-1

Proposed Initiative Study Area

boundary, the Cities of Palmdale and Lancaster form the western boundary, and the San Bernardino County line forms the eastern boundary of this subarea. This subarea is adjacent to the eastern edge of the incorporated City of Palmdale.

5. **Acton:** The Acton subarea is located in an area generally east of Hubbard Road and West of 47th Street East. This subarea consists of 1,129 parcels and encompasses approximately 20.6 square miles (13,155.0 acres). The Angeles National Forest is located to the north and south of the subarea. This subarea is adjacent to the southwestern edge of the incorporated City of Palmdale.

6. **Castaic/Santa Clarita/Agua Dulce:** The Castaic/Santa Clarita/Agua Dulce subarea is located generally west of Hubbard Road and north of the 210 Freeway excluding Kagel Canyon. This subarea consists of 1,626 parcels and encompasses approximately 22.4 square miles (14,357.9 acres). This subarea is adjacent to the northern, western, and southern edges of the incorporated City of Santa Clarita and the northern edge of the incorporated City of Los Angeles.

7. **Kagel Canyon:** The Kagel Canyon subarea is the smallest of the project subareas and consists of 498 parcels surrounded by the Angeles National Forest generally located along Kagel Canyon Road north of the 210 Freeway, west of Little Tujunga Road, and east of Lopez Canyon Road. This subarea encompasses approximately 0.1 square mile (40.8 acres). This subarea is located approximately 0.1 mile northeast of the northern edge of the incorporated City of Los Angeles.

The proposed initiative study area is located within forty-two (42) USGS 7.5-minute quadrangle maps (Figure 2.1-2, *USGS 7.5-Minute Quadrangle Index*):

- Acton
- Adobe Mountain
- Agua Dulce
- Alpine Butte
- Black Mountain
- Burnt Peak
- Del Sur
- El Mirage
- Fairmont Butte
- Green Valley
- Hi Vista
- Jackrabbit Hill
- Juniper Hills
- La Liebre Ranch
- Lake Hughes
- Lancaster East
- Lancaster West
- Lebec
- Liebre Mountain
- Little Buttes
- Littlerock
- Lovejoy Buttes
- Mescal Creek
- Mint Canyon
- Neenach School
- Newhall
- Oat Mountain
- Pacifico Mountain
- Palmdale
- Redman
- Ritter Ridge
- Rogers Lake South
- Rosamond
- Rosamond Lake
- San Fernando
- Simi Valley East
- Sleepy Valley
- Sunland
- Val Verde
- Valyermo
- Warm Springs Mountain
- Whitaker Peak

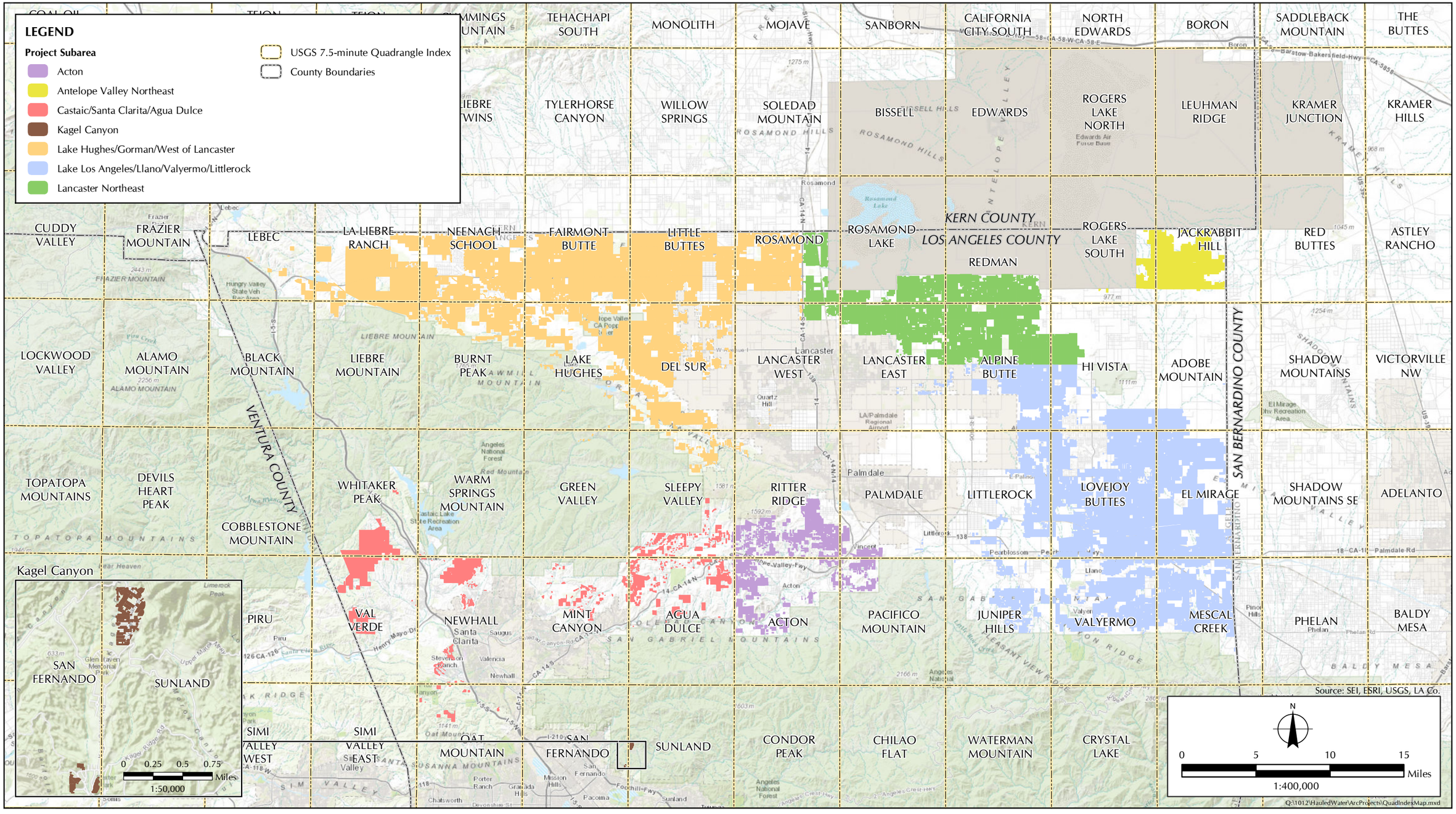

FIGURE 2.1-2

USGS 7.5-minute Quadrangle Index

The elevation of the overall proposed initiative study area ranges from 5,055 feet above sea level in the Valyermo area of the Lake Los Angeles/Llano/Valyermo/Littlerock subarea to 1,423 feet above sea level in the Kagel Canyon subarea.

2.2 PROJECT DESRIPTION

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. Specifically, the Los Angeles County Board of Supervisors has directed the preparation of an ordinance to allow hauled water as the primary source of potable water for new single-family residential construction in unincorporated areas of Los Angeles County. The initiative would be applicable to those properties that are zoned single-family residential at the time of the effective date of the ordinance.

In order to determine which areas would be subject to the proposed initiative, the Los Angeles County Department of Regional Planning developed a geographic information system (GIS) suitability model in 2012 based on five criteria:

- Parcels located in the unincorporated territory of Los Angeles County
- Vacant parcels
- Parcels located in areas where there is no designated water purveyor
- Zoning and General Plan designation that allow for development of a single family residence
- Parcel size greater than 2,000 square feet with slopes under 50 percent (26.6°)

SECTION 3.0
SITE HISTORY

Sapphos Environmental, Inc. conducted an evaluation of 35 randomly selected parcels, five parcels from each of the seven subareas, within the proposed initiative study area for the hazardous waste sites analysis. These parcels were exported from ArcGIS to Google Earth KML files, and U.S. Geological Survey topographic quadrangle and aerial photographic analyses were conducted using Google Earth to determine the presence/absence of potential hazards or hazardous sites within the parcels.

The 35 randomly selected parcels (Figure 3-1, *Randomly Selected Parcel Locations*) that were evaluated for their historical use are identified by the following Los Angeles County Assessor's Parcel Numbers (APNs):

Acton

- 3056-014-046
- 3057-007-025
- 3217-004-026
- 3217-008-010
- 3217-015-008

Antelope Valley Northeast

- 3322-026-007
- 3322-032-010
- 3326-005-070
- 3318-009-085
- 3318-015-059

Castaic/Santa Clarita/Agua Dulce

- 2810-103-080
- 2810-126-026
- 3214-024-005
- 3214-032-015
- 3247-063-035

Kagel Canyon

- 2845-016-008
- 2845-016-021
- 2845-023-038
- 2845-026-002
- 2846-018-020

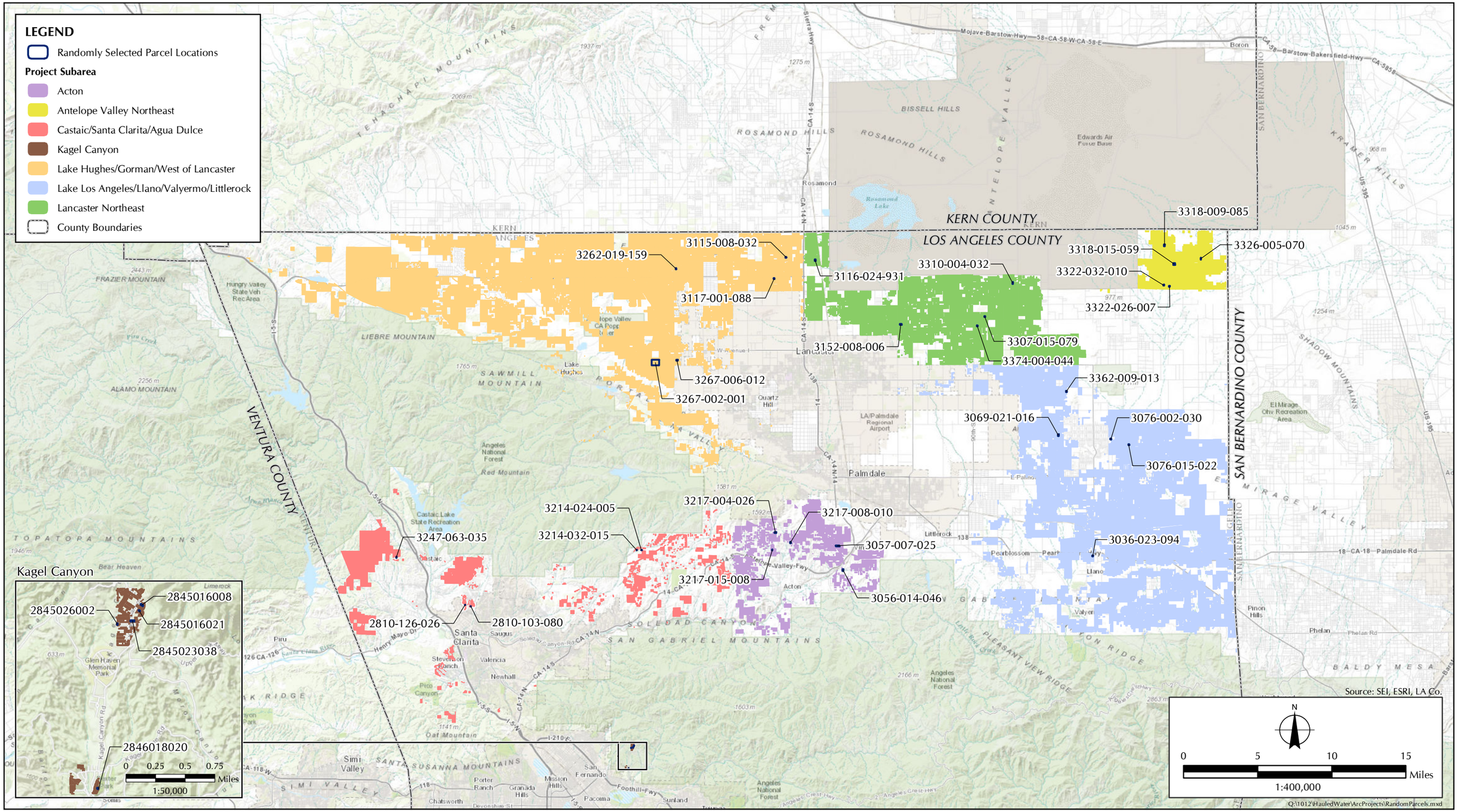

FIGURE 3-1

Randomly Selected Parcel Locations

Lake Hughes, Gorman, West of Lancaster

- 3115-008-032
- 3117-001-088
- 3262-019-159
- 3267-002-001
- 3267-006-012

Lake Los Angeles/Llano/Valyermo/Littlerock

- 3036-023-094
- 3069-021-016
- 3076-002-030
- 3362-009-013
- 3076-015-022

Lancaster Northeast

- 3116-024-931
- 3152-008-006
- 3307-015-079
- 3310-004-032
- 3374-004-044

3.1 U.S. GEOLOGICAL SURVEY TOPOGRAPHIC MAPS

USGS topographic maps of the randomly selected parcels within the study area were reviewed for the years between 1952 and 1992 to determine previous and current land use. The review of these topographic maps indicates that the randomly selected parcels were undeveloped. A cursory review of all the USGS topographic maps did not identify any on-site or off-site sources of contamination.

3.2 AERIAL PHOTOGRAPHS

Aerial photographs of the randomly selected parcels within the study area were reviewed for the years between 1994 and 2013 to determine previous and current land use. These photographs indicate that all the parcels, with the exception of two parcels in the Castaic/Santa Clarita/Agua Dulce subarea, were vacant, undeveloped properties. The two parcels in the Castaic/Santa Clarita/Agua Dulce subarea (i.e., 2810-103-080 and 2810-126-026) had been graded for the development of single-family residences. No indications of exposure to hazardous materials from on-site or of-site sources were identified. A cursory review of aerial photographs for the entire study area did not identify any of on-site or off-site sources of contamination.

3.3 DIVISION OF OIL, GAS AND GEOTHERMAL RESOURCES RECORDS

The records for the Division of Oil, Gas and Geothermal Resources were reviewed to determine if any oil and/or gas well fields existed within the subareas of the study area. The only portion of the

study area identified having oil and/or gas well fields is the Castaic/Santa Clarita/Agua Dulce subarea. The following 11 oil and/or gas fields (over 116 subarea parcels) exist within this subarea:[1]

- Castaic Junction – Abandoned (2 parcels)
- Del Valle (16 parcels)
- Lyon Canyon – Abandoned (3 parcels)
- Newhall (10)
- Newhall-Portrero (1 parcel)
- Oak Canyon (26 parcels)
- Placerita (2 parcels)
- Ramona (40 parcels)
- Ramona, North (2 parcels)
- Tapia (9 parcels)
- Wayside Canyon (5 parcels)

[1] California Department of Conservation, Division of Oil, Gas and Geothermal Resources. n.d. DOGGR On-line Mapping System. Available online at: http://maps.conservation.ca.gov/doms/doms-app.html

SECTION 4.0
ENVIRONMENTAL REGULATORY DATABASE REVIEW

4.1 ENVIROSTOR DATABASE

The Department of Toxic Substances Control (DTSC) of the California Environmental Protection Agency maintains the EnviroStor Data Management System public website.[1] The website provides detailed information on inspections and enforcement actions of permitted hazardous waste facilities. EnviroStor provides all existing information on permits and corrective action at hazardous waste facilities, as well as site cleanup projects. EnviroStor allows searches for information on completed facility inspection and enforcement actions, in addition to site investigation; site cleanup; permitting; and planned, current, or completed corrective actions under DTSC oversight.

The EnviroStor database contains information on four sites within the proposed initiative study area (Figure 4.1-1, *Hazardous Waste / Substance Sites within Proposed Initiative Area*).

Phase V School Site

This 115.4-acre school site is located in the Castaic/Santa Clarita/Agua Dulce subarea within Assessor's Parcel Number (APN) 2826-145-060. Previous uses of the site suspected of causing contamination were oil and gas extraction activities. The potential contaminant of concern was methane, which may have affected soil vapor. The DTSC conducted a preliminary environmental assessment (PEA) of the site in February 2000. In January 2001, the DTSC issued a letter stating that the results of the PEA recommended that no further action is required at the subject site.[2] Since a No Further Action letter was issued by DTSC, this site would not be expected to be a constraint to residential development of nearby properties.

Banning Park CP

This site is located in the Lake Hughes/Gorman/West of Lancaster subarea within APN 3260-024-017. The past and current land uses at this site is not specified. The potential contaminants of concern are unexploded ordinances. The status of this site, which has been inactive since July 2005, is the need for additional evaluation. No apparent additional evaluation of this site has been conducted to date. The adjoining parcels could potentially be affected by the unexploded ordinances. Since additional evaluation of this parcel is warranted, it would be expected to serve as a constraint to residential development of nearby properties.

Llano Barrels

This site is located in the Lake Los Angeles/Llano/Valyermo/Littlerock Subarea within APN 3083-004-048. Past uses of concern at this site was illegal dumping activities, which may have impacted soil and soil vapor. The potential contaminants of concern are pesticides (30 gallons) and polychlorinated biphenyls. In 1983, the DTSC certified that approximately 1,198 cubic yards of contaminated soil and 21 drums of unspecified waste were removed from the site. In March 1990,

[1] California Environmental Protection Agency, Department of Toxic Substances Control. n.d. Website. Available online at: https://www.envirostor.dtsc.ca.gov/public/

[2] Sharon Fair, Branch Chief, California Environmental Protection Agency, Department of Toxic Substances Control. January 19, 2001. Letter to Robert C. Lee, Superintendent, William Hart Unified School District.

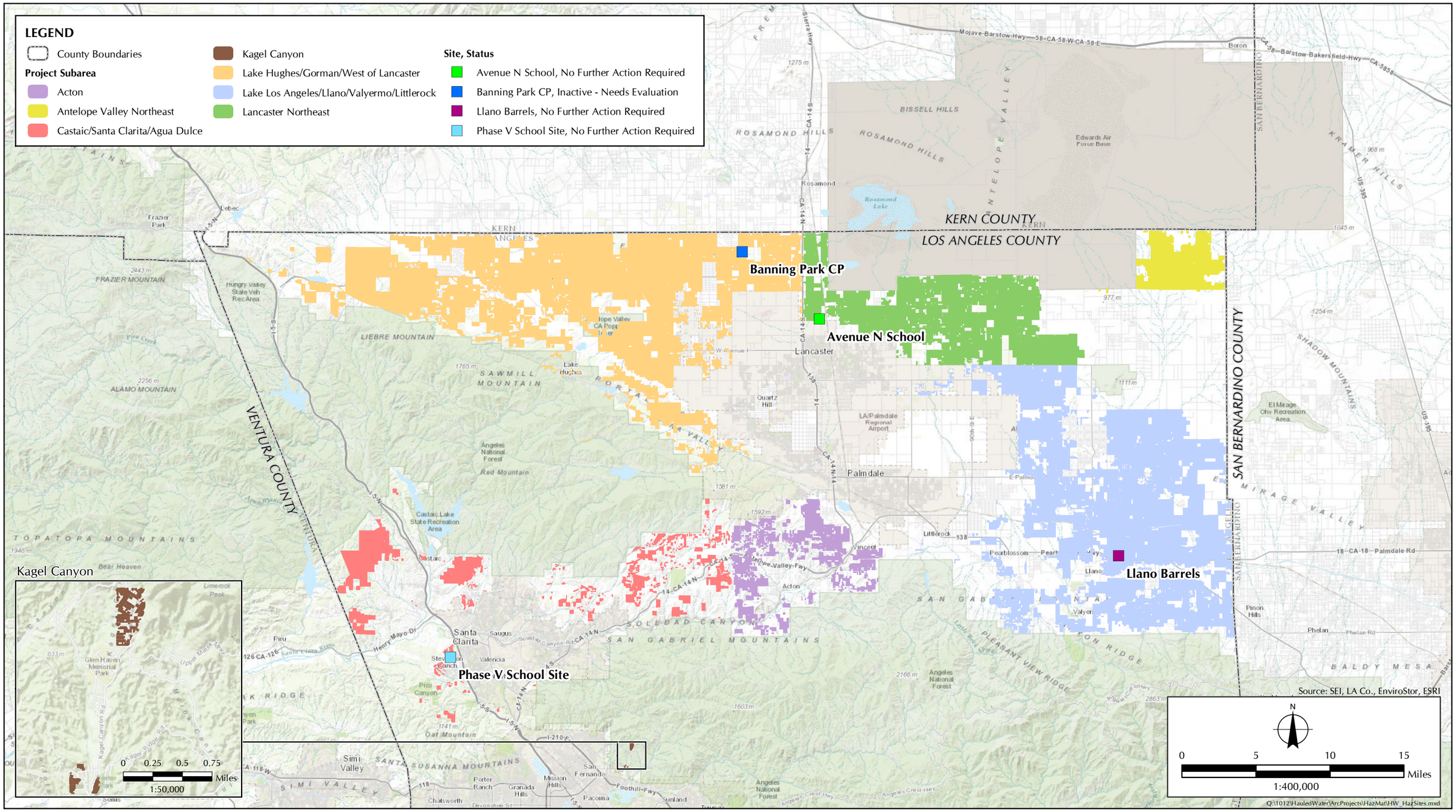

FIGURE 4.1-1

Hazardous Waste/Substance Sites within Proposed Initiative Study Area

the DTSC completed a reassessment of the Screening Site Inspection. The result of the reassessment indicated that no further action was necessary. Since a No Further Action letter was issued by DTSC, this site would not be expected to be a constraint to residential development of nearby properties.

Avenue N School

This site is located in the Lancaster Northeast subarea within APN 3118-003-062. The DTSC approved a Phase I Environmental Site Assessment of the potential 20-acre school site. This site has historically been vacant and undeveloped. No agricultural or other activities appeared to have occurred on the site; nor were there any apparent adjacent land use concerns. There were no suspicious past uses or potential contaminants of concern related to this site. This type of environmental investigation is typical of all potential school sites to ensure that the site is safe for development as a school. In June 2007, the DTSC recommended that no further action was required. Since a No Further Action letter was issued by DTSC, this site would not be expected to be a constraint to nearby properties.

SECTION 5.0
REGIONAL LANDFILLS

There are four regional non–hazardous waste landfills in the vicinity of the study area (Figure 5.1-1, *Regional Active Landfills*). Of these landfills, only one, the Lancaster Landfill, is located within the proposed initiative study area, in the Lancaster Northeast subarea.

The remaining three non–hazardous waste landfills are located outside the proposed initiative study area and do not pose a constraint to development. The locations of these landfills, which are also non–hazardous waste facilities, are as follows:

- Antelope Valley Recycling and Disposal Facility[1]
  1200 West City Ranch Road, Palmdale (near the Acton subarea)

- Chiquita Canyon Landfill[2]
  29201 Henry Mayo Drive, Castaic (near the Castaic/Santa Clarita/Agua Dulce subarea)

- Sunshine Canyon Landfill[3]
  14747 San Fernando Road, Sylmar (near the Castaic/Santa Clarita/Agua Dulce subarea)

Lancaster Northeast Subarea

The Lancaster Landfill is located at 600 East F Street in the city of Lancaster within the Lancaster Northeast subarea. This landfill accepts non-hazardous household and commercial refuse, clean asphalt and concrete, clean dirt, wood and green waste, and construction and demolition waste.[4] Used automobile and truck tires received at this landfill are shipped to off-site tire processors. Appliances and electronic wastes are accepted at this landfill for recycling.

The landfill is designed to allow disposal of non-hazardous solid wastes. Current permits require all disposal areas to be constructed with a composite liner system and leachate collection system. The leachate collection system gathers wastewater that is generated by the overlying municipal solid waste.

The primary liner consists of a synthetic 60-mil-thick high-density polyethylene (HDPE). The primary liner is underlain by 2 feet of low permeability soil, or equivalent material. Together, these two components of the liner system prevent contaminants from penetrating the surrounding environment.

The leachate collection system consists of synthetic drainage material called a geocomposite. The geocomposite is comprised of high-density polyethylene channels manufactured to rapidly convey

[1] Waste Management, Inc. n.d. Available online at: https://www.wm.com/location/california/antelope-valley/palmdale-landfill/contact.jsp

[2] Waste Connections, Inc. n.d. Available online at: http://www.chiquitacanyon.com/about/using-the-landfill/

[3] Republic Services. n.d. Available online at: http://www.sunshinecanyonlandfill.com/home/2-5-Using_what.html

[4] Waste Management, Inc. n.d. Available online at: http://www.wm.com/location/california/antelope-valley/lancaster-landfill/materials-accepted.jsp

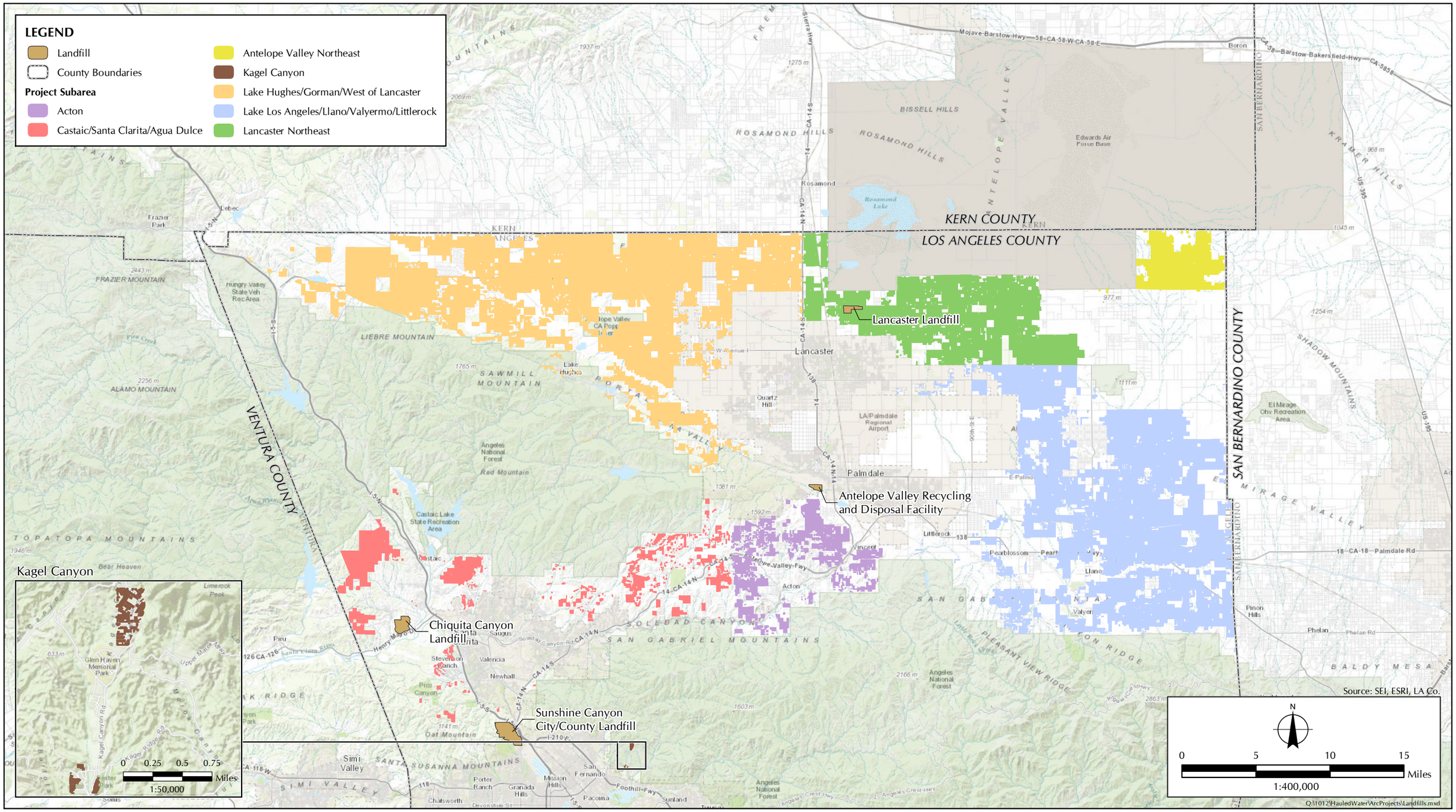

FIGURE 5.1-1

Regional Active Landfills

liquids such as leachate. It is considered to be an acceptable equivalent to 1 foot of granular drainage material. A non-woven filter geotextile is attached to prevent infiltration of soil that will clog the geocomposite. Base grades are sloped to a central collection sump which is designed for subsequent removal of leachate to an onsite storage tank.

All areas of the liner system are protected by a 1.5- to 2-foot-thick soil layer. The soil layer prevents the overlying waste from penetrating and damaging the liner system.

Following completion of the various liner components, landfill construction is accomplished by the area method. Open refuse is minimized by the construction of daily work areas sized to handle only each day's volume, and subsequently covered and sealed with soil or alternate daily cover at the end of each day.

The Lancaster Landfill is located within the following 11 parcels in the Lancaster Northeast subarea:

- 3155-003-002
- 3175-003-003
- 3175-003-004
- 3175-003-005
- 3175-003-006
- 3175-003-007
- 3175-003-008
- 3175-003-009
- 3175-003-010
- 3175-007-028
- 3175-008-009

The location of the Lancaster Landfill may pose a constraint to residential development to the above-mentioned 11 parcels.

There are no landfills located in the other six subareas that would be affected by the proposed initiative (Figure 5.1-1).

SECTION 6.0
HAZARDOUS MATERIALS TRANSPORT

The water hauling activities will not involve the routine transport, use, or disposal of hazardous materials within or adjacent to parcels within the proposed initiative study area that would be eligible for development of single-family residences using hauled water. However, hazardous materials may be transported via highway or railway through the proposed initiative study area (Figure 6-1, *Regional Highways for Proposed Initiative Subareas*; Figure 6-2, *Railways within the Proposed Initiative Study Area*).

6.1 HIGHWAYS

State Highways 14, 18, and 138 pass through four of the seven subareas: Castaic/Santa Clarita/Agua Dulce, Acton, Lake Hughes/Gorman/West of Lancaster, and Lancaster Northeast. Interstate 5 passes through the Castaic/Santa Clarita/Agua Dulce subarea. There are 322 parcels in the proposed initiative study area located within one-quarter mile of a highway:

- Acton (63 parcels)
- Castaic/Santa Clarita/Agua Dulce (42 parcels)
- Lake Hughes/Gorman/West of Lancaster (119 parcels)
- Lancaster Northeast (98 parcels)

These parcels may be constrained for residential development due to the potential for leaks or spills of hazardous materials.

6.2 RAILWAYS

Railways pass within one-quarter mile of 796 parcels of the Acton, Castaic/Santa Clarita/Agua Dulce, Lake Los Angeles/Llano/Valyermo/Littlerock, and Lancaster Northeast subareas:

- Acton (39 parcels)
- Castaic/Santa Clarita/Agua Dulce (6 parcels)
- Lake Los Angeles/Llano/Valyermo/Littlerock (474 parcels)
- Lancaster North East (277 parcels)

These parcels may be constrained for residential development due to the potential for leaks or spills of hazardous materials.

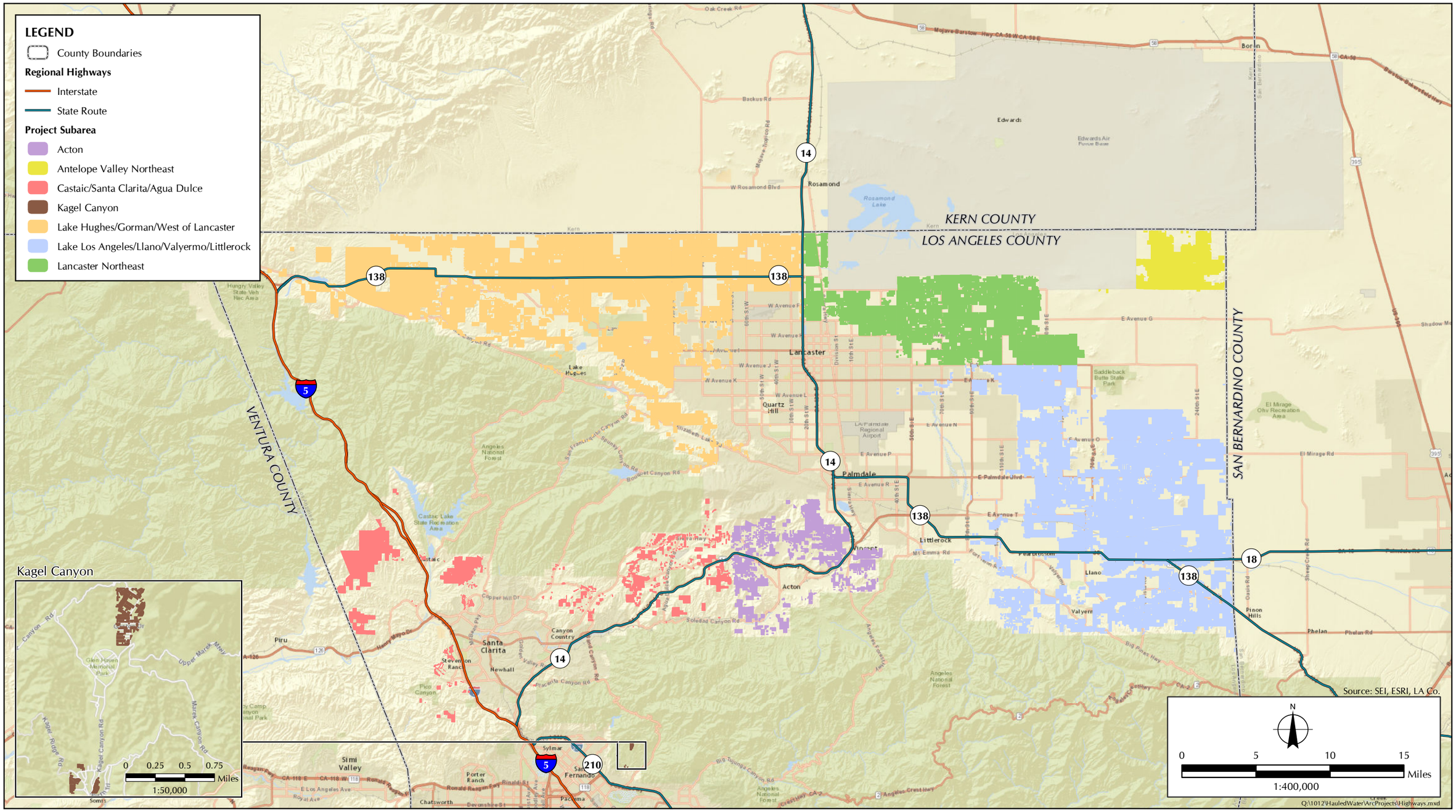

FIGURE 6-1

Regional Highways for Proposed Initiative Subareas

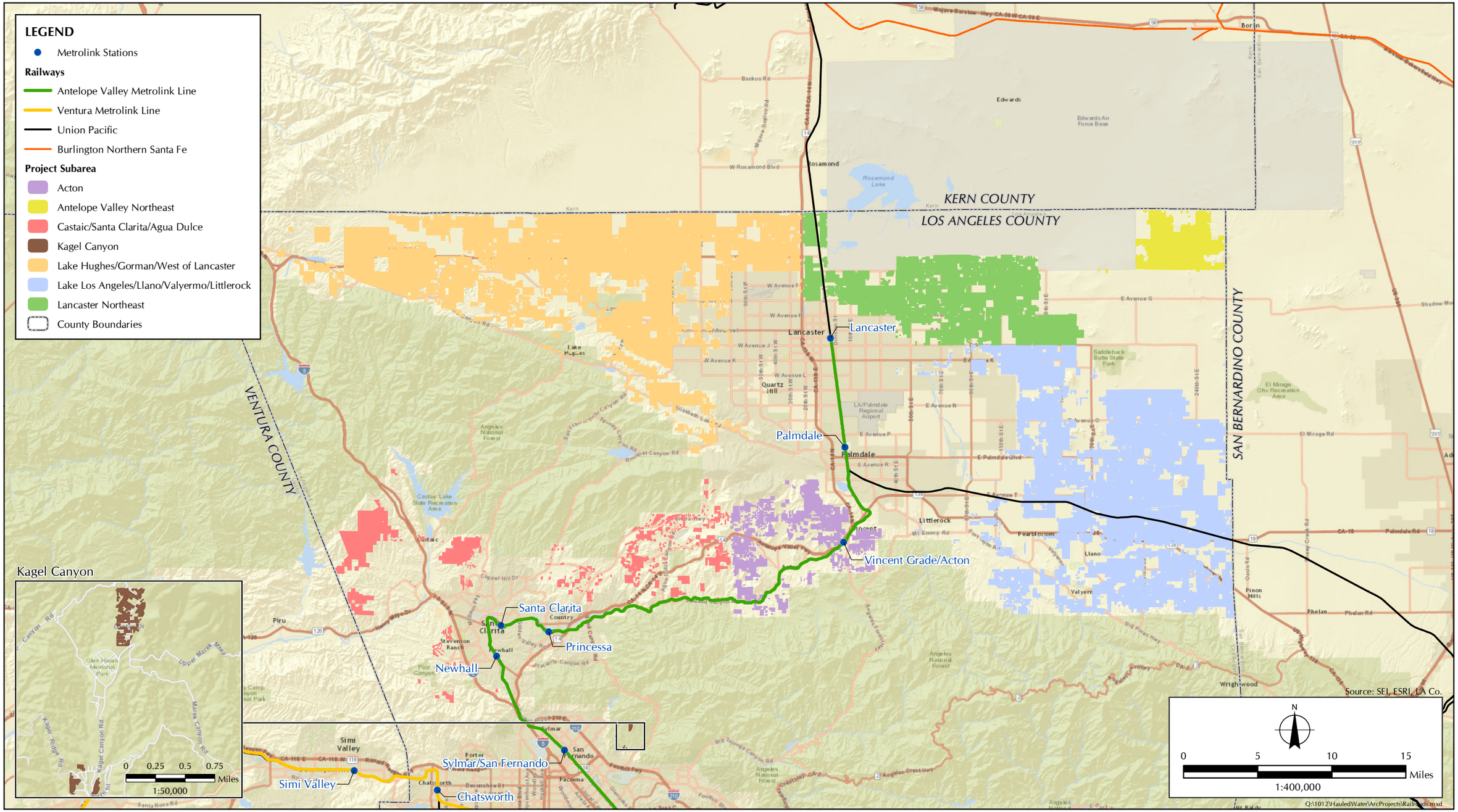

FIGURE 6-2

Railways within the Proposed Initiative Study Area

SECTION 7.0
FIRE HAZARD SEVERITY ZONES

Based on the review of fire severity hazard zone maps developed by the California Department of Forestry and Fire Protection (CAL FIRE), 8,685 parcels within five of the seven proposed initiative subareas are located in High or Very High Fire Hazard Safety Zones[1,2] (Table 7.1-1, *High or Very High Fire Hazard Severity Zones Located within or in the Vicinity of Proposed Initiative Subareas*; Figure 7.1-1, *Fire Hazard Severity Zones*). Parcels in high or very high fire severity zones may be constrained for residential development due to the potential for wildland fires.

TABLE 7.1-1
HIGH OR VERY HIGH FIRE HAZARD SEVERITY ZONES
LOCATED WITHIN OR IN THE VICINITY OF PROPOSED INITIATIVE SUBAREAS

Subarea	Severity	Local, State, or Federal Responsibility Area	Parcel Count within Responsibility Area
Acton	High	SRA	78
	High total		**78**
	Very high	FRA	14
		SRA	1,087
	Very high total		**1,101**
Castaic/Santa Clarita/ Agua Dulce	High	LRA	55
		SRA	2
	High total		**57**
	Very high	FRA	15
		LRA	143
		SRA	1,450
	Very high total		**1,608**
Kagel Canyon	Very high	SRA	498
	Very high total		**498**
Lake Hughes/Gorman/ West of Lancaster	High	LRA	51
		SRA	1,203
	High total		**1,254**
	Very high	FRA	13
		SRA	952
	Very high total		**965**
Lake Los Angeles/Llano/ Valyermo/Littlerock	High	FRA	15
		LRA	19
		SRA	2,594
	High total		**2,628**
	Very high	FRA	4
		SRA	492
	Very high total		**496**
Grand Total			**8,685**

KEY:
LRA = Local Responsibility Area
SRA = State Responsibility Area
FRA = Federal Responsibility Area

[1] CAL FIRE. September 2011. *Very High Fire Hazard Severity Zones in LRA Map, Los Angeles County, CA.*

[2] CAL FIRE. November 6, 2007. *Very High Fire Hazard Severity Zones in SRA Map, Los Angeles County, CA.*

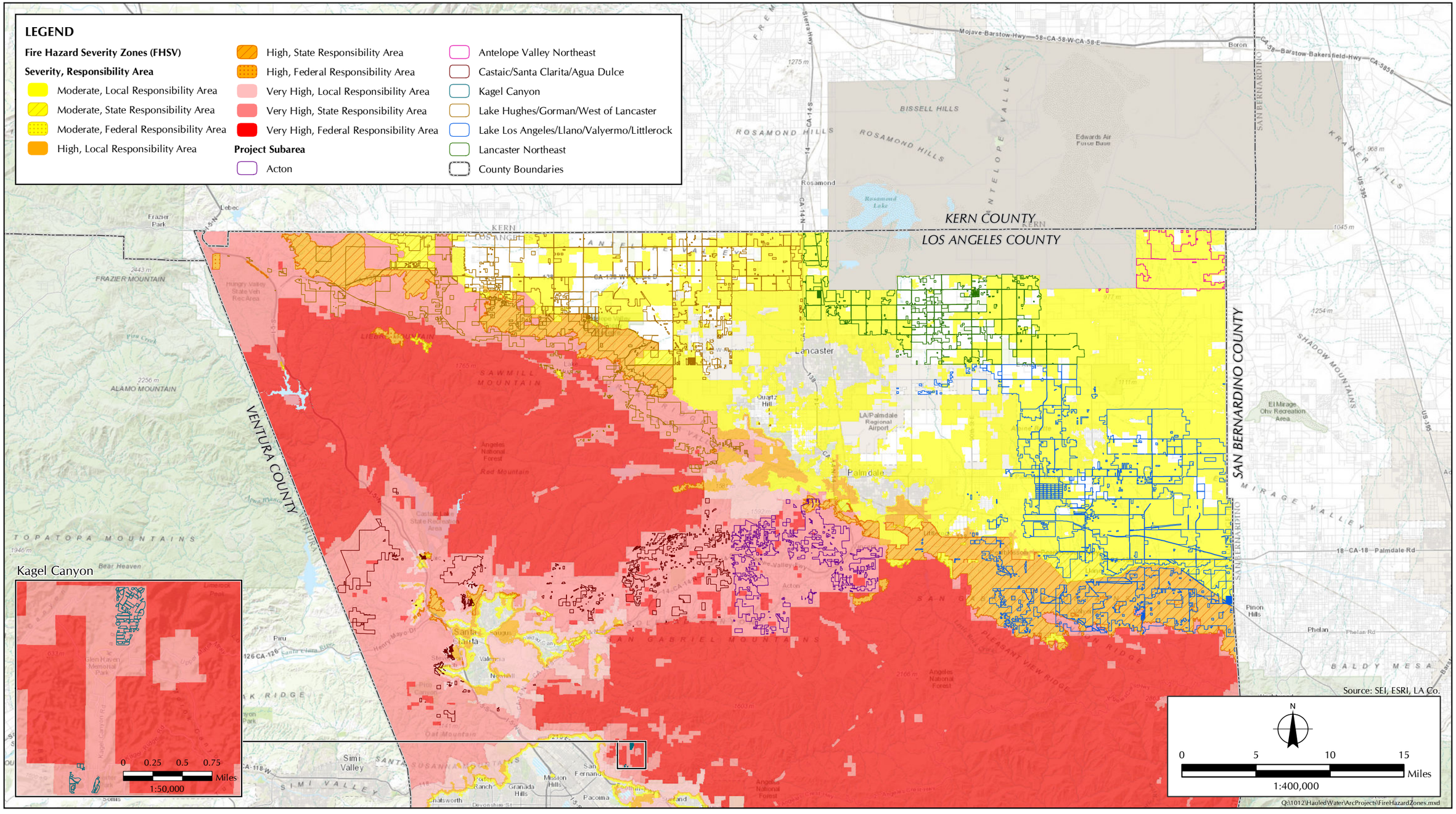

FIGURE 7.1-1

Fire Hazard Severity Zones

SECTION 8.0
HAZARDOUS EMISSIONS NEAR SCHOOLS

There are 24 elementary, middle, and high schools located adjacent to, or in the vicinity of, parcels within the proposed initiative study area, including five of the seven subareas.[1] Table 8.1-1, *Schools within One-Quarter Mile of Proposed Initiative Subarea Parcels*, indicates which schools are located in project subareas. Please refer to Figure 8.1-1, *Schools within One-Quarter Mile of Proposed Initiative Subarea Parcels*, for the locations of the schools. Review of the Envirostor database maintained by the California Department of Toxic Substances Control did not indicate any documented sources of hazardous emissions within one-quarter mile of any school site.

TABLE 8.1-1
SCHOOLS WITHIN ONE-QUARTER MILE OF PROPOSED INITIATIVE SUBAREA PARCELS

Subarea	School	Public/Private
Acton	Vasquez High School	Public high schools
Castaic/Santa Clarita/Agua Dulce	Agua Dulce Elementary School	Public elementary schools
	Desert Canyon Academy	Private and charter schools
	Mint Canyon Elementary School	Public elementary schools
	Newhall School District - Oak Hills School	Public elementary schools
	Newhall School District - Stevenson Ranch School	Public elementary schools
	Rancho Pico Junior High School	Public middle schools
	Stevenson Ranch Central Elementary School	Public elementary schools
	West Ranch High School	Public high schools
Lake Hughes/Gorman/West of Lancaster	Covenant Christian	Private and charter schools
	Gorman Elementary School	Public elementary schools
	Gorman Middle 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
	Pearblossom Private, Inc.	Private and charter schools
	Vista San Gabriel Elementary School	Public elementary schools
	Wilsona School District - Vista San Gabriel Elementary School	Public elementary schools
	Wilsona Elementary School	Public elementary schools
	Challenger Middle School	Public middle schools
Lancaster Northeast	Eastside Elementary School	Public elementary schools
	Lancaster Baptist School	Private and charter schools

[1] Los Angeles County. n.d. Location Management System. Available online at: http://egis3.lacounty.gov/lms/

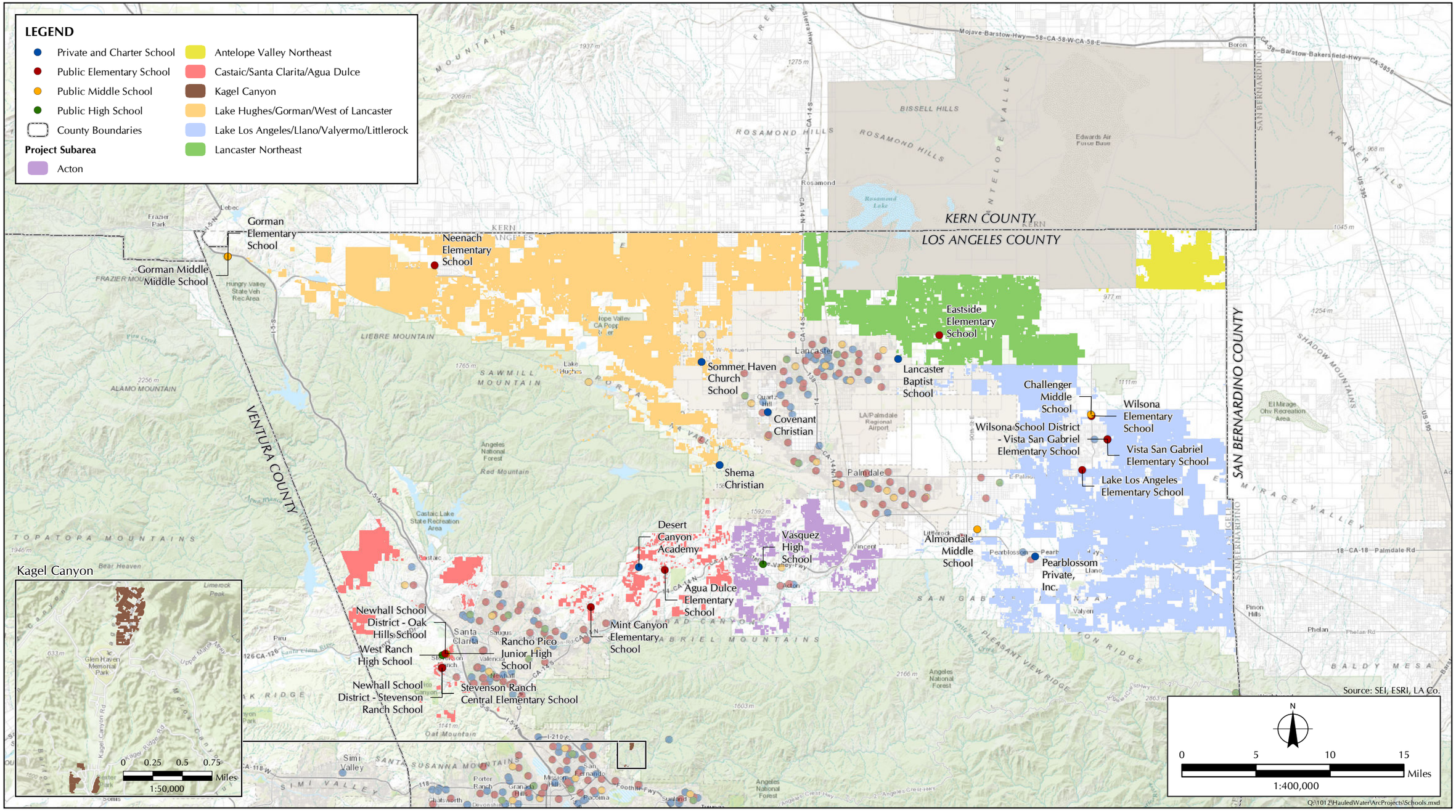

FIGURE 8.1-1

Schools within One-Quarter Mile of Proposed Initiative Subarea Parcels

SECTION 9.0
FINDINGS AND CONCLUSIONS

9.1 FINDINGS

The review of aerial photographs (dated 1994 to 2013) and topographic maps (dated 1952 to 1992) of 35 randomly selected parcels, five parcels from each subarea within the proposed initiative area, indicated that the parcels were predominantly undeveloped. Two parcels in the Castaic/Santa Clarita/Agua Dulce subarea had been graded for the development of single-family residences. The review of DOGGR records indicates that 11 oil and/or gas fields are located on 116 parcels in the same subarea.

The review of the CalEPA EnviroStor database indicated that four hazardous waste sites exist in the proposed initiative study area. Three of the four sites require no further action. The fourth site, identified as Banning Park CP located on one parcel in the Lake Hughes/Gorman/West of Lancaster subarea, has potential unexploded ordinances. This site, which has been inactive since July 2005, requires additional evaluation. To date, no apparent additional evaluation of this site has been conducted.

The proposed initiative study area has one regional non-hazardous municipal waste landfill facility. This facility, the Lancaster Landfill, intersects 11 parcels in the Lancaster Northeast subarea. This landfill is lined to protect the subsurface soil and/or groundwater and has a leachate collection and storage system. Three additional non-hazardous municipal waste landfill facilities exist near the proposed initiative study area, one near the Acton subarea and two near the Castaic/Santa Clarita/Agua Dulce subarea. These facilities are also lined with leachate collection and storage systems to protect the environment.

The transport of hazardous materials may occur via highway and railway within one-quarter mile of 1,118 parcels within the proposed initiative study area. The following subareas within the study area have parcels within one-quarter mile of a highway:

- Acton (63 parcels)
- Castaic/Santa Clarita/Agua Dulce (42 parcels)
- Lake Hughes/Gorman/West of Lancaster (119 parcels)
- Lancaster Northeast (98 parcels)

The following subareas within the study area have parcels within one-quarter mile of a railway:

- Acton (39 parcels)
- Castaic/Santa Clarita/Agua Dulce (6 parcels)
- Lake Los Angeles/Llano/Valyermo/Littlerock (474 parcels)
- Lancaster Northeast (277 parcels)

These parcels represent properties that are most likely to be affected should leaks or spills of hazardous materials occur due to the proximity of the parcels to highways or railways.

Based on the review of fire severity hazard zone maps developed by CalFire, 8,685 parcels within the proposed initiative study area are in High or Very High Fire Hazard Safety Zones.

There are 24 elementary, middle, and high schools located adjacent to, or in the vicinity of, the parcels within the proposed initiative subareas. Based on the review of EnviroStor database, there have been no documented sources of hazardous emissions within one-quarter mile of any school site.

9.2 CONCLUSIONS

The majority of the parcels within the seven subareas of the proposed initiative study area have been undeveloped and have no evidence of past or present RECs. However, additional evaluation of the Banning Park CP hazardous waste site, identified in the CalEPA EnviroStor database, to assess the potential existence of unexploded ordinances should be conducted. The existing non-hazardous municipal waste landfills in or adjacent to the proposed initiative study area have been constructed in a manner to protect the environment from impacts to the subsurface environment.

Property owners within one-quarter mile of highways and railways should be aware of the potential for leakage or spillage of hazardous materials. Additionally, property owners who have parcels located within High or Very High Fire Hazard Safety Zones should take added precautions, such as ground clearing activities, to protect against the possibility of fire.

SECTION 10.0
REFERENCES

American Society for Testing and Materials. November 1, 2005. Standard E 1527-13, *"Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process."*

CAL FIRE. November 6, 2007. *Very High Fire Hazard Severity Zones in SRA Map, Los Angeles County, CA*.

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